AN INVESTIGATION INTO THE IMPORTANCE OF KNOWLEDGE MANAGEMENT IN COLLABORATIVE COMMERCE

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Dedicated to my beloved family, who have molded me into who I am.

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ABSTRACT

The diffusion of e-commerce technologies has raised the hope for the development of commerce methods more adapt to develop the skills needed in today's world. In the modern changing world there is an increasing need to knowledge sharing between organizations meanwhile they are working with each other. By the working, it means different level of collaboration that could have with each other. Higher level of collaboration between organizations requests vaster knowledge sharing among them. To achieving that goal, organizations need to encourage their staffs to create and share knowledge inside the organization or share this knowledge with the organizations that have collaborated with. The term of collaborative commerce refers to organizations which collaborate with each other to produce a product or providing a service in a knowledge base environment. In this project the author tries to provide a conceptual framework and architecture to illustrate the whole idea of collaborative commerce and make it be more understandable. Furthermore, the useful tools that help organizations to create and share knowledge among their staff have been offered.

ABSTRAK

Perkembangan teknologi E-dagang telah memberikan harapan tinggi bagi kaedah pembangunan perdagangan agar lebih diterima dalam membangunkan keperluan kemahiran pada dunia masa kini. Dalam perubahan dunia moden, terdapat keperluan yang meningkat terhadap perkongsian pengetahuan dan organisasi di mana mereka bekerja antara sama lain. Bekerja bermaksud aras kolaborasi yang berbeza yang diperolehi setiap diantaranya. Aras kolaborasi yang tinggi di antara organisasi memerlukan perkongsian pengetahuan yang luas di antara mereka. Bagi mencapai matlamat tersebut, organisasi perlu menggalakkan pekerja untuk mencipta dan berkongsi pengetahuan di dalam organisasi atau berkongsi pengetahuan dengan organisasi yang mempunyai kolaborasi dengannya. Kolaborasi perdagangan merujuk organisasi yang mempunyai kolaborasi dengan yang lain bagi menghasilkan perkhidmatan dalam persekitaran berasaskan pengetahuan. Dalam projek ini, penulis cuba untuk menyediakan rangkakerja konseptual dan senibina bagi menunjukkan keseluruhan idea kolaborasi perdagangan dan membuatkannya lebih mudah difahami. Disamping itu, penggunaan alatan yang membantu organisasi untuk mewujudkan dan berkongsi pengetahuan di antara pekerja turut ditawarkan.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER 1

PROJECT OVERVIEW

1.1 Introduction

The maturation and diffusion of e-commerce technologies has raised the hope for the development of commerce methods and infrastructures more adapt to develop the skills needed in today's world. Information technology (IT) helps commerce to change from its traditional concepts to new one and let the businesses to think about the global commerce instead of local one.

Lots of businesses should interact with each other to be alive. This interaction has different aspects. As a simple and ordinary aspect, one business can only use the production of another one. For instance, a car company can order the mirror from specific company and this cooperation could stay limited as supplier and costumer. But most of the time this cooperation should go further and do more interaction for producing a specific item. Back to the car company, if you want to design a specific part

of the car, you should interact a lot with the supplier company to make sure that your design is possible or not. In some businesses, amount of interaction force the business to go from cooperation to collaboration which means that two businesses are tightly integrated and their try to produce specific item or service by working together. This kind of business called collaborative commerce.

Exchanging of information between two businesses is vital in collaborative commerce. When two businesses try to collaborate with each other, they have to find a way to exchanging the information as fast as possible which has been possible by today's technologies. Beside the information, there is still one thing that cannot exchange between two organizations easily however it is really important. This is the knowledge inside an organization.

This problem could be solved by managing the knowledge inside the organization with knowledge management tools and methods and try to share it with the collaborate partner. In this project is tried to understand the knowledge management methods and tools and their benefits and weaknesses. After that, investigate about the effectiveness of the knowledge management in collaborative commerce and how to improve the collaboration between businesses by using knowledge management methods. Finally at the end of this project the author will suppose a new executable model and preparing a case study to evaluating that supposed model in real world situation.

1.2 The Background of the Study

Internet technology has improved these few years; e-commerce has also become more mature. Chang (2003) mentioned, from 1995, enterprises have focused on elevating employee productivity and business process integration.

From 1995 to 2000, enterprises gradually shifted their attention to e-commerce, making transactions between enterprises and enterprises or customers electronic to reduce cost. After 2000 three closely related information technology disciplines have emerged which is collaborative computing, knowledge management, and electronic commerce (ecommerce). Collaborative computing enables people, groups of individuals, and organizations to work together with one another in order to accomplish a task or a collection of tasks. Knowledge management is about using knowledge as a resource for an organization and subsequently creating a knowledge organization with knowledge workers. Electronic commerce (e-commerce) is one of the fastest growing application areas for the World Wide Web. Essentially, it is about carrying out transactions on the web such as buying and selling products, as well as carrying out various activities such as training, procurement, and supply chain management Thuraisingham (1994). Effective collaboration is key to knowledge management and good knowledge management practices are essential for a successful e-business organization. More recently, organizations are going beyond collaboration, knowledge management and e-commerce. These organizations are collaboratively carrying out transactions on the web and going beyond organizational boundaries. That is, the organizations are autonomous and yet cooperate with each other. This form of collaboration has come to be known as c-commerce (or collaborative commerce) Chen (2000). There are lots of definitions for collaborative commerce. Here we mention some of the more acceptable definition:

Collaborative commerce (c-commerce) is the use of technology, especially internet based technology that facilitates collaboration amongst businesses. It is one way that information technology (IT) can lead to business transformation. C-commerce is considered by some to be the 'next phase' of the use of the internet by business; however, it may not be appropriate, feasible or possible for some, if not most SME, Rowe (2005).

C-commerce consists of all an organization's ICT bases, knowledge management and business interactions with its customers, suppliers and partners in the business communities in which it interacts. It can be horizontal competitive co-operation as well as vertical collaboration along a supply chain. Essentially it is the coming together of collaborators around IT to exploit opportunities as and when they arise.

C-commerce is an advanced form of e-commerce and it coalesces around the information exchange and activity views, while the focus of e-commerce is on the trading view, Furthermore, c-commerce does not ignore the effect views and value-chain view, which are the main focuses of e-business applications.

The building blocks of C-Commerce are consisting of three parts Thuraisingham(1994). The first building block is E-Business and E-Commerce. By definition E-Commerce involves carrying out commerce on the web, which includes buying and selling of products on the web. The term, E-Business, is about carrying out any business on the web and is broader than E-Commerce. Various aspects of E-Business are illustrated in figure 1.1:
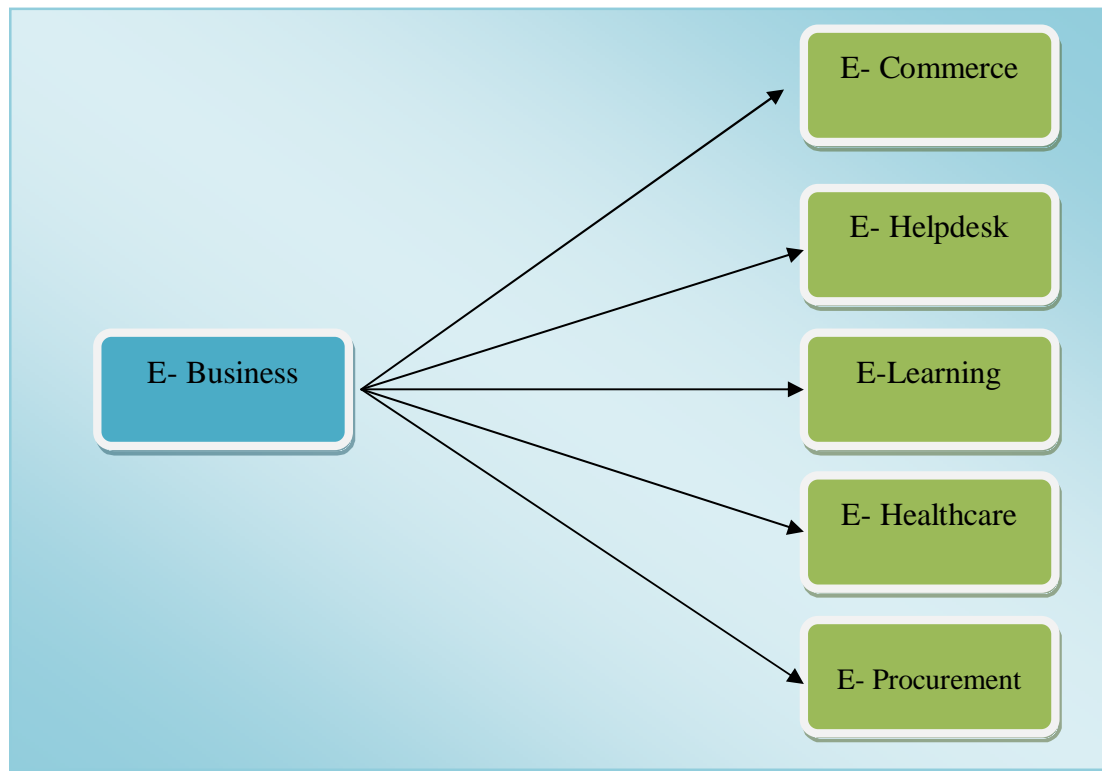
Figure 1-1: E-Business and its components

The second building block of the C-Commerce is Knowledge Management. While e-business and e-commerce enable business transactions to be performed on the web, one needs effective knowledge management and collaboration techniques for organizations to work across organizational boundaries. Knowledge management is the process of using knowledge as a resource to manage an organization. It could mean sharing expertise, developing a learning organization, teaching the staff, learning from experiences, as well as collaboration Holsapple (2000). Knowledge management essentially changes the way an organization functions. Instead of competition, it promotes collaboration. Knowledge management is dividing into three areas as show in figure 1-2. These are strategies such as building a knowledge company and making the staff knowledge workers; processes such as techniques for knowledge management including developing a method to share documents and tools; and metrics that measure

the effectiveness of knowledge management. Organizational behavior and team dynamics play major roles in knowledge management.
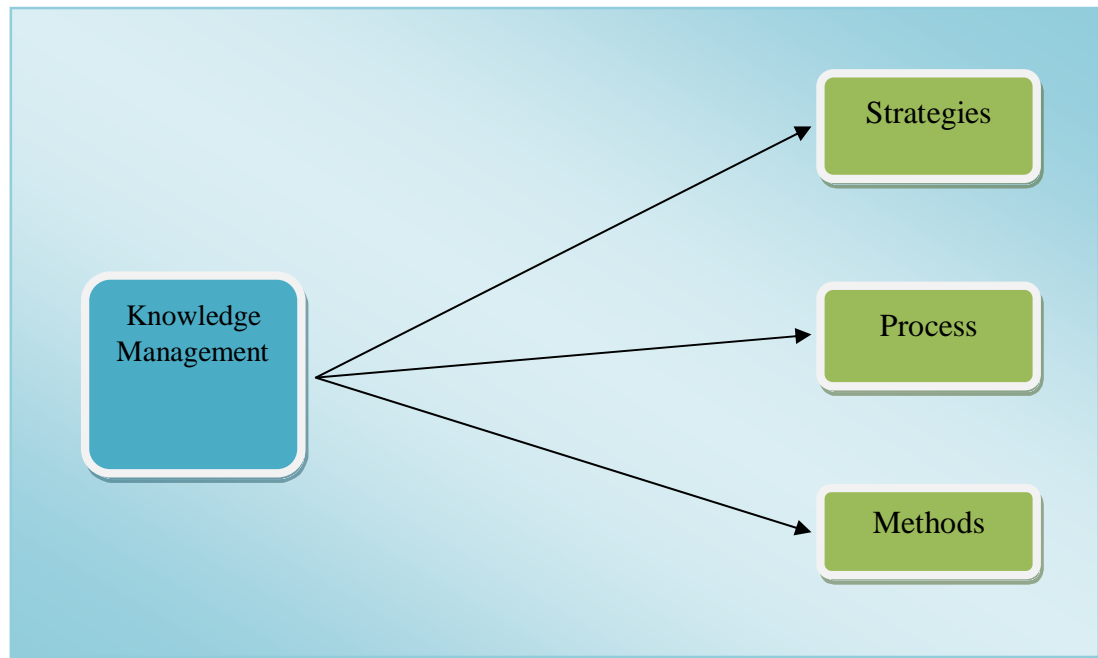
Figure 1- 2: Knowledge management components

Regarding the definition of knowledge management, specialists and scholars each have their own opinion.

Rosenberg (2001) divides knowledge management into three levels:

1. Document management
2. Information/knowledge creation, sharing and management
3. Enterprise intelligence

The final building block of the C-Commerce is collaboration. While e-commerce enables organizations to carry out transactions, and knowledge management captures the

knowledge of an organization, we still need a third component to enable organizations to work together and yet be autonomous. That third component is collaboration. As it mentioned above collaborative computing enables people, groups of individuals, and organizations to work together to accomplish a task or a collection of tasks. These tasks could vary from participating in conferences, solving a specific problem, or working on the design of a system. Specific contributions to collaborative computing include the development of team workstations (where Groupware creates a shared workspace supporting dynamic collaboration in a work group), multimedia communication systems supporting distributed workgroups, and collaborative computing systems supporting cooperation in the design of an entity (such as an electrical or mechanical system).

1.3 Statement of the Problem

The problem statement from this project is:

How to develop an effective Knowledge management for collaborative commerce?

While conducting this project study, there are some important questions arise:

   i.   What are the elements of knowledge management in collaborative commerce?
   ii.   How to analyze the effectiveness of the Knowledge management in collaborative commerce?
   iii.   How to improve the collaborative commerce by using knowledge management?

1.4 Objective of the Project

The objectives must be based on the problem statement/questions.

   i.   To describe the effectiveness of knowledge management in collaborative commerce.

  ii.   To explore the major problem of collaborative commerce in using knowledge management

 iii.   To propose the strategy to improve the effectiveness of knowledge management in collaborative commerce

1.5 The Scope of the Project

Since the aspects of chosen problem area of collaborative commerce area many, the researcher has tried narrow down the focus. The aim of the research is to find out most efficient and applicable outcome in project base pedagogy areas and trying to understanding the relation between various areas. The outcome can be in a format of a new model to integrate all area that can be a guideline for developing new computer supported learning system. It is tried to use some learning theories and some useful guidelines have well formatted computer supported project base learning. The project scopes that have been identified are as follows:

   i.   The aim of the research is to find out a guideline for using knowledge management in collaborative commerce

ii. The study focus on collecting, analyzing and comparing effective approaches in using knowledge management

iii. This research try to understand the elements of knowledge management and the way to adopt and improve them into collaboration environment

iv. The aim of the project is to provide guideline for a person who involved in business to make more effective collaboration in his business

1.6 Importance of the Project

In the last few years, a significant growth has been noticed in collaboration between organizations. As mentioned before, the main element of collaboration between organizations is information. Nowadays, organizations not only need to exchange information, if they want more effective collaboration, they also need exchanging knowledge. Therefore, it is important to study the tools and methods of managing knowledge and using them to have more effective collaboration between organizations.

1.7 Summary

In this first chapter a brief introduction about the project and how the project is going to be conducted has been discussed. The problem background and statement has also been discussed in this chapter to give an introduction of the project and to explain

why this project has been proposed. The objective, scope and the importance of this project have also been pointed out.