Determinants Of Successful Knowledge Sharing Behaviour In Social Networking Sites

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ABSTRACT:

Due to its increasing numbers, social networking sites (SNSs) have become an increasing fab among university students as mediums of sharing knowledge with each other. Therefore, students' knowledge sharing behaviour in SNSs from the social and technical approaches is observed in order to find ways to improve their sharing of knowledge. Social ties, knowledge self-efficacy, structural assurance and system quality has been found to be determinants of the success of knowledge sharing behaviour as compared to ethical culture and sense of belonging. The findings provided an understanding of the factors that measured knowledge sharing behaviour among students in SNSs. The implications of this study are further discussed.

Keywords: Knowledge sharing behaviour, Social networking sites

1. Introduction

Social networking sites (SNSs) have been around for a number of years. SNSs are sites that provide online services, which enable their users to communicate with not only their friends but also strangers with a common interest (Ellahi & Bokhari, 2013; Monika & Sumit, 2011). According to the study by Boyd and Ellison (2007), it is revealed that a majority of SNSs started in the year 1997 by Six Degrees.com, which is followed by Asian Avenue, Black Planet, LunarStorm, MiGente, Cyworld, Ryze, Friendster, Myspace, Hi5, Facebook, aSmallWorld (ASW), Flickr, YouTube, Ning and Twitter. Staksrud, Olafsson, and Livingstone (2013) indicated that SNSs have ever since turn out to be a hit among people of all ages in many countries and is regarded as one of the most used online services in the Internet. The increase in the number of users is due to the upturn of Web 1.0 to Web 2.0, which includes more features in terms of socialisation (Matthews & Stephens, 2010; O'Reilly, 2007; Wyatt & Hahn, 2011). Lin et al. (2007) insist that the importance on the uses of technology in this generation has increase SNSs' effectiveness. It is obvious that SNSs do not only provide users a way of virtually meeting up with others, sharing photos, videos or even to specify their location, but also allowing them the convenience of group discussions and sharing of files privately (Shu & Yu, 2011).

There are many SNSs available in the Internet, with examples varying from Facebook, Myspace, Twitter, Blogster, LinkedIn, Friendster, etc. In their study, it is proven that some of the sites have even re-launched their services since the demand for SNSs are still rising. For SNSs to compete with each other, they must have their own special features. Facebook is one of the top SNS that enables its users in having the ability to create profile, invite friends, form groups, and to chat with individual and also in group, uploading photos and much more. Another popular SNS would be Twitter that allows its users to follow and refollow other users, sends messages publicly (tweet) and privately (Steiner, 2006). As for LinkedIn, it is different from other SNSs since its site primarily caters to professional users. LinkedIn focuses on more specialised areas that connect people from numerous work areas.

According to the Ministry of Higher Education (MOHE) in Malaysia, higher education institutions are divided into two categories, public higher education institutions and private higher education institutions. Public higher education institutions in Malaysia include, for instance Universiti Malaya (UM), Universiti Teknologi Malaysia (UTM), Universiti Utara Malaysia (UPM). As for the private higher education institutions, they include Multimedia University (MMU), HELP University, and Petronas University of Technology.

Since it is believed that the behaviours of how people in SNSs behave are important in order to promote KS, this study has, therefore, focussed on the social-technical approach that would affect the success of knowledge sharing behaviour in SNSs. This paper has adapted Chai and Kim's (2011) research model in which the ethical culture, social ties, and sense of belonging are constructs of the social approach dimension while the structural assurance belongs to the technical approach dimension. Besides adapting Chai and Kim's model, this research has also included knowledge self-efficacy (i.e. a social approach) and system quality (i.e. a technical approach) to determine how these constructs will have an impact on knowledge sharing behaviours among students in SNSs.

2. Knowledge Sharing Behaviour

Hinds and Pfeffer (2001); and Hendriks (1999) believe that knowledge sharing behaviour is based on the personality and character traits of individuals. Instead of sharing knowledge for a particular reason, these researchers believed that individuals' behaviour is based on their personality that favours sharing with others. As a matter of fact, there are also individuals that emphasise on both technical and social approach but indicate that social have a larger impact if compared to technical (Rao, 2008). This does not indicate that technology advancement does not affect knowledge sharing but instead, it indicates the social behaviour and attitude to have higher influence towards knowledge sharing behaviour. On the other hand, Matthews and Stephens (2010) believe that the changes and advancement in technology today have made extreme differences in behaviour between generations (Matthews & Stephens, 2010).

Chatzoglou and Vraimaki (2009) revealed that each individual has different behaviour and attitude towards everything in each situation, whereby each individual in a different situation with a different perception will have different behaviour towards the same matter.

Chiu, Wang, Shih, and Fan (2011) indicate that KS in SNSs is difficult due to its weak relationship, unknown individuals and no reward for sharing. Because of an individual's selfishness in gaining competitiveness, the sharing and supplying of knowledge to the open would decrease one's competitive advantages to excel. Thus, it is important for an individual to give and gain in return. When an individual provide knowledge in SNSs, that individual will expect to gain knowledge from SNSs in return. If there is only giving out (i.e. being a knowledge provider) instead of gaining from the SNSs, individuals will have a repulsiveness towards knowledge sharing. Thus, fairness as an important factor towards KS in SNSs since the behaviour of an individual will affect the KS intention and the individual's perception on SNSs and other users of SNSs will also affect the individual's knowledge sharing intention.

For that reason, <u>Matthews and Stephens (2010</u>) believe that the behaviour of an individual to adopt and discharge could also be based on the immediate need of knowledge and the impulse of the individual to share and obtain knowledge. Both researchers also indicated the demand-pull and supply-push of knowledge as behaviour of knowledge sharing. The demand-pull is the behaviour of seeking and hunting for knowledge while the supply-push is the feeding of knowledge towards other individuals. The demand-pull and supply-push show how knowledge is being transferred in and out between individuals. Veinot (2009) ascertained that there is some knowledge that needs to be supplied or forced into the society especially on certain subject such as health matters, which is an example of supply-push knowledge. An example of demand-pull knowledge is when a person search for information for assignment purposes on the Internet. The behaviour and attitude, relationships between individual and technology advancement will affect the intention of an individual to share knowledge with others (Tohidinia & Mosakhani, 2010).

By expanding the model used by Chai and Kim (2011), this study examined the impact of social factors (i.e. ethical culture, social ties, sense of belonging, and knowledge self-efficacy) and technical perspectives (i.e. structural assurance and system quality) on the success of knowledge sharing behaviour among university students in SNSs.

2.1. Social Approach

2.1.1. Ethical Culture

The ethical culture is the moral value injected into the individual. Hawker (2002) clarified ethics as a moral principle while Pai and Arnott (2013) described ethical in SNSs as control of access and control of privacy and information. Chai and Kim (2011) indicate that the ethical culture of individuals in this generation is becoming imperative due to the wide use of technology. They also confirm that SNSs has been increasingly important to the society due to the wide use of SNSs. Due to the wide use of SNSs, the quality of information circulating in SNSs is very important to the future of SNSs as a medium for knowledge sharing. Devito (2009) emphasise on politeness during communication in SNSs as an important practice. Ethical and morality include the politeness towards other individuals and mutual respect towards one another. Matthews and Stephens (2010) pointed out that ethical culture is important in order to seek the truth. Besides, the high usage of SNSs today makes ethical culture much important to avoid circulation of false information. It is the responsibility and duty that students to be truthful and responsible on the knowledge shared (Spinello, 2006). Therefore, this study proposes hypothesis 1:

H1. Ethical culture positively effects student's knowledge sharing behaviour in SNSs.

2.1.2. Social Ties

Social ties are defined as the closeness between users in SNSs (Chai & Kim, 2011). For example, the relationship that an individual has with other SNSs users such as friends, strangers, close friends, and much more. Chow and Chan (2008) highlight that social ties indicates the degree of contact that an individual has with other members in the SNSs. Many researchers (Hsu et al., 2007; Chow & Chan, 2008; Larson, 1992) have supported the notion that stronger social ties between users in SNSs increase KS. He et al. (2009) indicates that the degree of KS will fluctuate based on the degree of social ties. Higher social ties indicate higher KS in SNSs and vice versa. Wang and Wei (2011) supported that

trust as an element in social ties that help build up the relationship among individuals. In addition, the time spent in SNSs would also affect social relationship between users (Chai & Kim, 2011; Ho et al., 2012; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). As more time is spent by a student in SNSs, the higher the possibility that he or she is able to build a better relationship with others. Apparently, Chai and Kim (2011) indicated that KS among university students could increase if there is close real-life friend in SNSs while Ho et al. (2012) further iterates that social ties could enhance the initiative to share with others. Thus, it is hypothesise that:

H2. Social ties positively effects student's knowledge sharing behaviour in SNSs.

2.1.3. Sense of Belonging

Sense of belonging, clarified by Lin (2008), is a self-realisation of being within the community as a member that determines the relationship between sense of belonging and KS. Lin suggested that the higher degree of belonging an individual has in the community, the greater the chances to share knowledge. Chiu et al. (2006) have also supported that higher sense of belonging will increase KS participation among students. Individual that has high commitment to SNSs will show higher KS behaviour (Chai & Kim, 2011). Lee et al. (2011) support higher enjoyment and feel like being part of the community will also increase KS among students. Sharratt and Usoro (2003) ascertained that friendliness will increase knowledge sharing activities while Shen et al. (2010) supported the positive relationship between sense of belonging towards KS among students. According, hypothesis 3 is posited as:

H3. Sense of belonging positively effects student's knowledge sharing behaviour in SNSs.

2.1.4. Knowledge Self-efficacy

Bandura (1986) perceived self-efficacy to be highly related to knowledge sharing behaviour. It is believed that students with high self-efficacy believed that the knowledge they own could bring benefits to others and are more willing to share (Tohidinia & Mosakhani, 2010). Luthans (2003) view knowledge self-efficacy as believing that an individual's own knowledge is able to solve problems and make better decisions. Therefore, higher knowledge self-efficacy among students will lead to higher knowledge sharing in SNSs. Thus, hypothesis 4 is proposed as

H4. Knowledge self-efficacy positively effects student's knowledge sharing behaviour in SNSs.

2.2. Technical Approach

2.2.1. Structural Assurance

Structural assurance is the structure of the Internet that provides protected environment for users in SNSs (Chai & Kim, 2011). The structures can be in terms of performance promises, rules, regulations, and legal assurance. McKnight et al. (2002) indicated structural assurance as the protection SNSs' users received from criminal and fraud activities and also the prevention of loss of privacy and individual identity. For example, SNSs users should be provided with options of ensuring that their information are to be made open to the public or

limited to certain users. Thus, structural assurance is important since the focus of this study is on university students. With this, it is hypothesised that:

H5. Structural assurance positively effects student's knowledge sharing behaviour in SNSs.

2.2.2. System Quality

Swan et al. (1999) stated that the importance of effective KS in SNSs is determined by the design of the site and also the facilities that are available for users. According to them, without user friendly design and appropriate facilities, KS would not be successful. Lin (2007) explained system quality as the functionality of a web site. The functions include system reliability, response time, convenience of access, and system flexibility (DeLone & McLean, 2003; Lin, 2007; Nelson et al., 2005). Lin also indicated that high system quality will provide a more comfortable environment which leads to efficient knowledge sharing among students. From the discussion, this study developed the following hypothesis:

H6. System quality positively effects student's knowledge sharing behaviour in SNSs.

3. Methodology, Analysis And Results

Data for this study was collected using a convenience sampling through a questionnaire, which were distributed to students in in Multimedia University and Universiti Malaya, who are users of SNSs. A total of 546 responses were obtained from 600 questionnaire that were distributed. From the 546, thirty-one were discarded due to incomplete data giving the final response of 85.83%. Responses were measured using the 7-point Likert type scale, ranging from 'Strongly Disagree' - (1) to 'Strongly Agree' - (7). The constructs were measured were adapted from previous studies but modified to request data on SNSs.

3.1. Demographic Profile Of Respondents

Table 1 shows the demographic profile of the respondents. There is a 306 (59.4 percent) of female respondents, which are more than male respondents with 207 (40.2 percent) that consist of 90.9 percent Malaysian. Most of the respondents fell in the 18 to 32 years age group with a majority of 265 (50.5 percent) of them from Multimedia University, whereas the remaining of 250 (48.5 percent) are from Universiti Malaya. Out of the total 515 respondents, 404 (78.4 percent) are degree holders.

Characteristic		Frequency	Percentage
Gender	Male	207	40.20
	Female	306	59.40
	Missing data	2	0.40
Age	Under18 years	2	0.40
-	18-20 years	247	48.00
	21-23 years	179	34.80
	Above 24 years	47	9.10
	Missing data	40	7.80
Nationality	Malaysian	468	90.90

Table 1: Profile Of Respondents

	Others	43	8.40	
	Missing data	4	0.80	
Race	Malay	152	29.50	
	Chinese	274	53.20	
	Indian	42	8.20	
	Others	40	7.80	
	Missing data	7	1.40	
Institution	Multimedia University	265	51.50	
	Universiti Malaya	250	48.50	
	Missing data	0	0	
Programme	Bachelor Degree	404	78.40	
registered for	Diploma	17	3.30	
-	Master Degree	39	7.60	
	PhD	8	1.60	
	Others	44	8.50	
	Missing data	3	0.60	

3.2. Findings

The summary of the reliability results and descriptive analysis are presented in Table 2. Based on the table, all the variables' Cronbach's alpha is good with more than 0.80. The variable with highest reliability is ethical culture with an alpha value of 0.863 and variable with lowest reliability is knowledge sharing behaviour with an alpha value of 0.837. There is no variable with poor or acceptable reliability and no variable deleted or removed from this research. Table 2 also shows the descriptive analysis of the variables. Ethical culture, social ties, sense of belonging, knowledge self-efficacy, structural assurance and system quality are the independent variables of this research while knowledge sharing behaviour is the dependent variable of this research.

Variable	Number of items	Cronbach's Alpha	Mean	Standard deviation
Ethical culture	6	0.863	4.52	0.85
Social ties	4	0.856	4.44	1.12
Sense of belonging	3	0.843	4.52	1.07
Knowledge self-efficacy	5	0.839	4.55	0.94
Structural assurance	5	0.844	4.27	0.96
System quality	4	0.848	4.84	0.96
Knowledge sharing behaviour	5	0.837	4.40	1.01

Table 2: Reliability And Descriptive Analysis

Table 3: Results Of Regression Analysis

Variable	Standardized Beta
Ethical culture	0.024

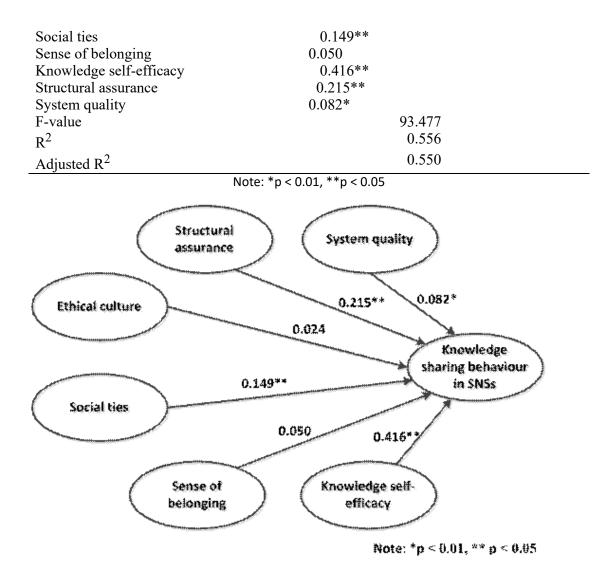


Figure 1: Results Of The Analysis

Table 3 and Figure 1 present the results of the regression analysis. The coefficient of determination (\mathbb{R}^2) is 0.556 indicating that 55.6% of the variation in dependent variable (knowledge sharing behaviour) is explained by the independent variables (ethical culture, social ties, sense of belonging, knowledge self-efficacy, structural assurance, and system quality). Social ties ($\beta = 0.149$, $\rho < 0.05$), knowledge self-efficacy ($\beta = 0.416$, $\rho < 0.05$), structural assurance ($\beta = 0.215$, $\rho < 0.05$), and system quality ($\beta = 0.082$, $\rho < 0.01$) are found to be positively related to knowledge sharing behaviour in SNSs. However, ethical culture and sense of belonging have been found not to influence knowledge sharing behaviour. Therefore, it can be concluded that hypotheses 2, 4, 5 and 6 are supported whereas hypotheses 1 and 3 are not.

4. Discussion

Based on the results, the study shows no significant relationship between ethical culture and knowledge sharing behaviour in SNSs. Bakker et al.(2006) supported the claim that ethical

culture do not have an effect on the knowledge sharing behaviour among students in SNSs. Based on Coleman (1990) and Chiu et al. (2006), it is indicated that there is a possibility that ethical culture in SNSs might not be crucial in a less risky knowledge sharing relationship, which will lead to lesser critical knowledge sharing. In SNSs, users might be closely related to each other or knows other user at a personal level, which provides a less stressful situation to share knowledge. Therefore, ethical culture might not be crucial in less risky knowledge sharing relationships in SNSs.

Based on the regression analysis, social ties have a positive relationship with knowledge sharing behaviour in SNSs. Previous research conducted by Chai and Kim (2011), Yang and Chen (2008), Tohidinia and Mosakhani (2010), Shin et al. (2007) has also proven that there is a positive relationship between social ties and knowledge sharing behaviour in SNSs. This shows that the higher social ties users have in the SNSs, the greater will be the knowledge sharing behaviour in SNSs and vice versa. Based on Tohidinia and Mosakhani (2010), when there is cooperation between users, there will be chances of exchanging and sharing knowledge.

From the results, this study shows that there is no significant relationship between sense of belonging and knowledge sharing behaviour in SNSs. In line with this research, prior research by Wang and Wei (2011) indicate that sense of belonging does not have an impact on knowledge sharing behaviour in SNSs. Wang and Wei (2011) explained that the reason is due to the lack of a direct relationship between these two variables. In addition, these researchers have indicated that lack of self-efficacy leads to lack of a direct relationship between sense of belonging and knowledge sharing behaviour in SNSs.

In this study, it is proven that there is a strong positive relationship between knowledge selfefficacy and knowledge sharing behaviour in SNSs. Numerous researchers have also supported this claim that knowledge self-efficacy have a positive impact towards knowledge sharing behaviour (Lu & Hsiao, 2007; Lin, 2007; Kankanhalli et al., 2005; Hsu et al, 2007; Carbrera et al., 2006; Zhang & Ng, 2012; Tohidinia & Mosakhani, 2010). Besides, Bock and Kim (2002) has explained that knowledge self-efficacy will be able to self-motivate an individual to share knowledge with each other.

Based on the results, it is shown that structural assurance is positively related to knowledge sharing behaviour in SNSs. In line with this research, Hara and Hew (2007) indicates that structural assurance has a positive impact towards knowledge sharing behaviour since the increase of structural assurance would encourage the behaviour of knowledge sharing among students. Apparently, it is found by Ribbink et al. (2004) structural assurance will positively influence the use of Internet and trust on the Internet.

The result also shows a positive relationship between system quality and knowledge sharing behaviour. Similar researches conducted by Ho et al. (2012) and Lin (2007) has shown a positive impact between system quality and knowledge sharing behaviour, whereby as system quality increases, knowledge sharing behaviour increases as well and vice versa. Lin (2007) have also indicated higher system quality provides better knowledge sharing experiences, thus increasing chances of knowledge sharing. She believes that system quality such as reliability of SNSs, their convenience, functionality and flexibility can increase users' experience and interaction and, therefore, increases SNSs' usage.

Based on the discussion above, the social approaches that affect KS behaviour of students in SNSs are social ties and knowledge self-efficacy while the technical approaches are

structural assurance and system quality.

5. Implications

From this study, the number of users in SNSs demonstrates a huge potential for SNSs' developers to take the opportunity increase SNSs' structure and system quality. SNSs are mediums designed for users to voice or share their thoughts, experiences or opinions and thus, provide an informal knowledge sharing platform that enables knowledge sharing unknowingly. This allows SNSs' developers to better design their sites to enhance knowledge sharing.

SNSs are beneficial to students in higher education institutions so as to encourage them to take the opportunity of sharing knowledge among each other. Higher education institutions can also take the opportunity of encouraging the use of SNSs in sharing knowledge not only between students, but also among lecturers and administrative staff. SNSs with improved knowledge sharing structure will raise the practice of SNSs to greater heights by promoting SNSs as a medium to share crucial knowledge instead of the sole purpose of enjoyment.

Besides, other industry can also take this opportunity to improve knowledge sharing from the results of knowledge sharing behaviour from the respondents. Researchers are able to determine the factors that affect the knowledge sharing behaviour of the respondents to determine ways to improve knowledge sharing. Organisations will be able to increase knowledge sharing in the organisation especially for new employees. Variables that these parties can concentrate include social ties, knowledge self-efficacy, structural assurance and system quality. These variables show a positive relationship which will increase knowledge sharing behaviour.

6. Limitation And Future Research

There are only two higher education institutions that are involved in this study, i.e. Multimedia University and Universiti Malaya. Even though each of them is the top public and private education institutions in Malaysia, the respondents were not diversified enough. This is because these institutions represent only a part of the students' community and does not represent the entire university students' community in Malaysia. Besides, the candidacy status among students causes an imbalance since six of the students who took part in this study are part-timers as compared to 488 students who are studying full time. Since there is the need to investigate students with a different perception towards knowledge sharing in SNSs, part time students might have different opinions and views towards knowledge sharing in SNSs as compared to full timers.

Based on these limitations, several suggestions are recommended. First, future researchers can increase the number of institutions by including universities in the rural areas including those located in Sabah and Sarawak. Next, researchers can consider other socio-technical aspects such as knowledge quality, trust, and enjoyment in helping others. Lastly, researchers keen in conducting future studies in Malaysia should include explanations in the Malay language due to its wide usage and also better understanding of this language among the Malaysian public.

7. Conclusion

This research seeks to determine the success of knowledge sharing behaviour among university students in SNSs. As the uses of SNSs are expanding, the findings are encouraging in providing some theoretical and practical awareness in determining the social and technical approaches of knowledge sharing behaviour among students in higher education institutions.

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