

KNOWLEDGE CREATION COMMUNITY PORTAL FOR RESEARCH
DEVELOPMENT

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A dissertation submitted in partial fulfilment of the
requirements for the award of the degree of
Master of Science (Information Technology - Management)

Faculty of Computing
Universiti Teknologi Malaysia

JANUARY 2014

ACKNOWLEDGEMENT

First and foremost, my unlimited and sincere appreciation goes to the Lord of the seven heavens and earth ALLAH (SWT) for His endless mercies, blessings and guidance through from birth till now and forever.

My sincere appreciation also goes to my supervisor the person of **DR. Roliana Ibrahim** for her support and encouragement to ensure this work is a success. My earnest appreciation also goes to all my friends who contributed to the success of this study and the knowledge acquired in cause. To you all I say thank you.

I shall forever be grateful to my parent, my siblings, and their families, to them I am highly indebted and words alone cannot describe my gratitude.

ABSTRACT

Developing thesis research remains the central requirement of graduation for most universities. Lack of personal knowledge and experience are among the main challenges facing post graduate students during their research completion. Failure to resolve these issues could lead to drop out or delay their graduation. It is considered that previously unacquainted research students who have already gone through the research writing can be a good knowledge and experience resource for those who have just started. It is a highly desirable to help post graduate students in order to overcome their difficulties in research development through facilitating experience and knowledge-sharing. Online communities and social networking have become important aspects in information systems technology nowadays. Developing or emerging these online communities for connecting educators can establish a powerful form of sustained professional learning. The purpose of this study is to develop web based community of knowledge-creation for research development, to help post graduate students overcome their research development difficulties, and to achieve such strategically professional sustainability. Multi-methodological approach was used for this study as it is more advisable for information system development research. The research was started by observation, literature review, and interviews to understand the current situation and identify required web tools and knowledge conversions within research development activities; next a questionnaire is used to develop the proposed model. Finally the information system was developed based on the proposed model. The user acceptance test proofs that the proposed model and developed system can successfully implemented and help post graduate students to overcome their difficulties.

ABSTRACT

Penyediaan tesis penyelidikan masih merupakan kepentingan utama bagi keperluan pengijazahan di kebanyakan universiti. Pengetahuan dan pengalaman yang tidak mendalam adalah antara cabaran utama yang dihadapi oleh pelajar lepasan ijazah dalam penyiapan tesis mereka. Kegagalan menyelesaikan isu ini menyebabkan pelajar tercicir atau melambatkan pengajian mereka. Kajian ini beranggapan bahawa pelajar lepasan penyelidikan yang telah melalui proses penulisan penyelidikan boleh menjadi sumber pengetahuan dan pengalaman yang baik bagi mereka yang baru sahaja bermula. Ianya sangat wajar bagi membantu pelajar lepasan ijazah dalam usaha untuk mengatasi masalah mereka dalam penyelidikan melalui perkongsian pengalaman dan pengetahuan. Komuniti atas talian dan rangkaian sosial telah menjadi aspek penting dalam sistem teknologi maklumat pada masa kini. Memulakan atau membangunkan komuniti atas talian untuk menghubungkan pendidik boleh mewujudkan satu pembelajaran profesional berterusan yang perkasa. Kajian ini bertujuan membangunkan masyarakat berpengetahuan berasaskan web untuk penyelidikan, membantu pelajar pasca siswazah mengatasi masalah membangunkan penyelidikan, dan untuk mencapai profesional yang berkemampuan serta strategik. Pelbagai kaedah kajian digunakan kerana ia lebih wajar dalam penyelidikan pembangunan sistem maklumat. Ia bermula dengan pemerhatian, kajian literatur dan temubual untuk memahami keadaan semasa dan mengenalpasti peralatan web yang diperlukan serta pengubahsuaian pengetahuan dalam aktiviti penyediaan penyelidikan; seterusnya soal selidik digunakan untuk membangunkan model. Akhirnya sistem maklumat telah dibangunkan berdasarkan model cadangan. Ujian penerimaan oleh pengguna membuktikan bahawa model cadangan dan pembangunan sistem berjaya dilaksanakan serta ia membantu mengatasi masalah pelajar pasca siswazah.

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CHAPTER 1

PROJECT OVERVIEW

1.1 Introduction

In the current institutional environment, knowledge has become more and more important. It participates in the everyday work problem solutions and has a key role in improving the efficiency and effectiveness of the institution. These importance and valuableness become higher in the academic environments. In the higher education institutes post graduate students as the community of practice (Cop) need to accomplish their research. Knowledge about how to conduct the research it is highly desirable to be shared among this community.

Lack of personal knowledge and experience in thesis research remains a central problem for many postgraduate students, which could lead to drop out or delay their graduation. Various factors can facilitate research completion, and learning from others' experiences is one of them. Going through research writing can be especially beneficial and an experience resource for research students who have just started. Similarly, the new participants feel encouraged and inspired when they witness the success of their previous peers. It is also helpful to be connected with those who can do well in thesis research (Jane, 2010).

Various procedural knowledge about conducting research and what some of the students are doing can help others to perform their research easily and avoid duplication of effort. This knowledge includes, specifically: research ideas designed

to identify new research gaps or problems, prior knowledge to choose appropriate methods, how to apply these research methods based on the needs of each methods. In addition how to avoid problems and issues facing students during conducting their research, how to promote the research quality and publish their finding (Niedderer & Imani, 2009).

It is important to facilitate the creation and sharing of knowledge which gains significance through experiences with those who need it especially new students. One of the most powerful solutions for knowledge sharing and creation can be found in online community. The online community inspires self-learners to discuss and learn from the problems/situations of others, as it enhances collaborative thinking, sharing personal experiences, etc. Individuals in online communities are allowed to disseminate their own opinions and thoughts. In addition the members are also encouraged to learn from other online community members' experiences and thoughts (Johnson, 2001).

A community of practice is a group of members who are interact with each other's for sharing and learning based on common interests. It is believed that these communities are necessary for both the knowledge creation and sharing, where learning process is done by interacting with others (Estabrooks et al, 2006). For this research post graduate students are selected as the community of practice.

1.2 Problem Background

University Teknologi Malaysia (UTM) implements key performance indicator (KPI) strategic initiative to promote research quality and performance among its PG students. Through this the university is attempting to achieve stability development and survival measures. This strategic initiative puts more workload on the students so as to improve their research quality in order to achieve university goals.

However, students have to face many challenges during conducting their research. Lack of personal knowledge and experience in thesis research remains a central problem for many of postgraduate students, which could lead to drop out or delay their graduation. Among those problems for instance, how to find suitable topic, right methodology, and apply these methodologies. This knowledge and guidance are difficult to be covered by the supervisors, since they have many students under their supervision. Under this circumstance, it will be very useful to provide a web portal for students to share their knowledge.

However, these tools are not fully utilized by the university to provide communication among post graduate students community. Therefore, to overcome the problem of communication and knowledge sharing among PG students, the idea of the study is to develop an online community portal for knowledge creation and sharing in research domain, to provide an effective way of communication and interaction between the students and their research colleagues. Consequently, this will reduce the individual efforts, also to make the research process which is done individually more social.

1.3 Problem Statement

One of the major problems that face PG students during conducting their research is lack of experience and procedural knowledge about how to do their research. For this purpose many universities provide an academic centre to help students' especially new students during their research process.

Online community portal is powerful web system which can help students to share their knowledge and learn from each other's experience. The research revolves around the question of developing web-based community for communication and knowledge sharing among the students.

Therefore, the main research question for this research would be “How to develop an online community portal, to improve knowledge creation for research development among post graduate students in UTM context?”

To address the main question several sub questions are needed to be answered which they are:

- i. What are the web2.0 tools for online community, and what type of knowledge sharing activity needed for research development?
- ii. What model can be used to improve knowledge creation among UTM post graduate students?
- iii. How to develop the community portal of knowledge creation?
- iv. How to test the online community portal?

1.4 Project Objectives

The objectives of conducting the research are:

- i. To identify required online community portal tools and knowledge sharing activity among students community.
- ii. To propose knowledge creation model for research development.
- iii. To build a prototype platform for PG students to promote their knowledge sharing and communication.
- iv. To evaluate the prototype functionality acceptance by the users.

1.5 Scope of the Project

- i. The study involves the post graduate students.
- ii. The research includes explicit and tacit Knowledge which involved within research development.
- iii. The research focus on online community for faculty of computing.

1.6 Importance of the Project

The finding of study which is online community portal will enable PG students to share knowledge and learn for each other's experiences. Knowledge sharing plays an important role in developing the student's community, with that, it helps them overcome the difficulties of research conducting process. The system will provide them with suitable knowledge sharing and communication tools to develop more social environment. Thereby, this will lead to more convenient research process with higher content quality.

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