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Knowledge Adoption in Virtual Community: Exploring The Moderating Effect of Learning Orientation

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KNOWLEDGE ADOPTION IN VIRTUAL COMMUNITY: EXPLORING THE MODERATING EFFECT OF LEARNING ORIENTATION

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ABSTRACT

This study aims to investigate the evaluation determinants of online knowledge adoption. Knowledge transfer in online context has been debated by many researchers but mainly addressed the knowledge sharing aspect. Knowledge recipient, however, is also a critical role in knowledge transfer. Thus, dual process theory is rooted as the theoretical foundation to investigate the persuasiveness of knowledge from virtual communities. A theoretical model of knowledge adoption suggests argument quality and source credibility would be moderated by the knowledge seekers' learning orientation. The results of this study will be helpful to understanding the individuals how to evaluate and learn online knowledge. Furthermore, the moderator's effect of the learning orientation may indicate how the personal learning characteristic affects the online learning behavior.

Keywords: Argument quality, knowledge adoption, learning orientation, source credibility, virtual community.

INTRODUCTUION

The proliferation of Internet leads to the rapidly growth of virtual community (VC), more and more people getting used to search information and knowledge online. In online contexts, some members who join a community seek information they need or ask for advice and help; some members who post article or information like share their knowledge, Virtual community is a place aggregated members that share common interest [1] and contain wide variety which ranges from those focused on economics and marketing to social networking and education, virtual communities influence universally on human behavior [2]. In virtual communities, members provide information or knowledge and solve problem of each other. Especially in knowledge sharing and exchange communities like Yahoo Answer or Wikipedia, individuals can directly search their problem with keywords or ask for answer. Knowledge adoption, focus on a knowledge recipient's perception, is a primary process of knowledge internalization [3, 4]. Research has shown that the intention to knowledge adoption can be governed by a variety of factors including information usefulness, creditability, quality and so on [4, 5, 6].

To understand the process by which knowledge recipient will be influenced by the provided knowledge, this study draw on the Elaboration Likelihood Model (ELM) of informational influence. In addition, focusing on the view of knowledge recipient, learning orientation included as a moderator to investigate knowledge adoption behavior.

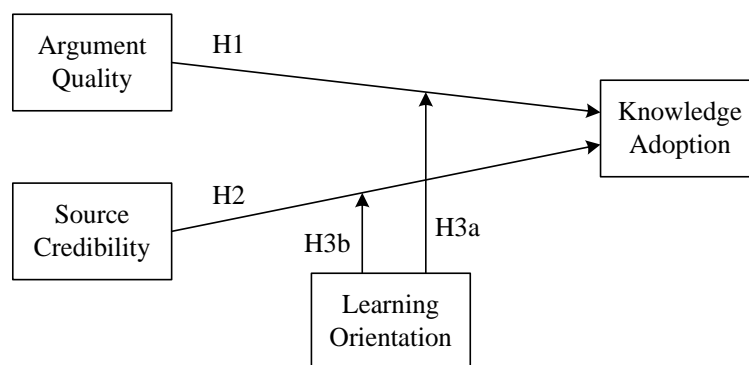## RESEARCH MODEL AND HYPOTHESIS

Research model

Figure 17. Research model

Elaboration likelihood model

Petty and Cacioppo [7] developed the Elaboration Likelihood Model (ELM) in order to explain the differences in influence results across individuals and contexts. ELM proposes a central route and a peripheral route of information processing: the central route, akin to systematic processing, entails careful scrutiny of the information, while the peripheral route, echoing heuristic processing, uses environmental cues associated with the information to determine whether to adopt or not [7]. The central route takes place as recipients consider carefully the presented issues, whereas the peripheral route occurs when recipients use simple decision rules to evaluate the message rather than analyzing its content [4]. ELM often used to better understand how people are influenced to adopt ideas; this study employs the argument quality as factor of central route and

source credibility as factor of peripheral route. Thus, following hypothesis proposed:

H1: Argument quality will have a positive effect on the knowledge adoption.
H2: Source credibility will have a positive effect on the knowledge adoption.

Learning Orientation
Learning orientation, from the educational psychology literature, is a disposition towards learning [8]. Having strong learning orientation, individuals would desire to improve their skills, abilities and knowledge through effort and experience. As Brett and VandeWalle [9] mentioned, they persistently engage in solution-oriented self-instruction with escalate effort and enjoy challenge. According to Gray and Meister's [10] finding, when employees encounter a problem they can't solve, those who with a stronger learning orientation have more higher willing to seek for knowledge from colleagues, manuals, and a knowledge repository.
Zhang and Watts [5] suggested personality and prior belief of recipients may affect evaluations of incoming information. Therefore, knowledge recipients who have higher learning orientation may result in stronger effect on the argument quality toward knowledge adoption. Conversely, higher learning orientation may lead to weaker effect in the source credibility which is peripheral process toward knowledge adoption. Thus, following hypothesis proposed:

H3a. Higher levels of recipient learning orientation, stronger the influences of argument quality to knowledge adoption.
H3b. Higher levels of recipient learning orientation, stronger the influences of source credibility to knowledge adoption.

RESEARCH METHODOLOGY

Data collection
To assure the validity of the instrument, items were adopted from the prior research and modified to fit VC context. Partial least squares (PLS) method was used to test the research model and SmartPLS software was used for the PLS analysis. A web-based survey was conducted by recruiting volunteer from Internet users on online discussion boards of Taiwan. In this study, participants need to have experience of work or school related knowledge search in virtual communities they joined. A total of 90 useable responses were collected. Basic characteristic statistics of the respondents are shown in Table 1. There were 39 female respondents (43.3%) and 51 male (56.7%). Age distribution was primarily 21-30 years old (63.3.0%), followed by15-20 years old (27.8%) and 31-40 years old (6.7%). In terms of education, most respondents had attained at least a bachelor's degree (73.3%), followed by master or PhD degree (23.3%). Finally, most respondents were students (62.2%).

Results
Reliability and convergent validity of the factors were estimated by composite reliability and average variance extracted (AVE) (see Table 2). The interpretation of the composite reliability is similar to Cronbach's alpha, except that it also takes into account the actual factor loadings rather than assuming that each item is equally weighted in the composite load determination. Composite reliability for all the factors in our measurement model was above 0.9. The AVE values were all above the recommended 0.50 level [11]. In order to examine discriminant validity, this study compared the shared variances between factors with the AVE of the individual factors based on Fornell and Larcker [12]. As shown in Table 2, the AVE of the individual factors was larger than each of the shared variances between constructs and the discriminant validity was supported.

Table 1: Respondent characteristics (N=90).

Characteristic		Number	Percentage
Gender	Female	39	43.3
	Male	51	56.7
Age	15-20	25	27.8
	21-30	57	63.3
	31-40	6	6.7
	41-50	1	1.1
	>51	1	1.1
Education	Senior high/vocational school	3	3.3
	Bachelor's degree	66	73.3
	Master's degree or PhD	21	23.3
Industry	Manufacturing	5	5.6
	Service	6	6.7
	Science and technology	8	8.9
	Education and research	7	7.8
	Financial institution	2	2.2
	Government	3	3.3
	Student	56	62.2

| Other | 3 | 3.3 |

Table 2: Reliability, average variance extracted and discriminant validity.

Construct	CR	AQ	KA	LO	SC
AQ	0.937	**0.939**			
KA	0.939	0.796	**0.891**		
LO	0.925	0.278	0.301	**0.897**	
SC	0.906	0.633	0.625	0.287	**0.841**

Notes: 1. CR: composite reliability.
2. AQ: argument quality; KA: knowledge adoption; LO: learning orientation; SC: source credibility.
3. Diagonal elements show the average variance extracted; off-diagonal elements show the shared variance.
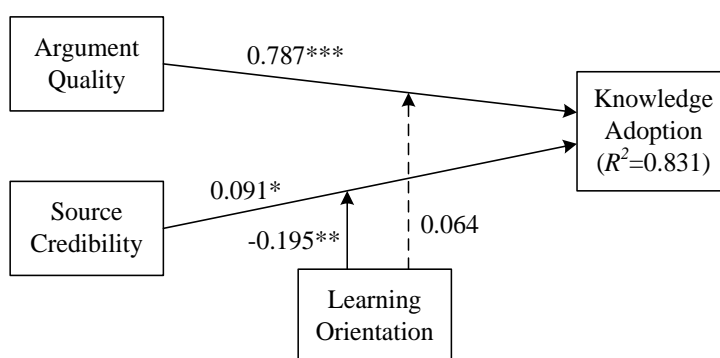
Notes: *$p<0.05$, **$p<0.01$, ***$p<0.001$; — Significant --- Not significant
Figure 2: Structural model results

CONCLUSION

This study investigates the evaluation determinants of online knowledge adoption through ELM's central route and peripheral route. According to the result, the factor of central route (argument quality) exerts significant influence on knowledge adoption and factor of peripheral rout (source credibility) also found has positive influence on knowledge adoption. Since this study focuses on the view of recipient, the learning orientation which is belong to personal characteristic has been included and found a salient moderating effect. The recipients who have higher learning orientation are less concerning about the credibility of source during the evaluating process. They may tend to rely on their own judgment and focus on the content's correctness. This finding not only indicates the moderating role of personal characteristic but also has a theoretical extension of elaboration likelihood model. However, the moderating effect on the argument quality toward knowledge adoption has no significant effect. It is likely because the argument quality has very significant influence on knowledge adoption.

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