

Knowledge Sharing Behavior and Individual Factors: A Relationship study in the i-Class Environment

Syed Mohammed Alhady Syed Ahmad Alhady
Faculty of Information Management
Universiti Teknologi MARA Kedah
08400 Merbok, Kedah, Malaysia
syalhady506@kedah.uitm.edu.my

Mohd Zool Hilmie Mohamed Sawal
Faculty of Information Management
Universiti Teknologi MARA Kedah
08400 Merbok, Kedah, Malaysia
zoolhilmie@kedah.uitm.edu.my

Ahmad Sufi Alawi Idris
Faculty of Information Management
Universiti Teknologi MARA Kedah
08400 Merbok, Kedah, Malaysia
sufiidris@kedah.uitm.edu.my

Nor Azlina Azmi
Faculty of Information Management
Universiti Teknologi MARA Kedah
08400 Merbok, Kedah, Malaysia
nazlina@kedah.uitm.edu.my

Zaherawati Zakaria
Faculty of Administrative Science and Policy Studies
Universiti Teknologi MARA Kedah
08400 Merbok, Kedah, Malaysia
zaherawati@kedah.uitm.edu.my

Abstract—This study try to examining the relationship between knowledge sharing behavior and information exchange in the E-Learning Environment via i-Class from the ePJJ students of Universiti Teknologi MARA Kedah, Malaysia and how does it inflict on their knowledge sharing behavior. Questionnaires were use to get information from the student such as Identification, online socialization, personal expectation. The total respondents are 70 students were selected randomly. This study uses Descriptive Statistic, Pearson Correlation and Cronbach's Alpha in order to analyze the data gathered by using Statistical Package for Social Sciences (SPSS).

Keywords-e-learning; knowledge sharing; online socialization

I. INTRODUCTION

i-Class Portal is the new Learning Management System which offers alternatives to classroom attendance for ePJJ students. ePJJ is part of Universiti Teknologi MARA initiative to implement e-Learning, it enhances pedagogical approach and makes e-Learning with Learning Management System easy to follow. The objective of Distance Education Programmes (ePJJ), Universiti Teknologi MARA is to offer continuing education to upgrade the knowledge and career of Bumiputera and also help to increase productivity and contribute to national development.

II. CONCEPTUAL FRAMEWORK

Figure 1 show the conceptual framework of the study. The research objective was to explore the relationship between knowledge sharing behavior and online socialization in the e-learning environment: I – Class, hence the independent variables for the study consisted of two

variables, namely knowledge sharing behavior and individual factors. On the other hand the dependent variable of the study is the online socialization.

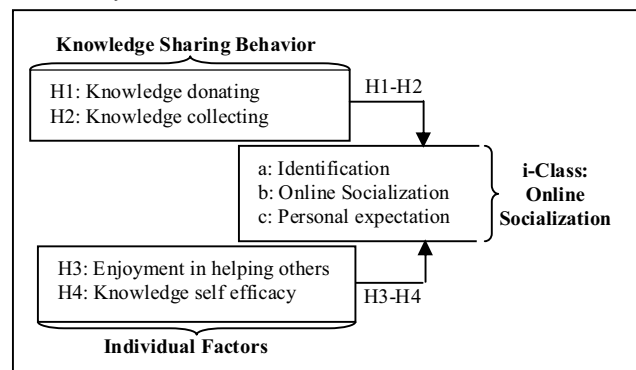


Figure 1: Conceptual Framework

A. Knowledge Donating and Knowledge Collecting

According to Van Den Hooff and De Ridder's (2004) [1] definition, knowledge sharing has two facets; collecting or receiving, and disseminating or donating, knowledge. They define knowledge donating as "communication based upon an individual's own wish to transfer intellectual capital" and knowledge collecting as "attempting to persuade others to share what they know". These two distinct processes are active processes in the sense that one is either engaged in active communication with others for the purpose of transferring knowledge, or consulting others in order to gain some access to their intellectual capital

Darroch and McNaughton (2002) [2] stated that knowledge donating aims to see individual knowledge become group and organizational knowledge over time, which in turn improves the stock of knowledge available to the firm. A firm that promotes employees to contribute knowledge within groups and organizations is likely to generate new ideas and develop new business opportunities, thus facilitating innovation activities

B. *Enjoyment in Helping Others*

USA Today, 2007 [3] indicated that human beings help others. Because helping is a behavior that transcends time and space, it is relatively unsurprising that helping is also a widespread activity in virtual spaces, such as web communities and Yahoo! Answers.

As stated by Batson, (1998) [4]; Dovidio, Piliavin, Schroedler, & Penner, (2006) [5], helping refers to actions intended to provide some benefit to another person despite the consequences whether the action is stimulated by self-interest or altruism.

An additional related study carry out by Wasko and Faraj (2005) [6] indicated that enjoyment in helping and reputation exert positive impacts on the helpfulness of information provision in an electronic network of practice. This verdict illustrates that self-rewarding motivation can be a significant determinant of information provision in organizations.

C. *Self-Efficacy*

As determined by Chih-Jou Chen and Shiu-Wan Hung (2010) [7], knowledge sharing self-efficacy is one's confidence in an ability to provide knowledge that is valuable to others. In their study, Knowledge sharing self-efficacy is the member's self-evaluation and confidence in his or her skills and capabilities to respond to questions posted by other members, and to provide knowledge that is valuable and useful to others. Through sharing useful knowledge, people feel more confident in what they can do.

Bandura, (1982) [8] and Bandura, (1986) [9]; Igarria and Iivari, (1995) [10], indicated that self-efficacy is a form of self-evaluation that influences decisions about what behaviors to undertake, the amount of effort and persistence to put forth when faced with obstacles, and finally, the mastery of the behavior. Generally, the perceived self-efficacy plays an important position in influencing individuals' motivation and behavior.

Bock and Kim (2002) [11] propose that self-efficacy could be treated as a major factor of self-motivational source for knowledge sharing. Their discoveries disclose that the individual's judgment of his contribution to organization performance has positive influence on knowledge sharing.

D. *Identification*

Identification is an identity based on the interests when individual's interests merge with organization's interests (Johnson et al., 1999) [12]. When people have had a good experience with virtual communities, they will expect a good experience with the next community. Wasko and Faraj (2005) found that when an expert helps others, they expect no reciprocity. Nahapiet and Ghoshal (1998) [13] stated that

identification is the process whereby an individual's see themselves as one with another person or group of people.

When identification is strong, the cost of sharing knowledge may not be an interest because the interest of organizational outcomes may ascend the behavior of knowledge sharing. Hence, identification can be described as a vital contextual factor affecting knowledge contribution (Chiu et al., 2006[14]; Chow and Chan, 2008[15]; Hooff and Huysman, 2009[16]; Hsu and Lin, 2008[17]; Jarvenpaa and Staples, 2001[18]; Kankanhalli et al., 2005[19]; Ma and Agarwal, 2007[20]; Panteli and Sockalingam, 2005[21]; Shin et al., 2007) [22].

E. *Online Socialization*

Zane L. Berge and Lin Y. Muilenburg (2005) [23] stated that social interaction refers to the learning environment that is created for learning online which should be friendly and social, and one in which learning is promoted. This suggests promoting human relationships, developing group cohesiveness, maintaining the group as a unit, and in other ways helping participants to work together for a mutual cause.

Christopher Irwin and Zane Berge (2006) [24] indicated that the term "socialization" is quite broad and can mean different things to different people. Socialization is about people being able to mingle and establish connections on one or more levels. They speak with to one another; share ideas and information and confirm the connections made through an agreed upon means.

Technology becomes more than merely a creation and use of technical means; the technology has affected to society by contributing to the nature of the activity and the sum of the ways in which it supports the emergence of collaborative creative interactions among people which allow creating a specific access to virtual environments.

Rheingold (2003) [25] emphasized that groups of people using these tools will gain new forms of social power, new ways to organize their interactions and exchanges just in time and just in place.

F. *Outcome Expectation and Personal Expectation*

Outcome expectations refer to the expected consequence of one's own behavior (Bandura, 1997[26]; Compeau and Higgins, 1995) [27]. Outcome expectations consist of three major forms: physical effects (e.g., pleasure, pain, and discomfort), social effects (e.g., social recognition, monetary rewards, power, and applause) and self-evaluation effects (e.g., self-satisfaction, self-devaluation)

Bartol and Srivastava (2002) [28] Outcome expectations that are related to reward systems are also important factors influencing the decision to share knowledge. According to the economic exchange theory, individuals will behave by rational self-interest, thus (Constant et al., 1994) [29] knowledge sharing will occur when its outcomes exceed its costs or are as expected

In keeping with Bandura, (1997), the positive expectations can be seen as incentives and thus human behavior can be regulated by these different forms of effects.

Bock and Kim (2002) indicated that an individual's behavior may lead to positive outcome, because individuals will behave with rational self-interest as asserted in the social economic exchange theory.

Constant et al., (1994) reported that this is the rationale why knowledge sharing will take place when rewards are greater than cost.

III. RESEARCH HYPOTHESES

Table 1 summarizes the hypotheses that have been generated based on the discussion from conceptual framework

Table 1: Research Hypotheses

	Statement of hypotheses
H1a	Knowledge donating is significantly related to identification.
H1b	Knowledge donating is significantly related to online socialization.
H1c	Knowledge donating is significantly related to personal expectation.
H2a	Knowledge collecting is significantly related to identification.
H2b	Knowledge collecting is significantly related to online socialization.
H2c	Knowledge collecting is significantly related to personal expectation.
H3a	Enjoyment in helping others is significantly related to identification.
H3b	Enjoyment in helping others is significantly related to online socialization.
H3c	Enjoyment in helping others is significantly related to personal expectation.
H4a	Knowledge self efficacy is significantly related to identification.
H4b	Knowledge self efficacy is significantly related to online socialization.
H4c	Knowledge self efficacy is significantly related to personal expectation.

IV. FINDING AND DISCUSSION

A. Descriptive Analysis

150 questionnaires were distributed to ePJJ Universiti Teknologi MARA Kedah students only 70 respondents return the questionnaires. Among them are 24 male students and 46 are female students. The age group between 18 – 21 years (5.7 percent), 22-25 years (44.3 percent), 26-29 years (22.9 percent), 30- 33 years (12.9 percent), 34-37 years (12.9 percent) and 42-45 years (1 percent).

B. Data Analysis

Table 2 and 3 below shows the rotated component matrix (also called the rotated factor matrix in factor analysis) which is a matrix of the factor loadings for each variable onto each factor. There are several things to consider about the format of this matrix. First, factor loadings less than 0.5 have not been displayed because the loadings below the value 0.5 are automatically suppressed. The utilized extraction method was Principal Component Analysis and the rotation method using Varimax with Kaiser Normalization

Table 2: Knowledge Sharing Behaviour rotated Component Matrix

Items	Component	
	1	2
Knowledge Donating		
When I have learned something new, I tell my colleagues about it	.865	
When they have learned something new, my colleagues tell me about it	.850	
Knowledge sharing amongst colleagues is considered normal in my learning environment	.691	
Knowledge Collecting		
I am confident in my ability to provide knowledge that others in my learning environment would consider valuable		.750
I have the expertise required to provide valuable knowledge for my learning environment		.866
Most other colleagues can provide more valuable knowledge than I can.		.774

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 3: Individual Factor rotated Component Matrix

Items	Component		
	1	2	3
Enjoyment in helping others...			
I enjoy sharing my knowledge with colleagues	.885		
I enjoy helping colleagues by sharing my knowledge	.880		
It feels good to help my colleagues by sharing my knowledge	.868		
Sharing my knowledge with colleagues is pleasurable	.692		
Your knowledge self efficacy...			
I am confident in my ability to provide knowledge that others in my learning environment would consider valuable			.772
I have the expertise required to provide valuable knowledge for my learning environment			.858
*It does not really make any difference whether I share my knowledge with my colleagues			.960

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

From the rotated component matrix it was clearly visible that all the items for measuring knowledge sharing behaviour have successfully and cleanly loaded onto its own distinct component. But however, from the rotated component matrix for individual factor, one of the item under 'self efficacy' have been loaded into another singular component, therefore that specific item would be eradicated from any further data analysis.

C. Reliability Analysis

Following Table 4 is outcome of the factor analysis, reliability analyses were conducted to measure the reliability of the instrument employed in the research. The reliability analysis that was utilized named Cronbach's alpha.

Table 4: Reliability of instrument measures

Measures		No of items	Cronbach's Alpha
Knowledge Sharing Behaviour	Knowledge donating	3	.748
	Knowledge collecting	3	.741
Individual Factors	Enjoyment in helping others	4	.859
	Knowledge self efficacy	2	.542
Online Socialization	Identification	4	.830
	Online Socialization	4	.814
	Personal expectation	4	.871

D. Relationship between knowledge sharing behaviour and online socialization

The results of the correlation analyses are displayed in the table 5 below. The table indicates the correlation is significant at the 0.01 level (2-tailed). From the correlation matrix it could be observed that the overall relationship between knowledge sharing behavior and online socialization in the e-learning environment is very weak. The only valid items from the correlation analyses were the relationship between knowledge collecting towards identification and personal expectation.

Table 5: Correlation matrix between knowledge sharing behavior and online socialization

	Knowledge Donating	Knowledge Collecting
Identification	.179	.425 **
Online Socialization	.042	.274 *
Personal expectation	.172	.470 **

** . Correlation is significant at the 0.01 level (2-tailed).

The table 6 below shows the correlation matrix between knowledge individual factor and online socialization; from the table it could be observed that the overall relationship between individual factor and online socialization is also very weak. The only valid items from the correlation analyses were the relationship between knowledge self efficacy towards identification and personal expectation.

Table 6: Correlation matrix between knowledge individual factor and online socialization

	Enjoyment in helping others	Knowledge self efficacy
Identification	.269*	.347**
Online Socialization	.058	.296*
Personal expectation	.058	.401**

** . Correlation is significant at the 0.01 level (2-tailed).

E. Hypotheses Testing

Table 7: Hypothesis testing

No.	Statement of hypotheses	Results
H1a	Knowledge donating is significantly related to identification.	Not supported
H1b	Knowledge donating is significantly related to online socialization.	Not supported
H1c	Knowledge donating is significantly related to personal expectation.	Not supported
H2a	Knowledge collecting is significantly related to identification.	Supported
H2b	Knowledge collecting is significantly related to online socialization.	Not supported
H2c	Knowledge collecting is significantly related to personal expectation.	Supported
H3a	Enjoyment in helping others is significantly related to identification.	Not supported
H3b	Enjoyment in helping others is significantly related to online socialization.	Not supported
H3c	Enjoyment in helping others is significantly related to personal expectation.	Not supported
H4a	Knowledge self efficacy is significantly related to identification.	Supported
H4b	Knowledge self efficacy is significantly related to online socialization.	Not supported
H4c	Knowledge self efficacy is significantly related to personal expectation.	Supported

V. CONCLUSION

Knowledge sharing behavior consists of two variables, knowledge collecting and knowledge donating, that communicate closely with each other in order to tap into the respondents' knowledge sharing behavior status. In addition, individual factors which consist of two variables were also investigated. As a result, the measurement would enable knowledge sharing behavior status to be examined in relation to online socialization within e-learning environment.

If each and everyone in the e-learning community plays the role of enjoying a benefit accruing from a collective effort, but contributes little or no contribution, the community would subside. Therefore the knowledge sharing behavior is vital to make the e-learning effectively. G.W. Bock et. al (2005) [30] defined knowledge sharing as a concerns of the individuals' willingness to share their knowledge they have created and acquired. This study fabricated a framework that coalesce individual factor and knowledge sharing behavior in order to scrutinize its applicability towards e-learning environment. Therefore, this paper presents an empirical study that employed two different variables, to examine people's knowledge sharing behavior within an electronic environment and the relationship towards online socialization.

Consequently, the data analysis had generated that the knowledge sharing behavior and also individual factor have little or very weak relationship with online socialization, thus the measurement is not effective and the study has resulted in an understanding that knowledge sharing behavior along with individual factor are not the favorable factors to be investigating into the online socialization in e-learning environment.

ACKNOWLEDGMENT

It is a pleasure to thank the various people who made this paper possible. Our sincere thanks goes to our colleagues in Universiti Teknologi MARA Kedah, Malaysia for whom we have great regard, and we wish to extend our warmest thanks to all those who have helped us with the creation of this paper.

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