Knowledge Management System for Entrepreneur Business Model Selection

by

Muhammad Ridhwan bin Azizan
3421

Dissertation submitted in partial fulfillment of
the requirements for the
Bachelor of Technology (Hons)
(Business Information System)

JUNE 2006

Universiti Teknologi PETRONAS
Bandar Seri Iskandar
31750 Tronoh
Perak Darul Ridzuan

CERTIFICATION OF APPROVAL

Knowledge Management System for Entrepreneur Business Model Selection

by

Muhammad Ridhwan bin Azizan

A project dissertation submitted to the
Business Information System Programme
Universiti Teknologi PETRONAS
in partial fulfilment of the requirement for the
BACHELOR OF TECHNOLOGY (Hons)
(BUSINESS INFORMATION SYSTEM)

Approved by,

_____

(Mrs Aliza Sarlan)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK

June 2006

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.

MUHAMMAD RIDHWAN BIN AZIZAN

ABSTRACT

Nowadays, the information and communication technology (ICT) has become the most important medium for business and entrepreneurship world of timely information especially in commercial area. A computerized-based information system plays a vital role in the success of an enterprise. It provides the information a business needs for efficient operations, effective management and competitive advantage easily and quickly. In this project, the author introduces the project concepts that will focus on business models selection for an entrepreneur to choose and adopted the best and right business models that suits them a knowledge-based scheme for facilitating their small and medium enterprises (SMEs). The project is developed using the waterfall model of system development life cycle approach. Waterfall model is one of the most popular incremental project development methodologies. The development of the project conducted by sequence starting with analysis, design, develop, test, and lastly implementation. The prototype covers the presentation of static beneficial data and information required by the SMEs entrepreneurs. The prototype developed has simplified the business by having appropriate documents to publish the data. Eventhough, the prototype not fully covered and completed all aspects of SMEs it is deem necessarily for the knowledge and information for existed and future entrepreneurs. By using the prototype, it is very beneficial for a future entrepreneur to have some kind of guidelines and procedures from the references before starting opting for the best businesses to be run. Finally, the author hopes that this project will really be beneficial since it is way to help the to-be entrepreneur to manage the skills and knowledge of its selected business models.

ACKNOWLEDGEMENT

Pursuing a Final Year Project (FYP) is a both painful and enjoyable experience. It is just like climbing a high peak, step by step, accompanied with bitterness, hardships, frustration, temptation, encouragement and trust and with so many people's kind help. When I found myself at the top enjoying the beautiful scenery, I realized that it was, in fact, an excellent lesson learn that got me there. Though it will not be enough to express my gratitude in words to all those people who helped me, I would still like to give my many, many thanks to all these people.

First of all, I would like to give my sincere thanks to my honorific supervisor, Mrs. Aliza Sarlan, who accepted me as her FYP supervisee without any hesitation. I would also like to put special appreciations to my first semester FYP supervisor, Mr Shuib Basri that have guide me through my early steps of doing the project till he further studies with his doctorate. Thereafter, both people have offered me so much advice, patiently supervising me, and always guiding me in the right direction. I have learned a lot from them, without their help I could not have finished my dissertation successfully.

Special thanks are also given to my lecturers especially lecturers that are the FYP coordinator, Mr Nordin Zakaria, lecturers in Software Engineering group and others who have given many comments and constructive ideas to further improve my project. I would like to convey my heartfelt thanks to my home university, Universiti Teknologi PETRONAS (UTP) for offering me an ideal study environment in which I felt free and could concentrate on my research. There are so many friends especially my colleague under the same research group, who offered me so much kindly help and ideas.

Last but not least, I am very grateful for my parent, Mr. Azizan Kassim and Mrs. Nor Asikin Salleh. Their understanding and their love encouraged me to work hard and to finish my studies in UTP. Special thanks also to the external evaluators who have spent their precious time in evaluating my project and everyone else who have provided useful comments, assistances and inspiration to help me completed the project successfully.

Thank you.

TABLE OF CONTENTS

LISTS OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 Background

The fast growth rate of the information and communication technology (ICT) era has provided an expansion of accessible information space for business and entrepreneurship world. A computer-based information system plays a vital role in the success of an enterprise. It provides the information a business needs for efficient operations, effective management and competitive advantage. For summary, this research project will focus on business models selection for an entrepreneur to choose the best and right business that suits them. The Knowledge Management System (KMS) will guide entrepreneur to make decision to starts their own business by choosing and analyzing the best options available. This information will be shared and analyzed in the system and all the to-be entrepreneur can view and use the information in this subsystem to chose and starts their business.

Therefore, it is very beneficial for an entrepreneur to have some kind of Knowledge Management System (KMS) to capture the guidelines and procedures from the expert before starting opting for the best businesses to be run. By doing this, the business models selection will be the most suitable and right choice of starting their own business. With this knowledge management system, an entrepreneur can also manage and develop their business as the time move on according to the right path of direction for their businesses. With this opportunity, the author comes out with the proposal to develop Knowledge Management System for Entrepreneur Business Models Selection as a way to help the to-be entrepreneur to manage the skills and knowledge of its selected business models.

1.2 Problem Statement

Nowadays, in order for an entrepreneur to choose the right forms of company remain competitive in the business, they have to depend heavily on the right and correct ability of their human capital. In other words, they have to fully choosing for the right business models and the right business processes selections. Entrepreneurs have really to understand their business model selection by knowing the options of the business by studying and analyzing the advantages and the strengths of the business model that they wanted to select to be done. For example, an entrepreneur may choose these business models; sole proprietor, franchise, public limited company and cooperative to be adopted in their newly business model selection. But the mechanism of choosing the right business models is not already being formalized and it is always being a major failures for an entrepreneur that risk their business to failure by opting to the wrong business model that does not suit and match their human and business capital at the early phase of their business directions.

The project is extracted from the following defined issues:

- Understanding and transforming the simplified flows and processes of the entrepreneur business models selection for an entrepreneur using Knowledge Management (KM) approaches.
  - The issues of transforming the traditional methods of running a business information is aimed at to make it more understandable and transforming it into more systematic and simplified flows and processes of the entrepreneur business models selection for an entrepreneur benefits. The project will be built using applied Knowledge Management (KM) approaches.

- Translating entrepreneur business models selection information into simplified knowledge-based modules by integrating business processes and IT tools.
  - The project will take into consideration to translate various types of the entrepreneur business models selection information into simplified knowledge-based modules. The translation processes will be done through the integration of the business processes with the information technology (IT) tools available.

1.3 Objectives and Scope of Study

1.3.1 Objectives

Based on the brief statement above, the objectives of this project are as below:

- To study in Knowledge Management (KM) approach integration with IT and business key areas.
- To manage Knowledge Management (KM) and expertise of business models and put them in one place; data mining and data warehousing.
- To provide an alternative and systematic way of business processes and information choosing the right business models selections for to-be entrepreneur using Knowledge Management (KM) approach.
- To develop an intelligent expert decision support system using Knowledge Management (KM) approaches for an entrepreneur business model selection.

1.3.2 Scope of Study

The proposed scopes of study are:

- Design the structure for knowledge-based business model selection
- Design the knowledge-based scheme that will be used to analyze the source of information and gather the contents to be published
- Develop the intelligent Knowledge Management System (KMS) for an entrepreneur business model selection.

CHAPTER 2

LITERATURE REVIEW AND THEORY

2.1 Knowledge Management and Knowledge Management System

Davenport & Prusak (1998) provide a holistic description of the knowledge. They state that knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and it is applied in the mind of knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes and norms.

Peter Drucker (1994), whom many consider as the father of KM, best defines the need for KM which is knowledge has become the key resource, for a nation's military strength as well as for its economic strength. Human need systematic work on the quality of knowledge and the productivity of knowledge; the performance capacity, if not the survival, of any organization in the knowledge society will come increasingly to depend on those two factors. (pp. 66 – 69).

According to Brian Detlor (2001), with the implementation of Knowledge Management System (KMS), another question arises on what are the implications or requirement needed for KMS. Specifically it is argued that KMS need to incorporate features and functions that facilitate knowledge creation, distribution, and use a set of information-laden processes. In order for it to be implement, requires the provision of certain functionality, the ability to access information; share this information with others, and utilizes this information in work practice.

Ronald Maier (2002) has defined a knowledge management system (KMS) is an ICT system in the sense of an application system or an ICT platform that combines and integrates functions for the contextualized handling of both, explicit and tacit knowledge, throughout the organization or that part of the organization that is targeted by a KM initiatives. A KMS supports networks of knowledge workers in the creation, construction, identification, capturing, acquisition, selection, valuation, organization, linking, structuring, formalization, visualization, distribution, retention, maintenance, refinement, evolution, accessing, and search and last but not least the application of knowledge the aim of which is to support the dynamics of organizational learning and organizational effectiveness.

According to Becerra-Fernandez (2004), there are different types of Knowledge Management (KM) systems which fall into four main categories: Knowledge Discovery Systems, Knowledge Capture Systems, Knowledge Sharing Systems, and Knowledge Application Systems. For document searching, categorising and matching systems, these systems basically use intelligent techniques to categorise documents and provide the user with a collection of relevant sources.

Alavi and Leidner (1998) refer Knowledge Management System (KMS) as the use of modern information technologies (i.e.: the Internet, intranets, and extranets) to systematize, enhance and expedite intra and inter-firm knowledge management.

2.2 Knowledge Discovery and Data Mining

Bhavani (2003) points out that the increasing number of databases on the Web must be mined to extract useful information. As for data mining, it is a process of posing various queries and extracting useful information, patterns and trends (oftentimes previously unknown) from large quantities of data possibly stored in the databases. Some also define data mining as the process of extracting previously unknown information, while knowledge discovery is defined as the process of making sense out of the extracted information. Essentially, for many organizations, the goals of

data mining include improving marketing capabilities, detecting abnormal patterns, and predicting the future based on past experiences and current trends (p. 35).

Bhavani (2003) also says that there are several outcomes of data mining including classification, sequence detection, deviation analysis, and data dependency analysis. To obtain these outcomes, there are various techniques are used which could be based on rough sets, fuzzy logic, inductive logic programming, neural networks, rule-based reasoning or just some statistical techniques (p. 39).

2.3 Knowledge-Based System

According to Royles (2005), there are various knowledge-based systems or expert system that is the solutions already available over the Internet, which fall into three main categories: advice systems, document searching, categorising and matching systems, and database and search engines. For document searching, categorising and matching systems, these systems basically use intelligent techniques to categorise documents and provide the user with a collection of relevant sources.

CHAPTER 3

METHODOLOGY / PROJECT WORK

3.1 Procedure

For this project, the author has uses waterfall model of system development life cycle approach or also known as software life cycle. Waterfall model is one of the most popular incremental project development methodologies. The development of the project conducted by sequence starting with analysis, design, develop, test, and lastly implementation. The author chooses the waterfall model because the concept is applicable to the author project. A thorough analysis need to be done before it can be proceeding further.

The waterfall model of development requires for a system to commit to a set of requirements before the design begins and the designer to commit to particular design strategies before implementation. Changes to the requirements during the development require rework of the requirements, designs and implementations. The advantages of the waterfall model are that it is a simple management model and its separation of design and implementation should lead to robust systems which are amenable to changes.

Waterfall model is popular method because many programmers like to code a program from the approved requirement and thorough analysis. Good preparation before kicking off the coding part is a good practice because in this methodology it is quite hard to go back a step behind, even though it can be done. But, refining the requirement after starting the development stage may take some times to correct or change the prototype. But anyway, waterfall model is a great choice if all the

requirements are clear because after all each stage is defined it is signed off and the development processes goes on to the following stages.

3.1.1 Procedure Identification

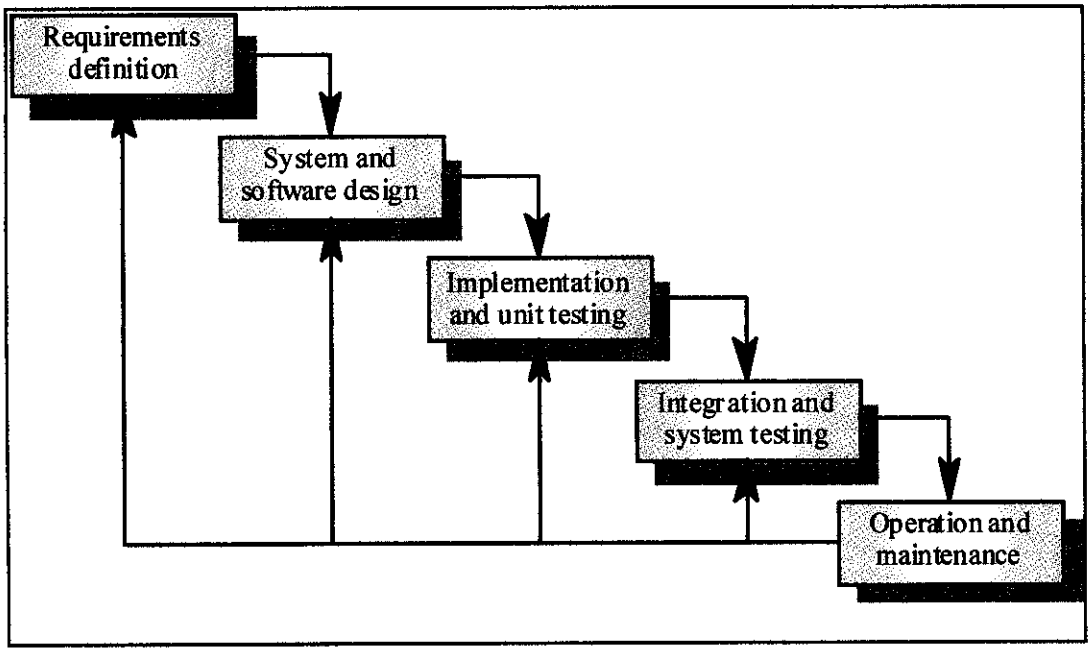

Figure 3.1: Waterfall model (software development methodology)

The principal stages of the model map onto fundamental development activities can be grouping into leads of four major phases in this project implementation which are:

- Definition and Planning

  In this phase, the author defines the underlying principle and scope of this project, the project timeline as well as the tools and the resources that will be used to produce the deliverables. The system's services, constraints and goals are established by the author here and then, being defined in details and serve as the system specifications at the later stages.

- Analysis and Design

  In this phase, the author designs the knowledge-based scheme for data mining process. This includes analyzing the available techniques to represent the authoring knowledge by applying conceptual semantic network, rule-based approach, or stylistic knowledge templates.

  The systems design process partitions the requirements to the hardware and the software systems. It will establish overall system architectures. The software design involves identifying and describing the fundamental software system abstractions and their relationships.

  In addition, the author designs the structure of the system and analyzes how it will link to the database and how the system document will be generated. Besides that, the author also designs the structure for system document modules.

- Prototype Development

  In this phase, based on the design, the prototype is developed. As the prototype is divided into several subsystems which is the development is done separately for each of the subsystem. During this stage, the software design is realised as a set of programs or program units. The individual program units or programs are integrated as a complete system.

- Testing and Implementation

  For testing, several data samples are used to test the efficiency and the effectiveness of the prototype in executing the data mining process based on knowledge-based approach, and generating the entrepreneurial document which contains the extracted data. The program is tested as completed

program that the software requirements have been met. After testing, the software system is delivered into the full operations that will benefits the user. Then, the system is installed and put into practical use.

3.1.2 System Architecture

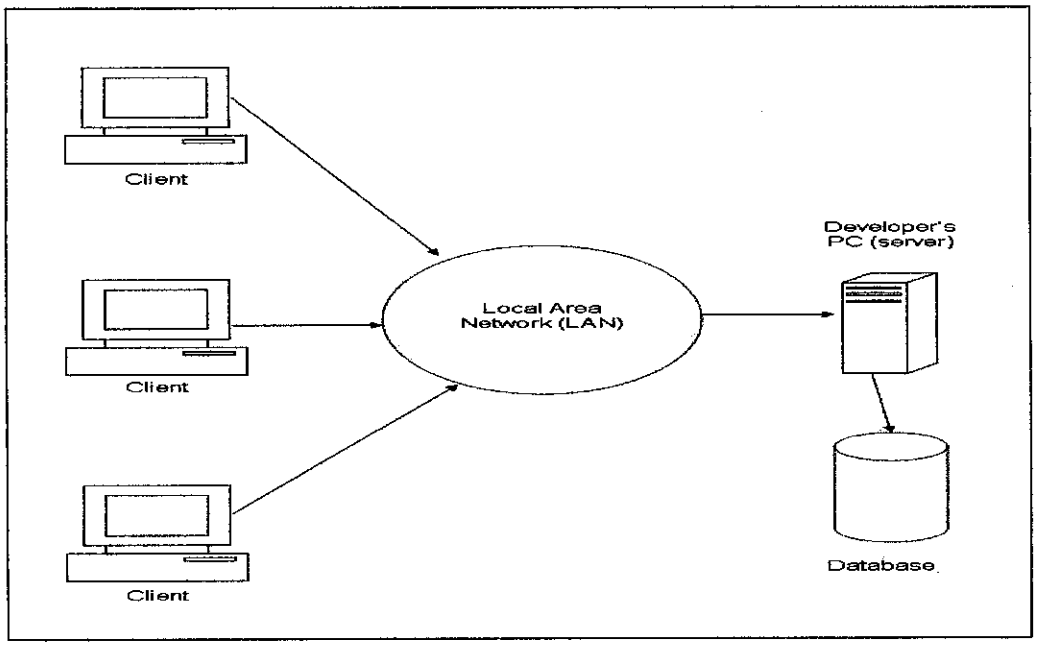

Figure 3.2: System Architecture

- The System Architecture

For the proposed system, the author has decided to develop a web-based system by adopting the client-server architectures model. The client-server model is a distributed system model which shows how data and processing are distributed across a range of processors. By using the system as a web-based system, the author will use the client-server model framework as which the model have consists of the client, server and database. The system can be viewed or access using the web browser using the Internet Explorer, Mozilla Firefox, Netscape Navigator or Opera browser. The author uses the MySQL as the database of the system for the purpose of the storing data processes. The author will also do the

installation at the client site to ensure the client can effectively use the web-based system developed.

The major components of the client-server model are:

- Stand-alone servers

  The system required a set of stand-alone servers which offers services to the other sub-systems.

- Client-side workstations

  To get the system work, a set of clients that call on the services offered by the servers. These are normally the sub-systems in their own client's rights. There may be several instances of a client program executing concurrently.

- Network

  To link those above parts, a network which allows the clients to access the services is needed by the system. Both the clients and the servers can be linked together through a network. Clients can access the services provided by a server through remote procedure calls.

Generally, the client-server approach can be used to implement a repository-based system where the repository is provided as the author system server. Sub-systems accessing the repository are called clients whereby each sub-system manages its own data. The server and the clients will eventually exchange data for the processing.

3.2 Tool

Basically, three aspects within the development platform are considered:

1. Relational Database Management System

   To make the prototype available on the Internet, it is better to use the client-server computing environment provided by Web technology. For this project, Fireserv 11.0 is used as the database management system to store all the relational databases and provide the access to them. It is a data management and analysis solution that delivers increased security, scalability, and availability to enterprise data and analytical applications, while making them easier to build, deploy, and manage including a full set of tools for managing the server and for creating and managing content, and a search engine for finding documents.

2. Programming & Web Scripting Tools

   For the prototype development, the author will use the Macromedia Dreamweaver MX 2004 as the main tools in developing the project to code the core of the prototype and to execute the data mining process and data warehouse processes. The author decided to chose Macromedia Dreamweaver because the author will develop the project using the PHP platform. Nowadays, PHP is a common language for the web development tools and it also has many advantages such as easy to understand the coding. These advantages are very helpful because the author also need to perform the task in the required given time besides developing an effective system.

3. Hardware

Among the hardware that are needed in this project that act as the development machine that is vital for the purpose of system development, database storage, testing, simulation and web hosting are a complete basic components of desktop personal computer with below specifications is used for the project:

- Pentium 4 1.4 GHz
- 384 MB of RAM
- 10 GB of hard disk space for operating system, relevant software installation, swap disk requirement and the system itself.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Data Gathering and Analysis

Source information materials are the basis of the documentation. The materials for the prototype are gathered through the text-form that will be mined and stored in a database or specifically, a data warehouse. The appearance of a document is relevant to the user interface which will affect the structure of each document. While producing the document, the system will be arranged according to the data based on the structure of the frequent information about entrepreneur gathered.

The references for the design of the structure for knowledge-based business model selection and the design the knowledge-based scheme that will be used to analyze the source of information and gather the contents to be published are gathered through the consultations and materials gathered from various government institutions that involved directly with small and medium enterprises (SMEs) and entrepreneurship in Malaysia such as Majlis Amanah Raya (MARA), Bank Negara Malaysia and Ministry of Entrepreneur and Cooperative Development (MECD). Then, the data gathered are being analysis by the author and being adopted into the system.

4.2 Findings

Presently, there is no common definition of small and medium enterprises (SMEs) in Malaysia. Different entrepreneurship government agencies define SMEs based on their own criteria, usually benchmarking against annual sales turnover, and number of full-time employees or shareholders' funds. In addition, present definitions focus mainly on SMEs in the manufacturing sector. The National SME Development Council has, on 9 June 2005 has approved the common definitions of SMEs across

economic sectors, for adoption by all Malaysia government ministries and agencies involved in SME development, as well as the financial institutions.

As the result, the establishment and adoption of standard definitions for SMEs have facilitate better identification of SMEs across sectors, thus enabling more effective formulation of SME policies and implementation of SME development programmes, and provision of technical and financial assistance. This has also allowed better monitoring of SME performance and their contribution to the economy.

4.3 Coverage of Definitions for SMEs in Malaysia

Based on the findings, the system that have been developed have to consider the wider coverage and applicability, definitions of SMEs that will be based on two criteria, namely:

- Number of employees; or
- Annual sales turnover.

Therefore, an enterprise will be classified as an SME if it meets either the specified number of employees or annual sales turnover definition. The constructed prototype must conform to the definitions according to the following sectors primary agriculture, manufacturing (including agro-based), manufacturing-related services (MRS) and services (including information and communications technology). The constructed prototypes have also followed the Malaysia approved SMEs definitions by the government in order to make sure that all the information and standards are accurate for prototype being constructed. The approved definitions have been summarizes based on the number of full-time employees and annual sales turnover.

Sector / Size	Primary Agriculture	Manufacturing (including Agro-Based) & MRS	Services Sector (including ICT)
Micro	Less than 5 employees	Less than 5 employees	Less than 5 employees
Small	Between 5 & 19 employees	Between 5 & 50 employees	Between 5 & 19 employees
Medium	Between 20 & 50 employees	Between 51 & 150 employees	Between 20 & 50 employees

Figure 4.1: Summary of approved SMEs definitions based on number of full-time employee.

Sector / Size	Primary Agriculture	Manufacturing (including Agro-Based) & MRS	Services Sector (including ICT)
Micro	Less than RM200,000	Less than RM250,000	Less than RM200,000
Small	Between RM200,000 & less than RM1 million	Between RM250,000 & less than RM10 million	Between RM200,000 & less than RM1 million
Medium	Between RM1 million & RM5 million	Between RM10 million & RM25 million	Between RM1 million & RM5 million

Figure 4.2: Summary of approved SME definitions based on annual sales turnover

4.4 Prototype Generation Process

The entire system prototype generation process that is built consists of several modules or menus that ranged from the main menu to other optional modules as are listed below. In the implementation, the clients who are an entrepreneur or an entrepreneur to-be will be the user who interacts with the system by selecting the available modules featured or simply by inputting the data and information on to the modules. The main modules or menu processes of the system are:

4.4.1 Main Page

At this main page or also known as landing page, the user will be display with the landing page welcoming messages, the site introduction, the member sign in and the

highlights of the current sites such as the latest entrepreneurship events and the upcoming and current highlights.

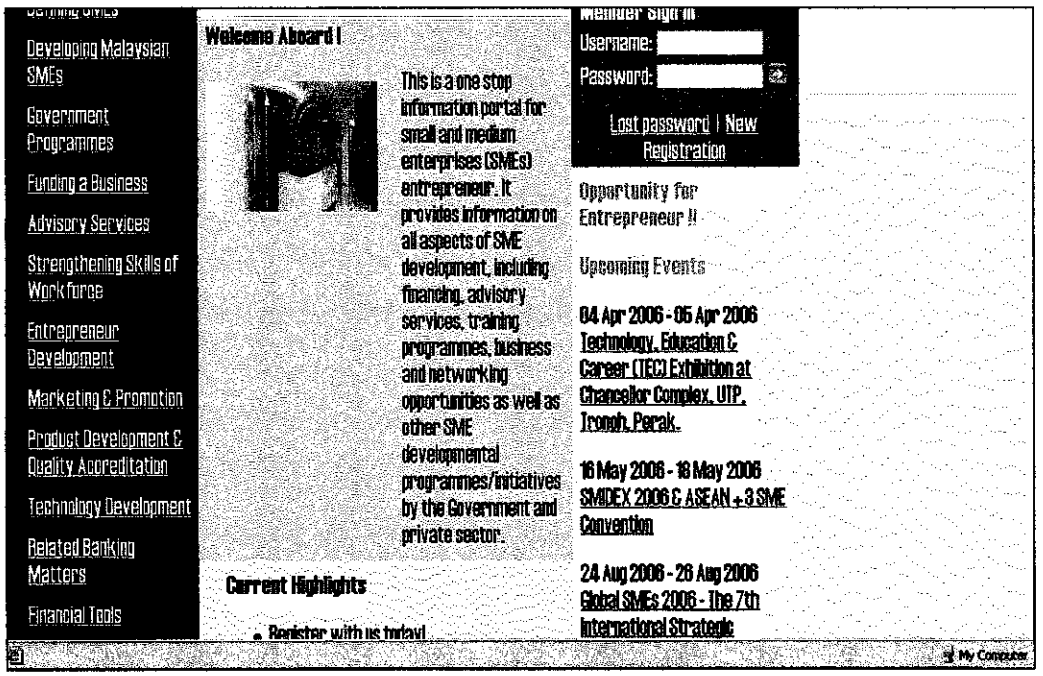

Figure 4.3: Main Page

4.4.2 Login

The login function is the most common function in a computer-based application as well as web-based applications in which its purpose is to authorize the user and to secure the system from the intruders. The system requires two basic requirements for login, which are the user name and the password.

Figure 4.4: Login menu

4.4.3 Defining SMEs

At this module, the details about SMEs entrepreneur definitions in Malaysia will be available to the user. All the information that is need to now by the future entrepreneur have been displayed here such as the fundamentals of entrepreneurship, definition of the small and medium enterprises (SMEs) entrepreneur and the background of the SMEs in Malaysia.

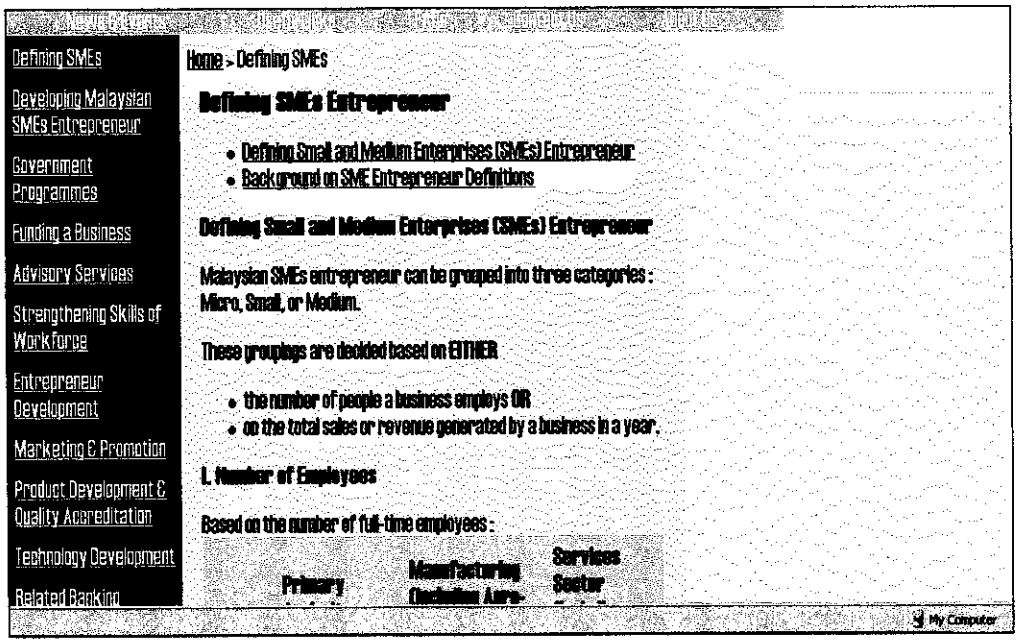

Figure 4.5: Defining SMEs

4.4.4 Developing Malaysian SMEs

The details about Malaysian SMEs development will be displayed here whereby the user will be presented to the development of the Malaysian small and medium enterprises (SMEs) milestone and information that covers the importance's of SMEs, the government strategies to develop and promote entrepreneurship with such as the establishments of governing bodies and acts that protect entrepreneurs and the details about the assistance provided by government.

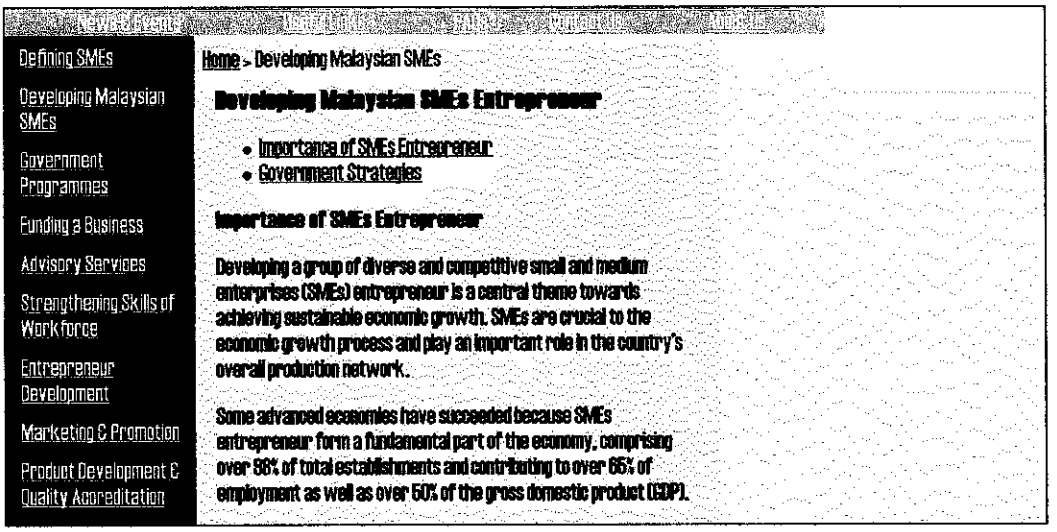

Figure 4.6: Developing Malaysian SMEs

4.4.5 Government Programmes

The details about the government programmes and financial assistance to the entrepreneur to support the development and entrepreneurship activities of SMEs. The Government have provides a comprehensive set of programmes through the various ministries and agencies such as the financial assistance and business support services.

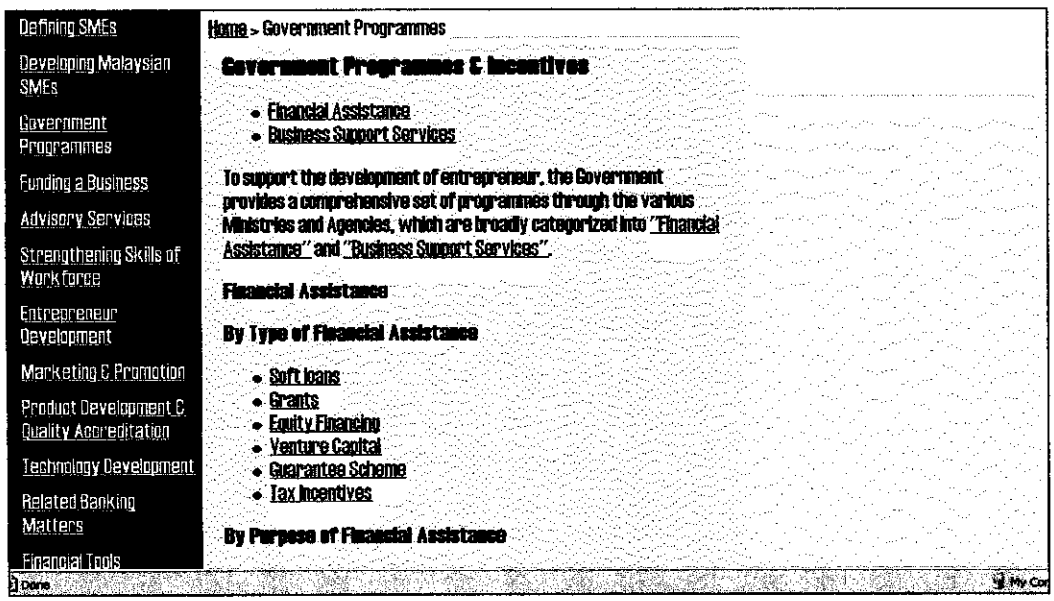

Figure 4.7: Government Programmes

4.4.6 Funding a Business

The information about how to funding a business is being processes here. Entrepreneur can trigger the ways on how to funding their businesses, whether to choose the government or private sector funding such as from conventional banking institution through loans and other related information regarding specially on funding a the entrepreneur business matching.

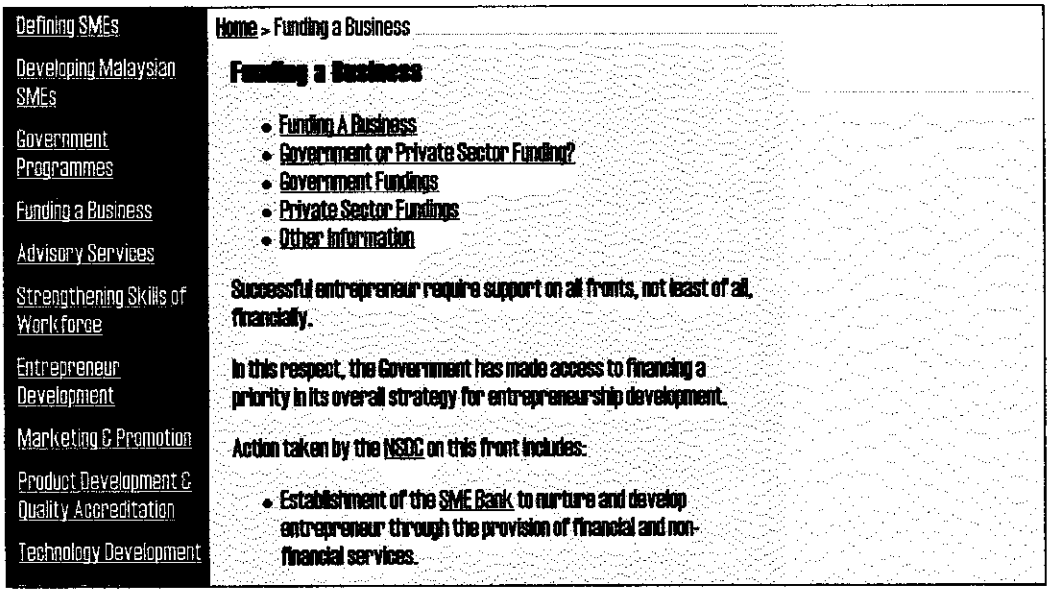

Figure 4.8: Funding a Business

4.4.7 Strengthening Skills & Workforce

At this module, an entrepreneur will be guided on how to choose the training and development programmes for their firm or organization in order to strengthen skills and workforce of their organizations. The process will involved the benefits of the training program, information about government agencies that solely involved in the training and development of staff which is the Pembangunan Sumber Manusia Berhad (PSMB).

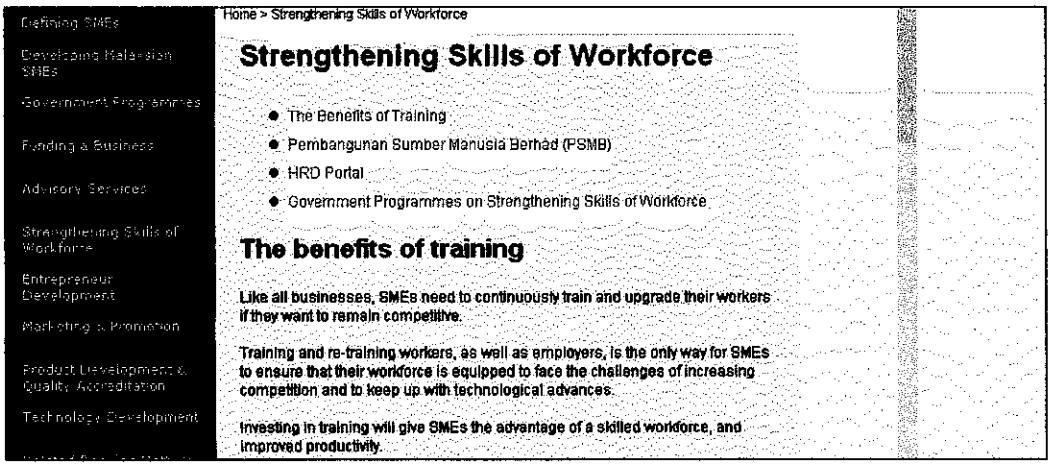

Figure 4.9: Strengthening Skills & Workforce

4.4.8 Entrepreneur Development

The details about entrepreneurs development programme will be processes here whereby user can choose their types of entrepreneur development, planning their businesses, starting their business on the right track, managing business, growing and expanding their business and also the government programmes for entrepreneur development.

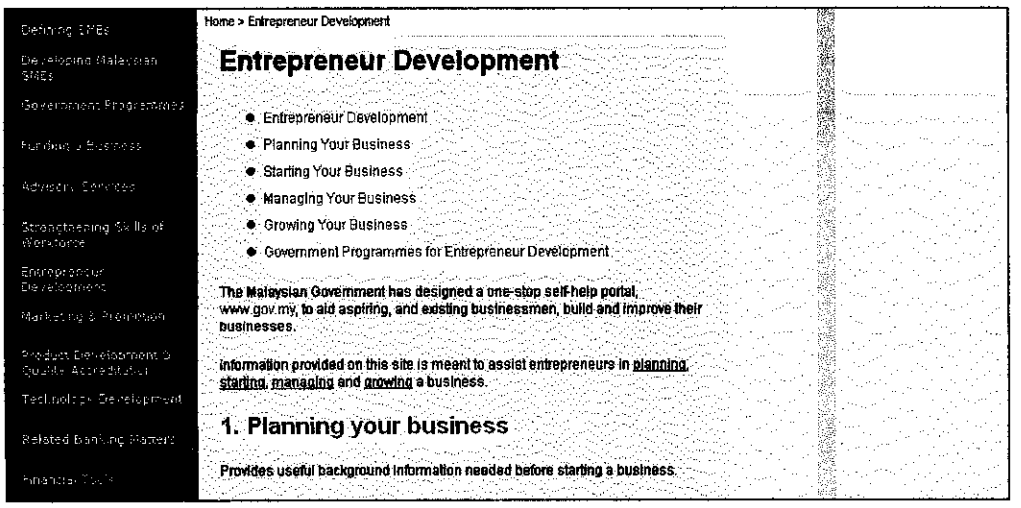

Figure 4.10: Entrepreneur Development

4.4.9 Marketing & Promotion

The details about marketing and promotion strategies that is useful to the entrepreneur to market their product and services can be easily access at this modules. The module contain the brief introduction about the importance of marketing and promotion, government programmes for helping entrepreneur to market and promote their products and services and also the useful links and tips about effective marketing and promotion.

Figure 4.11: Marketing & Promotion

4.4.10 SME Directory

At this module, user particularly the entrepreneur can get registered their company entity in the SME directory whereby the user have just to enter the company name, company address, the products and services and the sector the company involved. The directory of SMEs databases will make ease of the process of searching and matching the new business partner or new business opportunities amongst the entrepreneur in the country.

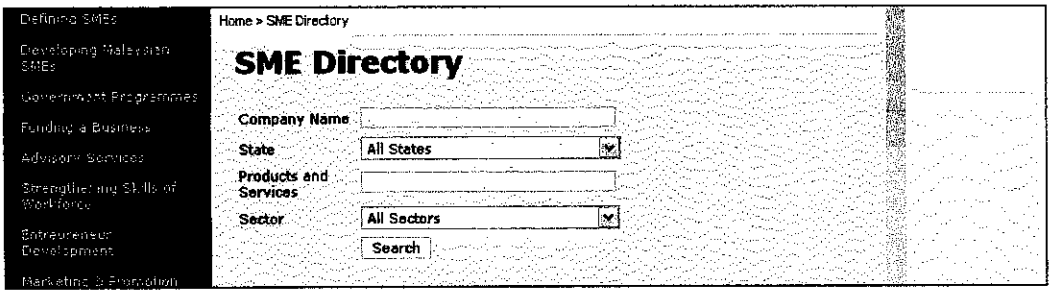

Figure 4.12: SME Directory

4.5 System Testing

4.5.1 Pilot Testing

After the prototype finished being developed, the author has implemented a pilot testing in order to identify and to have the user feedbacks and responses gathered and analyzed. The testing stage is concerned with the functioning of clearly identifiable components. Testing has also focused on the interactions and on the functionalities and performance of the system as a whole according to the users preferences and first hand experience. The pilot tester are required to perform some major functions in system prototype to gain knowledge and experience on what the system would offer to the user. The testing would also aim to know the users' responses in terms of the system dependability, reliability and stability. A set of questions have been asked to the user who have participated in the pilot testing after they have finished interact with the system. Below are the questions intended to the tested users together with the testing result.

Question 1
How good is the interfaces design of the system?

- Excellent
- Good
- Average
- Bad

Question 2
How smooth is the navigation of the system?

- Excellent
- Good
- Average
- Bad

Question 3
Is the system functionality & contents really benefiting user?

- Yes
- No

Question 4
Do you think that the features of the system are user-friendly?

- Yes
- No

Question 5
What do think in terms of accuracy and effectiveness of the system?

- Excellent
- Good
- Average
- Bad

Figure 4.13: Pilot Testing Questionnaires

4.5.2 Testing Results

For this section, the pilot testing results will be discussed and viewed according to the user feedback and responses. The data is being manipulated into graphs chart. Below are the discussions of the testing done by the identified user. The discussions are based on the questionnaires constructed and asked.

4.5.2.1 How good is the interfaces design of the system?

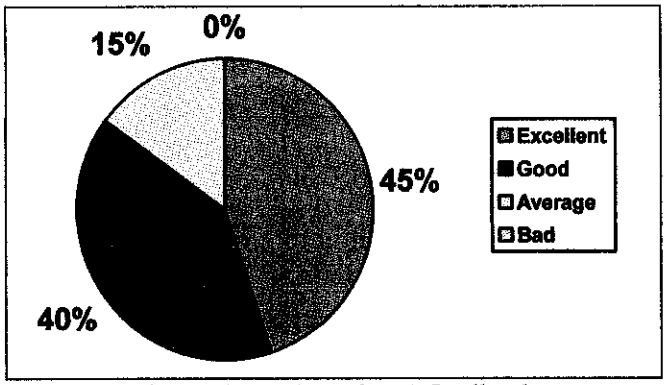

Figure 4.14: Question 1 feedback

As indicated in the Figure 4.14, the testing users agree and satisfy that the system is good in terms of the interfaces design of the system. This would probably reflect that the interfaces designs are looking good and easy to follow by the user.

4.5.2.2 How smooth is the navigation of the system?

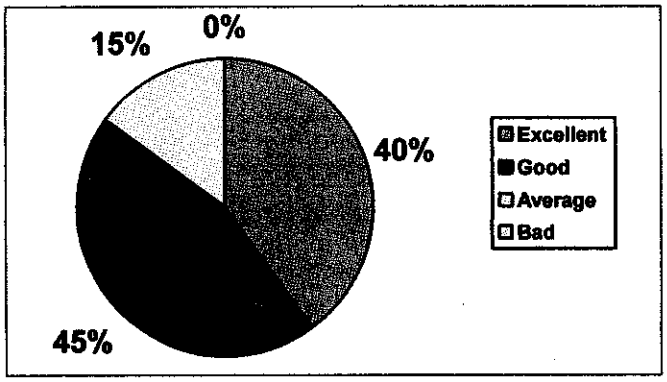

Figure 4.15: Question 2 feedback

Figure 4.15 depicted that overall the navigation of the system is working smooth without any interruptions. The system has been properly arranged in terms of the page navigation that have resulted as the majority users are satisfy with it smooth working of the system.

4.5.2.3 Is the system functionality & contents really benefiting user?

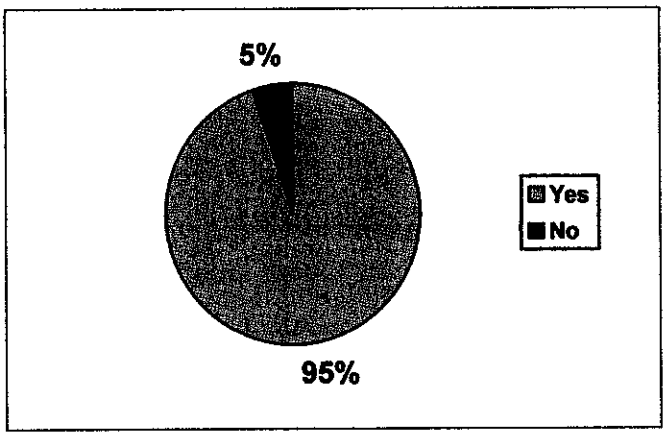

Figure 4.16: Question 3 feedback

From the result shown by the Figure 4.16, it has shown clearly that the system functionality and contents are really benefiting user. However, there are about 5 % who does not see the system have been benefiting them. This may be a challenge for the author to improving and put more effort in delivering the functionality and contents that suit the purposes of the user later on.

4.5.2.4 Do you think that the features of the system are user-friendly?

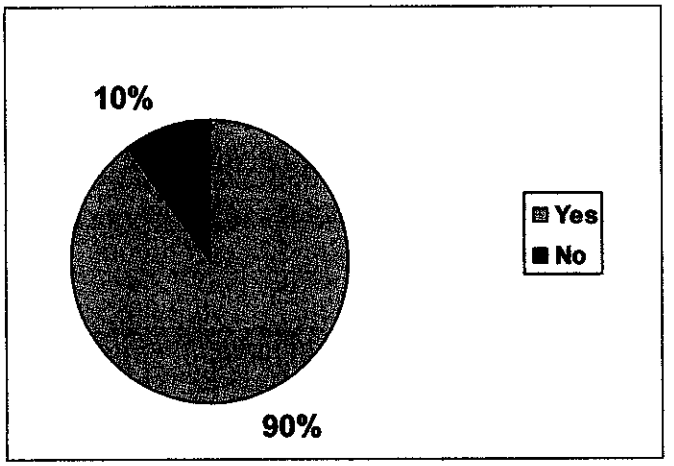

Figure 4.17: Question 4 feedback

From the Figure 4.17, it has shown that majority of the user think that the features of the system are user-friendly to them. But however, about 10% have disagree with it whereby as the resulted of some of the system components that needs to be enhanced in terms of its user-friendliness.

4.5.2.5 What do think in terms of accuracy and effectiveness of the system?

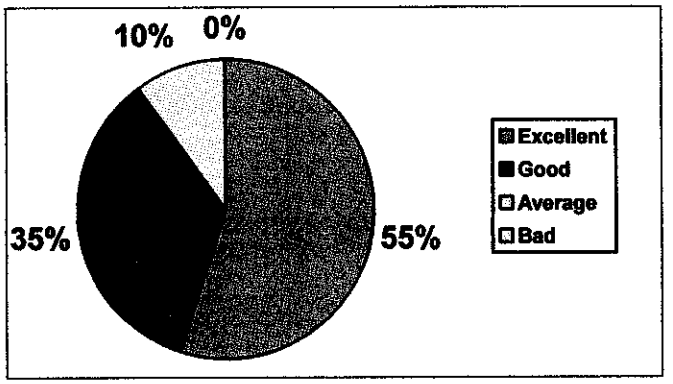

Figure 4.18: Question 5 feedback

Figure 4.18 has shown the result of what the user think about the system in terms of its accuracy and effectiveness. Most of them agree with the statement that the system

is accurate and effective enough for them. However, about 10 % have responded that the system is an average system.

4.6 Constraints and Limitations

After completing the project, the author has faced and acknowledged some constraints, limitations and difficulties as of the prototype completed. As for now, the prototype developed contains a static data and information as references and guidelines for the SMEs entrepreneurs. At the earlier stages, the prototype is aim to include the Knowledge Management (KM) concepts into the system but due to certain limitations, the prototype has not been able to be completed and applied all aspects related to KM. The prototype limitations are due to the difficulties faced in acquiring knowledge from the experts; people and government agencies that are involved directly in the SMEs such as Majlis Amanah Raya (MARA) and Ministry of Entrepreneur and Cooperative Development (MECD). The process of acquiring knowledge by transferring explicit knowledge from experts to tacit knowledge involved in SMEs has not been successfully being transformed into the prototype being developed by the author. As a result, the prototype been developed presents and contains a static information and does not include KM concepts as been planned earlier.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Although the rapidly expanding borderless and the era of globalization, it is a promising and crucial basis for the development of a Knowledge Management System (KMS) that integrates IT tools and business analysis start-up. This will really benefits an entrepreneur and ease them to choose and focus on business models selection for an entrepreneur to choose the best and right business that suits them. The Knowledge Management System (KMS) will guide entrepreneur to make decision to starts their business by choosing and analyzing the best options available.

With this idea, this KMS approach works better in tackling and matching the problems related to the to-be entrepreneur as compared to the previous conventional whereby there have to do their own study by getting advices from government agencies etc that do not link and give sufficient information and data about the further problems faced later. However, as the ICT world is rapidly changing and evolving, this project should be able to dynamically change to absorb the most advanced technique in order to keep in pace with the advancement of the business and IT applications.

It is hoped from the research and studies done, it can lead to realistic planning and this project can be completed within allocated time frame and at the same time meet the objectives.

5.2 Recommendations

For future work, this project can be improved to cater all functionalities and additional features that suits with the complexity and evolving of the business and entrepreneurships world in particular with the small and medium enterprises (SMEs) arena issues that integrates IT tools and business analysis for the future entrepreneurs. The Knowledge Management System (KMS) system is hope that it will guide entrepreneur to make decision to starts their business by choosing and analyzing the best options available more effectively and updating.

KMS approach works better in tackling and matching the problems related to the to-be entrepreneur as compared to the previous conventional. Since, in addition, in the future it is hope that this project can be linked to various online database systems such as Oracle, DB2, and MySQL. This can improve the usability of the project throughout all enterprise system.

REFERENCES

Becerra-Fernandez.I, Avelino Gonzalez, Rajiv Sabherwal 2004, Knowledge Management : Challenges, Solutions and Technologies, New Jersey, Prentice Hall

C.A. Royles, T.J.M. Bench, 2005, "Intelligent Interaction Between the User and Online Legal Content", Journal, The University of Liverpool, England

Central Bank of Malaysia, 2005, "Small And Medium Enterprises Promoted by Government of Malaysia Handbook".

Detlor.B 2001, An Information Perspective Towards Knowledge Work: Implications for Knowledge Management Systems, Knowledge Mapping & Management: 195 – 203

Elias M.Awad, Hassan M. Ghaziri 2003, Knowledge Management, New Jersey, Prentice Hall.

Maier.R 2002, Knowledge Management System: Information and Communication Technologies for Knowledge Management, Heidelberg, Springer De Publication.

Secretariat to National SME Development Council, 2005, "Definitions For Small And Medium Enterprises in Malaysia", Journal, Central Bank of Malaysia.

Thuraisingham,B. 2003, Web Data Mining and Applications in Business Intelligence and Counter-Terrorism, New York, CRC Press

Turban,E, Jay E.Aronson, Ting-Peng Liang 2005, Decision Support Systems and Intelligence Systems, New Jersey, Prentice Hall.