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Dr. Seyed Mohammad Bathaei & Seyed Ali Hosseini, 2014, 2(3):7-22

UNDERSTANDING ONLINE KNOWLEDGE SHARING INTENTION: A FACTOR ANALYSIS IN E-LEARNING SYSTEM

Dr. Seyed Mohammad Bathaei & Seyed Ali Hosseini

[1]*Deputy of Minister of Education in Islamic Republic of Iran*
(Correspondence E-mail: s_m_bathaei@yahoo.com)
[2]*International Business School, University Technology Malaysia (UTM) Malaysia*

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Abstract
The purpose of this thesis is to examine the KS enablers and individual factors influence intention to KS in E-Learning system. Moreover, its objective is to identify the individual influence on intention to share knowledge in E-Learning system and to recognize relationships among them. The current research expands a theoretical framework of online KS factors with the Decomposed Theory of Planned Behaviour (DTPB). An online questionnaire survey was applied to collect data and the analysis was completed according to583 responses from students who act in EL system of Open University Malaysia (OUM). A semi-structured interview was constructed with 10 participants who were facilitators and teachers in EL system of OUM as the case study to achieve ks comprehensible and understandable intention. The outcomes of the study survey and interview support the fundamental statement that superior altitudes of individual motivational factors including trust, perceived ease of use, perceived usefulness, and educational compatibility direct to influence intention to share knowledge well. The conclusions also illustrate those motivational KS factors which were classified by DTPB model influence intention to share in EL system strongly.

Keyword: knowledge sharing, E-learning, knowledge sharing behavior, theory of planned behavior, educational compatibility, intention to share, attitude to share, individual factors, trust, perceived ease of use, perceived usefulness.

Introduction
Recently, E-Learning approach has continued to increase at a marvelous usage rate at universities and institutions. Normally, the EL usage rate increased between 10 to 15 percentage yearly in open universities and institutions (RocSearch, 2003). Higher education reached its peak with US$23 billion in 2006, growing to US$44 billion in 2011(Okiki and Asiru, 2011). For the record the progress of EL at HEs all over the world is very high (Littlejohn *et al.*, 2008; Anastasiades *et al.*, 2008; Shee and Wang, 2008). Universities quickly extended their E-Learning system offerings to provide almost 4 million U.S. learners who obtained at least one EL program in the fall of 2007 (Allen and Seaman, 2008). They show that 60% of principal college direct EL critically and considerably to strategic positioning and more than 50% of them were persuaded to accept the EL system by observing the students' learning performance and experiences (Allen and Seaman, 2008). There are many challenges in E-learning implementation and process that universities and institutions face to them (Ehlers, 2004). Designers are involved with many ambiguities related with creating the procedure knowledge in learning process (Brophy, 1999; Chen *et al.*, 2008).

Significance of the Study
It is essential to examine and to have a better understanding of individual factors which affect student's online KS process as mechanisms of improvement in learning communities.

Consequently, by recognizing the influencing factors and improving them, it will be possible to answer the question "why would the students want to share their knowledge with others?" and by improving the new KS technologies it will be possible to answer how they can exchange and share their experiences and knowledge within communities (Addison *et al.*, 2010).

Research Questions

According to the statement of the research problem explained before, the research questions have developed the following questions:

1. Do individual factors i.e. Trust, Perceived Ease of Use (PEOU), Perceived Usefulness (PU) and Educational Compatibility (EC) affect attitude toward KS?

Research Objectives

The purpose of the research is to discover the relationship between the motivational KS factors and intention to share knowledge in an EL system. In connection to this, the researchers' other purpose is to identify the individual factors i.e. Trust, Perceived Ease of Use (PEOU), Perceived Usefulness (PU) and Educational Compatibility (EC) that affect attitude toward KS.

Research Hypotheses

The questions and objectives of the current study can be further studied through the following hypotheses:

H1. The students' attitude toward KS has a positive effect on the intention to share knowledge in EL system

Ha. **The individual factors have a positive effect on the students' attitude for sharing knowledge.**

Ha1. The trust has a positive effect on the students' attitude toward KS in EL system.
Ha2. The perceived ease of use has a positive effect on the students' attitude toward KS in EL system.
Ha3. The perceived usefulness has a positive effect on the students' attitude toward KS in EL system.
Ha4. The educational compatibility has a positive effect on the students' attitude toward KS in EL system.

E-Learning system

EL systems are the principal learning surroundings in Higher Education. EL is recognized as new applications by Learning Management System (LMS) and also Course Management System (CMS) in distance learning universities and institutions (Artino, 2010). Kanuka and Rourke (2008) discover the modifications that are happening in HE as an outcome of the use of EL system. They find that some technical system prepares chances for developed accessibility, compatible with the objective in application of modern technology in education environment. Nevertheless, it is also related to negative influences, as teachers and learners experience to gather a lock of a feel of belonging and responsiveness of borders. Vasilyeva et al (2005) recommend the general architecture offered in Figure 2.1 for an adaptive EL system environment. In figure, the arrows emphasize information flows most relevant to the adaptation

process. On the left hand box in the figure the main collaborators bringing in their expertise are named.

Knowledge sharing behaviour enablers

As Davenport and prusak (1998.) stated the one of the most significant KS matters in each institution is the examination of KS enablers which are influence in creation of KS by individuals and environment. Therefore, there are many challenges to facilitate actual KS behaviour in the institutions by enablers such as individuals and culture (Nielsen, 2006). KS enablers could facilitate an people willingness to contribute in KS behaviour (Lilleoere and Hansen, 2011). Besides, the environment features frequently facilitates KS behaviour as interactive environment and platforms that are caused individuals and group could got better understanding each other (Currie and Kerrin, 2003). As a summery, the most significant and enablers that are mostly influence on the KS such as people (Islam and Ashmiza, 2012), interactive environment and platforms (Moore, 2010).

People as KS enabler

People, which consists of both superiors and friends; are important influential factors affecting the success of KM initiatives (Kulkarni, et al., 2006). The following two sections review the literature with regard to superiors' support and friends 'motivation as influential factors for knowledge sharing. Superior's influence and commitment is known as one of the main serious success factors in enhancing KS in knowledge-based institutions (Damodaran and Olphert, 2000; Fliaster, 2004; Akhavan et al., 2006; Lin, 2007; Gagné, 2009).

Interactive environment as KS enabler

Interaction mechanisms in EL system must be appropriately planned to develop occurrence, quality, and celerity of interactions which might influence student happiness. Zhao Du et al. (2012) believe that EL is featured by active participation, interaction and collaboration of learners is becoming more and more important in education for learners to get better learning experience and for educators to achieve better education effect. Investigators also have offered extensively to the significance of learner interactions in the learning procedure in EL system. Vygotsky (1978) stated collaborative learning is essential to construct one's own cognitive procedure. Between people users, if users cannot share their knowledge efficiently, it leads to reduce learning conclusions (Soller, 2004). The interaction as mechanisms in the meaning of learning through social work in learning process should understand better how it work and investigated the steps and conditions that required for learning environment. Summaries of the related work by Harre (1984), Wertsch and Bivens (1992) suggest that the success of interaction process in learning is based on the assumption that:

1- Developed mental utilities effect from interaction;
2- People behavior, individual and group, is facilitated through technologies and marks;
3- Knowledgeable users of the culture support people in education; and
4- All users in group operative are aggressively involved in affecting this operative.

El platforms and Open Educational Resources (OER) as KS enabler

ICT system provided the technologies to enhance KM process through improving the KM practices of people. Alavi and Leidner (2001) indicate that for achieving this, "the plan of ICT

system must be constructed and directed through an considerate of knowledge characteristics". Some an understanding is needed in the mean of be able to describe the impact of ICT in supporting KS (Wolf *et al.*, 2010).

Open Educational Resources (OER)

The Open Education or Open Educational Resources (OER) association has come to universities, collage and foundations in more than ten years ago. There are many important learning innovations and creativity in create, publish and share the OER in online systems. For instant, there are more than 200 free programs and courses as online which they offer by 33 best universities that called by Coursera (http://www.coursera.org/), thousands of learners have attracted within these programs , and over 100,000 members (learners) have attracted in the courses. Additionally, there are hundreds of OER plans there in many exclusive discussion forms, counting repositories, portals, Massive Open Online Courses (MOOC), Open CourseWare (OCW), open textbooks (e-books), and tutorials. The idea of OER was originally adopted during a UNESCO Forum on Open CourseWare in 2002. Integrated as an independent non-profit institute in 2008, the Open CourseWare Consortium is a network society of over 260 universities and related institutions global committed to progressing Open CourseWare sharing and its influence on worldwide chance. Its mission is to advance formal and informal learning through the worldwide content and knowledge sharing and use of free, open, high-quality learning courses structured as learning program. Cooperatively, OCW Consortium users have distributed resources from more than 13,000 learning program in 20 languages.

Open University Malaysia (OUM) is Malaysia's premier open and distance learning university recognized in 2001, which has since offered more than 70 programs comprising over 900 courses with a cumulative enrolment of over 90,000. OUM OER, accessible at http://oer.oum.edu.my/, is an effort by the Institute of Quality, Research and Innovation (IQRI) meant to share some of OUM's learning courses with the universal free communities. It is managed by OUM's Institute of Teaching and Learning Advancement (ITLA). OUM students would share the OER between other students in the world.

Interactive LMS

Interactive LMS is content-based and the connection among learners in programs is sequential and imbalanced. Students and teachers of the same course can interact and share within the course environment. Exactly, instructors can share course statement and course material to students, students and teachers can chat in the discussion chat rooms about shared contents and knowledge. Generally, the contents are based on text, photo and massages within chat rooms and discussion forums, therefore, the interactions and knowledge sharing between students have restricted and simple in discussion chat rooms. Interactive LMS creates the learning environment that students can share courses and programs as text and photo based and also interacts as public or private. Interactive LMS direct students to learning objective by course instructors and manage the students' behavior in the system by supervisors. Various social applications delivers diverse methods of interaction facility to students, the connection among learners is stable and equivalent. Social application doesn't have any restrictions individual and group based interaction. in all social application, students can select to use individual or group based interaction conferring to their desires easily. Interactions in social applications are not limited to text and photo contents as LMS, while audios and videos contents are active and

sharable in social applications. The students can make personal social network and extend and share them with others.

Factors Influencing KS

There are a number of technical infrastructures, behavioral, cultural and social factors that supplementary investigators institute them as serious factors in support of KS as online and by systems (Hassandoust and Perumal, 2011). Individual factors are key factors to reply these questions why and how do people share their knowledge with others, but, what these factors are more specific and where do they arise? There are really a diversity of research which illustrate the motivational factors that effect on KS behaviour between people have been conceptualized (Markus, 2001) (Wasko and Faraj, 2000) with some distributed studies in tittles supplementary (Davenport and Prusak, 1998; Kamarul, 2012). The investigators interest to survey on the role of main individual factors and mechanisms on the behaviour of KS is fewer (Kankanhalli *et al.*, 2005; Bock et al., 2005). For instance, Lin and lee (2006) said," organizational climate influences perceived relative advantage, compatibility, and complexity, significantly affect on the intention to KS positively." Wang and Noe (2010) have reviewed the qualitative and the quantitative studies were done on the individual factors such as trust, personality, Self-Efficacy and environmental factors in terms of, culture/climate, social network, in group/out group that Influence on intention to share knowledge. They also developed a frame work to understand KS research that have classified into five areas such as organizational background, individual and group individualities, cultural individualities, individual appearances, and motivational mechanisms and factors. Maslow's hierarchy of needs (1987) prepares an extensively acknowledged description for the attitude of people in communities. Thus, classifying these factors is being done individually, socially and technologically (Riege, 2005). Hung and Chuang (2010) indicated four dimensions and 10 factors. Cheng et al, (2012) discovers KS activities between students aand instructors in a private university in Malaysia, i.e. MMU. These factors based on three sub-communities; specifically, individual factors, organizational factors and technical factors. Society influences includes friends and colleagues' influences, superiors' influences, Self-Efficacy and technologies provide the framework to understand the role of organizational climate affect on behaviour between members (Parraga, 1990; Pajares, 2002). Environmental, personal and technological factors have been considered as three main categories by Holzmann and Dubnov (2011) research in virtual communities of practice.

Theoretical Approach

Theory of planned Behaviour (TPB)

Theory of Planned Behaviour (TPB) (Ajzen, 1985) recognized as an advanced version of the theory reason action (TRA). Fishbein and Ajzen (1991) completed obligatory by the second representation 'incapability to contract with Behaviours done which individuals have imperfect optional control. TPB recognizes actual performed Behaviour as a people's effort of a convinced Behaviour is performed by his or her/his intention to fulfil that Behaviour. Attitude towards the actual Behaviour, Subjective Norm (SN) about involving in the Behaviour, and perceived Behaviour control (PBC) are supposed to impact intention and online learning by Behaviour in TPB producer (Baker and White, 2010). An attitude towards Behaviour is a positive or negative examination to achieve that actual Behaviour.

The Decomposed Theory of Planned Behaviour (DTPB)
The DTPB (Taylor and Todd, 1995) is derived from the TPB model with its fundamental belief and structure. In this model individual standard, attitude, SN and perceived behavioural control are further decomposed into some more specific constructs (Lau and Kwok, 2007). This model provides a complete understanding to use and to adopt Behaviour. Taylor and Todd (1995) also demonstrated that decomposed model of the TPB has the enhanced descriptive power more than the pure TRA and TPB models. In addition, it provides a more satisfying explanation to adopt intention (Shih and Fang, 2004). Several studies have preferred to use the DTPB instead of TPB to examine the factors influence the behaviour or predicate the actual behaviour specially to survive the information systems and E-services such as E-Government, EL, online communities, SME-based E-commerce and online shopping and purchase (Hsu *et al.,* 2004; Lau and Kwok, 2007; Susanto and Goodwin, 2011). To increase comprehension to communicate with idea constructions and experience of intention; numerous research have investigated on the ideas to decompose attitudinal beliefs by DTPB (Taylor and Todd, 1995; Chau and Hu, 2002; Rogers, 1995; Chen and Cheng, 2012; Riemenschneider and Harrison, 2003).

Intention to Share Knowledge
According to Ajzen (1991), the Intention is the most important cause of people's Behaviour. The sophisticated purpose will be achieving certain Behaviour, the advanced chances of the authentic enactment of that exact Behaviour.

Attitude toward Behavior
A positive or negative sensation is defined about the objective of Behaviour of people. Attitude toward behaviour is including, attitude, product beliefs and subjective probability that the person doing the Behaviour, the result would assess the consequences (the result of explicit evaluation response).

Educational Compatibility (EC)
Educational compatibility referred to adopt students' value and experiences with system features as well as students enjoy learning by system constantly (Jian Tan, 2009).

Trust
Trust has been pointed out as a collection of particular perceptions is exchanging initiatively with the integrity, mercifulness, and capability of alternative group in the administration literature (Chiu *et al.,* 2006, Gefen and Straub, 2004). This study focuses on integrity, which points out an individual's expectation that students in an EL system will follow a normally agreed collection of values, norms, and principles. Trust has been identified as a significant experience of EL system party performance (Nelson and Cooprider, 1996; Chiu *et al.,* 2006), online interactions (Chang *et al.,* 2005; Gefen and Straub, 2004), and KS in online group (Ridings *et al.,* 2002).

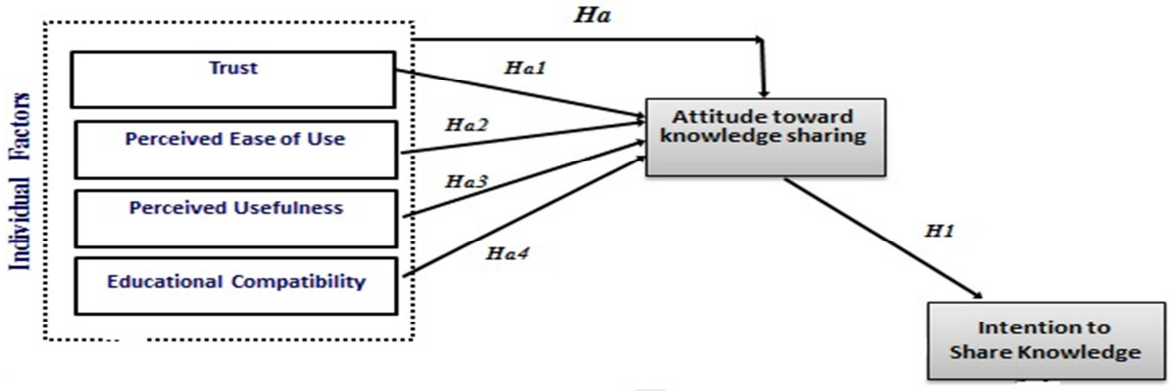

Figure 2.1 Research Model and Hypothesis

Open University Malaysia (OUM)

OUM was named as Open Distance Learning (ODL) in 2000. It is the seventh private university in Malaysia and it is owned by Malaysia's eleven public university associations. Based on the philosophy that learning is supposed to be democratized, OUM has concentrated on generating a reasonable and easy corridor to Higher Education system with significant position on flexible entrance necessities like a student-friendly education system, and a blended learning method with mixtures of dissimilar forms of education. This system was planned to perform different features based on the student's requirements, information and communication technologies and internet tools.

Table 3.1: The Learning Centers that collect questionnaire

NO.	LEARNING CENTER (BRANCH)	STUDENTS
1	Bangi Learning center	70
2	Ipoh Learning center	85
3	Johor Learning center	80
4	Kelantan Learning center	68
5	OUM KL center	180
6	OUM Petaling Jaya (PJ) Learning center	100
		583

Research Method

Research methodology has many classifications, such as, research methodology in terms of qualitative and quantitative methods (Williams, 2007). These approaches can be used as single and mixture method by investigators linked in OUM. For this study, mixed method is performed. Researcher has used both qualitative and quantitative approaches and he also examines and establishes the data gathered from selected cases (Creswell, 2012). Studies show that Quantitative and qualitative approaches are appropriate to grow the fortes and the reducing

of weaknesses of the research methods (Johnson and Onwuegbuzie, 2004). Thus, in this method we can say that the findings and outcomes are more valid. Furthermore, Quantitative study shows the actuality of the cause and effectiveness of relationships among variables. On the other hand, qualitative study approaches to discover the implications and outlines, consider to particularly the activities and records carefully. There are many researches in the Knowledge management area in which utilized the qualitative and quantitative methods as their key resources to collect data and to use the features of individual behavior constantly, which are frequently veiled (Nonaka and Takeuchi, 1995; Chennamaneni, 2006; Jones, 2007; Bock *et al.*, 2005; Ma, 2009; Stewart, 2008; Vashisth *et al.*, 2010; Jewels and Ford, 2006).

Instrument Development

Researcher gathered the data in two steps. Firstly, the online questionnaire as a survey instrument is distributed. After the online questionnaire, the interview questions followed to improve the survey, and to evaluate more appropriate outcomes and to develop the survey's validity and reliability. In addition, the investigator applied online questionnaire as pre-test to evaluate the 25 questions and to enhance its value. In this research, a pre-test investigation was applied with emphasizing on the validity of citing KS in the EL.

Interview

This research has shown the semi-structure interview questions that are comprised with; the research was created in 6 knowledgeable interviews selected online and off line by the facilitators and teachers in different faculties of OUM. The data have been gathered during two semesters in 2012-2013 academic years. In semi-structured interviews where some facilitators, technical administrators, and some online teachers were in charge of distance learning system or EL. As revealed, the questions on the interview were open-ended; and each interview was about 10 to 15 minutes created on their arrangement, while some of the interviews were voice-recoded. The KS intention factors and the effects of the KS on the success of the EL were discussed in the case study area. Table 3.6 shows the interview questions.

Table 2 The interview questions

NO.	QUESTIONS
1	Are the students learning in the EL system, frequently exchange and share knowledge and experiences with others? If not, what factors and situations preventing them? If you think yes, why? And what factors affect it?
2	In your opinion, are the students in E-Learning system interested in participating and willing to share their knowledge and courses with other students?
3	In your opinion, do they (students) share knowledge and develop learning experiences within EL system easily? Do they think that KS is useful?
4	In your opinion, what are the individual factors that affect on the student's attitude toward KS?
5	Do they (students) think that they are comfortable and can trust and share better by EL system?
6	Is EL system compatible with students' values, current requirements and previous experiences?

Questionnaire

Instrument Plan

Questionnaire survey based on the research conducted in DTPB is composed of two main sections. In the first part of the questionnaire, respondents were asked questions about personal characteristics, such as sex, age, educational level, duration of study, study courses. This section uses EL system as a moderating variable in the study. The second section of the questionnaire is extracted from the DTPB model. Question components are measured as well as what the students ask and a Likert scale was used to rank it from very low to very high. The investigator as a viewer can approve examination methods of collecting data and assessments by viewing how the learners engaged in learning activities in EL system. The five-point Likert scale was applied to measure each paradigm which comprised 1= strongly disagree to 5= strongly agree. The Likert response allocated numeric values to help the analysis of the answers.

Construct Measures

The research theoretical model of this research is comprised of following paradigms, the independent variables which comprise four individual attitude factors (trust, perceived ease of use, perceived useful, educational compatibility). Additionally, dependent variables which contain individual factors, attitude toward KS, contributes in this study, There are also thirteen main constructions of the hypothetical model that are used in this study. KS intention plays a double role: dependent and independent paradigms. The 43 questionnaire items measured the relationship between variables; these statements were calculated according to a 5-point Likert scale which include 1=strongly disagree to 5= strongly agree.

Descriptive statistic of the questions and variables

Descriptive statistic questioner includes quantity value, value, mean, standard deviation drawing was taken for each question that its results is visible in table 4.1.

Table 1 Descriptive statistics of the questions

Q?	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
IS1	1.00	5.00	3.94	0.77	0.778	0.819
IS2	1.00	5.00	3.73	0.88	0.882	0.121
IS3	1.00	5.00	4.14	0.68	0.681	0.722
IS4	1.00	5.00	3.61	0.85	0.853	0.480
IS5	1.00	5.00	3.44	0.83	0.837	0.646
IS6	1.00	5.00	3.71	0.82	0.822	0.525
IS7	1.00	5.00	3.46	0.86	0.868	0.436
AI1	1.00	5.00	4.14	0.71	0.715	1.144
AI2	1.00	5.00	3.88	0.71	0.718	1.144
AI3	1.00	5.00	3.94	0.71	0.711	1.149
AI4	1.00	5.00	4.11	0.72	0.722	1.632
TA1	1.00	5.00	3.78	0.76	0.768	0.606
TA2	1.00	5.00	3.79	0.72	0.726	0.875
TA3	1.00	5.00	3.35	0.81	0.813	0.612
TA4	1.00	5.00	3.51	0.73	0.734	0.445
PEOU1	1.00	5.00	3.80	0.75	0.755	1.171
PEOU2	1.00	5.00	3.80	0.73	0.735	1.062
PEOU3	1.00	5.00	3.87	0.77	0.770	1.121
PU1	1.00	5.00	3.95	0.71	0.717	1.428
PU2	1.00	5.00	3.79	0.75	0.756	0.436
PU3	1.00	5.00	3.84	0.69	0.697	0.750
COM1	1.00	5.00	3.76	0.68	0.685	0.588
COM2	1.00	5.00	3.57	0.80	0.804	1.085
COM3	1.00	5.00	3.53	0.90	0.909	0.591
COM4	1.00	5.00	3.76	0.72	0.727	0.875

IS: Intention to KS Behavior, AI: Attitude toward KS, TA: Trust, PEOU: Perceived ease of use, PU: Perceived usefulness, COM: Educational compatibility,

Descriptive statistic of variables

Dimensions of each question are made then descriptive statistic include standard deviation and mean is gotten by compute device in SPSS software that it's results are presents in table 4-12 the results of above table defines the people are studies have gotten advantages more than supposed mean, once these aren't limitation for their learning as electronic and their condition is suitable in terms of the dimensions, special in subjects like attitude toward KS (AI) with mean 4.02, succession in electronic teaching system (ES) with mean 3.94 and to be useful this system (PU) with mean 3.86.

Table 2 Descriptive statistical of variables

variables	Mean	Std. Deviation
Intention to KS Behaviour (IS)	3.56	0.70
Attitude Toward KS (AI)	4.02	0.61
Trust (TA)	3.61	0.60
Perceived Ease of Use (PEOU)	3.83	0.63
Perceived Usefulness (PU)	3.86	0.65
Educational Compatibility (COM)	3.65	0.62

Constructs Analysis

13 main structures are in the main research model, according to the research model. 5 numbers Likert scale was used to measure questions of the questioner which each number shows answerer's opinion in order: 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A), and 5= Strongly Agree (SA). Detailed explanation about the questions relates to the structures and their descriptive statistic.

Table 3 Route Statistical Results

Path	Path Coefficient*	Standard Error	Remark
Attitude ⇨ Intention to Share	0.70	0.08	**Supported**
Trust ⇨ Attitude	0.72	0.05	**Supported**
Perceived ease of use ⇨ Attitude	0.81	0.04	**Supported**
Perceived usefulness ⇨ Attitude	0.77	0.02	**Supported**
Educational compatibility ⇨ Attitude	0.69	0.06	**Supported**

Note: * significant at $p < 0.05$ level

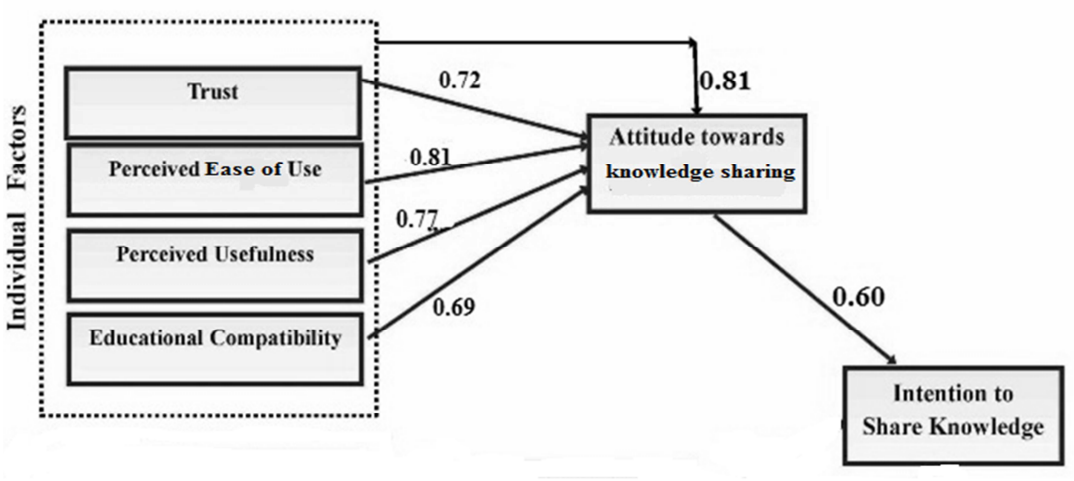

Figure 4.1 Results of Structural Modeling Analysis

Qualitative Analysis

Interviews were carried out on the system facilitators and teachers in OUM learning system. As mentioned earlier, the interview was done after the results from the survey research. In order to verify the research results from the survey method about the antecedents was used qualitative method as a supplementary technique with the answers from the case study that cooperate the important special effects on the KS Behavior in the EL system. This part of the study will report the responses of the participants in the interview and how those responses give answers to research questions.

Participant Information

According to the quantity of individual interviews that was dependent on participants from the OUM as case study. Since the research needs some explanations about details of study dimensions, the interview questions were requested that contribute by a few participants in OUM as case study. Choosing interviewees were beneficial and only integrated a small from the case study (Saunders *et al.*, 2007). The interviewees who were conducting as individual interviews are recommended around 10 to 15 (Hill *et al.*, 1997). Participants in this study consisted of 10 system facilitators and teachers engaging in the learning practice within the OUM e0learning system. Moreover, all participants were chosen based on their experience in OUM and E-Learning system. The interviews were held between April and May 2013 in semi-structured face-to-face one-on-one interviews with the participants, which consisted of 10 questions (see Appendix A). Participants' ages ranged from 28 to 57.

Qualitative Results

The raw data from the transcribed interviews were coded and categorized. The coding procedure used for the research, followed the guidelines recommended by Kitami et al. (2011) separated sections of data according to responses to similar questions. Data coding started with identifying and marking the commonalities of key concepts and key words from transcripts. The researcher interpreted concepts from the participants' transcriptions for different meanings. In order to realize additional motivations which affecting personal and environmental KS intention and its relation with success in EL system, the interview questions were designed.

Table 4 Matrix Triangulating Outcomes across the Instruments of Data Collection

Key Themes	Presentation of findings across instruments	
	Questionnaire	**Interviewees Viewpoint**
Attitude to KS and intention to share	**Supported (Q1 to Q11)**	**supported**
Conclusion	The results of two sources agreed that the attitude toward KS has a positive impact on the intention to share.	
Individual factors and attitude toward KS	**Supported (Q12 to 25)**	**supported**
Conclusion	The results of two sources agreed that the individual factors have a positive impact on the attitude toward KS.	
Trust and attitude toward knowledge sharing	**Supported (Q12 to Q15)**	**Supported**
Conclusion	The results of two sources agreed that the trust has a positive impact on attitude toward KS.	
Perceived ease of use and attitude toward KS	**Supported (Q16 to Q18)**	**Supported**
Conclusion	The results of two sources agreed that the perceived ease of use has a positive impact on the attitude toward KS.	
Perceived usefulness and attitude toward KS	**Supported (Q19 to Q21)**	**Supported**
Conclusion	The results of two sources agreed that perceived usefulness has a positive impact on the attitude toward KS.	
Educational compatibility and attitude toward KS	**Supported (Q22 to Q25)**	**Supported**

Conclusions and recommendations

To answer the questions related to hypotheses, four main questions were proposed and investigated. These research questions are:

1. Do individual factors i.e. trust, Perceived Ease of Use (PEOU), Perceived Usefulness (PU) and Educational Compatibility (EC) affect on attitude toward KS?
2. Does attitude toward KS affect intention to share knowledge?

These are questions that are addressed and investigated in the structural framework of the research hypotheses. The framework that was presented in the second chapter is designed in relation to the individual factors influencing on intention to KS in EL system. It explains that the first hypotheses refer to the effect of the attitude toward KS on intention to share. In other

words, the intention of KS itself is influenced by attitude and these were also contained in the second and third hypothesis of this research. Meanwhile, the four effective factors as individual factors influencing the attitude toward KS were marked as a, a1, a2, a3 and a4 hypothesis. These hypotheses were proposed to support the conclusion of this study. Every question regarding the hypotheses will be answered in the process and context of this research.

Table 1 Hypothesis Testing Results

NO.	Relationship	Hypotheses	Results
1	Attitude towards KS and intention to share knowledge	H1. The students' attitude toward KS has a positive effect on the intention to share knowledge in EL system.	The findings of two sources agreed that attitude towards KS has a positive impact on intention to share knowledge.
2	**Individual factors to attitude toward KS**	Ha: The individual factors have a positive effect on the students' attitude for sharing knowledge.	The findings of the research indicate that individual motivational factors have a positive impact on attitude to share knowledge.
3	Trust and attitude towards KS	Ha1. The trust has a positive effect on the students' attitude toward KS in EL system.	The results of the study showed that the trust has a positive impact on attitude towards KS.
4	Perceived ease of use and attitude towards KS	Ha2. The perceived ease of use has a positive effect on the students' attitude toward KS in EL system.	The results of the study showed that the perceived ease of use has a positive impact on attitude towards KS.
5	Perceived usefulness and attitude towards KS	Ha3. The perceived usefulness has a positive effect on the students' attitude toward KS in EL system.	The results of the study showed that the perceived usefulness has a positive impact on attitude towards KS.
6	Educational compatibility and attitude towards KS	Ha4. The educational compatibility has a positive effect on the students' attitude toward KS in EL system.	The results of the study showed that the educational compatibility has a positive impact on attitude towards KS.

Restrictions of the study

There were some limitations in the research method and data collecting. This often happens in similar studies done in behavioural field. There are also restrictions in the examination of EL

system in OUM as Open University which educates through online system where students are not required to attend classes in the traditional classroom as in face to face education. Secondly, the investigation of some variables in this research like intention to share knowledge is sometimes very difficult because the control on effective changes on this structure is hard, for example, the application of the whole factors of KS Behaviour in research model. Another research limitation is the lack of examination tools for all main factors on students' KS behaviour in EL system. The third limitation was to adjust factors in relation to the intention to share knowledge in online environment that students can use many tools and technologies based on their skills and abilities..

Recommendations for Further Study

In the other aspect of this research it is also recommended that the relation among research structures must be investigated for successful results as what this current study did, for example, the investigation of the main factors on intention to share, where it introduced two levels of intent to share. There are three more effective structures in each level. Thus, the effective examination of the factors of the variables such as educational compatibility and Self-Efficacy on this study will approve the student's intent to share knowledge in EL system if these factors and variables will be applied. And because of this, the need to work on more studies and examining the related theories and models in the future can be much easier.

Conclusion

Consequently, factors such as individual and social environment factors affect the students' KS intention and enhance these factors which encourage the students to share their experiences and knowledge together are the conclusions of this research. This research contributes to the filling up of the gap in the better understanding of KS in online learning environment such as EL system through literature review and by the involvement of OUM students thus it answers the questions "why share and how to share?" .

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