SELECTION FRAMEWORK FOR SPECIAL CHILDREN COMMUNITY KNOWLEDGE SHARING TOOL

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SELECTION FRAMEWORK FOR SPECIAL CHILDREN COMMUNITY KNOWLEDGE SHARING TOOL

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Dedicated to:

My loving and caring husband, Harmize Bin Ahmad.

My precious sons,

Muhammad Syakir Syahmi & Muhammad Za'im Zaqwan.

My parent, Sukiam Bin Sujak and Minah Binti Shukar.

My parents-in-law & all my brothers and sisters

Thank you for your prayers and understanding.

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ABSTRACT

The term Special Children (SC) is viewed as children who have learning difficulties that make it harder for them to learn or access education as compared to most children of their age. SC community consists of groups of people or organizations who share the same passion for anything related to SC. The community is seeking knowledge on ways to improve the abilities of the SC children. Knowledge Sharing-Tools (KS-Tools) have been identified as a medium for sharing and acquiring knowledge that could improve the ability of SC through regular interaction among members of the SC community. Web-based KS-Tools such as blogs, social network, instant messaging and others provide users with unlimited access in terms of time and space for the purpose of knowledge sharing. However, it was found that there is no framework that is capable of identifying appropriate KS-Tools for SC community to guide portal developers or practitioners. Thus, the main objective of this study is to develop a KS-Tools Selection Framework (KSTSF) for SC community. The proposed framework would systematically select suitable web-based KS-Tools for SC community. The framework was developed based on a knowledge audit analysis and KS-Tools capabilities. Data was collected through survey, interviews and document analysis among SC community in the Southern Region of Malaysia. A KSTSF-Tool was then developed and 10 KS-Tools were selected as appropriate tools for the SC community. Based on the 10 tools, a prototype of "*Portal Perkongsian Pengetahuan Komuniti Kanak-kanak Istimiewa* (3P3KI)" was developed to demonstrate the practicality of the framework. The framework was also verified by portal developers through KSTSF-Tool. The framework provides portal developers and knowledge management practitioners a systematic process for selecting KS-Tools appropriate for use by this SC community. Hence, it has been proven the KSTF-Tool has the capability to automatically select the most appropriate tools needed to be part of the 3P3KI portal.

ABSTRAK

Kanak-kanak Istimewa (*SC*) dilihat sebagai kanak-kanak yang mempunyai masalah pembelajaran menyebabkan mereka sukar mempelajari atau akses pendidikan dibandingkan dengan kebanyakan kanak-kanak sebaya yang lain. Komuniti SC terdiri daripada kumpulan individu atau organisasi yang berkongsi minat yang sama terhadap perkara berkaitan *SC*. Komuniti ini mencari pengetahuan sebagai wadah untuk meningkatkan keupayaan *SC*. Alatan perkongsian pengetahuan (*KS-Tools*) dikenalpasti sebagai medium berkongsi dan mendapatkan pengetahuan yang boleh meningkatkan kebolehan *SC* melalui interaksi biasa di antara ahli komuniti SC. *KS-Tools* berasaskan web seperti blog, rangkaian sosial, mesej segera dan sebagainya menyediakan akses yang tidak terhad dari segi masa dan ruang bertujuan untuk perkongsian pengetahuan kepada pengguna. Walaubagaimanapun, didapati bahawa tiada rangkakerja yang mampu mengenalpasti *KS-Tools* yang sesuai kepada komuniti SC untuk dijadikan panduan kepada pengamal dan pembangun portal. Oleh itu, objektif utama kajian ini adalah untuk membangunkan sebuah Rangkakerja Pemilihan Alatan Perkongsian Pengetahuan (*KSTSF*) untuk komuniti SC. Rangkakerja yang dicadang akan memilih *KS-Tools* berasaskan web yang sesuai untuk komuniti SC secara sistematik. Rangkakerja ini telah dibangun berdasarkan analisa audit pengetahuan dan keupayaan alatan perkongsian pengetahuan. Data telah dikumpul melalui soal selidik, temubual dan analisa dokumen di antara komuniti SC di Wilayah Selatan Malaysia. *KSTSF-Tool* kemudiannya dibangunkan dan 10 alatan perkongsian pengetahuan dipilih sebagai alatan yang sesuai untuk komuniti SC. Berdasarkan 10 alatan ini, satu prototaip "Portal Perkongsian Pengetahuan Komuniti Kanak-kanak Istimwewa (3P3KI) telah dibangun untuk mendemonstrasi tahap praktikal rangkakerja. Rangkakerja ini telah disahkan oleh pembangun portal melalui *KSTSF-Tool*. Rangkakerja ini menyediakan proses pemilihan *KS-Tools* yang sesuai digunakan oleh komuniti SC secara sistematik kepada pengamal perkongsian pengetahuan dan pembangun portal. Oleh itu, telah terbukti bahawa KSTSF-Tool berkeupayaan untuk memilih secara automatik alatan yang paling sesuai yang diperlukan untuk menjadi sebahagian portal 3P3KI.

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LIST OF ABBREVIATIONS

C&ME	-	Clinical & Medical Expert
CoP	-	Community of Practice
DFHD	-	Division of Family Health Development
MGA	-	Malaysian Government Agencies
KA	-	Knowledge Acquisition
KM	-	Knowledge Management
KC	-	Knowledge Characteristics
KS	-	Knowledge Sharing
KSTSF	-	Knowledge Sharing Tools Selection Framework
LD	-	Learning Disability
MOE	-	Ministry of Education
MOH	-	Ministry of Health
SC	-	Special Children
SE	-	Special Education
SED	-	Special Education Department
SWD	-	Social Welfare Department
3P3KI Portal	-	*Portal Perkongsian Pengetahuan Komuniti Kanak-kanak Istimewa*

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CHAPTER 1

INTRODUCTION

1.1 Overview

This research investigates the capabilities of web-based KS-Tools that would be adopted and used by Malaysian Special Children (SC) community in order to expedite knowledge sharing (KS). There are web-based KS-Tools that explicitly designed for communities, as well as tools that were designed for other purposes such as instruction, collaboration, document storage and conversation that community might adopt (Wenger et al., 2005). An exploration of the current practice of KS by the selected community aims to provide an understanding on how certain tools could be adopted in certain situation. This study aims to formulate a KS-Tools selection framework that will be used as a fundamental guide in selecting KS-Tools for SC community. Ultimately, it is hoped that SC community could acquire and share their knowledge in various situations, with ease and high satisfaction. This chapter gives an overview of the study. The overall structure of the chapter is depicted in Figure 1.1.

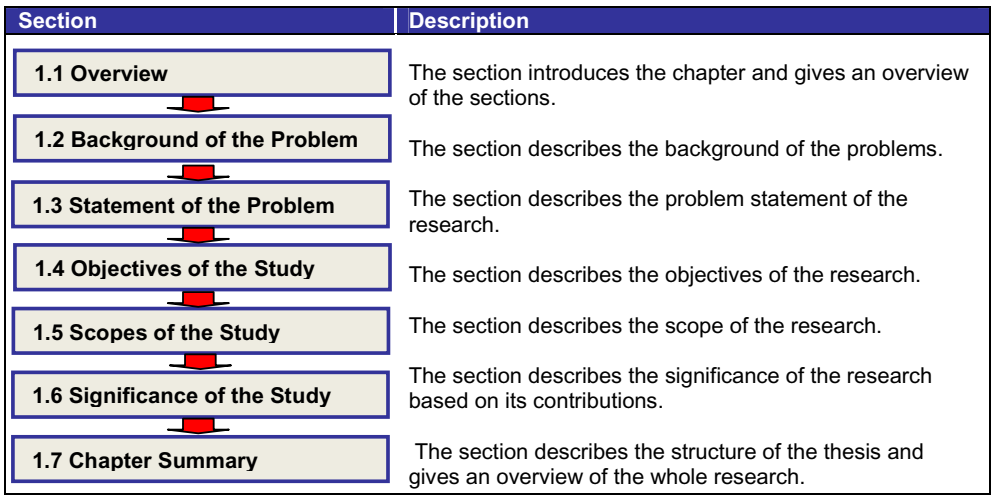

Figure 1.1 : Organisation of Chapter 1

1.2 Background of the Problem

Special Children (SC) is viewed as children who have learning difficulties that make it harder for them to learn or access education as compared to most children of their age. SC with learning disabilities is different from normal children. They are unable to fend for themselves in doing any decision making due to their conditions, without the help from parents, teachers or other member in SC community. In order to ensure the children get the best nursing and education based on their condition, there are many requirements of relevance knowledge that SC community needs. However, in Malaysia context, the provision of this knowledge in documented form such as books, journals, websites or others are very limited. Most of the knowledge is remain in the CoPs' mind as they gained that knowledge based on experiences. Different group of people in SC community may hold different type of knowledge and carry out different types of activities. In doing certain activities, they will face some issues and they always learn on how to do it better. Others' experience and knowledge become so valuable to others though there is limited in documented form. There are so many questions raise up. They need the support and help from people who understand their situation. They are

always hunger of knowledge in order to perform their daily activities as well as to improve abilities of the children. Therefore, it is important to provide this community with an appropriate KS-Platform that they can use to interact and communicate with other members in SC community to share their knowledge and experience.

The single KS Platform is integration of various KS-Tools. However, there are many KS-Tools available and these tools keep evolving and changing (Wenger et al., 2005). In fact, each tool has its own weaknesses and strengths since those tools have different features and capabilities. The tool usefulness will relate back on how and when it is relevant. This led to the selection process becomes difficult to portal developer as well as to the community. In addition, there is no specific selection process for community though there is for organization whereby involves different requirements.

KS-Tools selection method is not a linear process that can be prescribed in a step by step approach. It has many loops, intricacies and iterations that depend on the circumstances and constraints under which it takes place. Selecting KS-Tools become complex depending on requirements of SC community. There are various aspects should be considered and it is the challenge for portal developer to identify them. SC community members have different background including their education level and ICT literacy. They possess different knowledge and skills in manipulating available KS-Tools. With limited ICT knowledge, SC community face difficulties to choose appropriate KS-Tools that could be applied. Selecting inappropriate tools could reduce the benefits of sharing knowledge. This issue should also be considered by portal developer. Portal developer also should be concerned about how SC community implementing KS to perform their daily tasks such as who participates in the KS process; what knowledge being shared; current mechanisms and elicitation technique being used as well as issues and problem they face during KS. With various aspects involves in KS, there is a need to identify the crucial criteria that influencing the KS-Tools selection process.

1.3 Statement of the Problem

Based on the problem background discussed earlier, it can be summarized that KS platform SC community is important. However, there are difficulties in choosing the right KS-Tools to be embedded in the knowledge sharing platform for SC community. The problem statement for this study can be derived as "There is no framework to guide portal developers or practitioners to select appropriate KS-Tools for SC community".

Therefore this study intends to answer the research questions related to this study as identified below:

- "How to select appropriate KS-Tools for the SC community?"

The main research question can be decomposed into several research questions:

- What are the knowledge characteristics influencing the KS-Tools selection process for SC community.
- How to characterize the capabilities of web-based KS-Tools.

1.4 Objectives of the Study

The main objective to be study is:

- To develop a KS-Tools selection framework for Special Children community.

The sub-objectives that could be achieved are:

- To identify the knowledge characteristics influencing the KS-Tools selection process for SC community.
- To characterize the capabilities of web-based KS-Tools based on identified knowledge characteristics.

1.5 Scope of the Study

The scope of this study will cover the following aspects as follows:

(i) This study focuses on special children community in Malaysia context.

(ii) The relevant target agencies that are being studied are the Social Welfare Department (Ministry of Women, Family & Social Development), the Division of Family Health Development (Ministry of Health) and the Special Education Department (Ministry of Education).

(iii) Web-based KS-tools that have been studied only covered the available tools being used during this study was conducted.

(iv) The possible stakeholders that are being studied are Parent, Educator, Researcher and Medical & Clinical Expert.

(v) Respondents of this study involve people located in Kuala Lumpur, Selangor, Melaka and Johor Bahru.

1.6 Significance of the study

This research is significant as it contributes to theory, practice and methodology as follows:

- The proposed framework not only identifies characteristics considered in KS-Tools selection process but also identify how the whole process should be conducted. The result from this study could be used to support future research on Knowledge Management especially in Knowledge Sharing.
- Development of the KSTF could assist in the implementation of knowledge sharing initiatives in the SC community. This study provide insights into an area neglected by many researcher but very important to a civil and caring society.
- Development of the KSTF-Tool leads to systematic and quick KS-Tools selection process. The identification of the criteria influencing the KS-Tools Selection process could be utilized by other portal developers or practitioners.
- Allow portal developers and the community as a whole to have more effective development of the technology. This allows the technology being appropriated and utilized in a more effective way so that SC community is able to gain maximum benefits from the technology.
- Development of 3P3KI portal would expedite KS among SC community and ultimately may enhance the abilities of SC.

1.7 Chapter Summary

In this chapter, the importance and necessity of having a structured framework for KS-Tools selection process were introduced. In the following chapter, the literature will be reviewed in terms of issues related to this study.

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