

# Knowledge Sharing Success Model of Virtual Communities of Practice in Healthcare Sector

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## INTRODUCTION

One of the knowledge management (KM) initiatives in health care sector is Virtual Communities of Practice (VCoPs). In the recent past, the VCoPs have emerged as a new robust interactive channel, by supporting all the characteristics to be used as knowledge management systems (KMS), and as enabler of knowledge creation, sharing, and utilization. According to Wenger and Snyder (Wenger, McDermott, & Snyder, 2002), VCoPs help knowledge management by capturing and sharing of the expertise of members, spreading know-how, ideas, problems, innovations, talents, and experiences. They are held together by a common purpose and a need to know what others know (Wenger et al., 2002).

There are some basic models and frameworks available to evaluate the knowledge sharing behaviour of VCoPs or in general, knowledge management systems (Gray, 2000). Hence, it becomes essential to establish a valid measurement model for evaluating the efficiency of VCoPs in managing the knowledge, and suggesting methods to improve its usage in health care sector. This study will develop and validate a multidimensional model for measuring the success of VCoPs in knowledge sharing, based on the information systems (IS) success models such as: the DeLone and McLean IS Success Model (W. DeLone & McLean, 1992; W. H. DeLone & McLean, 2003) and Technology Acceptance Model (TAM) (Fred D. Davis, Bagozzi, & Warshaw, 1989).

This study argues that, the satisfaction of members with VCoPs is a surrogate indicator to evaluate knowledge sharing behaviour. However, using DeLone and McLean IS Success Model to measure the actual use behaviour has some theoretical challenges (Seddon, 1997). Likewise, using TAM alone may not be sufficient to capture all predictive variables, which support knowledge sharing behaviour among health care professionals in VCoPs. This study hypothesizes that, VCoPs success in knowledge sharing, is a combination of user's acceptance of technical features and knowledge quality of the VCoPs. By integrating well-acknowledged IS models, this study proposes that, the user satisfaction stream and technology acceptance literature are complementary approaches to understand IS usage and success.

DOI: 10.4018/978-1-4666-9787-4.ch021

Ultimately, the satisfaction and acceptance approaches offer supporting steps such as, key characteristics of system design, and beliefs and expectations about outcomes, which eventually determine the knowledge sharing behaviour (Alali & Salim, 2010, 2011).

## Theoretical Background

The imperative of the evaluation in measuring the effectiveness of VCoPs fulfils its role and support for healthcare practitioners. Knowledge sharing behaviour has been recognized by practitioners and researchers in the KM field (Kankanhalli & Tan, 2005). VCoPs evaluation refers to a process of assessing the value of VCoPs in managing knowledge through defining the determinants of VCoPs success and acceptance. Success measures of VCoPs should support healthcare organizations in different methods; it could suggest ways to improve the design, implementation, usage, and operation of VCoPs by addressing and understanding the main factors that impact the VCoPs success and acceptance. The success measures of VCoPs might enhance decision making on investment in VCoPs and such KM initiatives, as well as in developing instruments to be used as benchmarks for future evaluation and comparison. In addition, the VCoPs evaluation gives researchers opportunity to determine the missing gap that can actually improve VCoPs in the future (Fernandez, Gonzalez, & Sabherwal, 2004; Kankanhalli & Tan, 2005).

Literature review pertaining to VCoPs confirmed that a number of theories were proposed to guide research on the success and acceptance of VCoPs (Urbach, Smolnik, & Riempp, 2010). Several models have been validated and proposed in many studies (Casaló, Flavián, & Guinalíu, 2010; Jin, Cheung, Lee, & Chen, 2009), to evaluate use and success of IS; this study has adopted: the Technology Acceptance Model (TAM) (Fred D. Davis et al., 1989), and DeLone and McLean IS Success Model (W. DeLone & McLean, 1992; W. H. DeLone & McLean, 2003). TAM and DeLone and McLean IS Success Model are the most influential and commonly employed theories in testing IS success.

## Technology Acceptance Model

The Technology Acceptance Model was developed by Davis (F. D. Davis, 1986), to predict and explain, information technology acceptance and usage. This model of IS success relies on Theory of Reasoned Action (TRA), which was developed by Fishbein and Ajzen (Fishbein & Ajzen, 1975), in order to specify the causal relationships between system design features such as, perceived usefulness (PU) and perceived ease of use (PEU), behavioural intentions (BI), and actual system use (F. D. Davis, 1989; Fred D. Davis et al., 1989). Whereby, PU is defined as “the degree to which a person believes that, using a particular system would enhance his or her job performance”. While, PEU is defined as “the degree to which a person believes that, using a particular system would be free of effort (F. D. Davis, 1989: p320). TAM model shows, how the actual system use is determined by BI, to use the technology. Furthermore, PU is a major determinant of people’s intentions to use computers. Moreover, PEU is a significant secondary determinant of people’s intentions to use computers. Additionally, PU is also affected by PEU.

Most recently TAM has been applied to examine the use of web information systems (Chen & Tan, 2004; Gefen & Straub, 2000), mobile healthcare systems (J.-H. Wu, Wang, & Lin, 2007), and has been studied in acceptance of blog usage in USA (C. L. Hsu & Lin, 2008). Whereby, the success of IS depends on the fact that, IS has to be installed, utilized, and accepted (Tung & Rieck, 2005).

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