SUCCESS FACTORS FOR ICT SHARED SERVICES IN HIGHER EDUCATION INSTITUTIONS

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A dissertation submitted in partial fulfillment of the
requirement for the award of the degree of
Master of Information Technology

Faculty of Computing
Universiti Teknologi Malaysia

MARCH 2018

This dissertation is dedicated to my great parents Mhd Hashim b. Yusof and Mariam bt Abdul Rahman, who never stop giving of themselves in countless ways, my dearest husband, Mohd Azhar b. Mohd Dzahari, who always be my greatest support and my strongest motivation, my beloved kids, Nur Damia and Nur Aliya, whom I love more than words can say.

ACKNOWLEDGEMENT

In the Name of Allah, the Most Merciful, the Most Compassionate all praise be to Allah, the Lords of the worlds and prayers and peace be upon Mohamed His servant and messenger. First and foremost, I must acknowledge my limitless thanks to Allah, the Ever-Magnificent, the Ever-Thankful, for His Helps and bless. I am totally sure this work would never become truth without His guidance.

I would like to express heartfelt gratitude, to my supervisor Dr Suraya bt Miskon, who has been always generous during all phases of the research. Her advices and guidance bringing me to the finish line. Besides that, I highly appreciate the efforts expended by my co supervisor Dr. Nazmona bt Mat Ali. I have learned a lot from her and I am fortunate to have her as my mentor.

I would like to take this opportunity to say warm thanks to the lecturers of Faculty Computing that involved either directly or indirectly in helping, assistance and guidance for me to complete this dissertation. Among them are Dr. Norasnita, Dr Fadzil, Dr. Azizah and Dr. Norminshah.

I also would like to express my wholehearted thank to my family for their generous support they provided me throughout my entire life and particularly through the process of pursuing the master degree. Because of their unconditional love and prayers, I have the chance to complete this thesis. I owe profound gratitude to my husband, Mohd Azhar, whose constant encouragement, limitless giving and great sacrifice, helped me accomplish my master study. Last but not least, deepest thanks go to all people who took part in making this thesis real.

ABSTRACT

Shared service is a consolidation of support functions in an organization, to provide services as efficiently and effectively as possible. The implementation of shared services in an organization becomes crucial particularly with reference to ICT shared services. However, there is a deficiency in the means of measuring the extent of successful ICT shared services. The purpose of this study is to identify the factors that influence the success of ICT shared services and determine the level of ICT shared services implementation. The study uses a systematic literature review (SLR) to identify the factors characterizing the success of the ICT shared services model. The content of this study was acquired from various resources including papers and books, which were used to find the ICT shared services factors. The SLR revealed six factors which influence the success of ICT shared services in the organization. These factors are organized using multiple theories which are split into three different perspectives: technologies, organizational and the personnel responsible for producing the ICT shared services model. This study deploy a questionnaire survey method to evaluate the initial success factor and using Descriptive Statistics to validate the data.

ABSTRAK

Perkongsian perkhidmatan adalah salah satu fungsi sokongan di dalam sesebuah organisasi untuk menyediakan perkhidmatan dengan cekap dan berkesan. Pelaksanaan perkongsian perkhidmatan dalam sesebuah organisasi menjadi sangat penting terutamanya merujuk kepada perkongsian perkhidmatan dalam sektor ICT. Tujuan kajian ini adalah untuk mengenal pasti faktor-faktor yang mempengaruhi kejayaan perkongsian perkhidmatan ICT dan menentukan tahap pelaksanaan perkongsian perkhidmatan ICT. Kajian ini menggunakan kajian literatur secara sistematik (SLR). Kandungan kajian ini diperoleh daripada pelbagai sumber termasuk kajian terdahulu dan buku, yang digunakan untuk mencari faktor perkongsian perkhidmatan ICT. Melalui kaedah SLR, enam faktor yang mempengaruhi kejayaan perkongsian perkhidmatan ICT dalam organisasi dapat dikenal pasti. Faktor-faktor ini dianjurkan menggunakan *multiple theories* yang dibahagikan kepada tiga perspektif iaitu teknologi, organisasi dan tanggungjawab pengurusan untuk menghasilkan model perkongsian perkhidmatan ICT. Kajian ini menggunakan kaedah kaji selidik untuk menilai faktor-faktor yang mempengaruhi kejayaan dalam melaksanakan perkongsian perkhidmatan dalam institusi pengajian tinggi. Selain itu, untuk memastikan keberkesanan faktor-faktor ini, kaedah *Descriptive Statistics* telah di implikasi.

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CHAPTER 1

INTRODUCTION

1.1   Overview

Shared services are defined as the consolidation of support functions (such as human resources, finance, information technology, and procurement) from several departments into a stand-alone organizational entity whose sole mission is to provide services as efficiently and effectively as possible (Soalheira & Timbrell, 2014). Furthermore, as an organization undergoes a transformation, it gives primacy to the efficiency of corporate functions; at which point shared services could be considered as an alternative to outsourcing (Sako, 2010). According to Yee and Chan, shared services refer to the practice of business units, operating companies and organizations deciding to share a common set of services rather than having a series of duplicate staff functions. This serves the purpose of achieving improved operational efficiency and cost reductions (Jonathan Yee & Chan, 2009).

Based on Gartner, shared services are a centralized approach by an organization set up in order to establish a one-to-many delivery model which provides services to several areas of an enterprise thereby optimizing business values (Dreyfuss, 2016). The idea is to redistribute services which belong to a single department of an organization or group to other departments as a shared resources. When this happens, the department providing this service is potentially defined as an internal service provider.

Shared services should possess certain characteristics which make them well suited for application in the one-to-many delivery model. These characteristics of shared services include (Cassio & Simon, 2017)-

i.   Multiple departments within the organization should have a need for the same features of a candidate service.

ii. Common key elements such as quality and security measures are required at the service level.

iii. The solutions provided by the shared services should potentially be long-term and stable in terms of compatibility and usability

iv. There should not be a better commercial solution available in the market comparable to the candidate service, particularly one from commercial rivals.

v.   They should offer a cost effective solution with service level features.

vi. In terms of business value, candidate services would potentially create business benefits for both the service provider and the clients.

1.2   Background of the study

The motives for establishing shared services in organizations may include strategic (increase productivity), organizational (reduction of complexity/uncertainty), political (enhance credibility), technical (standardization of IT platforms), and economic (lower costs) benefits (Janssen & Joha, 2006b). Besides, the shared services traditionally, entail the consolidation of replicate business functions. Additionally, these shared services predominantly support functions such as Finance, Human Resources or Information Technology (IT), as separate units which provide customer-oriented services to the originating business units (Chiang, Tseng, & Chen, 2011). Therefore, this study will focus on Information Technology (IT) or Information Communication Technologies (ICT) in the shared services context.

Other than that, standardization of the process can be the best practice for the organization if they use shared services. Shared services come with some additional features such as the provision of well-standardized services which include authorization, e-form generation, digital safe and citizens' registry (Janssen & Joha, 2006a). Furthermore, ICT shared service units can also be centralized structures aimed at achieving global scale efficiencies through the provision of standardized services and IT infrastructure (Sia et al., 2008).

Among the many benefits of ICT shared services, competitive features sometimes enable service delivery outside the organization. This type of external provision is absent in traditionally centralized services. ICT shared services are business oriented and are dependent on service level agreements and business value metrics.

A candidate shared service exists only because more than one business unit has a common interest in the services. This means that the development of an ICT service for the provision of services within departments results from the approval of several business units, which help set a common goal to increase potential business values.

1.3   Statement of problem

As mention, shared services have many benefits that can apply in organization especially in HEI and to be precise in ICT area. One of it is, data collected during the interviews were then compared against the literature reviewed to yield the Shared Services Decision (SSD) model (Jonathan Yee & Chan, 2009). SSD model was used to collect the data and measure the successful using between SS and outsourcing. However, as mentioned, ICT shared services have many benefits which are applicable to organizations, but whose discussion on how to measure the

successful ICT shared services (Davies, 2011; Ulbrich & Schulz, 2014) is still lacking. From previous research, there is a module that measures the rate of success in the use of ICT shared services based on the data collected (J.a Yee, Chian, & Chan, 2009). It has been identified that there is a need to extend and validate the shared services success model (Miskon et al., 2012).

From the study, even though have many model been created, but none of it apply to the HEI and precisely in ICT Shared Services area. The main problem here is to define the suitable model that can be used to measure successful ICT shared services in HEI. This research question in this study will be divided into two main parts. The first part is the main research question and the second part is the sub research questions that support the main problem.

Main research question is derived from intention to studying the importance of ICT shared services in HEI. The main research question as below:
How to measure successful ICT Shared Services in High Education Institution?
To fulfil the main research question, sub questions are developed to support main research question. The sub questions are:

    i.   What are the factors that influence the success of ICT shared service?

    ii.   What are the factors that influence the success of ICT shared service in HEI?

    iii.   How to validate the initial success factors in ICT shared services in High Education Institution?

1.4   Purpose of study

Many of the surveys in the studies focused much on shared services success factors while neglecting the ICT shared services successful factors especially the perception of the stakeholder and users. This study fills this gap by studying ICT

shared services appropriation criteria not only to understand the ICT shared services behaviour, but also the perception of the stakeholders towards this ICT shared services and how they actually implement and use it in organization focus on HEI.

Thus, this study specifically aims at answering the question, "What are the factors influencing the success of the ICT shared service initiative in HEI". The outcome from this study is the identification of success factors and the proposal of an initial model for ICT shared services' success.

1.5   Objective of study

The outcome from this study should meet the research objective which are:

    i.   To identify the factors that influence the success of ICT Shared Services

    ii.   To propose ICT Shared Services success factors that can be used in HEI

    iii. To validate the proposed initial success factors of ICT shared services in HEI

1.6   Significant of the study

This research study could provide information on the elements, categorized by its characteristics, which could lead to the successes adoption ICT Shared Services model by HEI in Malaysia. The study provides a review on the model that combines ICT element and provider that use the ICT. The case study would be beneficial for academic researcher and HEI organization itself in study the factors, opportunities and concerns for Malaysia HEI regarding with using ICT Services.

1.7 Scope of the study

Since this study examines the ICT shared services implementation level, the Research and Development System (RADIS) in Universiti Teknologi Malaysia (UTM) was chosen to be a sample for this study. The RADIS has been known and recognized as one of the well-established research management information systems. The system was chosen for this study because of web-based integrated information and overall performance which range from simple transaction processing at the operational level to complex process. This system supports the management processes and operations in a comprehensive way in the management of all research project proposals and research projects leading up to the completion of research projects.

Data from research management system is also frequently retrieved by many external systems through integration. The data provides real time and useful information for many important purposes like payroll, claims, assessment, teaching, learning and much more. Thus, a RADIS can be considered as a valuable asset for UTM and related parties in sustaining the success. Therefore, service developer is the participant that will be evaluated based on the respondent level of understand and develop the system and have experience manage the system that provide compatibility.

1.8 Thesis Organisation

This section provides an overview of all the six chapters of this dissertation as follows:

Chapter 1 present introductory chapter has attempted to present the project outline of the thesis. Beginning with the introduction on the shared services

background followed by research problem background, the main problem statement and its related research questions. An explanation of the research inspiration is then briefly explained. The research objectives, research expected contribution, research scope and the significance of the study are also presented in this chapter. The next chapter presents a review of literature related to the context of the study.

Chapter 2 present a review of literature related to what ICT shared services successful factor. It provides definition of shared services, shared services characteristics, benefits ICT shared services and implementation ICT shared services in HEI. An overview of IS theories implementation are discussed in this chapter. The end of this this chapter concludes adoption model can be used to develop initial model.

Chapter 3 describe the methodology used for this study. A quantitative methods using a survey based questionnaire is used for the data collection in this study. This chapter also describes and justifies the research design and research approach. This chapter end with the development of the questionnaire used to collect data collection.

Chapter 4 comes out with the proposed initial model for ICT shared services success factor. This chapter present the justified factor that involve while measure the success factor in ICT shared services with discussion and conclusion of the study. From the analysed papers, 6 of success factors were identified and proposes an ICT shared services model which consists of three perspective depending on their relevance

Chapter 5 presents the data analysis and result of this study. This chapter introduce data analysis to manage data collection. The question are organised in four section which are demographic, technologies, organizational and social. The result from the data analysis of the ICT shared services factor is presented in this chapter. The data has been gathered from the survey through questionnaire to achieve the

objective of the study. The descriptive analysis has been use in order to examine the data.

Chapter 6 discusses and conclude propose initial model for ICT shared services success factors and summarized the result. Both research contributions and implications are then discussed. Limitations of the study and the future work area are also suggested in this chapter.

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