

A Review on Knowledge Sharing Behaviour in Virtual Community

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Abstract

The increasingly famous new subset of Web pages, called weblogs vary from conventional Web pages in characteristics and potential to Web users. Weblogs are becoming a perfect medium for Web user to share knowledge and generate income. This paper seeks to understand the gap among profit-oriented bloggers and their challenges in sharing knowledge through weblogs. We investigate the knowledge sharing behaviour among profit-oriented webloggers and identify weblog community. Thus, discover ways in collecting and preparing information for success factor in the weblog community. We proposed a model that integrates success factors in weblog community and knowledge sharing behaviour for future study.

Keywords: Weblog; knowledge sharing, weblog community, profit-oriented webloggers, theory of reasoned action, success factor

1. INTRODUCTION

This paper provides an extensive review on past and present Knowledge Sharing Behaviour (KSB) studies that are relevance to this study. Discussion on the factors how to initiate intention in knowledge sharing also have been done. Following is about discussion on the usage of weblogs in sharing knowledge for business purposes. Next, the highlights four types of social interactions used among webloggers. It is followed by a discussion on several techniques used by former researchers in exploring knowledge sharing. Review on social network analysis in knowledge sharing behavior also is included in this paper.

2. KNOWLEDGE SHARING BEHAVIOUR IN VIRTUAL COMMUNITY

In recent years, there has been an increasing amount of literature on definition of knowledge sharing. Yang (2007) defined knowledge sharing as the transfer process where individual competencies are developed through the sharing and learning process. The transfer process consists of two things; they are transmission and absorption; otherwise, the knowledge transfer will not occur. This means knowledge sharing is a process that involves knowledge resource and the acquisition of the knowledge by the recipient (Aliakbar, Md. Yusoff, & Nik Mahmood, 2012; Jain, Manjit, & Gurvinder., 2007). Davenport (1997) has another perception of knowledge sharing where it is more a voluntary dissemination activity that requires skills and experience. Yang (2007) also agreed that knowledge sharing only occur if an individual is willing to assist in the development of new competencies.

However, Mustafa & Abu Bakar (2009) has a different perception of knowledge sharing. They claimed that even though knowledge sharing is a social interaction, it is adequate if an individual gives information to another individual to help them. Moreover, Sulaiman (2012) agreed that social interaction is an important element as it serves as the underlying foundation in knowledge sharing. This interaction involves human and social factors. Thus, knowledge sharing is actually relates to peoples' behaviour and leads to Knowledge Sharing Behaviour (KSB) in this study context.

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The use of internet for sharing knowledge has resulted in increasing interest among our society. Searching knowledge through internet to resolve problem is very popular (Hassandoust, Logeswaran & Kazerouni, 2011; Chiu, Hsu, & Wang, 2006). A few internet users are enthusiastic to share knowledge in virtual community. Thus, this lead to the question on why individuals in virtual community choose whether to share or not to share with other community members. These are called motivations or factors to share knowledge. Further study on the KSB among virtual communities will help academicians and practitioners to get valuable understanding into what is required to stimulate knowledge sharing in virtual communities (Chiu et al., 2006). There are many studies conducted in the area of knowledge sharing in virtual community. Several aspects should be considered in order to identify factors that can initiate intention of an individual to sharing knowledge in virtual community.

2.1 Factors that Initiate Intention of Knowledge Sharing Behaviour

Intention toward performing a behaviour is identified from a person's decision to engage that behaviour (Hassandoust et al., 2011). The individual's intention is determined by attitude and subjective norms regarding the particular behaviour (Fishbein & Ajzen, 1975, 1980 in Casimir, Yong, Chai 2012; Bock, Zmud, Kim, & Lee, J., 2005). The attitude is a reflection of the individual's salient behavioural beliefs (Hassandoust et al., 2011). Casimir et al. (2012), and Bock et al.(2005) found that attitude towards knowledge sharing has a major influence on intention to share knowledge. Social norm is the degree to which an individual perceives how others approve the participation in a specific behaviour (Hassandoust et al., 2011). Consequently, social norm has a positive effect on intention to participate in sharing knowledge (Bock et al., 2005). Previous studies claimed that social norms resulting from influence of family members), colleague (Dong, Liem, & Grassman,2010) and seniors (Dong et al., 2010) resulted in positive effects on users' intention of knowledge sharing.

Presently, there is a necessity for reciprocal benefits from the exchange between the knowledge sources and recipients. The reciprocal benefits, together with trust, competition and willingness towards knowledge sharing are attitudes that motivate individual intention in sharing knowledge (Hassandoust et al., 2011). Additionally, there are other influencing factors that affect a user's intention to share knowledge virtually. These include identification, collectivism and community culture, all of which have an impact on social norms (Hassandoust et al., 2011). These factors, in turn, can influence an individual's intention to share knowledge.

2.1.1 Trust

According to Mayer, Davis, Schoorman (1995), trust is the degree of willingness to be vulnerable to the actions of others. Other researchers defined trust as an implicit set of beliefs that the other party will refrain from opportunistic behavior and will not take advantage of the situation (Riding & Gefen, 2002; Hosmer, 1995). Moreover, several researchers view trust as a set of specific beliefs of individuals that relate to integrity, benevolence and ability to others (Chowdhury & Ahmad, 2011; Kim, Ferrin, & Rao, 2003; Mayer et al., 1995).

A number of studies have found that trust is an important factor that influences knowledge sharing (Hassandoust et al., 2011; Tan, Lye, Ng, & San, 2010; Al-Alawi et al., 2007). However, Tan et al. (2010) points out that trust in knowledge sharing is a risky deed, where individuals are more inclined to conceal what they know if they are uncertain with the outcome of sharing. Therefore, trust building is the first step of knowledge sharing (Tan et al., 2010).

2.1.2 Competition

Competition is defined as the fear of losing to others that prevents individuals from willingly sharing their knowledge (Hassandoust et al., 2011). Individual that possesses knowledge have advantage that can be leveraged (Cho, Li, & Su, 2007). A small-scale study by Hassandoust et al. (2011) showed that competition has no positive effect on the student's intention to share knowledge. However, they argued that the findings might be influenced by self-selection bias, as only one university was sampled. Since competition is concerned with intellectual property, competition still considered as a factor that can affect knowledge sharing in this study context.

2.1.3 Anticipated reciprocal relationship

Huang (2009) pointed out the anticipated reciprocal relationship as an individual determines to maintain relationship with others by devoting a certain amount of time to share the mutual problem and concern while Hassandoust et al. (2011) concluded that an individual believes of ongoing relationships can be improved by sharing knowledge. Tohidinia & Mosakhani (2010) claim that an individual who choose to maintain relationship

with others are individual that loves to share knowledge. Several studies have revealed that the anticipated reciprocal relationship has a positive effect on intention of sharing knowledge (Tohidinia & Mosakhani, 2010; Bock et al., 2005).

2.1.4 *Willingness to share knowledge*

The willingness in sharing knowledge is considered since people wish for good outcomes for themselves and others. Previous studies have revealed that willingness in sharing knowledge has a positive effect on knowledge sharing (Hassandoust et al., 2011; Van den Hooff & de Ridder, 2004). However, a study by Wangpipatwong (2009) reaches a different conclusion, in which willingness has no positive effect towards knowledge sharing. He points out that the findings of his study may not be applicable due to a different social context for his sample only focused on several universities in Thailand. Thus, this factor will still be considered in this study.

2.1.5 *Identification*

Identification happens when a person feels a sense of ownership for knowledge sharing in virtual communities. Identification is explained by Hassandoust et al. (2011) as a positive feeling and a sense of belonging to the virtual community. In addition, Hwang & Kim (2007) claimed that the identification is concerned about the relationship which occurs when an individual adopts attitudes and behaviors to achieve a satisfying and self-defining relationship with another person or groups. Moreover, studied by Hassandoust et al. (2011) and Hwang & Kim (2007) proved that an identification has a positive effect on intention of knowledge sharing.

2.1.6 *Collectivism*

Collectivism is defined as a very strong group feeling where group success is more important than individual success (Hofstede, 2001). Hassandoust et al. (2011) claimed that the norms from other members in the community should be positively influenced by the collectivist culture. However, the study reached a different conclusion where collectivism have no positive effect towards knowledge sharing. They made conclusion that the findings may be influenced by self-selection bias, since the sample only involve one university in Malaysia. Subsequently, collectivism is still considered as a factor that can affect knowledge sharing in this study.

2.1.7 *Community culture*

Park, Ribiere & Schulte (2004) defined organizational culture as the shared, basic assumptions that an organization learnt while coping with the environment and solving problems of external adaptation and internal integration that are taught to new members as the correct way to solve those problems. Al-Alawi et al. (2007) claimed that each organization has its unique culture, which is developed overtime to reflect the organization's identity in two dimensions, visible and invisible. The visible dimension of culture is reflected in the adopted values, philosophy and mission of the firm while the invisible dimension lies in the unspoken set of values that guide employees' actions and perceptions in the organization (McDermott & O'Dell, 2001). In other words, community culture is a community commitment and pride, which may increase the likelihood of individuals behaving in the community's best interest. Several studies have revealed that this factor have a positive effect on knowledge sharing (Hassandoust et al., 2011; Al-Alawi et al., 2007). Based on the factors already discussed, conceptual model from Hassandoust et al. (2011) was adopted as illustrated in Figure 1. The model is derived from Theory of Reasoned Action (TRA), which was originally developed by Fishbein and Ajzen (1967).

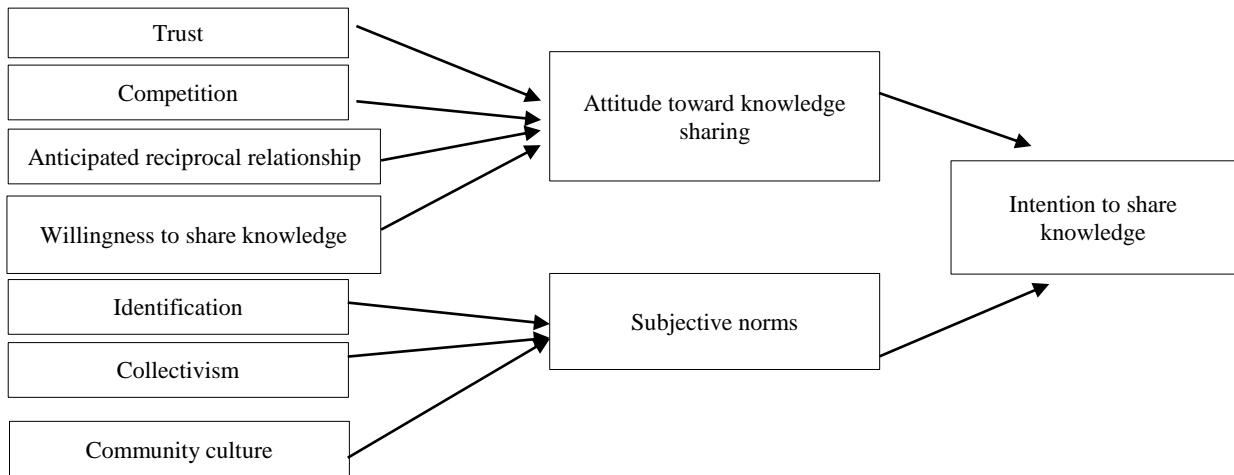


Figure 1: Knowledge sharing behaviour adopted from Hassandoust et al. (2011).

In original TRA as shown in Figure 2, intention toward performing a behavior identified from a weblogger's relative strength to share knowledge (Hassandoust et al., 2011). The attitude towards knowledge sharing and subjective norms determined the intention to share knowledge.

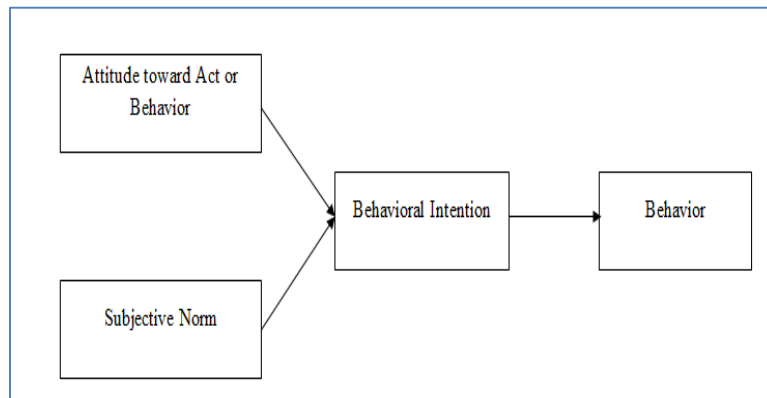


Figure 2: Original form of TRA adapted from Fishbein & Ajzen (1967).

2.2 Weblogs as medium for knowledge sharing and business

Web 2.0, a new generation of the web, is an authoring tool for users to collaboratively create, share and recreate knowledge. Weblog, which is one of the Web 2.0 technology, is a popular media (Martin-Niemi & Greatbanks, 2010; Hsu & Lin, 2007; Ali-Hasan & Adamic, 2007). Besides weblogs, social networking sites are rapidly becoming popular among internet users. However, there are several reasons weblogs deserve more attention from users. Other than allowing webloggers to share different types of file, weblog articles also have a long shelf life because they can still be found online years after they are first published. Meanwhile, for social network sites such as Facebook updates, only the last few days can be viewed at most (Blog Bloke, 2012). Furthermore, webloggers are able to reach multiple audiences since weblogs allow anyone to visits meanwhile social network sites such as Instagram and Twitter only allow followers to see users' updates (Redsicker, 2012). Therefore, comparing it to social networking site, weblogs are suggested as the more appropriate knowledge sharing medium.

Entrepreneurs view weblogs as an appropriate medium to initiate business. Weblogs are able to replace brick and mortar stores and acts as large trading platforms as weblogs have influence over a wider audience (Doyle, Heslop, Ramirez & Cray, 2012; Shafie, Nayan, Mansor, Maesin, Mahadi, & Fadzillah 2011). Profit-oriented webloggers in this study are webloggers that use weblogs in generating extra income. There are two types of profit-oriented webloggers, direct and indirect. Commonly, direct profit-oriented webloggers use weblogs to market their goods

and services. Trading involves two-way communication. Customers are able to browse products, give comments and feedbacks, bargain and critique directly to direct profit-oriented webloggers through weblogs. Indirect profit-oriented webloggers use weblogs to share their personal opinions and thoughts, while also building revenue through several ways, such as affiliate programs (Smartzul, 2009).

The affiliate program is a program where webloggers display others companies' products or services as advertisements on the weblogs and receive commissions for each sale made. According to Helmstetter & Metivier (2000), there are four types of affiliate programs; they are committing-based program, flat-free referral programs, click-through program, and cost-per-thousand impression programs. Commission based is the most common used type of affiliate program that pays weblogger a percentage of the revenue generated by the sale of a product or service made to a visitor who is referred by the weblog.

3.0 PROFIT ORIENTED WEBLOGGERS

According to Hasmuni, Sulaiman, Ahmad, Abdullah, Zakaria, & Zaibidi, (2013), weblogs can replace physical stores and it can serve as great business platforms that can reach bigger customer population. It can be fully utilized as a low cost and effective marketing tool, especially in developing countries such as Malaysia. Writing a blog gives benefits for individual who are new in online business, thus, helping them to promote and introduce their products. Along this line, the weblogs also can create an opportunity for business practitioners to share their expertise and knowledge of the business market and to gain a larger number of audiences. Furthermore, the business industry can gain benefits from the emergence of profit oriented webloggers by making the business online industry to become more profitable.

Profit oriented webloggers can be defined as webloggers that use weblogs in generating extra income. There are two types of profit oriented webloggers, which are direct and indirect. On the one hand, the direct profit oriented webloggers use weblogs to market and sell their products and services rather than having their own brick and mortar stores. The customers/readers are able to browse products, give comments and feedbacks, bargain and critique directly to direct the profit oriented weblogs. On the other hand, the indirect profit oriented webloggers use weblogs to share their personal opinions and thoughts, but at the same time they have indirectly built revenue through several ways such as an affiliate program (Smartzul, 2009). The affiliate program is a program where the webloggers display other products or services as an advertisement on the weblogs and they receive a commission for each sale made. The commission based is the most common way uses in the affiliate program that pay webloggers a percentage of revenue generated by the sale of a product or service made for visitors who was referred to the weblog (Helmstetter and Metivier, 2000; Smartzul, 2009).

Frequent communication with other profit oriented webloggers is one way to survive as the profit oriented weblogger. The most successful profit oriented webloggers encourage others to be active in weblog activities to gain ideas in generating income. However, survivability is the main problem faces by the profit oriented bloggers. It is possible to do well in making money through weblogs, even though it takes time and lots of hard work. Unfortunately, a majority of profit oriented webloggers are unable to survive in generating income through weblogs (Rowse, 2013) due to reluctance in sharing knowledge especially through online communication via the weblogs (Ahmad, 2011). Sometimes, individuals are reluctant to share knowledge due to a sense of insecurity. For example, the webloggers are afraid of their ideas or entries in their weblogs will be stolen (Ahmad, 2011). As a result, successful knowledge sharing can be difficult to achieve when open sharing of knowledge by the webloggers is limited across the social network.

3.1 Social interaction among webloggers

Social interaction is important in knowledge sharing as it serves as an underlying foundation in knowledge sharing (Sulaiman, 2012, Sulaiman, Alias, Omar, Zabidi, & Zakaria, 2014, Helou & Abd Rahim, 2014, Sulaiman, Ghazali, Alias, Omar, & Zabidi, 2015). Online communities are virtual spaces where groups of people with similar interest communicate and interact to succeed in their goals (Meng & Gong, 2009). Thus, social interaction in this study is referred to as weblogs ties that are considered as links between two webloggers on one or more relations in weblogs (Chen, Chen & Kinshuk., 2009; Safran & Kappe, 2008). There are several types of social interactions, among them are guestbook entry, comment, permalink and blogroll. These social interactions are discussed as follows:

3.1.1 *Guestbook entry*

Guestbook entries are usually implemented as a chronological order of responses which allow readers to give overall comments about the weblogs and not just responding to certain posts. Safran & Kappe (2008) use guestbook entries as one of the weblogs, social ties to study the influence of community activity towards Meine Kleine Weblogs Community. Their results show that community activity does have an influence on Meine Kleine Weblogs Community. However, Safran & Kappe (2008) stated that not all of the top twenty webloggers in their study have created guestbook entries.

3.1.2 *Comment*

Comments have similarity with Guestbooks in that it is also implemented as a chronologically ordered of responses. However, the difference between these two is that comments act as a reply contributed by the reader to a specific post within the site. Comments serve as a simple and effective way for webloggers to interact with readers that allow webloggers to respond to readers' comments (Marlow, 2004). Pikas (2008) use the comments in studying science weblogs community and found that blogs can be formed into more easily findable general subject area or interest cluster. Ali-Hasan & Adamic (2007) use comments to study real life relationships between Kuwait Blogs, Dallas/ Fort Worth Blogs, and the United Arab Emirates Blogs. Besides using guestbook entries, Safran & Kappe (2008) also use comments to study the influence of community activity towards Meine Kleine Weblogs Community. However, they again discovered that not all of their top twenty webloggers give comments in the analyzed period.

3.1.3 *Permalink*

The permalink is the link to specific posts. This feature allowed weblogger to have a sort of distributed conversation, where a post can respond to another on an entirely different weblog. Besides using comments, Marlow (2004) used permalinks to understand the social implications of linking the community, drawing from the weblogs social ties collected by the Blogdex project which track over 30,000 weblogs.

3.1.4 *Blogroll*

Blogrolls work as a navigation tool for readers to find other authors with similar interest and allowing webloggers to be notified when others make any new post (Marlow, 2004). Besides using comments, Ali-Hasan & Adamic (2007) also use blogrolls to express real life relationships Kuwait Blogs, Dallas/ Fort Worth Blogs, and United Arab Emirates Blogs. Picks (2008) also used blogrolls to describe science blogs, but he suggested that it is better to use comments. This is because by using blogrolls, the blogs are densely connected and cohesive subgroups are not easily found. Zafiropoulos, Vrana & Vagianos (2012) use blogrolls to investigate the most influential weblogs among Greece political weblogs community and mentioned that using blogrolls is a good way to map the network.

4.0 REVIEW OF SOCIAL NETWORK ANALYSIS IN KNOWLEDGE SHARING BEHAVIOUR

Apart from selecting the suitability factors, choosing the appropriate techniques in analyzing factors of knowledge sharing is also crucial and need to be considered. The concept of social networking has been used since the early 20th century. However, Barnes (1954) started using the term to denote patterns of ties, groups and categories concepts that used by other researchers. Pinheiro (2011) defined social network as a set of nodes that have relationships or links with one another. A social network may comprise a few or many nodes, connected to one or several types of relationships. According to Prothmann (2007), SNA can help support knowledge sharing by focusing on core applications of knowledge management, for example, identification of personal expertise, understanding knowledge transfer and discovering opportunities in improving knowledge sharing process and efficiency. Moreover, SNA is the study of the relation structure between nodes as well as the behaviours of the nodes embedded in the network and the characteristics of the whole network (Lei & Xin, 2011). Prothmann (2007) mentioned that the number of participants surveyed through methods of social network analysis may range from small groups of 10 to 20 people to large network consisting of several thousand actors. Several attempts have been made to analyze knowledge sharing using SNA (Lei & Xian, 2011; Daniel, McCalla, & Schwier, 2008; Marques, Cardosa, & Zappala, 2008; Liebowitz, 2005; Paier, 2003).

In education sector, Lei & Xin (2011) studied knowledge sharing and knowledge flows by a university scientific group among 16 members. A set of questionnaire is used as a measurement of individual behaviours and attitudes.

This is followed by observation to collect information about group members' routine activities, behaviours and connection. SNA is used to build the model of social relations, revealed the social relations among behaviour within the group, and describe the social relation structure. They claimed that the position of the members in the network determined the knowledge sharing process in it. Meanwhile, Daniel et al. (2008) conducted a study to understand the flow on knowledge sharing. The content analysis is an online interaction in a six credit graduate course in Educational Communications and Technology. This is followed by a survey instrument with 30 items administered to a random sample of 9 of the 15 graduate students who participated in the course. SNA is used to analyze the exchange of messages within the group and to examine the degree of connectivity of each individual within the community.

In order to develop organizational and business process through knowledge management, Liebowitz (2005) conducted a study to better understand the knowledge flows in the organization. An important technique to visualize these knowledge flows is the used of acknowledging map using SNA. Interval measures of SNA are used in order to determine the strength of the connections between individuals or departments in the organization. This study applied the analytic hierarchy process (AHP) to develop these interval measures and integrated the values within the social network analysis to produce a meaningful knowledge map. Marques et al. (2008) analyzed the relationship between knowledge sharing behavior and performance. The former behaviours were studied using SNA to characterize knowledge sharing network.

5. THE WAY FORWARD

From the stages have been discussed above, this paper will move forward for Prioritization of factors and Interpretation of results. For prioritization of factors, the verification and validation using the semi-structured questionnaire was adapted from Hassandoust et al. (2011). A pretest of questionnaire performed using two experts in the knowledge management area and three experts in blogging (i.e. influential webloggers) to review its logical reliability and validity, contextual relevance, arrangement of items and ease of comprehension of statements. The feedback from these experts led to minor revisions. This questionnaire contained demographics section and factors that motivate intention to share knowledge section. The first section sought respondents' demography details that are relevant in this study, including industry, weblogs URL and number of years in the industry.

6. CONCLUSION

Based on comprehensive review, identifying suitable factors that can initiate intention of an individual in sharing knowledge in blogosphere is crucial. This paper also reviewed the use of weblogs as knowledge sharing and business platform. Since knowledge sharing is claimed to be more effective with the existence of social interaction, this study reviewed four types of social interactions used by webloggers. Apart from that, this paper has also discussed appropriated techniques that have been employed in analyzing knowledge sharing in several sectors which is Social Network Analysis (SNA). As best on our knowledge, there are no previous study focused on knowledge sharing among weblogs for business purposes in Malaysia context. Moreover, the review of literature proved that SNA is more suitable in analyzing knowledge sharing in blogosphere since SNA can be used in identifying influential webloggers and exploring the whole network.

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