The Mediational Role of Trust on the Relationship between Virtual Communication and Knowledge Sharing and the Initial Impact on ODI: A Quasi-experimental Study of the Thailand Appreciative Inquiry Network (AI Thailand)

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Abstract

This research aims to: (1) examine the relationship between virtual communication and knowledge sharing within the Thailand Appreciative Inquiry Network (AI Thailand) and the mediational role of trust in this relationship; (2) increase the frequency and quality of virtual communication between AI Thailand and members; (3) design and implement an appropriate Organizational Development Intervention (ODI); and (4) examine the impact of ODI on virtual communication, trust in organization and knowledge sharing in the focal organization. This action research was conducted with AI Thailand and recruited 40 participants who were students from Khon Kaen University. The ODI activities were new virtual communication tools (www.ailearningcircle. com), training and virtual activities that promote social interaction and virtual communication. The results show that : (1) there is a positive relationship between virtual communication and knowledge sharing after ODI; (2) trust does not mediate the relationship between virtual communication and knowledge sharing ; (3) the frequency and quality of virtual communication between AI Thailand and members improved after ODI; and that (4) the participants' trust in the organization and knowledge sharing increased after ODI.

Keywords: AI Thailand, Mediation, trust, virtual communication, knowledge sharing, virtual organization

Introduction

Although working in a virtual organization ("VO") gives employees more freedom and flexibility to work at anytime and anywhere in the world, it also keeps people at a

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distance and creates barriers in communication. A drawback of virtual communication ("VC") is that people rarely meet, mingle and have personal relationships with other members in their organization. People also tend not to trust an organization without a physical presence (Zwarun, 2007). With no face-to-face communication, trust may be diminished and may negatively affect knowledge sharing and the productivity of the organization. VOs need to implement a strategy to improve virtual communication, employees' trust, and knowledge sharing so they can be competitive in the modern business world.

With the globalization of the Internet and worldwide distrust, virtual and traditional organizations alike must make adjustments to be able to achieve success. In a low trust but hi-tech world, people are connected virtually, but not socially, thus they may be reluctant to share information. Without information sharing, organizations lose efficiency. Without trust in organization, people who are in virtual communication are reluctant to share critical information and knowledge. Thus, learning ways to improve VC and trust in such a hi-tech environment is necessary for VOs to improve knowledge sharing, and thereby stay competitive in the global market in the long term.

The focal organization was a non-profit VO; Thailand Appreciative Inquiry Network (AI Thailand), with the leader of the organization solely running operations.

The Image of the Focal Organization

In terms of organizational image, AI Thailand was an organization of one, which produced AI knowledge using a self-system management and influenced members to move toward the same purpose. The image of AI Thailand was a "Tribe" according to Seth Godin's definition (2008). The organization viewed itself as a "Tribe" of thinkers who collaboratively think and virtually share their appreciative inquiry (AI) knowledge with the world without seeking monetary benefit. The users or members follow the leader of AI Thailand so that they can learn and share the knowledge together via the AI Thailand website. With this image, the leader of the "Tribe" can communicate, create enthusiasm, initiate changes and connect with people in the group.

The Internet is an efficient tool that enlarges connections or the number of members of a tribe. Though the size of members in the tribe does not matter, the tribe needs sufficient

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"true fans" who care deeply about it to collectively and collaboratively transform the organization.

The Purpose and The Hypotheses

The main purpose of the study was to implement an ODI and to show that the ODI improves VC, trust and knowledge sharing. Additionally, the purpose was to examine whether trust mediates the relationship between VC and knowledge sharing. The research model is presented in Figure 1.
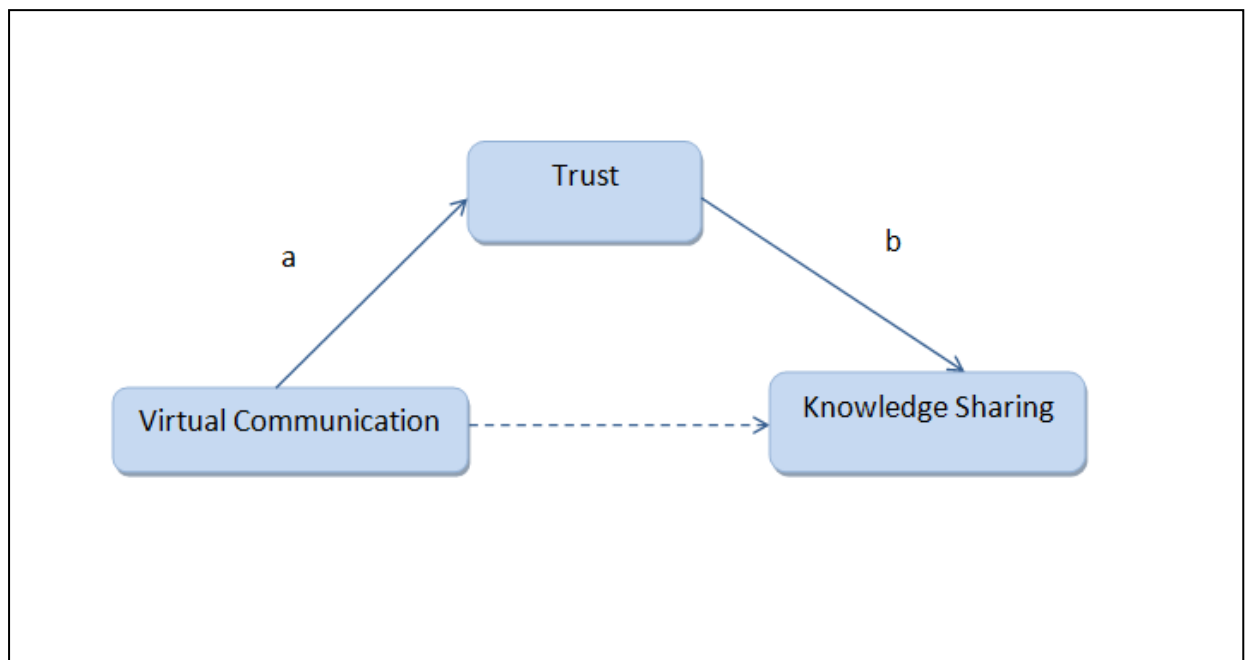

Figure 1: The Research Model **.**

The independent variable, the mediator and the dependent variables are VC, trust and knowledge sharing, respectively.

The following hypotheses were made:

Hypothesis 1: There is a positive relationship between VC and knowledge sharing.

Hypothesis 2: Trust mediates the relationship between VC and knowledge sharing.

Hypothesis 3: VC increases after ODI.

Hypothesis 4: Trust increases after ODI**.**

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Hypothesis 5: Knowledge sharing increases after ODI.

Participants: Forty participants, who were students of Khon Kaen University, voluntarily joined in this study.

Methodology

Procedure and Design

The research methodology was action research and applied techno-structural and human process interventions in the research design. The techno-structural ODI was a new VC tool; www.ailearningcircle.com ("ailearningcircle") which were attached to the website of AI Thailand, www.aithailand.org. The tool consolidated main VC tools of the focal organization. These included incorporating a web board ("AI Forum"), Facebook, and blog ("GotoKnow") of AI Thailand into the same locations. Human process ODI was implemented by providing training to the leader of the organization, by promoting more VC activities, by adding a privacy protection policy and more social context and social presence into the new tools. This researcher's role was the website administrator and one of the academics represented on AI Thailand.

VC and website activities run for eight weeks, and were implemented regularly by both the leader of AI Thailand and this researcher as the website administrator.

Before the ODI, the pilot test was conducted to examine the reliability of the measures to be used in the main study. Fifteen individuals who had visited the AI Thailand website were invited to join the pilot test. Results showed a Cronbach's alpha of 0.9 for all the measures, which was acceptable since it, should not be less than 0.7 (Blaikie, 2003).

The procedure included the following activities:

1. Trust and VC training and regular conference calls with the management of AI Thailand to update progress.
2. Ailearningcircle launch: All participants were informed of the launch date (9 June 2013) via a face-to-face meeting and via the Facebook fan page.
3. VC and website activities of ailearningcircle and users, including participant: The VC and website activities were AI related topics with friendly, positive and colorful pictures.

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4. New articles of AI Thailand from GotoKnow: Twenty-one and twenty-seven new articles were produced by the leader of AI Thailand and this researcher, respectively.

5. Communications in the AI Forum during ODI: The topics were adjusted to suit participant interest when there was no interest from users. There were nine topics discussed.

6. VC via other tools. These activities were completed by both the leader and this researcher via emails and other VC tools such as posting on Facebook by the leader (26 times), Email, SMS and Facebook chats/posts and telephone by this researcher (39 times) and colorful and positive slideshows (36 pictures, 9 times).

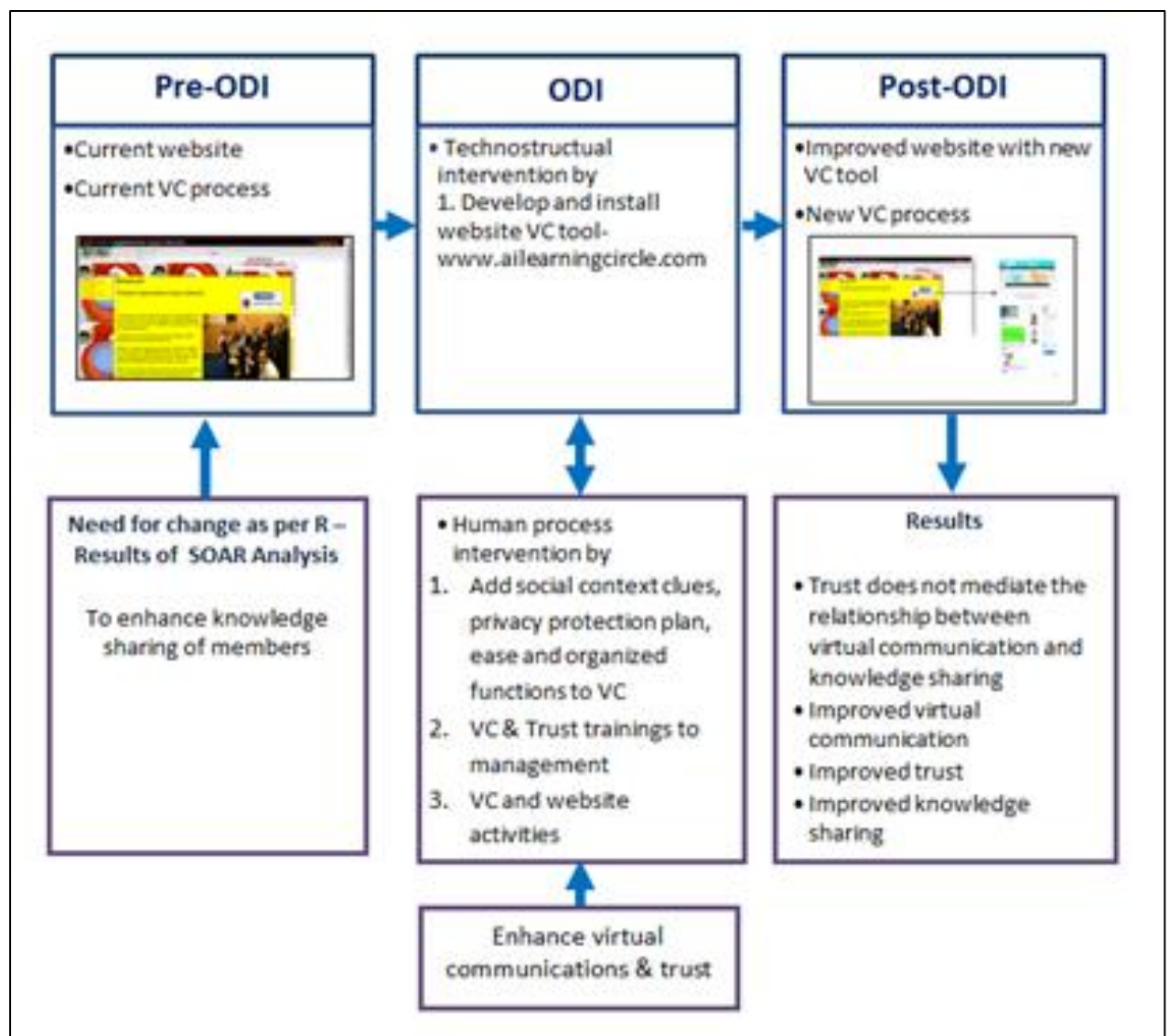7. A motivation program was implemented to encourage participation from website users.

Figure 2: Action research framework

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ODI phases (from new website development) were started in February 2013 and finished in early October 2013. Please see Figure 2 for Action research framework.

Self-report Measures

A 5-item scale adapted from the Communication Satisfaction Questionnaire (CSQ) developed by Downs and Hazen (Downs & Hazen, 1977) was used to measure VC. The Cronbach's alpha in this study was 0.8.

A 5-item scale adapted from the Gabarro and Athos's measurement of trust in organization (Gabarro & Athos, 1976, cited in Robinson, 1996) was used to measure trust. The Cronbach's alpha in this study was 0.7.

A 5-item scale adapted from Cummings (Cummings, 2004) was used for knowledge sharing. The Cronbach's alpha in this study was 0.9.

Results and Discussion

This research utilized both qualitative and quantitative methods to analyze the data collected via self-report questionnaires, interviews and observations.

Hypothesis 1

The results of the correlation analyses indicated that the relationship between VC and trust was not significant before ODI ($r=0.20$, $p > 0.05$). After the ODI phase however, this relationship became significant, ($r = 0.38$, $p < 0.05$). Therefore, Hypothesis 1 was only supported for the Post-ODI phase.

Hypothesis 2

Hypothesis 2 was tested by applying a mediational analysis. The basic process of mediation is to test an indirect effect of an independent variable on a dependent variable (Figure 3).

According to Baron and Kenny (1986), mediation requires that the following four conditions are met: (a) variations in levels of the independent variable significantly

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account for variations in the presumed mediator (i.e., path a), (b) variations in the mediator significantly account for variations in the dependent variable (i.e., path b), (c) variations in levels of the independent variable significantly account for variations in the dependent variable (i.e., path c), and (d) when paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant – with the strongest demonstration of mediation occurring when path c is zero (Baron & Kenny, 1986). In other words, changes in the independent variable influences changes in the outcome variable only through the changes in the mediator variable. In rare cases, the influence of the mediator variable can be very strong or a single dominant mediator; however, in psychology and social studies, it shows that most effects will be multiple mediating factors (Baron & Kenny, 1986).
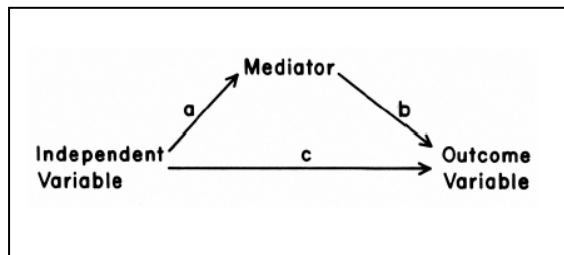

Figure 3: Basic mediation model (Baron & Kenny, 1986, p. 1176)

The correlation between VC and trust was significant (unstandardized b = 0.51) (path a). Correlation between VC and knowledge sharing was significant (unstandardized b = 0.38) (path c). However, correlation between trust and knowledge sharing was not significant (unstandardized b = -0.06) (path b). Therefore, the path b condition required by Baron and Kenny was not met.

Additionally, a Sobel test was run using a calculation tool for mediation tests (Preacher & Leonardelli, 2010-2013) to examine this mediation. Supporting the mediational analysis, the results of the Sobel test indicated that this mediation was not significant, Sobel z = -0.39, p >0.05.

Therefore, the results revealed that trust did not mediate the relationship between VC and knowledge sharing (Figure 4).
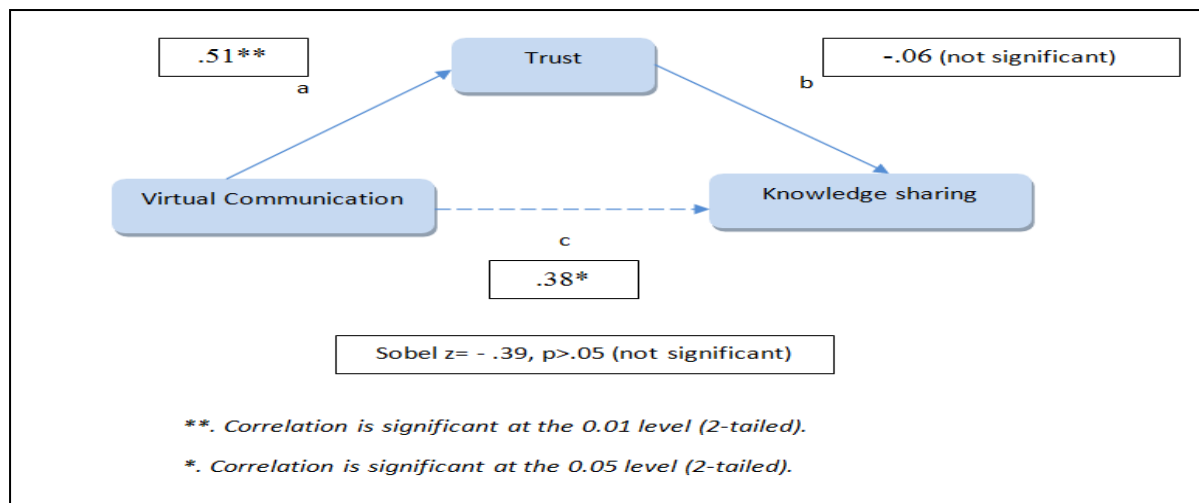
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Figure 4: The test of the mediation

Hypothesis 3

The mean VC of pre-ODI (M = 3.13) was significantly lower than the mean VC of post-ODI (M = 3.87), (t (39) = -10.18, p = 0.00). Hence, the respondents engaged in more VC after ODI. Thus, hypothesis 3 was supported.

Hypothesis 4

The mean trust of pre-ODI (M = 3.86) was significantly lower than the mean trust of post-ODI (M = 4.16), (t (39) = -2.99, p = 0.00). That means that the respondents' engaged in more trust after ODI. Thus, Hypothesis 4 was supported.

Hypothesis 5

The mean knowledge sharing of pre-ODI (M = 1.51) was significantly lower than the mean knowledge sharing of post-ODI (M= 2.51), (t (39) = -6.63, p = 0.00). That means that the respondents engaged in more knowledge sharing after ODI.

Thus, Hypothesis 5 was supported.

Other findings

1. The level of satisfaction of VC via Facebook, AI Forum and GotoKnow improved after ODI.
2. Gotoknow was the VC channel the respondents liked the most.

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3. The results from interviews indicated the respondents accessed and communicated with AI Thailand because of study and personal interest. AI Thailand with ailearningcircle could be used as a communication tool. In addition, knowledge sharing was occured among participants and non-participants such family and friends.

4. The majority of respondents suggested: (1) adding new features would improve the functions of the website such as easier user functions and speed, more contemporary website appeareance and website promotion would increase the number of user visits, (2) they observed that good content attracted users and encouraged them to share more, (3) With regular communication, making it more pleasant and personable would promote VC, trust and knowledge sharing.

5. The interview results revealed that extrinsic motivation did not influence to user participant to access the website.

Conclusions

With appropriate techno-structural and human process interventions, VOs can improve their VC, trust and knowledge sharing. VC can be promoted by more social context, social presence, friendly pictures and a well-organized website. In addition, frequent VC positively influences trust and knowledge sharing**.**

Though trust did not correlate with knowledge sharing in this study, knowledge sharing could still be created with an appropriate VC process. This comes from the result of the research which showed improvement in knowledge sharing by frequent VC with participants, as well as providing correct message content that suited their shared passions (in this research, VC activities were implemented every day in various forms).

With this study, AI Thailand has improved its VC, trust and knowledge sharing with its members. Knowledge sharing was created inside and outside the organization.

Scope and Limitations

The scope and limitations of the study are as follows:

1. In sum, VC, trust and knowledge sharing improved after ODI. Although this is a promising outcome, it should be noted with caution because the improvements might have occurred due to Hawthorne effect. That is, the fact that the participants knew that they were being studied and observed might have inflated their participation, communication and involvement in the website. The increases might end or continue after the study.

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2. The study using techno-structural intervention had been done before in the past. However, this author studied this topic differently by looking at the mediational role of trust, its influence on VC and knowledge sharing and ODI impact. Hence, this research did not repeat the work of the previous researches.

3. Due to limited time and budget, the researcher used purposive sampling to select populations for research and focused only on active groups such as Khon Kaen University students who were studying with leaders of the organization. Therefore, the results of the research might not represent the whole population of the focal organization.

4. Need for change of the organization on its website was limited to adding new VC function or tools; therefore, appearance and functions of the current website were not touched. Since the new website was an attached part of the current website, users may view the new website as another website, not part of AI Thailand.

5. The researcher intended to use simple design and maintained the current academic feel of the new website so that users would not be confused and still could feel that it was part of the AI Thailand website.

6. The design of ODI activities was arranged with regard to the time constraints of the management of the organization and the participants as well as fitting within the budget of this research.

7. Results of the interviews and questionnaires might not be completely accurate as participants might have answered or acted favorably to the researcher and the management of the organization (i.e., social desirability effect).

8. Since the focal organization and "ailearningcircle" are public websites, the study could not distinguish participant website statistics from total user website statistics, such as number of hits, number of replies and number of visits and etc.

9. The researcher was aware that there were alternative models which showed different kind of relationships between trust, VC and knowledge sharing. However, this study aimed to study mediational role of trust on the relationship between VC and knowledge sharing and initial impact on ODI. Therefore, only the conceptual framework related to this relationship was used in the study.

Acknowledgement

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