

## Social capital and knowledge sharing in tertiary education - The conceptual framework

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### ABSTRACT

Numerous technological improvements, especially the Internet, have given rise to social networking, which offers new opportunities for millions of people to enhance not only their communications and businesses but also the process of sharing and exchanging knowledge without spatial and temporal limits. During the COVID-19 pandemic, the knowledge-sharing process among tertiary students that took place through online learning raised controversial questions about how this process is stimulated and whether it enhances students' academic performance. This study reviews the theoretical background and previous empirical studies to seek the underlying mechanism of the social phenomenon named social capital-driven knowledge-sharing process. The authors conducted a small qualitative study to collect narrative data from three students. Based on the theoretical background and empirical reality, the study proposes a conceptual framework to explain the sequencing relationships among social capital, knowledge-sharing behavior, and learning performance. The study recommends further research to explain this social phenomenon by using the proposed conceptual framework.

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### 1. Introduction

In the twenty-first century, the technology's development has led to the notion of a "virtual community" in which millions of people worldwide have the chance to stay in contact with their friends and relatives and do business without the constraints of time and space. Education is no exception. Thanks to technological improvements, people can access education in different forms, moving from traditional to online learning. In the case of COVID-19, online learning is the best option for universities to ensure the continuation of teaching and protect students' health. This study argues that social interactions among students may boost knowledge-sharing behavior and enhance their learning outcomes in tertiary education. Social capital theory and social cognitive theory were used to explain the social phenomenon named "social capital and knowledge-sharing process".

Social capital is a collective resource embedded within the network of community relationships (Bourdieu, 2011). It plays an important role in facilitating cooperation between members of an organization for mutual benefit (Putnam, 2000). Social capital theory presupposes that social capital endures in a virtual community through the relationships between members (Chang & Chuang, 2011). According to Nahapiet and Ghoshal (1998), social capital has three distinct dimensions: structural, or the general pattern of relationships between community

members; relational, or the nature of connections between individuals in an organization; and cognitive, or the extent to which community members share their understanding.

The main purpose of this paper is to propose a conceptual framework to explain the social capital and knowledge-sharing process that enhances learning performances among students in tertiary education. The conceptual framework draws on a review of theoretical literature, previous empirical studies, and narrative data collected through a qualitative approach.

## **2. Theoretical background**

Chang and Chuang (2011) argued that the ties of social interaction act as a means of transportation delivering flows of information and resources. In virtual communities, members with social interactions can access, share, and vast exchange amounts of knowledge. Therefore, knowledge sharing is achieved and maintained easily if there are strong connections and direct ties in the network of relationships among members. Kwahk and Park (2016) investigated that the stronger social ties employees have, the more knowledge-sharing activities are facilitated in firm-based social media environments.

In virtual communities, trust is important for coordination and cooperation, resource acquisition, and knowledge sharing (Ridings, Gefen, & Arinze, 2002). The more people put their trust in community members, the more they participate in social exchange and cooperative interaction. Reciprocity refers to the “fairness” of a knowledge exchange that is perceived as mutual by members of a virtual community (Chiu, Hsu, & Wang, 2006). Chang and Chuang (2011) suggested that if the effort invested in knowledge sharing can be reciprocated, individuals in a virtual community are encouraged and motivated to contribute more of their knowledge. Furthermore, the knowledge-sharing process is supposed to be fostered with a high level of reciprocal benefits, resulting in the long-run cooperation between parties (Wasko & Faraj, 2005). In recent years, various studies found driven factors of the information sharing process and evidential proofs. They had a common finding that health professionals and normal users with a strong sense of reciprocity are more willing to share their information to virtual health communities (X. Zhang, Liu, Deng, & Chen, 2017), and enterprise-based social media (Kwahk & Park, 2016). Hence, reciprocity is one of the factors that have an impact on knowledge-sharing behavior. Individuals tend to share their knowledge with others if they are recognized as part of a group by other group members, a process called “identification”. Identification will create the perception of social unity that motivates people to share their knowledge (Chiu et al., 2006). Participants with a strong sense of community identification will feel responsible for giving others their helping hands, leading to more knowledge contributions in virtual communities (Wasko & Faraj, 2005). X. Lin, Xu, and Wang (2020) demonstrated that identification could be an intrinsic motivation to encourage community members to engage more in information-sharing activities in social network environments.

Shared language and shared vision are variables of the third dimension of social capital. Shared language refers to the mutual understanding that enables community members to share, interpret, and perceive its meaning and prevents out group individuals from accessing this information. With shared language, members in a community with the same background or experience are motivated to share their ideas and communicate appropriately together, which enhances the process of knowledge sharing in a virtual community (Chiu et al., 2006). It proved that shared language has a significant impact on knowledge-sharing behavior in the context of a virtual community (Chang & Chuang, 2011). Chiu et al. (2006) argued that a virtual community is where many people from different organizations come together and perform knowledge-sharing behavior to achieve their common interests. This explains why, in a virtual community, many people with distinct backgrounds and working experiences coordinate themselves and cooperate to

achieve their shared objectives or goals. Chiu et al. (2006)'s findings showed that the process of knowledge sharing between employees in a firm is enhanced considerably by a shared vision.

The social cognitive theory was used to explain what motivations force individuals to join and share their knowledge in a virtual community (Chiu et al., 2006). The theory states that an individual's behavior is controlled and guided by two factors: the impacts of social systems and personal cognition (Bandura, 1992). Moreover, a person's cognition is guided by self-efficacy and outcome expectations (Hsu, Ju, Yen, & Chang, 2007), which contributes significantly to sharing knowledge. However, this study will emphasize the effect of outcome expectations - the belief that one will gain interests, achievement, or outcomes after completing the tasks (Chiu et al., 2006) - and the knowledge-sharing process. Outcome expectations are divided into community-related and personal outcome expectations. Many studies are investigating how these two types of outcome expectations impact knowledge sharing. Wasko and Faraj (2005) and Chang and Chuang (2011) showed that strengthening reputation and improving status are the individual motivations that foster the knowledge-sharing process in both electronic networks of practice and virtual communities. Moreover, enriching knowledge, seeking support, and expanding relationships are also found to be personal motivations (Andrews, 2002; Y. Zhang & Hiltz, 2003). X. Zhang et al. (2017) proved that two types of individual motivations (e.g., extrinsic motivation/reputation and intrinsic motivations/altruism and empathy) have significantly positive effects on knowledge-sharing behaviors in Chinese online health communities. Likewise, tertiary students are always willing to engage in information-sharing process because they enjoy helping others in social network sites (Kim, Lee, & Elias, 2015). In contrast, students in tertiary education are motivated to share their information and help their friends with the ultimate aim of receiving respects from other people (e.g., their peers, their friends, and so forth), enriching knowledge, and increasing self-recognition (Moghavvemi, Sharabati, Paramanathan, & Rahin, 2017). Other studies suggested that individuals perform knowledge-sharing behavior to meet community-related outcome expectations, such as accumulating knowledge, preserving the community's operation, and developing the group (Bock & Kim, 2002; Kolekofski & Heminger, 2003; Lesser, 2000).

Participation involvement is added to the conceptual framework to investigate its moderating effect on the causal relationship between knowledge-sharing behavior and personal outcome expectation. Social exchange theory explains that an individual's expectation of gaining some social rewards, such as respect, reputation, and status, is reflected by his or her engagement in social interactions (Blau, 1964). Additionally, Chang and Chuang (2011) noticed that different people with different roles would participate in virtual communities with different frequencies and at different levels, leading to varying degrees of content and knowledge. Also, their results showed that involvement moderates the causal relationship between knowledge-sharing behavior and personal outcome expectations in virtual communities.

In tertiary education, learning performance refers to "the extent to which a student is making progressive learning in achieving educational goals in terms of added knowledge and skill-building during education" (Eid & Al-Jabri, 2016, p. 16). The study determines how knowledge sharing impacts learning performance in the context of virtual learning implemented via social networks (e.g., Facebook) and other tools provided by universities (e.g., Microsoft Teams, Google Meet, Zoom). Learning tools are essential for both professors and students to increase student motivation and engagement in the learning process. Thanks to online software, not only new learning environments are created but also new learning activities are gradually linked to student engagement, making them an excellent replacement for traditional methods (i.e., offline learning) (H.-M. Lin & Tsai, 2011; Thoms & Eryilmaz, 2014). Many studies found that knowledge sharing among community members helps employees build up their expertise

(Henttonen, Kianto, & Ritala, 2016), create new ideas, and improve the use of resources and employees' capabilities (Masa'deh, Obeidat, & Tarhini, 2016). Furthermore, the study by Eid and Al-Jabri (2016) of how online social network site (SNS) tools (i.e., Facebook, LinkedIn, Instagram, Twitter, and WhatsApp) affect learning performance in higher education indicated that online topic discussion and file sharing through SNS tools significantly increase students' learning performance.

### **3. Concrete stories of virtual learning**

The study conducted in-depth interviews with three students from the International University of the Vietnam National University Ho Chi Minh City (IU-VNUHCM) to explore their knowledge sharing experiences during the learning process. The results offer insights into the sequencing relationship among social capital, knowledge-sharing behavior, and learning performance.

When asked how important knowledge sharing is in their learning progress, a senior student indicated that social capital-particularly social interaction ties-plays an essential role in enhancing their knowledge and accessing related information.

All announcements related to studying, academic administration, and other student activities are transferred widely via information sharing and exchange among my classmates, accounting for 70% of the information sources. There are plenty of changes in the course schedule in every upcoming formal examination, such as class cancellations and tutorial sessions, which happen so repeatedly that I can't keep up with the latest information. Therefore, discussions and conversations in my groups of friends can help me access the latest news quickly.

The student also said that the knowledge-sharing experience helped her pass the internship course, thanks to social interactions among her friends.

Because of the spreading of Coronavirus last year, the company where I was working in an internship position rejected my job suddenly. In the meantime, I, unfortunately, missed all the information about the deadline and announcements of this course, which made me more confused and worried. However, I contacted other students in the same course using Blackboard and Facebook to ask for missed information. Thanks to their support, I can follow the course progress and submit my internship report on time.

Another senior, who had some experience working as a tutor for different business-related subjects, shared her unforgettable experience of knowledge sharing to ask for subject reviews and information before the subject registration period in a group where there is a majority of IU students. Her story proves the positive effect of personal outcome expectations on knowledge sharing.

I usually use the online learning tools provided by IU-VNUHCM and Facebook to follow many IU pages that share a large amount of valuable knowledge. These sources of information help me maximize my self-study ability and save time and money to gain a lot of knowledge. Especially, I experienced sharing the subject registration guide in the Pass Community group, where most students participated in asking for subject information. Although the department had already instructed us on subject registration, many students found it unclear, and some of them found it difficult to follow, especially the freshers. Therefore, to help them, I decided to write a list of tips for subject registration based on my own experience. Unexpectedly, my list was shared widely among students from different departments, and I was surprised when the administrator of this group wrote a post

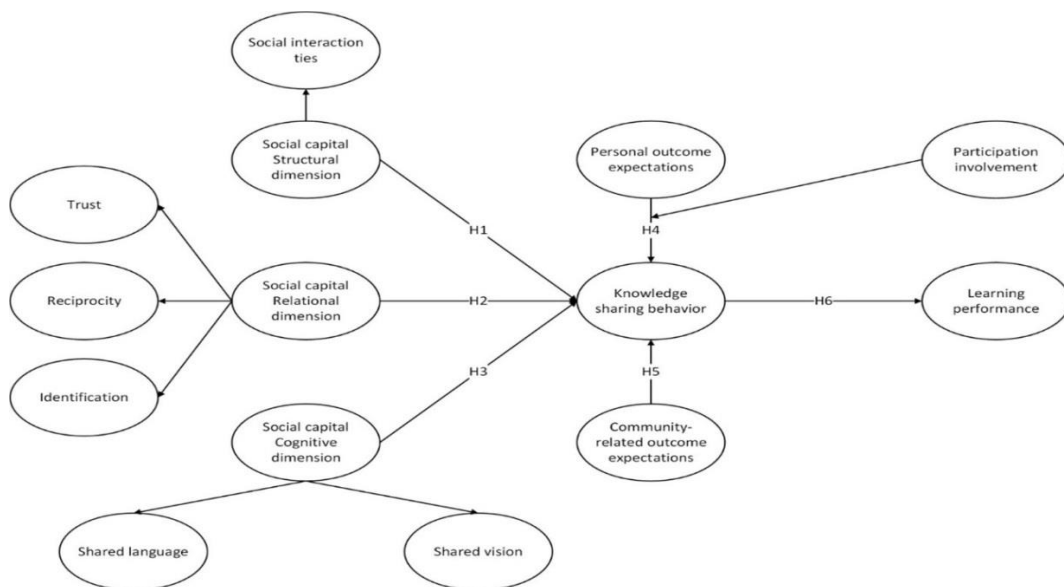
to thank me. I was so happy and excited. It will motivate me to share my knowledge with group members in the future.

The interviews indicated not only how social capital and outcome expectations motivate the behavior of knowledge sharing at university but also the essential role of knowledge sharing in enhancing students' learning performance. The latter is exemplified by the story of a junior student who usually accessed the information and knowledge shared by group members to improve subject revision and get high scores in formal examinations and continuous assessments.

In the final examination, when I was surfing in the Pass Community group, I saw a post full of materials for the subject Critical Thinking, which a senior shared. I was fortunate because I was attending this course this semester. So, I decided to use the materials, including notes, samples of previous examinations, and test-bank for my revision. Thanks to this, I got an excellent mark in this course (i.e., grade A).

#### 4. Proposed conceptual framework and hypotheses

The authors propose the following conceptual framework to explain the sequencing relationships between social capital, knowledge-sharing behavior, and learning performance alongside other intervening agents regarding the theoretical background and the narrative data.



**Figure 1.** The proposed conceptual framework

Source: Created by the authors

The testing hypotheses in the conceptual framework are:

*H1: Structural social capital is positively associated with knowledge-sharing behaviors*

*H2: Relational social capital is positively associated with knowledge-sharing behaviors*

*H3: Cognitive social capital is positively associated with knowledge-sharing behaviors*

*H4: Personal outcome expectations are positively associated with knowledge-sharing behaviors*

*H4a: Participation involvement moderates the causal relationship between knowledge-sharing behaviors and personal outcome expectations*

*H5: Community-related outcome expectations are positively associated with knowledge-sharing behaviors*

*H6: Knowledge-sharing behaviors are positively associated with learning performance*

## 5. Conclusions and recommendations

The authors proposed the conceptual framework to observe the social phenomenon by which social capital and knowledge sharing enhance learning outcomes among students in tertiary education. Social capital can be observed intensively through its dimensions and sub-dimensions. Further research may apply a hierarchical component model with social capital measured by second-order latent constructs (e.g., structural, relational, and cognitive dimensions). Empirical studies using this proposed conceptual framework can be conducted by using mass surveys among students in universities with different virtual learning conditions.

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