Examining Virtual Leadership Behavior Towards Knowledge Sharing in Online Communities

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Abstract: Despite the significant increasing numbers of emerging virtual communities, very few succeeded in inspiring members to share their knowledge. Many researchers realize this problem and led to many studies on examining factors that affect knowledge sharing. However, there is a scarcity of studies and frameworks that examine virtual leadership behaviors and their impact on knowledge sharing. This research developed a conceptual framework based on Social Cognitive Theory (SCT) and Path-goal theory. Using SCT to study the effects of Self-Efficacy (SE) and Outcome expectancy (OE) on members of online community’s knowledge sharing moderated by the six dimensions of leadership behavior where four components adapted from path-goal theory and two components generated by analyzing the component of leadership behavior. These leadership behaviors consist of Supportive leadership, Participative leadership, Directive leadership, Social leadership, Achievement oriented leadership and Regulative leadership. This proposed model will be tested empirically in online communities to treat the problem of under contribution and maintain the health of online community.

Key words: Knowledge sharing • Virtual leadership • Online communities • Social cognitive theory • Path goal theory

INTRODUCTION

Online communities can be described as a wide group of web users with regular interest, concerns and activities that interact and share great amounts of resources with each other via the Internet [1]. It brings together thousands of people across national, time zone and geographical boundaries and always finding ways to inspire its followers to participate and continue contributing by sharing their knowledge to enhance the community [2-5].

Knowledge sharing is the main constituent component of any online community. It is the capability to spread an idea or concept or shape a topic discussion. The value of interaction is the most important part of knowledge sharing that happen among members of online communities because it helps in building knowledge by converting tacit knowledge into explicit knowledge [6]. This lead in making online communities plays an important role by being an avenue for knowledge sharing activities. Besides, online community can serve as knowledge repositories for members to gain knowledge and find answers and solution to their enquiry and problems in their fields and other aspect related to their lifestyle and careers.

Despite the rapid growth and rich diversity of the online community, little is known on how they are structured and how they can sustain themselves in a leaderless organization that are often categorized by fluid boundaries, high turnover, expertise-based authority and emergent roles [7]. Because of this fluidity, leadership is important to guide the knowledge sharing process. The objective of this paper is to develop a model to address the following research questions: a) What are the antecedents that significantly influence knowledge sharing in online community b) What are the components of virtual leadership that influence knowledge sharing in online communities? b) c) How components of virtual leadership influence knowledge sharing in online community?

Literature Review and Research Problems

Online Communities and Knowledge Sharing: Members’ contributions are very crucial for ensuring the survival of online communities. Previous studies show that despite the significant increasing numbers of emerging online
communities, few of them succeeded in retaining and motivating their members to share knowledge. This led to a serious problem of under contribution and inactivity after extended period of time even in active online communities [4, 8]. For instance, Lakhan and Von Hippel [9] found only 4% of members contribute 50% of the answers to help site user-to-user communities. Mockus, et al. [10] found that merely a small portion of (4%) developers contributed 88% of new code and 66% of code fixes in open source software development communities. While, the top 5% of contributors in Wikipedia made 44% of the total edits [11]. These contributors are clearly valuable, but irregular participation will pose some risks to the online communities that lead to a few voices dominating the community and will affect the resource availability and the health of online communities and leave the group vulnerable until it ultimately dies if these few active contributors depart [12].

Many researchers realize of this problem and led them to many studies on examining the factors that affect knowledge sharing that can be grouped into motivation factors such as perceived online relationship commitment and perceived online attachment motivation, achievement motive and online social ties [13-16]. Additionally, there are cultural related factors that found significant like fairness, identification and openness [17-19]. Attitude factors also found to be significant which include self-efficacy and performance expectancy, perceived enjoyment, individual attitudes towards knowledge sharing and personal outcome expectation, satisfaction, reciprocity, social capital, content value, social value and intention. [20-24].

Leadership: Besides the aforementioned factors, other important factor that can promote knowledge sharing is virtual leadership. According to Bradshaw, et al. [25], leadership plays an important role in promoting knowledge sharing activities by maintaining active participation and encouraging members to stay and continuously share their knowledge and experience with others. Johnson, et al. [26] and Faraj, et al. [27] claimed that online community leadership processes and how leaders emerge are not well studied and there is a limited research examining the role of leaders in an online setting compared to traditional organizations. It is also supported by Hew and Hara [28] who argued leadership as one of the moderating factor that aided knowledge sharing. The leader or moderator have an important role as a sieve or filter that helps keep communication focused on issues related to the community objectives. Issues unrelated to the community are kept out by the effort of the moderator or leader. They also act as a “watchdog” of netiquette that helps keep communication civil. For example, unprofessional statements are frowned upon by the leader/moderator (e.g. personal attack on a member).

There are some fundamental similarities between online communities and traditional leadership. Such as in both settings leadership plays an important role in strengthening the community/organization and assist members/employees in building and managing relationships and resources. However, they have differential emphasis on behaviors such as monitoring behaviors, influence processes, rewards and punishments, attitudes of sharing knowledge, delegating tasks and outcomes relevant to online communities [29] that need to be further investigated.

Virtual leadership is a unique phenomenon. It does not fit neatly into any of Weber’s models [29]. It also does not represent traditional forms, in which they inherit a position of power, nor do they represent legal authority, in which they are appointed or elected [29]. Although these leaders informally emerge, but they exert influence on the attitudes and behavior in online spaces they inhabit. Thus, what makes someone a leader online remains an open research question [26, 30, 31].

Previous studies conducted in online communities also cover a very limited scope and focus only on one leadership style [32] in online community of practice. By studying only one leadership style, we could not comprehend the whole components of leadership style that existed in online community. It is can be supported by the statement of Faraj, et al. [27] which mentioned, “Leaders in different type of online community's platform such as Wikipedia, Blogs, SNSs, or massively open online games or courses may have different leadership style” (p. 407). Moreover, in online community, there are many people coming from different type of background. As a result, it leads to many types of leadership style involved. Thus, this study is going to be conducted to move away from a narrow perspective of leadership (where a single leadership style and its influence on the online community members) towards a more comprehensive view of leadership that comprised of multiple interconnected components that shaped virtual leadership.

This study also attempts to understand the antecedents of virtual leadership behavior that encourages people to lead in online community from the lenses of Social Cognitive Theory. Consequently, the effects of the different components of virtual leadership on their knowledge sharing will be analyzed. According to

Faraj, *et al.* [27], the key questions concerning leadership in online community's engagement in specific behaviors that distinguishes them from other participants remains unsettled. Faraj, *et al.* [27] also called for more study to examine the antecedents of leadership within the online context. By examining the antecedents of the leadership components we will comprehend how specific individual attributes shape leadership components that lead toward promoting knowledge sharing behavior in online community among members.

**Conceptual Framework:** The conceptual framework to explain this study relies on two important theory that are social cognitive theory and path-goal theory. Based on Social Cognitive Theory (SCT), Self-efficacy (SE) and Outcome expectancy (OE) are the strong predictor of knowledge sharing. As argued previously, not only individual attributes of the members influence knowledge sharing, virtual leadership is also important. Based on path goal theory the types of leadership should match with the follower (online community members) are illustrated and explained in the hypothesis section.

The following are the justification and suggestion of the hypothesis following the conceptual framework in figure 1:

Bandura [33] defined self-efficacy as the people's perception about what they can do with the skills they possess. Regarded as an intrinsic benefit, self-efficacy is another essential motivator of knowledge-sharing behavior, especially in an online context[34]. Self-efficacy is enhanced when individuals feel confident about themselves by contributing their valuable knowledge to the community. Researchers have reported the positive relationship between self-efficacy and knowledge sharing [34, 35]. Therefore, we assume that individuals with higher self-efficacy will share more knowledge. Thus,

H1: Self-efficacy has a positive effect on knowledge sharing.

Outcome expectancy is an individual’s belief that carrying out a certain action will lead to a desired outcome, this study argues that outcome expectancy positively affects a given individual’s knowledge sharing. Here, outcome expectancy is defined as the consequence of an act and not the act itself. Based on social exchange theory (SET), if employees believe they can improve relationships with other employees by offering knowledge, they will be more willing to share what they know with others[36-38]. Therefore, this study proposes that outcome expectancy affect the knowledge sharing behavior and proposes the following hypothesis:

H2: Outcome expectancy has a positive effect on knowledge sharing behavior.

In online communities, the main characteristic of the members are voluntary behavior. Therefore, it is hard to drive members to share their knowledge without strong motivation [39]. Supportive leadership works on moderating the relationship between self-efficacy and knowledge sharing. Through motivational mechanism,
leaders energize members by articulating a compelling vision and providing an appropriate model. A virtual leader can serve to persuade members that they can be capable as well and can empower them to contribute to the community vision by sharing their knowledge [40, 41]. Moreover, inspirational motivation can enhance self-efficacy as well. By inspiring individuals with their passion, supportive leaders underpin individuals’ willingness and ability to work on improving the status quo. The more frequently a participant has motivated by the leader, the more the member get confidence of himself to contribute to the online community as active member and the more likely tend to participate actively in discussion and sharing their knowledge in the online community. Therefore, we assume that individuals in the online community supported by the leader will have a high level of self efficacy to share their knowledge in the online community. That is to say,

H3: Supportive leadership of virtual leader positively moderates the effect of self-efficacy on knowledge sharing.

Related to the volunteerism characteristic of online communities, participative leadership can also help in motivating members of online communities to contribute to the online communities. According to Sashkin [42], increasing the degree and the autonomy for the followers/members to participate in decision making may increase performance through enhanced motivation. Especially for the expert in the field who are sharing their expertise and skills that can bring ideas and contribution toward developing and enriching the functionality of the online communities. This type of leadership behavior tends to foster the feeling of “psychological ownership” of followers [42], increase followers feelings of self-efficacy and control and reduce their sense of powerlessness [43].

Prior research suggests that the participative leadership plays a vital role in providing followers with experience of intrinsic motivation, feelings of self-worth and a sense of self-determination [44]. Similarly, some authors have suggested that participative leadership is likely to induce the feeling of empowerment among followers [45, 46]. The feeling of psychological empowerment has been conceptualized as a form of intrinsic motivation to perform tasks, manifested in four cognitive dimensions: meaning, impact, competence and self-determination [47]. Thus,

H4: Participative leadership of virtual leaders positively moderates the effect of self-efficacy on knowledge sharing.

Another characteristic of online community members is they are usually involved in different types of tasks. For example in Wikipedia, the main task is creating articles while in open source software community, the main task is developing applications. Coordinating task behavior of a leader is crucial to lead members to work on the objectives in accomplishing a milestone of these tasks. [12].

Directive leadership is needed to guide members and give instructions related to their tasks, including defining the expected outcome. By having the guidance from leaders with expertise that have knowledge and skill of particular task, it will increase the ability and confidence level of the member to perform the task to achieve the defined goals [40, 41]. Hence, will empower members to contribute to the community and share their knowledge. Therefore, we assume that members that been guided by directive leadership will increase their self efficacy toward performing the task and behavior of knowledge sharing. That is to say

H5: Directive leadership of virtual leader positively moderates the effect of self-efficacy on knowledge sharing.

In online communities, participation is based on voluntary behavior. It is hard to drive participants to share their knowledge without strong relationship between community leaders and members. Social relationship behavior defined as a connection between two or more individuals where each person has influences to the other [48, 49]. Through social relationship behavior of a leader, members will have a bond with the leaders and better understand the vision and able to anticipate the outcome of the online community. Hence

H6: Social relationship behavior of virtual leader positively moderates the effect of outcome expectancy on knowledge sharing.

Achievement in online communities are a bit different from offline organization. Members contribution are appreciated by assigning level of expertise, such as (beginner, intermediate, advanced, top contributor and expert) This can be seen exist in many type of online communities such as in Linux and gaming communities
Members’ active score can also reflect members’ achievement. Since members do participate for these kind of rewards, achievement oriented leadership is important to boost the motivation of the followers to attain specific goals that lead to external and internal reward. Externally reward include high position, a better set of skills to use for career, new network of good team to work with, a status indicator in online communities such by gaining more stars. Meanwhile internal achievement also can be perceived by followers through successfully accomplishing a challenging task, expand knowledge and network and successfully guiding others to accomplish task. Hence, achievement oriented environment build by leadership in online community will create value internally and externally for followers and will motivate them to contribute to reach the goal of the online community to achieve target and expand the empire of the online community. Therefore:

H7: Achievement oriented leadership of virtual leader positively moderates the effect of outcome expectancy on knowledge sharing.

We believe, members of online community are more willingly to engage in a behavior they expect to result in a likeable outcomes [51, 52]. Without regulative leadership, members can break the rules and regulation, share unethical and unrelated content. Eventually, this abusive behaviors will affect the goal and quality of established online community. This in turn will lead to high turnover of participants and have a detrimental effect to the online community. Therefore, by having a sets of rules or “implicit contract” by a leader, it will ensure a good healthy environment and ensure communicative behaviors between members in online communities are being regulated. Additionally, this healthy environment facilitate members to contribute to task and achieved the desired goals of the online community. Thus, we hypothesize that:

H8: Regulative leadership of virtual leader positively moderates the effect of outcome expectancy on knowledge sharing.

Outcome expectancy is a belief of an individual that by accomplishing a task it will leads to possible outcome [36, 53]. Researchers have suggested that an individual highly prefer selecting a behavior or a task which they expect to have a favorable outcome [51, 52]. Members will intend to share their knowledge if they perceive their own knowledge needs and goals [54]. By having directive leadership which provide guidance and clear expectations, members can have a better vision of the end result. With clearer goals in mind, members will have better sense of outcome expectancy that motivate them to contribute in online communities. Therefore we hypothesize:

H9: Directive leadership of virtual leader positively moderates the effect of outcome expectancy on knowledge sharing.

CONCLUSION

In this paper, the author had presented the first phase of this research i.e. the literature review, research problem, objective, questions, conceptual framework and hypothesis. Based on the literature review, research gap has been identified in which a framework is developed to explain virtual leadership behaviors that can influence members’ knowledge sharing. This study contributes theoretically to the body of knowledge by giving a better understanding of the influence of leadership components on knowledge sharing through identifying mechanism that facilitates knowledge sharing in online community settings. While practically, this research contributes by giving a guideline to community administrators, moderators and volunteer leaders, particularly in online community setting to promote knowledge sharing among members. The findings of this study also are practically significant for future researchers who would be interested in carrying out research on virtual leadership for sustaining membership participation and engaging knowledge sharing among online community members. It is expected that the research results will contribute new knowledge in the field of knowledge sharing, particularly as related to leadership in the rapidly expanding domain of online communities.

REFERENCES


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