FACTORS PROMOTING KNOWLEDGE SHARING USING VIRTUAL MODE FOR THE RESEARCHERS: A LITERATURE REVIEW

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ABSTRACT

Promoting a knowledge sharing behaviour is a challenge for the most knowledge-savvy organizations such as the research organizations. Developing behaviour with the values and practices of knowledge sharing is a multi-year effort involving attention to social, organizational, managerial and technical components of this behaviour. Based on the previous researches, various gaps or barriers were cited by the experts on knowledge sharing that include functional silos, individualism, ineffective means of knowledge capture, inadequate technology, internal competition and managerial gaps in the organizations.

People nowadays are utilizing virtual modes and web-based technologies such as Internet, Intranet, social media and other latest online applications to interact and socialize. This is where knowledge can be extracted, shared and distributed around the globe. On that note, many scholars have recognized the virtual environment as an effective platform for knowledge sharing and collaboration. The experts have suggested virtual communities as cyberspace communities having various internet-based chat and collaboration that include discussion forums, chatting space, discussion or online bulletin board, wikis, blog and other online platforms.

Synthesizing from the previous theories and models, namely Theory of Reasoned Action, Technology Acceptance Model and Unified Theory of Acceptance and Use of Technology, the conceptual framework of a further research is developed. From the relevant theories and framework, this review has proposed five important predictors or key success factors for implementing knowledge sharing and collaboration; performance expectancy, effort expectancy, social influence, facilitating condition and attitude towards knowledge sharing.

Keywords: Virtual Mode; Knowledge Sharing; Behaviour; Success Factors; Web-Based Technology

1.0 Introduction

Knowledge Management (KM) has been widely recognized and practiced by many organizations around the world, including Malaysia. This initiative comprises a range of strategies and practices to identify, create, capture, distribute, share, collaborate and enable adoption of insights and experiences, either by individuals or organizations. KM definition has been suggested by many experts such as Argote (1999) and Huber (1991) who refer KM as how organizations create, retain, and share knowledge. Landoli and Zollo (2007) also refer KM as the process of creating, capturing, and using knowledge to enhance organizational performance. These scholars also refer KM as a range of practices and techniques used by organizations to identify, represent, and distribute knowledge, expertise, intellectual capital and other forms of knowledge for leverage and learning across the organization. KM has been positioned as a
business strategy that advances knowledge as a critical resource and the capacity to integrate pieces of it across the organization as distinguishing feature for the success within the market (Davenport and Prusak, 1998 and Grant, 1996).

From the above definition, the experts have identified one of the important pillars in Knowledge Management, i.e. knowledge sharing. Grant (1996) describes knowledge sharing as an important focus in KM field, where knowledge is seen as the most important resource which organization possesses. Argote and Ingram (2000) also define knowledge sharing as the process through which one group, department, or division is affected by the experience of another. They further point out the transfer of organizational knowledge can be observed through changes in the knowledge or performance of recipient units.

2.0 Virtual Mode/Platform

Face-to-face interaction is recognized as an effective conduit or medium for knowledge sharing (Pierce, 2000). This conventional mode is using normal human conversation that can facilitate the transfer and sharing of knowledge among the communities. On contrary, there is another mode of interaction that is become more popular since the emergence of the latest technology. People nowadays are utilizing virtual mode and web-based technology such as Internet, Intranet, social media and other online platform. This is where knowledge can be extracted, shared and distributed around the globe and people are starting to interact and socialized using the latest online media and technology. On that note, many scholars have identified the virtual environment as an effective platform for knowledge sharing and collaboration (Saenz, Aramburu and Rivera, 2010).

Virtual Communities can be defined as people or users who collaborate and communicate regularly in an organized manner via online or virtual medium, such as bulletin board and newsgroup (Chen and Hung, 2008). Rapid exchange of information and knowledge through this platform has extensively changed people’s lifestyle and enhancing individual and organizational learning. This virtual platform has facilitated access to more diverse set of users at lower cost using the free online platform and creates the social interactions among community members that will enhance knowledge creation in the society (Hoffman and Novak, 1996).

Lin (2008) has suggested virtual communities as cyberspace community that have various internet-based chat and collaboration that include discussion forums, chatting space, discussion or online bulletin board, wikis, blog and other online platforms. According to this scholar, these virtual platforms share several common properties such as collaboration features that support people in different time zones and places and engage knowledge organization by supporting threading or hyper-linking features. This platform also creates a non-volatile data and record of the collaboration and stored in text and enhanced by multimedia addition.

Johnson (2001) also cited that virtual communities use networked technology, such as Internet platform to collaborate across geographical barriers and times zones. These platforms exist based on specific activity or related task such as collaboration about the environment and humanity. These virtual
communities are organized around an activity and they are formed as a need arises (Squire and Johnson, 2000). Due to the structure of this communities whereas the members cannot see each other, norms do not dominate as compare to traditional face-to-face collaboration, thus allowing for greater individual control.

There are several types or mode of virtual technology that are commonly used, either by individuals or organizations, for instance:

a. **Online Message Boards**

   This platform is an online forum where people can interact and discuss thought or ideas and share their knowledge on various topics. This forum also allows participants to choose which thread or board of discussion, users would like to read or contribute and other respondents can follow the discussion by adding their own post to that thread (Browder and Elstrom, 1997).

b. **Online Collaboration/Chat Rooms**

   The development of this collaboration platform started as the medium that allowed users to talk and interact to whoever was online at the same time they were. In this mode of interaction, messages and information were sent and online users could immediately received and respond back in real time. Instant messaging such as Yahoo Messenger and Microsoft Network (MSN) Messenger are two common platforms that provide collaboration facilities that include an input box, a message window and a participant list (Phelps, 2010).

c. **Social Network Platform/Services**

   Andreas Kaplan and Michael Haenlein (2010) has define social network as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content. This platform is the most prominent type of virtual platform nowadays. For instance, Facebook, Twitter, Friendster and other social network services are commonly used to connect people and maintain their virtual relationship. These platforms will allow participants to gather in the cyberspace and enable them to keep up to date with their friends and acquaintances’ activities.

d. **Blog**

   Oxford Advanced American Dictionary (2011) has defined Blog as a website where a person writes regularly about recent events or a particular topic, sometimes with new information added every few minutes as events happen, and with the opportunity for readers to send in their own comments and opinions. Blog is also defined as a chronological publication of personal thoughts and web links. Brady (2005) cited that blogs have gained a lot of popularity among Internet users as a useful communication tool. According to this scholar, blogs have been discussed lately as an innovative knowledge sharing technology for knowledge management. Functions such as permanent links, track-back and comments enable bloggers to be interactive and allow people to more actively participate in information and knowledge generation.

### 3.0 The Virtual Communities

The strategic, learning, collaboration and innovation environments in which knowledge sharing takes place can affect the firms and knowledge sharing processes in many ways. From the previous research,
several items are identified as the form of knowledge that is shared among the professionals in the research organization. As mentioned by Levitt and March (1988), knowledge may be embedded in the form of tasks or routines. Routines are described by these scholars as the forms, rules, procedures, conventions, strategies and technologies around which the research organizations are constructed and through which they operate. While a routine may be easy to transfer, knowledge about ‘who is good’ at using that routine may take time to establish and develop.

In response to this issue, many organizations, especially in the Research and Development (R&D) communities have attempted to codify ‘who is good’ or ‘who-knows-what’ in their organizations through the development of the expert directories or knowledge yellow pages (Davenport and Prusak, 1998, Yeung, et al., 1999, Dixon, 2000). Previous scholars such as Stasser, Stewart and Wittenbaum (1995) have found that group performance increases when everyone in a community is informed of each other member’s expertise. As a result, as Sutton and Hargadon (1996) revealed, such knowledge allows communities to engage and collaborate in the joint brainstorming sessions. It also allows group members to explore new ideas or innovation and discuss difficult issues such as lesson-learnt and best practices. In addition, since organizational knowledge is embedded in processes, procedures, routines and structures, such knowledge cannot be moved into an organization without the transfer of cluster of individuals with established patterns of working together (Teece, 2000).

This study will analyse the transfer of knowledge via virtual technology in the Research and Development centre in Malaysia. On that note, this research will define and review the specific norm of virtual communities that suit for the knowledge and research organization. Few scholars have defined the characteristics of the innovative virtual communities as follows:

a. This medium encourages the future-oriented and innovative users to share their own view and creativity by deliberating trial-and-error tools to support experimental activities during innovation processes (Thomke, 2001).

b. This platform also encourages users to update their knowledge by providing simple and clear navigation through some features such as semantic knowledge maps and advanced search functionalities to encourage knowledge creation (Antioco et al., 2008). Organization can offer opportunities to their staff to make new usage experiences through iterative prototype and testing that can develop the knowledge sharing culture (Thomke, 2001).

c. A virtual community also stimulates contributions by appealing to user’s intrinsic and extrinsic motives. Therefore, organization can design reward system based on a contributors’ innovation in the form of explicit rewards, recognition and rankings or idea competitions (Piller and Walcher, 2006).

Palloff and Pratt (1999) describe several steps in developing a virtual community. For a start, the organization needs to clearly define the community’s objectives and create a gathering platform for the group. Subsequently, the participants in the group should promote leadership from within the group, as well as define norms or a code of conduct. This will allow community members to resolve conflicts by themselves in the virtual environment. In addition, these scholars suggested a range of member roles and responsibility such as coordinator or team leader should be established, plus facilitation of subgroups, if necessary.
4.0 Issues in Promoting Knowledge Sharing

Instilling a knowledge sharing behaviour is a challenge for the most knowledge-savvy organizations, such as the research organization. Because behaviour is difficult to pin down, it is often underestimated in efforts to change how firms work. Developing a behaviour which values and practices knowledge sharing is a multi-year effort involving attention to social, organizational, managerial and technical components of this behaviour. Past efforts have often assumed that implementing technology such as media online will be enough to promote knowledge sharing. While this has been consistently demonstrated as an ineffective practice, frequently the majority of an organization’s knowledge resources are devoted to technology and not to the other factors, which stimulate knowledge sharing.

Based on the previous researches, various gaps or barriers were cited by the experts on knowledge sharing, that include functional silos, individualism, in-effective means of knowledge capture, inadequate technology, internal competition and managerial gaps in the organization (Davenport and Prusak, 1998). Several cultural issues concerning these initiatives in many organizations are due to the following factors as mentioned by the scholar, such as Davenport (2000) who cited some of the common reasons given by people who reluctant to share their knowledge:

a. Pride syndrome – People have pride in not having to seek advice from others and in wanting to discover new ways for themselves

b. Not realizing how useful particular knowledge is to others – An individual may have knowledge used in one situation but be unaware that other people at other times and places might face the similar situation.

c. Lack of trust – If people share their knowledge, will others use it out of context, miss-apply it or pass it off as their own without given any acknowledgement or recognition to them as the source.

Logan (2006) also cited that enabling efficient knowledge sharing in organizations is not easy. The challenges mentioned by this expert are often related to motivate people to share knowledge, identifying the key people to share the knowledge, organizing the existing knowledge and making knowledge easily accessible. Handzic, Lazaro and Toorn (2004) in their research also uncovered a distinct preference for people over technology-orientated means of knowledge sharing in the specific organization. The four major issues identified by them are: personnel–related, method-related, fear of technology and technological promises versus actual deliverance.

Despite strong efforts to systematically define processes and technology solutions, recent studies have appointed out that 70% of organizations implementing a company-wide strategy for knowledge sharing and transfer fails to realize improvement in performance or to develop core competencies such as innovation and research development (Malhotra, 2005). Among the critical factors highlighted by the experts such as Holsapple and Joshi (2002) and Massey, Mantoya-Weiss and O’Driscoll (2002) are failure to emphasize knowledge sharing as a business objective, failure to embedded knowledge sharing in daily processes and failure to implement technology that facilitates the knowledge sharing.
5.0 Previous Studies on Determinant Factors for Knowledge Sharing

Communicating with others in a virtual community involves creating social presence. Tu (2002) defines social presence as the degree of salience of another person in an interaction and the consequent salience of an interpersonal relationship. According to his research, it is believed that social presence affects how likely an individual is participating in a virtual community. Management of a community of practice often faces many barriers that inhibit individuals from engaging in knowledge exchange. Some of the reasons for these barriers are egos, personal attacks and time constraints.

Other constraining factors that were identified by Correia, Paulos & Mesquita (2010) in their research are fear of losing the position they occupied in their organization’s hierarchy, lack or opportunity to participate because nobody requested their assistance in sharing their knowledge and technological limitation that preventing them to actively involved in the communities. These scholars also suggested that the most important factors that influenced users’ involvement in virtual communities are organizational factor, namely the support and recognition from the management and their colleagues in order to enhance and motivate their day-to-day activities.

Other scholars such as Krogh and Grand (2002) suggested that members in virtual communities will be motivated in knowledge creation culture within their society are mostly related to their personality and satisfaction they feel when they collaborated with their colleagues. Sharratt & Usoro (2003) also determined that among the vital factors in knowledge sharing is the trust element. They defined trust factor in the shared environment as a facilitator of communication. Ardichvili (2002) also added another factor – moral obligation as another contributor because members feel the moral obligation to repay what they have gained from the related virtual communities.

Ramlee (2011) describe based on his study in one of the government agency in Malaysia that indicated about people’s high expectation to be rewarded in terms of recognition and promotion as one of the vital predictors for implementation of knowledge sharing culture. This author also suggested that the implementation of this sharing culture is dependent on changing of the staff’s attitude and behaviours to share the knowledge willingly.

Based on the previous researches, there are two major factors that promoted the knowledge sharing and collaboration culture in the organization:

5.1 Motivation to share

Motivation to share knowledge is critical to success in Knowledge Communities. Studies by Ardichvilli, Page and Wentling (2003) show that members are motivated to become active participants in Knowledge Communities when they view knowledge as meant for the public good, a moral obligation and/or as a community interest. Members of a community can also be motivated to participate by using methods such as tangible returns (promotion, raises or bonuses), intangible returns (reputation, self-esteem) and community interest (exchange of practice related knowledge, interaction). This factor is justified by Hall and Graham (2004) that suggested - direct or indirect extrinsic factors such as financial rewards can influence members to actively participate in the Knowledge Communities.
5.2 Motivation to collaborate

Collaboration is essential to ensuring that communities of practice thrive. Research by Sveiby and Simon (2002) has found that certain factors can indicate a higher level of collaboration in knowledge exchange in a business network. They also found that more seasoned colleagues tend to foster a more collaborative culture. Additionally they noted that a higher educational level also predicts a tendency to favor collaboration. In term of technological factors, Maloney-Krichmar (2003) also justify that technology especially Information and Communication (ICT) platform should allow members to easily collaborate, socialize, provide user-friendly interface and offer an assessment of their platform, for instance the number of knowledge artifacts and archived that had been created and their production dates, number of active users who registered and collaborate in the system and other facilities that can enhance users participation in the KM platform.

6.0 Review of Previous Theory and Framework

In order to develop a conceptual model for this research, some theoretical models describing the factors that influence knowledge sharing behaviour from the previous researches were identified and analyzed. To begin with, three basic theories that described the factors influencing individual behaviour had been identified as the foundation of this model. All these theories are quite general and so require those factors or predictors to be specifically described.

6.1 Theory of Reasoned Action (TRA)

![Figure 1: Theory of Reasoned Action](Source: Davis et al., 1989)

This theory was developed by Martin Fishbein and Icek Azjen in 1975 and 1980 that derived from previous researches that started as the theory of attitude, which led to study of attitude and behaviour. Miller (2005) defines each of the three important components in this model as follows:

a. Attitudes (A)

This component describes the sum of beliefs about a particular behaviour weighted by evaluations of these beliefs.

b. Subjective Norms (SN)

This component refers to the influence of people in one’s social environment on his/her behaviour intentions; the belief of people, weighted by the importance one attributes to each of their opinions that will influence one’s behavioural intention.
c. Behavioural Intention (BI)

This component refers to a function of both attitudes toward a behaviour and subjective norms toward that behaviour, which has been identified to predict the actual behaviour.

This model defines the links between beliefs, attitudes, norms, intentions and behaviour of individuals and can be summary as follows:

\[
\text{Behavioural Intention (BI)} = \text{Attitude (A)} + \text{Subjective norms (SN)}
\]

This theory also suggests that all other factors which influence the behaviour only do so in an indirect way by influencing the attitude or subjective norms. Fishbein and Azjen (1975) refer to these factors as being the external variables. These variables for knowledge sharing as example can be the organizational structure, management support, key performance indicators and other relevant factors that influence this sharing culture.

6.2 Technology Acceptance Model (TAM)

This model was introduced by Fred Davis and Richard Bagozzi in 1986 and is specifically made as an adoption of the Theory of Reasoned Action (TRA) to explain behaviour related to Information System (IS) usage. The purpose of this theory is to predict the acceptability of a tool and to identify the modifications which must be brought to the system in order to make it acceptable by the users.

According to Bagozzi and Warshaw (1992), this model replaces many of TRA’s attitude measures with the two technology acceptance measures – ease of use (E) and usefulness (U). These two important components had been described by Davis (1989) as follows:

a. Perceived Usefulness (U)

This component is defined as the degree to which a person believes that using a particular system would enhance their job performance within the organization.

b. Perceived Ease of Use (U)

This component can be defined as the amount of effort the person expects to need for using a particular system.

Davis (1989) also stresses about the attitude of an individual are not the only factor that determines the usage of a system, but is also based on the impact it may have on his/her performance. Therefore, even
if the individual reluctant to utilize the system, the probability that he/she will use it is higher if this individual perceives that the system will improve his/her performance at work. With different system offering the same features, a user will find more useful the one that he/she finds easier to use (Dillon and Morris 1996).

6.3 Unified Theory of Acceptance and Use of Technology

![Figure 3: Unified Theory of Acceptance and Use of Technology](source)

This model is formulated by Venkatesh (2003) and others to explain user intentions to use an information system and subsequent usage behaviour. According to this scholar, this theory was developed through review and consolidation of the constructs of eight models that earlier research had employed to explain Information System usage behaviour. The eight models are Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), Motivational model, a combined theory of planned behaviour and technology acceptance model, Model of Personal Computer utilization, Innovation diffusion theory and Social cognitive theory.

This theory has four key constructs or variables as follows:

a. Performance expectancy

Venkatesh (2003) had arranged five additional dimensions from previous research, which are Perceived usefulness (Technology acceptance model), external motivation (Motivational model), work correlation (Model of Personal Computer utilization), relative advantage (Innovation diffusion theory) and expectancy to the achievement (Social cognitive theory). From these dimensions, the author also suggested that this variable refers as the ability to obtain significant rewards after using the system. For instance, the difference between two variables – Gender and Age had towards performance expectancy is relatively significant in a knowledge society. Therefore, the male/female or young staff who pursues performance will be more outstanding in sharing knowledge, compare to other groups.
b. Effort expectancy

This component refers to the easiness that an individual thinks of when using the system (Venkatesh and Davis 1996). Similar to the above variable, Vankatesh (2003) has identified three sub-dimensions from the previous research, which are Consciousness of easy to use (Technology acceptance model), systematic complexity (Model of Personal Computer utilization) and operating simplicity (Innovation diffusion theory). This author suggests that whether the design of the system such as Virtual platform can allow user to navigate it easily or not is one of the key success factors of accepting the technology. For instance, the acceptance of the new system such as Virtual platform is determined by easy-to-use factor and would be somewhat different because of gender and age factor and these influences will be reduced as the using experience increases.

c. Social influence

This variable refers to the degree that an individual sense that the person who is important to him thinks that he should use the new system (Venkatesh and Davis, 1996). From this component, Venkatesh (2003) has categorized three sub-dimensions from the previous scholar as follows:

i. Subjective Norm (Theory of reasoned action, Technology acceptance model and Theory of planned behaviour)

This attribute refers to a certain kind of image of the party that is given by people around him or people think that how the party should do (Venkatesh and Davis 1996). This was relevant to produce the point of behavioural intention that was first proposed by Theory of Reasoned Action. Davis (1989) believed that the strong or weak strength of this element is closely related to the environment that the discussion subject is in. As example, in establishing Virtual platform, the commitment from the top management will affect the acceptance and utilization of this system to the users.

ii. Public Image (Innovation diffusion theory)

This element refers to the party thinks a certain image helps to maintain or improve his position in the group (Venkatesh and Davis, 1996). Vankatesh (2003) suggested that because the image the party hopes to establish is usually related to role model that had been identified. As a result, this author assumed that there is significantly relation between public image and role model identification.

iii. Social Factor (Model of Personal Computer utilization)

Vankatesh (2003) believes that this attribute has the relationship with use intention and influenced by the interfering variables such as gender, age, experience and use voluntarily. For instance, social factor has very significant influence towards senior staff in sharing knowledge due to recognition or motivational factors that influences the positive culture in the organization.

d. Facilitating conditions

This variable can be described as the degree of supporting that an individual received from the organizational and technical relevant equipment toward system use such as training, manual,
hand-on and others (Venkatesh and Davis 1996). Vankatesh (2003) had categorized three sub-dimensions from the previous models:

i. Control of conscious behaviour (Technology acceptance model and Theory of planned behaviour)
   This elements refers to user’s self-efficacy to the system in general which determine the ability of user to operate and utilize the system

ii. Promoting condition (Model of Personal Computer utilization)
   This attribute refers to the technology assistance that is provided by the environment

iii. Compatibility (Innovation diffusion theory)
   This element is refers as the consistency of system and organization value

Other factors such as gender, age, experience and voluntariness of use are posited to mediate the impact of the four key variables on usage intention and behaviour. Venkatesh (2003) suggested that the purpose of these mediating variables is to emphasize that there is difference between personal acceptance and strategy of using the system under different environment and situation. Venkatesh (2003) also suggested that the purpose of this model is to weigh the introduction of the new technology such as Virtual platform in the organization and predict and explain the user’s behaviour of accepting this new system. On that note, this research will use the above theories as the foundation of the study framework.

7.0 The Proposed Conceptual Framework

Synthesizing the previous theories and models, the conceptual framework of this research can be proposed and shown as figure below:

![Figure 4: The Research Conceptual Framework](image-url)
From the above framework, this research has identified five key predictors or independent variables as follows:

7.1 Performance expectancy

This research suggested that this variable refers as the ability to obtain significant rewards after using the system (Vankatesh 2003). For this research, rewards and recognition are the important variables that suit for this predictor to motivate researchers to use the system. Previous study by Ardichvilli, Page and Wentling (2003) show that users are motivated to become active participants in Virtual platform when they view knowledge as meant for the public good, a moral obligation and/or as a community interest. Members of a virtual community can also be motivated to participate by using methods such as tangible returns (promotion, raises or bonuses), intangible returns (reputation, self-esteem) and community interest (exchange of practice related knowledge, interaction). There are few elements of recognition in sharing knowledge and best described by Yoo (2002) as follows:

i. Career advancement – the degree to which an individual believes sharing their knowledge will positively affect their career.
ii. Sense of community – the degree to which an individual feels a sense of belonging in a community.
iii. Value congruence – the degree to which a member’s values are congruent with the organization.

7.2 Effort expectancy

This research suggested that whether the design of the system such as Virtual platform can allow user to navigate it easily or not is one of the key success factors of accepting the technology. For this research, the acceptance of the new system such as Virtual platform is determined by easy-to-use factor and the system user’s interface is developed based on the users need and justification. Whittaker (1999) had mentioned about the users’ involvement in is long recognized as a success factors in Information System project. Similarly in developing Virtual Communities system, it is important to get users’ agreement and involved the intended researchers to gain ownership and acceptance over the interface eventually developed. Without the effort expectancy elements in the development of this system, will be ended up with a solution that did not meet their needs and expectation. According to Lam (2005), KM tools such as Virtual platform that suffer from poor usability are likely to discourage and frustrated potential end users. Davis (1989) also identified this element as follows:

i. Ease of use – the degree to which an individual believes that using the Virtual platform is free from effort.
ii. Perceived usefulness - the degree to which an individual believes that using the Virtual platform enhances their job performance.

7.3 Social influence

Previous research has pointed out that the social and organizational context is crucial for work group success (Denison, 1996; Gladstein, 1984; Govindarajan and Gupta, 2001; Höggl, 1998). In the context of Knowledge Communities, these scholars argue that five context variables are of major importance - management support, knowledge culture, topic relevance, knowledge supply, and knowledge type. Davis (1989) believed that the strong or weak strength of this
element is closely related to the environment that the discussion subject is in. For this research, in establishing Virtual platform, the commitment from the top management and establishing effective organization structure will affect the acceptance and utilization of this system. Social factor also had very significant influence towards senior staff in sharing knowledge due to recognition or motivational factors that influences the positive culture in the organization.

7.4 Facilitating conditions

This variable refers to user’s self-efficacy to the system in general which determine the ability of user to operate and utilize the system and refers to the technology assistance that is provided by the environment such as training, Helpdesk system, manuals and documentation. As describe by Gannon-Leary and Fontainha (2007), the participants must have access to a basic Information Technology (IT) skills to become efficient in technology and usability of this Virtual platform. On that note, self-efficacy elements such training and manuals are very crucial to support the acceptance of this system by the relevant participants. Training for instance is critical in developing the potential users to subscribe and utilize the new platform, such as Virtual technology in the organization. Without proper system hands-on, the probabilities of users’ participation are very low and will also maximize user’s error and misinterpretation towards the platform.

7.5 Attitude towards Knowledge Sharing

Based on Theory of Reasoned Action (TRA), this variable can be defined as the degree of one’s positive feelings regarding sharing his/her knowledge (Bock and Kim, 2002). As example, a person might have the beliefs that knowledge sharing is good for the organization, that culture makes organization look strong, or the negative perception are this sharing culture will burden their time and they are uncomfortable to share their knowledge. Each of these beliefs can be weighted. One of the important elements of knowledge sharing attitude is trust. According to Mayer (1995), this attribute that can be described and categorized as follows:

i. Integrity-based trust – The degree to which an individual believes the community to be honest and reliable
ii. Benevolence-based trust – The degree to which an individual believes the community will act in their best interest
iii. Competence-based trust – The degree to which an individual believes that the community is knowledgeable and competent

Job hierarchy in terms of job position that differentiates between senior and junior level in the organization will be the mediator variable that will influence the behaviour of sharing knowledge. Most probably, senior staff will intend to be promoted as the facilitator or leader in the communities and will share more of their experiences compare with the newly recruited person in the organization.

8.0 Conclusion

This research attempts to concentrate in investigating the critical success factors in developing a new feature for KM platform, namely Virtual technology to implement the knowledge sharing and collaboration culture in the research organizations. Based on the literature review and comparative of the previous methods and frameworks, this study suggested five important predictors or key success
factors for promoting knowledge sharing and collaboration – performance expectancy, effort expectancy, social influence, facilitating condition and attitude towards knowledge sharing.

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