UNIVERSITI PUTRA MALAYSIA

RELATIONSHIP BETWEEN INDIVIDUAL BELIEFS AND USAGE OF ONLINE KNOWLEDGE SHARING TECHNOLOGY, AND MODERATING EFFECTS OF COGNITIVE STYLE AMONG ACADEMICIANS IN MALAYSIAN RESEARCH UNIVERSITIES

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FPP 2016 38

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By

KOMATHI MUNUSAMY

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of Philosophy

October 2016

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DEDICATION

This thesis is dedicated to my parents L.P.Munusamy and Sarathambal, my husband Selveratinam and my kids, Saiharan, Subhadra and Yuvanathraj, and not forgetting all my brothers, sister, brother-in-law, sister-in-laws and all my family members.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the Degree of Doctor of Philosophy

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October 2016

Chairman : Associate Professor Khairuddin B. Idris, PhD
Faculty : Education Studies

Knowledge is a crucial device for institutions of higher learning, more specifically to Research Universities. In fact, the growth of these institution ties solidly to their capability of obtaining, managing and sharing their knowledge. Knowledge sharing technologies i.e knowledge repositories are introduced and used in universities as an intellectual saviour in promoting the management and sharing of knowledge among the academic staffs. However, previous studies indicated that the knowledge that resides within individuals is hard to be transferred to others, as not all academics are willing to share it openly. Past literature has indicated a significant relationship between functional determinates and acceptance or rejection of a technology. However, most of the previous studies did not consider arousal as an emotional determinant in understanding the usage of online knowledge sharing technology. Thus, in this study, the technology acceptance model (TAM) and the hedonic consumption model was applied to examine the relationship between individual beliefs (perceived ease of use and perceived usefulness) and emotional element (arousal) towards usage of online knowledge sharing technology among academic staffs in research universities in Malaysia. Moreover, the study also examined the moderating effect of cognitive style on the relationship between the independent variables (perceived ease of use, perceived usefulness and arousal) and the dependent variable (usage of online knowledge sharing technology).

In this quantitative study, a total of 321 respondents were surveyed. A multistage sampling technique was used to select the respondents from the five research universities in Malaysia. Data were gathered using a structured, self-administrated questionnaire where the items of the questionnaire were adopted from pervious literature. The questionnaires were administrated to the respondents by the researcher. The descriptive analysis were analysed using SPSS and the contribution of perceived ease of use, perceived usefulness and arousal on usage of online knowledge sharing technology were determined using structural equation modelling (SEM-AMOS).

Results from the Pearson correlation analysis showed that, there is a significant relationship between perceived usefulness, perceived ease of use, arousal, and usage of knowledge sharing technology. Moreover, the analysis of the structural equation modelling indicated that the standardized path coefficient were consistent with the hypothesis by indicting the significant contribution of predictor variables to the outcome variables based on the goodness-of-fit indices: Chi – Square χ^2 (CMIN) = 489.913 (df = 203), Relative χ^2 (CMIN/df) = 2.413, p = .000, AGFI = .849, GFI = .879, CFI = .945, IFI = .945, NFI = .910, TLI = .937, RMSEA = .066. Moreover, the Structural Model also indicated that about 74% of variances in dependent variables i.e. usage of online knowledge sharing technology was explained by the predictor variables entered into the Structural Equation Modeling respectively.

Base on the standardized regression weight in the hypothesized path model showed that perceives ease of use, perceived usefulness and arousal are significant predictors of usage of online knowledge sharing technology. Moreover, the relationship between arousal and usage of online knowledge sharing technology was further strengthen with cognitive style.as a moderator. The findings of this study can be used by policy makes to implement policies and activities to strengthen the emotional bonding between academics and the technology in order to facilitate knowledge sharing behaviour in research universities in Malaysia.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

HUBUNGAN ANTARA KEPERCAYAAN INDIVIDU DENGAN PENGGUNAAN TEKNOLOGI PERKONGSIAN PENGETAHUAN SECARA ONLINE DAN PENYEDERHANAAN KESAN GAYA KOGNITIF DI KALANGAN AHLI-AHLI AKADEMIK DI SEKTOR KAJIAN UNIVERSITI MALAYSIA

Oleh

KOMATHI MUNUSAMY

Oktober 2016

Pengerusi : Profesor Madya Khairuddin B. Idris, PhD
Fakulti : Pendidikan

Ilmu adalah penting untuk institusi-institusi pengajian tinggi, khususnya untuk universiti bertaraf penyelidikan. Pada umumnya, pertumbuhan institusi pendidikan ini bergantung kepada kemampuan mereka untuk mendapatkan, mengurus dan berkongsi pengetahuan. "Online knowledge sharing technology (i.e. knowledge repositories)"diperkenalkan dan digunakan di institusi pengajian tinggi untuk meningkatkan dan mempromosikan pengurusan dan perkongsian ilmu di kalangan kakitangan akademik. Walau bagaimanapun, kajian sebelum ini menunjukkan bahawa pengetahuan atau ilmu yang ada dengan individual adalah sukar untuk dipindahkan kepada orang lain. In adalahkan kerana setiap individual adalah berbeza dari segi pesonality and ada di kalangan mereka yang tidak sanggup untuk berkongsi ilmu. Kajian lepas telah menunjukkan wujudnya hubungan yang signifikan antara persepsi indiviudal dan emosi ke arah tingkah laku manusia. Walau bagaimanapun, kebanyakan kajian lepas tidak mengambil kira pemboleh- ubah emosi sebagai pembolehubah bergerakbalas dalam memahami tingkah-laku individual untuk menggunakan "online knowledge sharing technology" (repositori ilmu pengetahuan) dalam proses perkongsian ilmu pengetahuan. Oleh itu, dalam kajian ini, "Technology Acceptance Model" (TAM) dan Hedonic Consumption Model digunakan untuk mengkaji hubungan antara pembolehubah bergerakbalas ke arah tingkah laku di kalangan staf akademik di universiti penyelidikan di Malaysia dalam aktiviti perkongsian ilmu pengetahuan.

Selain itu, kajian ini juga mengkaji kesan pemboleh ubah kebolehan kognitif sebagai "moderator" dalam mempengaruhi hubungan antara pembolehubah bergerakbalas dengan pembolehubah bersandar.

Dalam kajian kuantitatif ini, seramai 321 responden telah dikaji dan teknik "multistage sampling" digunakan untuk memilih responden daripada universiti-universiti penyelidikan di Malaysia. Data telah dikumpul melalui soal selidik berstruktur, di mana item-item soal selidik telah diambil daripada kajian sebelumnya. Soal selidik ini telah ditadbir sendiri oleh penyilidik kepada responden. Analisis deskriptif telah dianalisis dengan menggunakan SPSS dan hubungan antara pembolehubah telah ditentukan dengan menggunakan model "structural equation modeling" (SEM-AMOS).

Hasil kajian ini menunjukkan bahawa terdapat hubungan yang signifikan antara kegunaan system dengan penbolehubah bergerakbalas . Selain itu, analisis "structural equation modeling" menunjukkan bahawa "standardized path coefficient" adalah selaras dengan hipotesis berdasarkan Indeks . Chi – Square χ^2 (CMIN) = 489.913 (df = 203), Relative χ^2 (CMIN/df) = 2.413, p = .000, AGFI = .849, GFI = .879, CFI = .945, IFI = .945, NFI = .910, TLI = .937, RMSEA = .066. Selain itu, model SEM juga menunjukkan 74% daripada perubahan dalam pembolehubah bersandar dipengaruhi oleh pembolehubah bergerak balas.

Berdasarkan keputusan ini, penyelidik membuat kesimpulan bahawa "perceived ease of use", "perceived usefulness" and 'arousal" adalah peramal kepada penggunaan "usage of online knowledge sharing technology". Malahan hubungan diantara "arousal' dan 'usage of online knowledge sharing technology" dikukuhkan lagi dengan "cognitive style". Hasil kajian ini boleh digunakan oleh pembuat dasar untuk melaksanakan dasar-dasar dan aktiviti bagi mengukuhkan ikatan emosi antara akademik dan teknologi untuk memudahkan tingkah-laku staff akademik di Universiti Penyelidikan di Malaysia kearah perkongsian pengetahuan.

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This study has given me a unique experience to create new knowledge and wonderful new relationship. First, I thank the God for granting me this opportunity, strength and patience to successfully completing this PhD programme.

I would like to take the time to particularly express my gratitude to the members of my supervisor committee. A special thanks to Professor Dr Khairuddin Idris , who has always been professionally supported, encouraged and guided me throughout the journey of my study. I would also like to express my sincere gratitude and thanks to Dr Zoharah Omar for her professional support particularly her expertise in statistical analysis and data interpretation. I want to also thank Dr Wahiza for her support and contribution.

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Special appreciation goes to my parents, LP Munusamy and Sarathambal; my wonderful husband Selveratinam, my sons Saiharan, and Yuvanathraj, my daughter Subhadra, and my entire siblings for their patience, continued moral support, encouragement, love and endless prayers.

I certify that a Thesis Examination Committee has met on 17 October 2016 to conduct the final examination of Komathi a/p Munusamy on her thesis entitled "Relationship between Individual Beliefs and Usage of Online Knowledge Sharing Technology, and Moderating Effects of Cognitive Style among Academicians in Malaysian Research Universities" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Declaration by graduate student

I hereby confirm that:

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Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) were adhered to.

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LIST OF ABBREVIATIONS

χ^2	Chi-Square
AGFI	Adjusted Goodness-of-Fit
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CA	Cognitive Differences
GFI	Goodness-of-Fit Index
IFI	Incremental Index of Fit
UOKST	Usage of Knowledge Sharing Technology
KSB	Knowledge sharing Behaviour
PUE	Perceived Usefulness
PEOU	Perceived Ease of Use
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
RUs	Research Universities
SEM	Structural Equation Modeling
TAM	Technology Acceptance Model

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter gives the general background of the study, statement of the problem, research questions, objectives of the study, significance of the study, conceptual and operational definition of the terms, and organization of the study.

1.2 Background of the Study

The rapid change in the business environment that is increasingly driven by technology change has required the organisation to be equipped with a competent workforce who can stay abreast of the latest innovations. A change in technology will radically transform how employees communicate, collaborate and create in an organization. As such, this has called the need for Human Resource Development (HRD) practitioners to improve the performance of its members by supporting organization's business strategies with sophisticated Information and Communication Technologies (ICT) capabilities. HRD's main goal has always been to enhance and improve organizational effectiveness by developing individual knowledge, skills, and expertise (Wang, 2012). Of these, technology has the most reflective impact on organisations. With that, organizations are believed to be able to seek production, service, and innovation advantages to enhance organizations' performance.

The efforts of the government of Malaysia on ICT development can be traced to the beginning of vision 2020 in 1991 as well as to the inception of Multi Media Super Corridor in 1996. Ever since then, the Malaysia Economic Development plan, have implemented numerous policies on technology advancement. (Juhary, 2005). The implementation of technology is essential because the turbulent and competitive environment has brought tremendous change to organizations. As such, technology innovations and adaptations in organizations enhance the organization's ability to be highly competitive by quickly adapting and changing deliberately, systematically and timely. Hence, a technological revolution will be necessary to provide core competence to organizations.

The revolution of technology is seen in various sectors, including the education field. Malaysia has significantly transformed itself from an input-driven growth strategy to one that is increasingly driven by the knowledge-based thus leading towards a knowledge society and stable economy. In this situation, the widespread diffusion of ICT and enhances networking capabilities have significantly modified learning and teaching activities within the institutions of higher learning (Wagner et al, 2008). Nevertheless, the incorporation of ICT in the field of education has considerably changed academic involvement in teaching, as well as research activities. The progress of educational technology infrastructure and facilities has provided an opportunity for academics around the world to collect and share valuable knowledge, information, and ideas across functions, divisions, and geographical boundaries, consequently transforming the country education sector into knowledge based- society.

Knowledge, in general, is an organisation or an individual that possesses facts, information, or skills through personal experience or education. The concept or the term knowledge is indeed a powerful attainment by organizations to achieve competitive advantage. There are two versions of embedded knowledge within an organization, which are the explicit and tacit knowledge. The former refers to common knowledge that is documented in the form of text, video, audio, or even drawing. The latter deals with knowledge that resides within an individual in the form of experience or expertise, and cannot be easily expressed in words, tests or even drawings. Having said that, both these kind of knowledge are critical to business and research organizations as it is the greatest source of assets that contributes to improving individual and organizational success (Panahi et al, 2012). Adding on, a knowledge-based environment continuously promotes sustainable development and a strategic tool in developing a knowledge-oriented organization (Mohamed et al., 2010; Alavi & Leidner, 2001; Ruddy, 2000; Riege, 2005, Huber 2001; Househ et.al, 2011, Kim & Ju, 2008).

In fact, the positive growth and success seen in business organizations have strong ties with their solid capability in obtaining, managing, and sharing knowledge with others accurately and professionally (Bircham-Connolley et al., 2005; Nassuora, 2011). Thus, knowledge sharing in indeed the building blocks of organizational success and a survival tool in today's' knowledge era (Witherspoon et al; 2013). The importance of knowledge sharing gain the attention of HRD practitioners since beginning of the year 2000 and it has been the central focus of HRD field (Blankenship & Ruona, 2009; Gocerlay, 2001)

The age of technology and the importance of knowledge have led to a link between technology, knowledge, and learning in creating a new digital environment. This new digital environment has increased adaptation towards digital learning and research environment. For instance, the introduction of online knowledge sharing technologies like knowledge repository in organization develops a new challenge towards learning, teaching and research experiences. Past researchers mentioned that online repository system acts as an important intellectual savior in promoting the management and sharing of knowledge within organizations (Cheng et. al., 2009 & Sabri, 2005, Bhatt 2001; Kim et. al., 2003). It is a technology enhanced knowledge sharing tools that enhance the ability for organizations to acquire and articulate new knowledge. In fact, online knowledge sharing technology provide organizations with the greater power to explore opportunities and drive innovation through innovative problem solving and decision making (Zailani at. al, 2006; Wang & Noe, 2010, Hislop, 2003; Ipe,2003; Osterloh & Frey, 2000; Liebowitz,2007). Nevertheless, technology has long been used to facilitate knowledge management and sharing where much of the research examined the role of technology in the creation and sharing of knowledge (Hou, Sung & Chang, 2009).

Technology innovation has also a significant implication for higher learning institutions, not only in the teaching and learning process but also in knowledge sharing. Higher learning institutions have always been regarded as organizations being in the knowledge business. As such, they are very much closely tied to the management and sharing of knowledge (Alexandropoulou, Angelis & Mavri, 2008). Moreover, researchers have also acknowledged that knowledge sharing is vital to institutions of higher learning, as a strategic tool for preserving their competitiveness and achieving operational excellence, and this is done by promoting and transferring the application of scientific knowledge successfully (Asheim & Gertler, 2005; Ismail & Yusof, 2008).

Knowledge management and sharing in institutions of higher learning are regarded as an important process in which academics generate, capture, codify, store, share and apply the knowledge that resides within them (Ramachandran, Chong, & Wong, 2013). Efficient and effective knowledge management practices in institutions of higher learning allow academics to collaborate interdisciplinary around the world to create new knowledge, thus promoting the credibility of the faculty and quality of research undertaken (Lin; 2007). However, research had indicated that successful knowledge sharing in institutions of higher learning had become a rising concern (Ramayah, Yeap, & Ignatius, 2013).

Research Universities (RU) are regarded as the pinnacle of the national higher education system and they are the most visible academic universities (Hazelkorn 2015). Altback (2009) clearly showed that RUs have a set of roles in the academic system, which includes a clear mission that focuses on not only research and publications by their academic staff but also in getting students to engage in research. Therefore, RUs are categorized as the hub of global knowledge, and the excellent knowledge management and sharing practices among academic staff can build better linkages between them and the society. To enhance the application and accessibility of knowledge that was shared, RUs use various repositories as enables for online knowledge sharing. These online repository technologies help to create systematically, store, apply and manage knowledge within the institutions (Ramachandran et al., 2013).

Five universities in Malaysia have obtained RU status. These universities are Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM, Universiti Sains Malaysia (USM) and Universiti Technology Malaysia (UTM). RUs hold a prominent task to enhance further and strengthen research and development activities. Thus, academicians in RUs are required to continually contribute new ideas, knowledge, and concepts or theories leading to new discoveries and innovations in a range of disciplines, which subsequently produce a knowledge-based society. Sue-Chen (2014) said that most of the RUs in Malaysia are still lacking in terms of knowledge sharing behavior and needed major change. With a radical change, it is believed that RUs will lead among others in research and publications (Sirajuddin et. al., 2006).

The use of online knowledge technology in RUs, for instance, institutional repositories will help to disseminate knowledge effectively. The various repositories available are KM portal (UPM); RICEUKM (UKM); Institutional Repository (UTM); UM portal (UM); and Repository@USM (USM). Academics can engage with a range of external partners through research and publication activities. Hence, a successful adoption and usage of online knowledge technology will facilitate the intensity and knowledge exchange undertaken by universities.

1.3 Problem Statement

For the field of HRD, technology innovation has a high impact on organisation effectiveness. However, past researchers recognises that the introduction of a technology has created a difficult challenge for HRD professionals in promoting individual and organisational learning and performance improvement (Benson, Johson, Kuchinhe, 2002). As such, the investigation of

technology intervention has received considerable attention from HRD practitioners specifically in projecting the usage of technology in enhancing organisational performance (Wang, 2012).

The effective adoption and usage of online knowledge sharing technologies have been recognized as powerful platforms that allow users to connect, share, and interact with others (Arpaci, & Baloglu, 2016; Ramakrisnan, Jaafar, & Yahaya, 2016). Prior studies have used some technology adoption and usage theories, including Theory of Reason Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). The above theories are used in various technology and usage research to explain or predict a person's technology usage. Among these theories, TAM emerges as the dominant model for understanding the individual behavior towards acceptance and usage of a technology (Lee & Lehto, 2013; Hsiao & Yang, 2011; Sumak, Hericko, & Pusnik, 2011). Moreover, Kim and He (2007), have acknowledged that TAM is a valid and robust model which is applied in various fields.

Since a decade ago, information system researchers have extended TAM with different determinants to explain and predict technology adoption and usage behavior of the individual. Most commonly used determinants are (i) lack of system to protect their intellectual assets, trust and personality, (Kim & Ju, 2008; DeLong & Fahey, 2001); (ii) status (Willmanet et.al 2001); (iii) self-efficacy (Chen, & Hung, 2010); (iv) enjoyment in helping others (Dovidio, Piliavin, Schroedler, & Penner, 2006); (v) organizational structure (Youndt & Snell, 2004); (vi) role of reward (Robertson, & Hmmersley, 2000); and (vii) motivational factors (Cummings, 2004). The increasing evidence from past research concludes that the above variables are related to human change processes; however, the future direction of TAM should incorporate more variables that are relevant. Chuttur (2009) argues that, despite the fact that TAM is a highly cited model; the model is still lacking sufficient research.

Perceived Ease of Use (PEOU) and Perceived Usefulness (PUE) are the two most important construct in the TAM that is more likely increases users' willingness to utilize a technology (Rosen, Whaling, Rab, Carrier & Cheever, 2013). However, understanding on the online usage of technology cannot be accomplished just by examining PEOU and PUE (Edwards et al, 2003; Handzic, Lazaro & Toorn, 2004). More variables should be incorporated into the model to make the model more rigorous.

Chen, Chen & Kinshuk, (2009) state that there is a need to examine the potential impact of user's cognitive traits to understand its influence on technology usage behavior. The statement is based on the evidence from past researchers who argued that the extent to which individual make a decision on technology acceptance, and usage may vary depending on individual characteristics like personality, cognitive ability/style and individual motivation (Kim, Shin, Shin & Miller, 2016). However, less is understood, on how the above mentioned individual traits may have a potential impact on user's interpretation of technology usage (Chakraborty, Hu & Cui, 2007). Conceivably, individual vary in their cognitive style and such differences can affect their technology acceptance and usage decision. Therefore, the researcher argued that it is important to investigate the influence of cognitive style on the usage of online knowledge sharing technology.

Moreover, Holsapple and Wu (2007) mentioned that there is a need to examine the element of emotion in relation to behavior. Studies have shown that the role of emotion has a constant effect on decision making and behavior (Ding, Chai & Hin, 2015; Han, Lerner, Keltner, 2007). The influence of emotion has been examined across different research settings, and researchers have agreed that emotion is an important construct to understand information technology usage (Ding & Chai, 2015). The two types of emotion construct examined in the field of IS are anxiety (Brown et al., 2004) and perceived enjoyment (Koufaris, 2002). However, Ding and Chai (2015) suggested that arousal is a prime component of emotion, thus influencing behavior.

From the above discussion, the researcher argued that there is a need to study on arousal and cognitive style as one of the determinants in the technology acceptance model, which was identified as the limitation of previous studies. To bridge this gap, the study extends the technology acceptance model by incorporating the emotional contracts of arousal to predict the usage of online knowledge sharing technology. Furthermore, the technology acceptance model is further extended by examining the moderating effect of cognitive style on the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology. Based on these issues, the researcher proposed the following research questions and research objectives.

1.4 Research Questions

(a) Is there any significant relationship between perceived usefulness, perceived ease of use, arousal, and usage of online knowledge sharing technology?
(b) Is there any moderating effect of cognitive style (innovator and adaptor) on the relationship between perceived usefulness, perceived

ease of use, arousal, and usage of online knowledge sharing technology?

1.5 Research Objectives

The aim of this study are (i) to examine the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology, and (ii) to investigate the moderating effect of cognitive style on the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology. A structural equation modeling (SEM) is developed to examine the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology, and to investigate the moderating effect of cognitive style on the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology. Specific objectives of the study is to

(a) determine the significant relationship between perceived usefulness, perceived ease of use, arousal, and usage of online knowledge sharing technology.
(b) determine the predictor (s) of usage of online knowledge sharing technology
(c) examine the moderating effect of cognitive style on the relationship between perceived usefulness, perceived ease of use, arousal, and usage of online knowledge sharing technology.

1.6 Significance of the Study

The present study is significant because, it bridged the gap that exists in the previous literature due to the fact that, the data gathered is used to examine (i) the relationship between PEU, PEOU, arousal and usage of online knowledge sharing technology, and (ii) the moderating effect of cognitive style on the relationship between PEU, PEOU, arousal, and usage of online knowledge sharing technology which is generally scare in the existing literature.

This is indeed important to the management team in RUs to understand that valuable knowledge that resides in academics mind need to be shared openly with others. This can only be done if academics are cooperative enough to share their knowledge (Gupta et al. 2012; Lin & Hwang, 2014). Nevertheless, many academics are nearing their retirement age or end of their contract, thus it is important for top management to initiate appropriate measures to ensure that the knowledge that resides in their mind can be stored and used.

Moreover, not only the top management but also the HRD practitioners failed to understand why individuals are still reluctant to preserve and store they knowledge effectively (Blankenship & Ruona, 2009, Wang, 2012). Although, it is known fact that technology revolution has brought forth an evolving and increasing set of tools as an enabler for the exchange of knowledge in the workplace, but the projection on the interaction between human and technology is unpredictable. As such, successful application of online technologies depends upon the understanding of the determinants of usage of online technology in knowledge sharing. Therefore, it is essential for HRD practitioners to understand these determinants that may significantly influence the use of technology in the workplace for the exchange of knowledge.

The research will propose a conceptual framework that will serve as the controlling path for policymakers to draw appropriate policies for understanding the usage of online knowledge sharing technology by academic staffs in RUs. The greater demand for institutions of higher learning to improve their world ranking justifies the need for aggressive research and publication activities, and to cope with these challenges, a transformation towards knowledge sharing and innovation is a must. Thus, a high level of usage of online knowledge sharing technology is needed among academic staffs. Furthermore, the framework proposed in this research serves as a blueprint for universities in designing training and development to address the challenges faced by the academic staff to use online knowledge sharing technologies. By doing so, the researcher believes that the avoidance tendency by the academic staffs to use online knowledge sharing technologies can be overcome.

Finally, the findings of this study can be extended to a larger group of audiences, for instance to the global academic communities from various universities and colleges. Knowing that knowledge sharing is the critical mass for excellence and quality in research and development (R&D), the results are aimed at providing the academic community at large with an understanding of the factors that initiates the utilization of online knowledge sharing technology

From a theoretical perspective, this study extends the technology acceptance model by adding two additional factors; arousal, and individual cognitive style that are likely to influence the usage of online knowledge sharing technology. With that, the study offers a holistic perspective on the usage of online knowledge sharing technology by examining, technology acceptance model (TAM), individual differences theory (Kirton's theory) and hedonic consumption theory.

1.7 Contributions of the Study

This study generates four main contributions. Firstly, this study expands the Technology Acceptance Model (TAM) which was developed by Davis, 1986. The TAM model is extended by adding arousal as a new determinant in predicting technology usage. For that, the study incorporated determinates of technology acceptance model (Davis, 1989) with hedonic consumption theory (Hirschman & Hikbrook, 1982) to construct a holistic model in order to explain the usage of online knowledge sharing technology. Secondly, the study also examines the influence of individual cognitive style as a moderator that may influence the strength of the relationship between PEOU, PUE, arousal and usage of online knowledge sharing technology.

Thirdly, this study incorporates the complex nature of samplings by having the multistage cluster sampling to generate holistic representative of generalization in understanding the connections between the PEOU, PUE, arousal and usage of online knowledge sharing technology among academic staffs in RUs.

1.8 Limitations of the study

The present study was only conducted on academics staffs from the five RUs, without considering those from other public and private universities in Malaysia. Secondly, the study only aimed to examine the perceived usefulness, perceived ease of use and arousal as the independent determinates in predicting usage of online knowledge sharing technology.

1.9 Conceptual and Operational Definitions of Terms

1.9.1 Online Knowledge Sharing Technology

Conceptual definition: Online Knowledge Sharing Technology or sometimes-referred to as institutional repository are digital research archives that represent the intellectual capital of an institution. This digital research archive consists of a collection of scholarly work that is accessible by many users (Jain, Bentley & Oladiran, 2011)

Operational definition: In this study, online knowledge sharing technology is defined as a computer- based knowledge management systems or repositories, which are designed to support and facilitate knowledge sharing between academics in research universities.

1.9.2 Usage of online knowledge sharing technology

Conceptual definition: Technology usage is referred to as "material artifacts such as software and hardware that are used to perform duties in an organization" (Orlikowski, 2000).

Operational definition: In this study, usage of online knowledge sharing technology is defined as the frequency and amount of usage of online technology for knowledge sharing.

1.9.3 Knowledge Sharing

Conceptual definitions: Knowledge sharing is defined as the exchange of useful information, ideas, experience and best practices (tacit knowledge) between two or more employees to create new explicit knowledge (Wu et al, 2012) Knowledge sharing behaviour is defined as a behaviour set which involves exchanging of information or assistance with others (Connelly & Kelloway, 2003)

Operational definition: In this study, knowledge sharing is defined as the degree to which the academic staff in research universities actually share knowledge with other academics.

1.9.4 Perceived Usefulness

Conceptual definition: Perceived Usefulness is defined as "the extent to which a person believes that using a technology will enhance his or her productivity" (Davis,1989).

Operational definition: In this study, perceived usefulness is defined as the degree to which academic staff believes that knowledge repository would enhance his or her research activities to improve knowledge sharing.

1.9.5 Perceived Ease of Use

Conceptual definition: Perceived Ease of Use is defined as "the extent to which a person believes that using a technology will be free of effort" (Davis, 1989).

Operational definition: In this present study, perceived ease of use is defined as the degree to which academic staff expect the use of knowledge repository to be free of effort both mentally and physically or easy to use for the purpose of knowledge sharing.

1.9.6 Cognitive style

Conceptual definition: Cognitive style refers to an individual's way of processing information, the preferred approach to creative thinking, decision making and problem solving (Kirton, 1994). Here, the cognitive style is grouped into either a person is an innovator or an adaptor.

Operational definition: In this study, cognitive style is defined as the ability of individual academic staff to process information and determine the preferred approach for knowledge sharing behavior.

1.9.7 Arousal

Conceptual definition: Arousal is a cause to make someone become more active/ or to have feelings or reaction. It also referees to the level of emotional intensity (Wu & Holsapple, 2014).

Operational definition: In this study, arousal is defined as the feelings of academic staff that engage themselves into using the knowledge repository.

1.10 Organization of the study

This research consists of five chapters. Chapter one consists of the background of the study, statement of the problem, research questions, objectives of the study, significance, and contributions of the study, limitations of the study , conceptual and operational definition of terms, and organisation of the study. Chapter two deals with extensive modes of critical reviews of literature on various themes of knowledge repository system, which include the theoretical and conceptual framework and hypotheses of the study. Chapter three contains the methodological arguments of the study that consists of research design, nature of sampling, instrumentation, preliminary data analysis, and procedures of the data analysis. Chapter four consists of data analysis, interpretation, and discussions. Chapter five consists of a summary, conclusion, implications of the study, and recommendations for future research.

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