FACULTY'S USED BOOKS E-PLATFORM

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DECEMBER 2005

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DISSERTATION SUBMITTED IN FULFILLMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER
OF COMPUTER SCIENCE

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AND
INFORMATION TECHNOLOGY
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ABSTRACT

The study was carried out in order to construct a Web-based application of Faculty's Used Books E-platform. This is done due to communication problems that occur among sellers and buyers of used university textbooks. This study also recognizes the e-commerce capabilities and marketing strategies that could assist in developing the applications. Moreover, this study also embarks on the search of technopreneurship initiatives in Malaysia to develop a guide to technopreneurship as encouragement for students to become a technopreneur. The System Development Research Methodology is the methodology used in the study. The prototype of Faculty's Used Books E-platform is built using the MySQL relational database, together with PHP and Apache Web server. The benefits of these technologies are discussed in this paper. The development of Faculty's Used Books E-platform will improved the communication between sellers and buyers of used books community and could be a reference to students of Faculty of Computer Science and Information Technology, University of Malaya.

ACKNOWLEDGEMENTS

I am thankful to Allah for giving me the courage and strength to complete my dissertation. Throughout this journey, I am very grateful to received constant supports and guidance given by many peoples.

Initially, I would like to express my deepest gratitude toward my supervisor Assoc. Prof. Salimah Mokhtar, for giving me guidance and assistance in completing this dissertation.

My warmest appreciation to my beloved parents Tuan Haji Othman Ismail and Puan Hajjah Sarah Awang for their compassion and supports in my time of need. Thank you for always remembering me in your prayers. For my sister Mahfudzah Othman, thank you for your kind assistance and contribution.

To my beloved husband, Kardi Sebli, I am deeply grateful for your continuous encouragement, patience, and gentle understanding of my situation. Thank you for being there. For my two beloved sons, Muhammad Haziq and Muhammad Syafiq, thank you for your understanding.

Not to forget my closest friends who always been there to support me. My deepest appreciation to Suriawati, Yana, Hanayanti, Munirah, Kak Azah, Zubaile, Azizul Zambri, Zainab, Min, Fida, Tang and many others that I could not mentioned here.

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LIST OF ABBREVIATIONS

ACID	Atomic, consistent, independent and durable
ASP	Active Server Page
B2B	Business-to-Business
B2C	Business-to-Consumer
B2E	Business-to-Employee
BATIC	Business & Technology Innovation Centre
C2B	Consumer-to-Business
C2C	Consumer-to-Consumer
CASE	Computer-aided systems engineering
CGI	Common Gateway Interface
DBMS	Database Management Systems
DFD	Data Flow Diagram
EDI	Electronic Data Interchange
ERD	Entity Relationship Diagram
FAQ	Frequently Asked Question
FCSIT	Faculty of Computer Science and Information Technology
GPL	GNU General Public License
HTML	Hypertext Markup Language
HTTP	Hypertext Transport Protocol
IATFEC	Inter-Agency Task Force on E-Commerce
ICT	Information and Communications Technology
IIS	Internet Information Server
ITF	International Trade Forum Geneva
JSP	Java Server Page
JTDC	Java Technopreneur Development Centre
MDC	Multimedia Development Corporation
MITI	Ministry of International Trade and Industry
MSC	Multimedia Super Corridor
MSC-TDF	MSC Technopreneur Development Flagship
MSC-TeC	MSC Technopreneurship Centre
MSCVC	MSC Venture Corporation
MTD	MSC Technopreneur Development
NECC	National E-Commerce Committee
NIN	National Incubator Network
NTDC	.NET Technopreneur Development Centre

LIST OF ABBREVIATIONS

PHP	Hypertext Preprocessor
RBMS	Relational Database Management Systems
SMEs	Small and Medium Enterprises
SQL	Structured Query Language
TeAM	Technopreneurship Association of Malaysia
URL	Uniform Resource Locator
WWW	World Wide Web
XML	eXtensible Markup Language

CHAPTER 1

INTRODUCTION

1.1. Overview

The birth of Internet open a new path to businesses when businesses started to realize the potential of electronic commerce technologies has to offer. The Internet is a unique medium; this allows information to be accessed without geographic location constraints. As communication tools the Internet has the capability of delivering messages enhanced by color, sound real or animated images, as well as two-way interaction. Growth of this communication network has been rapid with the Internet doubling in size every year since the mid-1990s. At the same time, Internet also has given business vast opportunity to market their product without the barrier of space and time. Business can create and transmit advertisements on the Web that can access by anybody with a computer equipped with appropriate software. Such a convenience and marketing efficiency, both for the business and potential customer, is making the Web popular marketing practices all over the world (Kiani, 1998). The Internet has been called the most effective promotional tool of the century (Herbig and Hale, 1997).

The transformation of doing business has given a new meaningful name to entrepreneur that embarks into e-commerce business that they call Technopreneur. Technopreneur orchestrate these transformations and create new channels for

economic activity and employment. Technopreneurship is encouraged among citizen of developed country such as Malaysia in order to pursue continued economic growth.

Malaysian brick-and-mortar used book industry is small especially for university used textbook market. It is difficult to find a brick-and-mortar bookstores that sell used university textbooks. Most of the stores sell primary and secondary schools used textbooks and novels and does not have Internet present. It is different in other country such as United State, where used books is sell not only in brick-and-mortar stores but also through the Internet. Some example of these stores is Longhorn Book Exchange (www.longhornbookexchange.com), Books4Exchange.com (www.books4exchange.com) and bookswap.com (www.bookswap.com). University student in Australia is provided with a free exchange textbooks Web site service that help them search and contact seller of books through email notification the Web are call textbookexchange (www.textbookexchange.com.au).

This study is mainly focusing on the potential of electronic commerce technology that has to offer in promoting the growth of used university textbook industry combine with electronic marketing strategies. The outcome of the study will hopefully benefit the players of this industry which are the buyers and sellers of used books. This study will also embark in the search of technopreneurship initiatives in Malaysia to encourage students to become a technopreneur.

1.2. Problem Statement

The rationale of this study is to solve problems that always arise among buyers and sellers in the used book industry. In the case of buyers, they always have difficulties to find used textbooks because traditionally the search from brick and mortar bookstores would be time consuming and a lot of hassle. Furthermore, not all bookstores sell used books and most of their stock are not up-to-date. While for seller the problem that arises is their difficulty to sell their used books to targeted customer because they face the same problem as the buyers, which has difficulty to locate a bookstore that would buy their used books. The same problem arises which is about too much hassle and time consuming.

In the context of Faculty of Computer Science and Information Technology (FCSIT) community, the seller and buyers of the used textbooks are mainly students because they know that to buy a new textbook is much more expensive. There is a bookstore in the University but unfortunately they don't sell used books. The same problem arises among the faculty's community because at the start of semester, there are many flyers selling or marketing used books at either the faculties or hostels. They use the most traditional means of marketing, which is using papers and put it up for everyone to read. But the question here is can they sell their books faster by marketing this way? What about the cost of the paper and time consuming that they have to endure by putting up the flyers? Moreover not all students sell their used books because of the hassle putting up the flyers, which reduce availability of used books in the market. For the buyers of the books they have difficulty to find used bookseller without reading the flyers or asking around among their colleagues.

Furthermore with declining seller participation, buyers have lesser chance to buy used books that they require.

Another crucial problem is the concern of plagiarism issues among the students. Many students prefer to photocopy textbooks from their friends who already bought the textbooks that proof to be an easy way to save time and money. Xeroxing textbooks is considered a plagiarism and can be sued because it violated the Copyright law.

In conclusion, the problems is not only about the difficulties marketing used books to targeted customer and the hassle of finding used books which both are very time consuming act when done traditionally but about providing alternate way e-commerce solution to hinder xeroxing of textbook among students .

1.3. Research Question

In this study there are several research questions, which need to be answered:

1. How the utilization of e-commerce technology combine with e-marketing strategies could benefit business relation, in this case buyer and seller of used books?
2. How this effort could spark technopreneurship at the faculty?

1.4. Research Objectives

1. Identifying e-commerce technology capabilities and e-marketing strategies for developing used textbooks platform for FCSIT.

2. Identifying suitable e-business model for FCSIT used textbooks exchange site.
3. Developing a free service prototype Web site of used books for students of FCSIT using suitable technology and techniques used in the e-commerce Website development.
4. Develop a guide to technopreneurship

1.5. Research Scope

The scope of this study is to create an e-commerce solution, which will concentrate on developing Faculty's Used Books E-platform for the Faculty of Computer Science and Information Technology (FCSIT), University of Malaya community. This e-commerce solution will be in a form of electronic platform for buyers and sellers of used textbook and act as intermediary between them. The development of this e-platform will utilize e-commerce technology combine with some suitable e-marketing strategies for this kind of business.

1.6. Overview of the System Function

The system will be able to assist buyers in finding used books easier and faster with lower cost and without hassle. While for the seller, the system could easily advertise their books to targeted buyers. To accomplish this sellers and buyers must register as user and their personal data will be kept private.

All the registered available used books will be listed in the Web page meaning that the Web page will assist the seller with their product list. Not only the system act as marketing tool for the seller but also is a platform for the seller and buyer to

communicate with each other by e-mails. The seller must consider the system to be their own virtual bookstores because they are responsible for updating the books status data, setting their own price and handling payment and postage.

The buyer also will have their own personal account enabling them to participate. They could compare books prices among other sellers of the same books title. The buyers also could fill in wish books list for a used book that is not available so that sellers can offer the books they wish by sending e-mail notification. Buyer could either accept or decline offers through the e-mail services provided by the system. In some cases the buyer could also be the seller.

1.7. Assumption and Limitation

1. The business model use is intermediary model where the system acts as "middle man" between sellers and buyers.
2. There is no money transaction involve because the users are students and does not have the convenience of credit card or smart card that could be used in purchasing online.
3. The payment transaction will be done conventionally based upon both parties agreement through the e-mail. The booksellers will have to handle their own payment collection and postage.
4. The users of this system are the students of FCSIT University of Malaya.

1.8. Research Methodology

In this study, the development of e-business application will be conducted following System Development Research Methodology. The System Development Research process consists of five distinctive phases (refer to Figure 1.1), which are:

1) **Construct a Conceptual framework**

- Justify a meaningful research question.
- Investigate the system requirements and functionality.
- Understand the processes and procedures of system building.
- Study the disciplines that related for new approaches and idea.

2) **Develop a System Architecture**

- Develop a unique architecture design for extensibility and modularity.
- Define functionality of the system components and interrelationship among them.

3) **Analyze and Design the System**

- Design the database and processes to carry.
- Develop the alternative solutions and choose one best solution.

4) **Build the Prototype System**

- Learn about the concepts, framework and design through the system building processes.
- Gain insight about the problems and the complexity about the system.
- Build the prototype system.

5) **Observe & Evaluate the System**

- Observe the use of the system by case and field studies
- Evaluate the system by laboratory or field experiments
- Develop the new theories or models base on the observations or experiments of the system's usage.

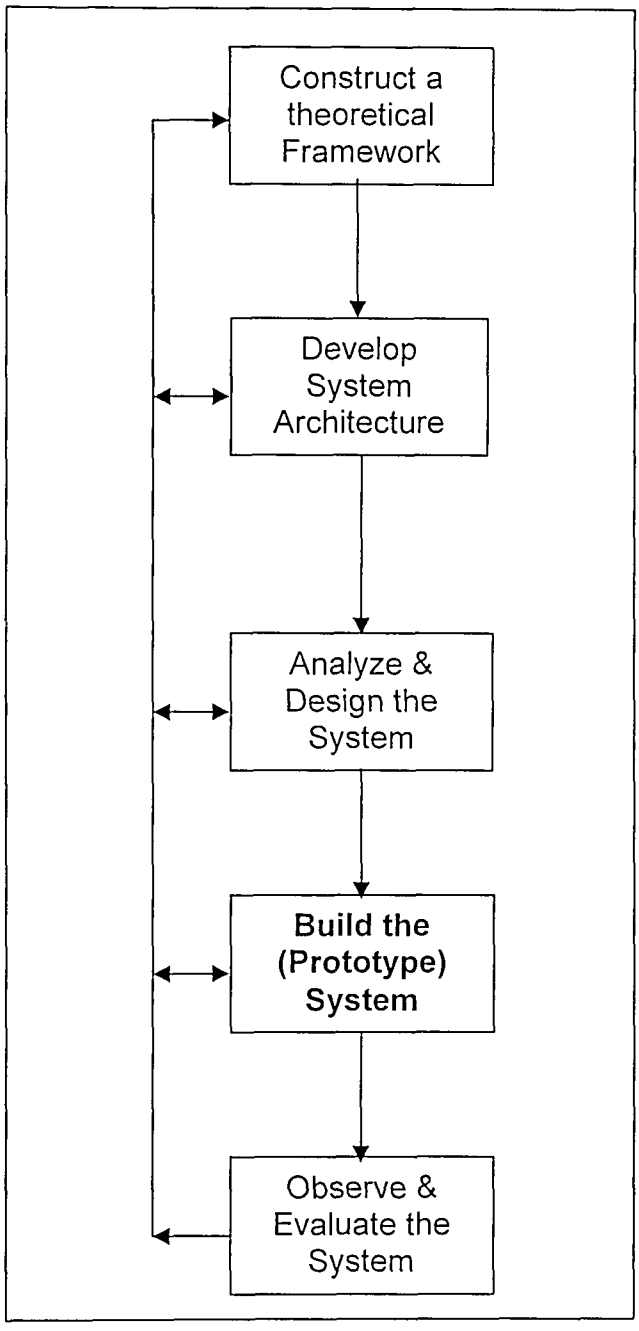

Figure 1.1
A Process for System Development Research Methodology

1.9. The Organization of Dissertation

The dissertation will consist of five chapters that will be enlightened below.

1.9.1 Chapter 1

Chapter 1 consists of a brief overview of e-commerce potential and its influence in business that leads to technopreneurship concept being born. This chapter also lists out research question, objectives, scope, assumption and limitation. There is also mentioned an overview of the system functions and methodology used.

1.9.2 Chapter 2

Chapter 2 will highlight the literature review part where the e-commerce and e-marketing potential is measured through academic reading and case studies. Several electronic business models will be identified. It will also mention about the concept of technopreneurship and their role in e-commerce growth. In this chapter will also discuss component consist in web application architecture and the software needed to build it.

1.9.3 Chapter 3

Chapter 3 will be the detail explanation of each methodology step taken. In the first step of the methodology, which is the conceptual framework, a suitable business model for Faculty's Used Book E-platform, will be build based on electronic business models mentioned in Chapter 2.