Identifying Discrepancies between Expertise and Expert Status in Academic Virtual Communities of Practice

Beate Baltes, Ed.D.

ABSTRACT

An online university facilitates the interaction of faculty and the relationship they develop with each other in virtual Communities of Practice (vCoP). One of the unique features of vCoP is that not all participants have to be actively contributing but nevertheless, all participants can benefit from the accumulated knowledge and experience. However, due to the un-moderated nature of vCoP, it isn't guaranteed that only valid and credible information is being shared.

PROBLEM

As long as there are some active participants, vCoP are not only a place for teaching and learning but also a place for knowledge construction, negotiation, and expansion among the participants. However, the computer-mediated communication may lead to discrepancies between vCoP members' expertise and their expert status. The purpose of the proposed study is to identify the magnitude and bases of such discrepancies so as to facilitate formulation of means of minimizing them. This study will investigate potential correlations between knowledge descriptors (participants' perceptions of their domain knowledge and interest as well as the critical thinking index) and their expert identity determined through a Social Network Analysis.

RELEVANT LITERATURE

Communities of practice are groups of people sharing goals, activities, and experiences in the frame of a given practice (Lave & Wenger, 1991; Wenger, 1999). This particular practice continues over lengthy periods of time and their termination is often neither planned nor foreseen. Numerous communities are found in schools (Bonsen & Rolff, 2007), universities (Brown, 2001; Rovai, 2002; Thompson & MacDonald, 2005), and research institutes (Kienle & Wessner, 2006).

Participation in a CoP leads to the accumulation of experience, stimulates the social construction of knowledge and the development of expertise (Bereiter, 2002; Boylan, 2010; Engeström & Sannino, 2010; Fuller, Unwin, Felstead, Jewson, & Kakavelakis, 2007; and Paavola, Lipponen, & Hakkarainen, 2004), hence, making it particularly interesting for educational research on formal learning.

RESEARCH QUESTIONS

RQ$_1$: Does the participation in vCoP mediate the influence of expertise on expert status?

RQ$_2$: Do the acceptance factors (technology use intention, performance expectancy, effort expectancy, social influence, facilitating conditions) predict the intensity of participation in the vCoP?

PROCEDURES

The data for this correlation study will be collected from three measure points. The participants are the entire population consisting of approximately 470 Ed.D. Walden University faculty. The independent variables will be domain knowledge, time in the CoP, performance expectancy, effort expectancy, social influence, and facilitating conditions. The dependent variables will be technology use intention, participation, and expert status.

The data will be collected primarily through questionnaire and survey instruments.

• All the acceptance predictors (performance expectancy, effort expectancy, social influence, and facilitating conditions), as well as the technology use intention will be measured using the UTAUT questionnaire by Venkatesh et al. (2003).
• The self-evaluated domain knowledge and the time in the CoP will be self-reported.
• The critical thinking assessment framework by Weltzer-Ward et al. (2009) will be used to determine the domain knowledge.
• Data will be generated through an analysis of the eCampus discussions.
• Participation will be operationalized through the number of messages posted to the discussion forums by the vCoP participants.
• The expert status will result as centrality degree from the social network analysis within the vCoP (Baltes & Nistor, 2012; Borgatti et al., 2009; Cross et al., 2001; Nistor & Fischer, in press; Nistor & Schustek, 2011).

Although most of the proposed questionnaires were already validated by their authors, the study will re-validate the instruments by means of confirmatory data analysis that should indicate their convergent and discriminant validity (Mulaik & Millsap, 2000). This extra step is necessary because of the novel application context.

DATA ANALYSIS

According to the quantitative causal model of academic communities (Nistor & August, 2010; Nistor & Schustek, 2011), participation mediates the influence of expertise on expert status. Consistent with the UTAUT, participation in online learning environments is influenced by the technology use intention and the facilitating conditions. The former is further determined by the performance expectancy, effort expectancy, and social influence.

In the combined model it becomes apparent that a discrepancy between expertise and expert status may be due to a technology acceptance deficit, meaning that low performance and effort expectancy or social influence, as well as poor facilitating conditions may lead to low intention to use the educational technology and in turn, to low participation in the vCoP.
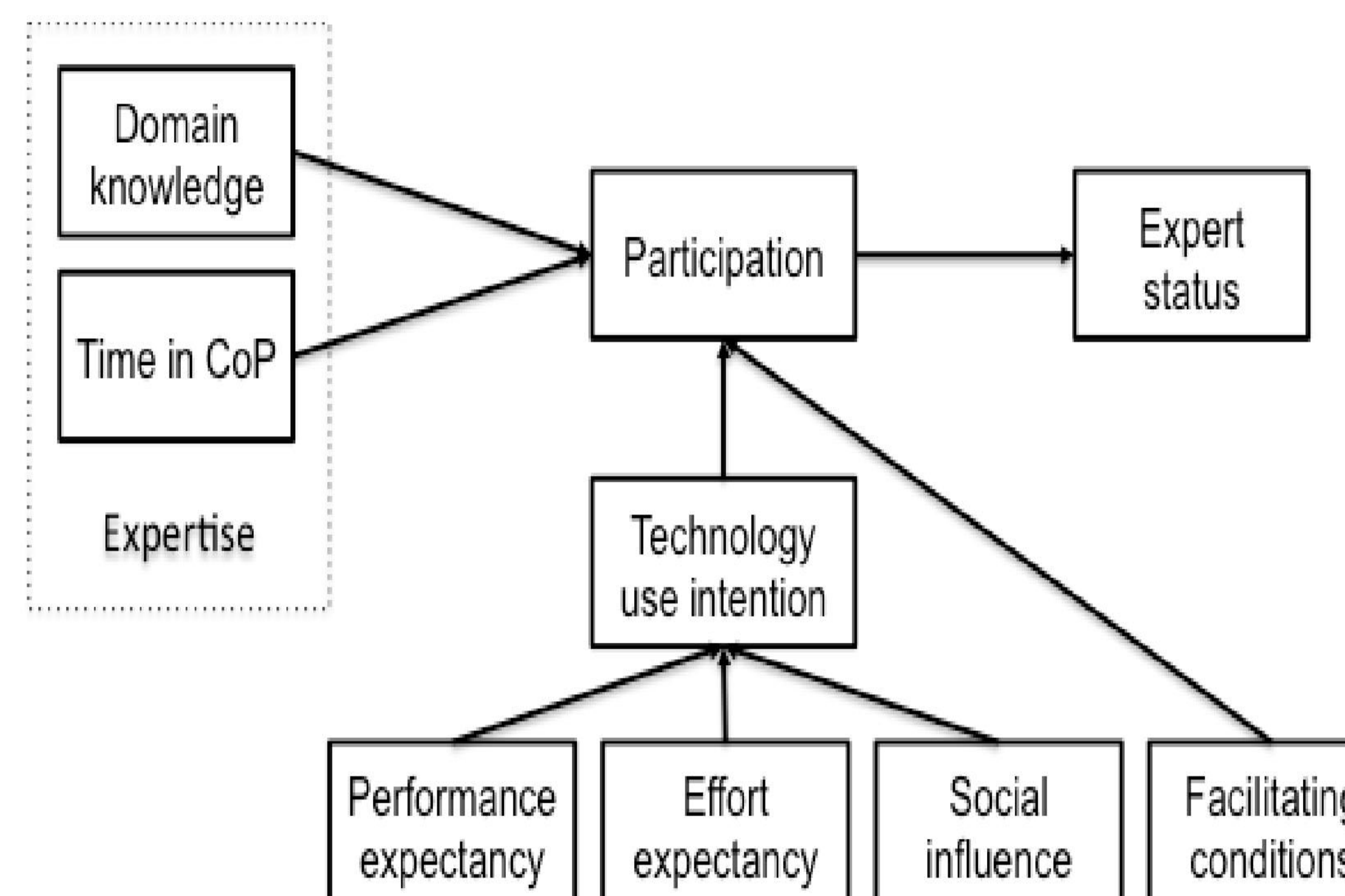
FINDINGS

Initial findings were expected in August 2012. However, access to the vCoP was not available until May and a program is still being written to insert the discussion postings of the vCoP into the Social Network Analysis.

CONCLUSIONS

Conclusions will be available after project is completed in December 2012.

SOCIAL CHANGE IMPLICATIONS

In the context of the studied academic vCoP, discrepancies between faculty's expertise and expert status might emerge. If a member's expert status is lower than his or her actual expertise, it would suggest that the CoP member is not well enough known in the community. For the benefit of all vCoP members, the expert's centrality in the social network would have to be increased which could easily be done by an introduction of the expert through the university leadership. Additional activities or separate discussion forums could be created to facilitate the knowledge sharing and member interaction with the expert. Conversely, if the individual expert status is higher than the vCoP member's expertise, an overall lack of expertise in the network might be deduced. In other words, the present members might ask each other questions that nobody can or should confidently answer. If unchecked, this could result in dissemination of erroneous information and unsound practices. In this case, knowledge management measures are recommendable, such as inviting content experts to the discussion, or offering faculty training based on the topics discussed in the vCoP. Moreover, this study may initiate the development of an online tool that monitors the concordance (or discrepancy) of expertise and expert status in vCoP, and thus improve teaching and virtual mentoring in online universities. In so doing, it could contribute to positive social change by maximizing vCOP utilization of actual expertise and minimizing the spread of misinformation based on misperceptions of expertise.

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