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Research Paper

Online Communities of Practice: Sustainable Leadership Model

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ABSTRACT

Wenger (2011) has argued that domain, community and practice should be gathered in order to create communities of practice (CoP). It is believed that CoP would end as soon as the interest in learning together diminishes. Within that context, the role played by the community leader is of importance. In structural communities, which Wenger defines as the domain of CoP, the leader of the community could be chosen and assigned from the organization and be motivated through salary, authority etc. However, this is a phenomenon that is more difficult and should be solved in online CoP, which are informally structured. In this study, it is advocated that sustainable leadership element should also be added to the current elements which includes domain, community, and practice, through analyzing Wenger's framework for CoP and creating an online CoP. In addition, we also recommended the A2D cyclical model for enabling sustainable leadership, in this research.

Keywords: *community of practice, online communities of practice, situated learning, community of practice's leadership, sustainable leadership model*

COMMUNITIES OF PRACTICE

The term communities of practice is a model of situated learning founding the base of constructivist approach, and is considered to be based on the situated learning book of Lave and Wenger in the literature. The situated learning approach focuses on "learning", which is informal and occurs through social interaction, rather than on "teaching", which is planned and occurs through a mechanical information transfer (Lave & Wenger, 1991). Such interactions refer to the processes that structure the information in the complexity of real life implementations and in which learners are active, rather than simply acquiring information (Cox, 2005). Defining this process as the situated cognition, Browni Colling & Duguid (1989) claim that culture, context, and activities in real life play a major role in structuring the information.

Communities of practice are described as human groups; which possess common interest, desire, and problems in a specific subject and improve their knowledge and experience in a subject as a result of what they share in common (Wenger, McDermott, & Snyder, 2002). Communities of practice, also defined as a social learning system (Wenger, 2010), not only enable individuals to organize around a specific subject area to share new information and to learn together but also fill in the information gaps in sub-fields of that subject, thus help determining guidelines for these fields (Elliot & Finsel, 2016).

Communities of practice aim to unite people on a volunteer basis. Volunteering in communities of practice is a critical characteristic enabling community members to seek and share information, to establish trust, to interact, and to implement what they have learned in real life (Snyder, Wenger, & Briggs, 2003). Because communities of practice focus on an assignment; the information and interest shared in such environments support voluntary participation (Gray, 2004). In his research on informal learning in online communities of practice for adults, Gray (2004) has concluded that the motivation of individuals to join communities is affected by the opportunity to learn new information and skills and by the desire to remove the isolations resulting from geographical differences, and to connect socially and/or professionally with other individuals with the same domain.

ONLINE COMMUNITIES OF PRACTICE AND EXAMPLES

Members of communities of practice provide their members with different technological opportunities in order to include them in the community. This ongoing togetherness is one of the factors enabling the emergence of communities of practice; and occurs at a certain time and place (Wenger, White, Smith, & Rowe, 2005). Technology can serve as a platform for the lifetime of the communities of practice (Wenger, White,

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& Smith, 2009). Hoadley & Kilner (2005) indicate that technology could support communities of practice in terms of enabling their content, process, and context. Content providers enable members to search and store posts in different formats anywhere anytime, whereas; process providers present certain assignments and activities to help members fill in the gaps they have in their prior knowledge on subjects; furthermore, context providers enable members to share more social posts through some technological tools and to reach more individuals at once than they do in real life (Hoadley, 2012).

The habits of people to access information had changed with development of Web 1.0, which had developed as a result of technological improvements. Moreover, with Web 2.0 and social network applications, individuals started to transfer and exchange information with one another (o'Reilly, 2009). This has allowed people, who had to gather at the same place to create a community, to establish communities in front of a computer. Gammelgaard (2010) defines online communities of practice as those, which are not associated with any region or place and in which practices are regularly shared through information technologies' infrastructure. Gammelgaard also adds that these communities facilitate the coordination of information and minimizes the contextual problems between the recipient and transmitter of information. An online community of practice could consist of traditional media (telephone, conference, fax), improved technological tools (e-mail, video conference, online meeting rooms, websites, intranet), and printed common virtual media (Dubé, Bourhis, & Jacob, 2006). The online community of practice called HOBE+ developed by Mendizabal, Solinís, & Zaballa González (2013) to promote and improve innovation in primary healthcare services, has been used by 133 voluntary experts in the field of healthcare and 80% of the participants have found their experiences satisfactory. Moreover, 17.2% of the ideas generated in the environment has been found innovative and thus implemented. As a result of the experiences they had in the environment, it was concluded that online communities of practice promoted and facilitated innovative ideas. In the study conducted by Barnett, Sandra, Bennett, Iverson, & Bonney (2013) on usefulness of Web 2.0 tools and online communities of practice for general implementation trainings of healthcare workers, they have collected data from 18 participants, who spent 1 hour a day in front of a computer, out of 34 participants from urban and rural areas through semi-structured interview method. The analysis indicated that the cooperation and interaction in the communities of practice prevented those especially living in rural areas from feeling isolated.

THE SIGNIFICANCE OF LEADERSHIP IN COMMUNITIES OF PRACTICE

Kim (2000) describes the lifecycle of members of online communities as visitor, beginner, frequenter, leader, and senior whereas; Sonnenbichler (2010) defines this cycle as visitor, beginner, passive, troll, active, and leader. In the framework drawn by Sonnenbichler (2010) visitor is not a member of the community but evaluates the community's domain; beginner logs in for short time and does research on the domains and rules of the community; passive shares only a little; troll tries to disturb the community; and leader actively contributes to the community, has strong personal networks, and leads the ideas and trainings.

In online communities, making individual contributions is a parameter for a person so as to be defined as a leader (Dahlander & O'Mahony, 2010). Faraj, Kudaravalli, & Wasko (2015), in their study examining the structural and behavioral background of leadership in online communities, have stated that factors such as contribution, sociality, and structural social values are required for leadership. The researchers have detected that writing answers to the questions, making personal evaluations for implementations, sharing program codes etc. are indicators of contribution, whereas; leaving personal anecdotes or thanking in posts, sending notifications when online and frequently logging in and out are indicators of being high sociality. Furthermore, building bridges between the parts of the communities, which are not associated with one another, in order to attach importance to the unimportant information in another part of the community, is an indicator of structural social value. Gray (2004) deduced that in communities of practice, online moderating is not only an important factor for ensuring the continuity of the community for the long term but also a factor for increasing the learning function in a community. In the community of practice called "Career Development Circle", the participation was mandatory for the first three months and voluntary for the following six months; Baran & Çağıltay (2010) evaluated the incentive and impending factors behind the participation of 177 participants, under interpersonal, personal, and contextual categories. As a result, they determined that gradually giving members responsibilities keeps them active in the community and is significant in terms of ensuring the continuity of the community. They stated that members; who are well-informed & active participants, have self-confidence, have adopted the idea of lifelong learning, and should be chosen while assigning tasks to the members of the community. In their study, where they examined how the leaders of 7 virtual communities of practice affected the success of those communities, Bourhis, Dubé, &

Jacob (2005) found that leadership played a key role in overcoming the challenges resulting from the structural character of communities.

VOLUNTARY LEADERSHIP AND PROBLEMS

Lave and Wenger (1991) assert that communities of practice cannot be structured. Whereas; Roberts (2006) claims a business could establish a project team, which would later turn into a community of practice, however, an administration cannot be created within this community of practice, and the only thing that can be done is to provide support for helping establish a community of practice spontaneously. On the other hand, Brown and Duguid (2001) indicated that administrators could make that spontaneity happen. Snyder, Wenger and Briggs (2003) argued that what triggers members in communities of practice to share information, to establish trust, to implement what they learn, is voluntary participation; and added that it adds value to communities when members act together and are willing to learn through sharing. They also stated that communities of practice could serve as a complementary tool for formal units, whose real objectives are to produce a product or to offer services.

In cases, where businesses give the expected support, the continuity of communities of practice could be ensured through considering whether the participants and administrators of the community remain in their position, share information and lead, or not. In their study examining the examples of communities of practice in the literature, Corso and Giacobbe (2005) discussed the case of Daimler Chrysler, which supported the community of practice that was built in order to enable their engineers working towards creating a production circle in different regions to share things with each other in 2000. Even though the participation to the community was based on voluntariness, the firm awarded the members based on their participation. Similarly, when the customer service staff of an Italian telecommunication operator named Telco improved their sense of belonging, it supported the community of practice, which was established by them to exchange information in a cooperative atmosphere, through the contribution made by two members in order to enable others to develop their sense of identity. So that those who needed extra time to lead the community did not have any problems with that issue.

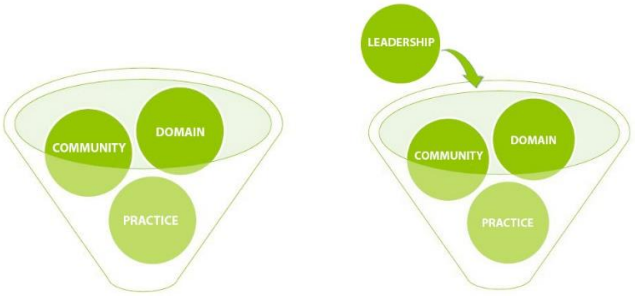
However, the fact that similar support is not provided in communities of practice, in which leaders are not associated with an administration or do not have either organic or inorganic connections and are totally voluntary, creates various challenges. Voluntarism could be defined as activities, which create trust & social commitment, help the emergence of common sense for future, and unite in the name of a common goal (United Nations Report, 2015). Palabıyık (2011) argues that two major characteristics of voluntarism and voluntary participation are; participation is not necessary, and nothing is given in return. On the other hand, a volunteer is defined as a person, who makes use of his/her financial resources, time, labor, and know-how, for a humane or social cause (Özgen, 2007).

In their research, objective of which was to determine what sort of behaviors were displayed by members of communities of practice as well as the views of members on their community, Alakurt & Keser (2014) indicated that what bothered the participants the most was distraction from the subject. They also added that distraction from the subject occurs when leaders do not play an active role in administrative processes and are not able to fulfill their inspection duty due to their intensive workload at times. The study carried out by McLennan, Birch, Cowlishaw and Hayes (2008) demonstrated that 51% of the 369 voluntary participants stated their reason to quit the study as they had time shortage and wanted to spare more time for their work and their families. In a similar fashion, Cleave and Doherty (2005), in their study where they investigated the problems of voluntarism, interviewed 20 both voluntary and involuntary participants and found out that the biggest problem they had is being unable to plan the time to spare for their work and families and the time to spare for their voluntary work. The leader's shortage of time and inability to participate in the community affect the development and growth of the community. In the study conducted by Marler (2010) on religious groups, where participation is voluntary, the less the leader participates in the community, the less rapidly grows the community. Moreover, in the study carried out by Ockenden and Hutin (2008) on small groups led by and voluntary leaders, it was revealed that according to members the actual reason why they refuse the responsibility of leadership and choose to take more distant and basic roles is because of their shortage of time. In addition, the researchers also stressed that if current leaders of communities do not make contribution to their communities, this will result in a void in the community and thus the general opinion will be that the community will slowly come to an end.

ONLINE COMMUNITIES OF PRACTICE - SUSTAINABLE LEADERSHIP MODEL

Wenger (2011) has argued that 3 structural elements should be gathered in order to create communities of practice. These elements are "domain", which attracts the common interest and creates a common identity; "community", in which members come together around their domain and learn through interaction; and

"practice", which consists of documents, stories, style, information, tools, ideas, and a common roof shared by members of the community. Snyder, Wenger and Briggs (2003) argued that these structural elements are in an informal manner and cannot be externally managed. The studies on this subject suggest that being a leader in these communities of practice is of high importance. It is asserted that the improvement of the leader starting from the moment the community is established affects certain things such as enabling members to participate. Furthermore, researches also indicate that the continuity of a voluntary community is ensured by the existence of a leader. Therefore, the "leadership" element is also added to the structural elements suggested by Wenger including "community", "domain", and "practice" in the proposed model (Figure 1).



Wenger - Community of Practice Structural Elements

Suggested Community of Practice Structural Elements

Figure 1. Wenger's Community of Practice and Suggested Community of Practice - Leadership Model

In communities of practice supported by a business, the continuity of the community is ensured through supporting the leader of the community via incentives so that he/she could remain in, share, and lead the community. However, the fact that similar support cannot be provided in the communities of practice where leadership is totally voluntary. As a consequence, the leaders have a hard time fulfilling their responsibilities and more importantly may have to leave the community. It seems impossible for leaders to ensure the continuity of communities of practice. For these reasons, the leadership element should be in a sustainable structure so as to contribute to the continuity of the community. The cyclical A2D model has been suggested for a sustainable leadership in that process (Figure 2).



Figure 2. Virtual Communities of Practice - Sustainable Leadership Model

SUSTAINABLE LEADERSHIP - A2D CYCLICAL MODEL

Even though the term leader and the term manager are often interchangeably used, there is a difference between them. In the meeting conducted within the framework of International Leadership and Organizational Behavioral Efficiency research project with participants from 54 countries; "leadership" was defined as being able to motivate, to impress others and to enable other members of organizations to work towards achieving certain objectives (Jameson, 2008). A manager is a person who makes necessary planning to ensure that assignments are regularly completed in line with an objective, deals with organizational transactions, and fulfills the control functions. While a manager ensures that assignments are correctly fulfilled, a leader ensures that correct assignments are being fulfilled.

Communities of practice cannot be externally managed because participation is based on voluntarism (Snyder, Wenger & Briggs, 2003). One or a few people from the community should take the responsibility of being the leader. In communities of practice, leadership role is not about decision making as it is in traditional organizations but is related to enabling others' active participation and collective decision making (Johnson, 2001). Online communities of practice should be somehow managed so that their content is available; posts can be kept and searched for in different formats; members could be reached everywhere every time; more social content can be shared through some technological devices. Thereby, the leader should take

the responsibility of "managerial leadership", which is suggested by Quinn (1996 op cit. Miyamoto, 2015).

In the literature, there are models supporting voluntary management and participation to the organization through developing leadership. Some of the suggested models are ISOTURE (Boyce, 1971), Fisher & Cole (1993), Ellis (1996), GEMS (Culp, Deppe, Castillo & Wells, 1998) (Safrit and Schmiesing, 2005). These models are developed for voluntary management and leadership development in voluntary structural organizations such as NGO's and relief foundations. Since these models are created for structural organizations, they cannot be exactly applied to virtual communities of practice even though they both are based on voluntarism. However, they are guiding for the "sustainable leadership" model suggested in this study. Moreover, it was found out that the biggest problem, which may even make members leave the community, for leadership in voluntary communities is shortage of time. It is believed that leadership responsibility is taken by several members in time so as to ensure its sustainability and overcome the challenge of shortage of time experienced in voluntary communities.

For the "Online Community of Practice - Sustainable Leadership Model" we suggested; voluntary participation models and "Leadership Development Model" proposed by John West-Burnham (2004) were synthesized and A2D cyclical leadership model was created.

A2D Cyclical Model

According to the Leadership Development Model by John West-Burnham (2004), as the trust relationship is improved, the structure of the organization transforms into an auto regulation structure rather than a hierarchical one. Building trust will create more capacity for leadership in the organization, and thus more people will have the chance to lead. The model adopts a shared leadership approach.

Organizational commitment is evaluated in four stages in leadership development model:

1. *Control:* It is the stage, where only one person is responsible, all decisions are made from a single hand, and other individuals only comply with the orders given to them.

2. *Authorization:* Giving authorization to the individuals only for well explained assignments, thus providing them with limited authority and responsibility.

3. *Empowerment:* It is the stage, in which a higher level of authority is given to the responsible person, who will decide how to complete a previously determined assignment.

4. *Authority stage:* It is the stage, where power is locally allocated independent from the central authority as seen in federal governments.

West-Burham (2004) presented this model in a shared leadership framework, so as to change the hierarchical managerial system seen in educational institutions. Since communities of practice do not possess a hierarchical structure and leaders could overcome the shortage of time problem by delegating authority; "leadership development model" was developed for A2D cyclical model that is suggested in this study. The suggested A2D cyclical model is demonstrated in Figure 3.

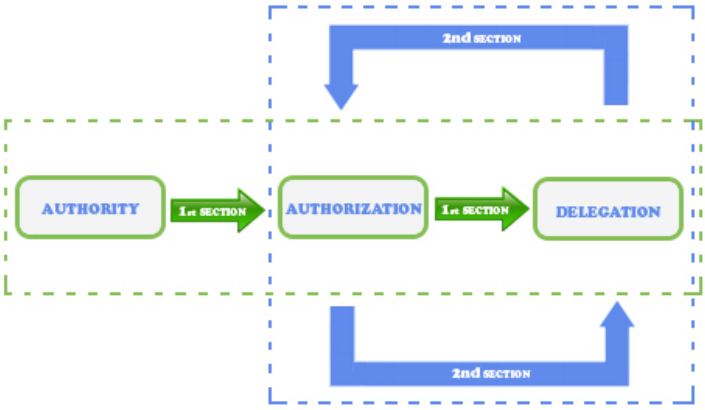


Figure 3. A2D Cyclical Model

A2D cyclical model consists of 2 main sections. The first section discusses the structural change of leadership in the phase of creating and developing a community of practice; whereas the second section deals with how the community of practice expands or shrinks in the process and how leadership is allocated.

A2D Cyclical Model - First Section

Authority: Online communities of practice, which are not associated with a certain organization, emerges when a need or idea is recognized. In such communities of practice which were created using Web 2.0 technologies; determining the objective, virtually creating the community, informing the community of the creation, choosing, inviting, and accepting members could only be possible through a manager, at the first phase. In that stage, any manager has the authority. The first and later posts shared by the person with the authority will determine how the online community will operate. The expansion and continuity of the online

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community of practice depend on the efforts of the manager at this phase.

Authorization: In this stage, the manager with authority gradually becomes a leader, who will delegate assignments to members in the community and leadership-managerial skills will be transferred to other members. In their study, in which they interviewed 3000 managers from international organizations, Toole, Galbraith & Lower (2002) describes the common characteristics of people with leader profiles, regardless of their position in an organization, as follows:

- Not acting like an employee, but like the owner of the business,
- Quickly taking initiative in finding solutions to the problems,
- Possessing the spirit of the organization.

The first phase of one of the models supporting voluntary management and participation to the organization through developing leadership, which is named as GEMS (Generate, Educate, Mobilize and Sustain) (Culp, Deppe, Castillo & Wells, 1998) is "voluntary creation" In this phase, in order to make a choice, people talented in that domain should be listed and this list should include personal interests, knowledge, skills and background of those people. The first phase of ISOTURE (Identification, Selection, Orientation, Training, Utilization, Recognition and Evaluation) (Boyce, 1971 as cited in Safrit & Schmiesing, 2005) model within the context of managerial concept is identification and is explained as the process of identifying people with certain leadership characteristics. The authorization could be delegated either to the volunteers invited to join the online community the manager personally knows or to those included in the list, in which other volunteers with similar profiles are listed after comparing their profiles to the profile of the leader. Toole, Galbraith and Lower (2002) asserted that when leaders are participative, better results are yielded than when leaders choose participants.

Delegation of authority: This stage occurs when the online community of practice is expanded and the manager delegates assignments among the community. In this stage, manager-leader authority belongs to the leader of the community of practice, however, the manager-leader position is held by other group members. The transfer of authority takes place thereby, and participants could upgrade to the stage of leadership.

Naylor (1967 as cited in Safrit & Schmiesing, 2005) stressed on the importance of exchanging positions among the volunteers in the organization at the last phase of the model, which Naylor suggested for voluntary management in organizations. The last phase of one of the models supporting voluntary management and participation to the organization through developing leadership, which is named as GEMS (Culp, Deppe, Castillo & Wells, 1998) is "sustainability (S = Sustain)" phase. In this stage in order to ensure the continuity, it is expected that voluntary participants are evaluated and checked to see whether they coincide with the objectives of the organization, or not. In online communities of practice, it is significant for the manager-leader to choose which member/members to delegate authority to, after making an evaluation about them. However, Camplin (2011) argued that voluntary members may have problems while leading other volunteers, main reason of which is the fact that other members cannot be forced to follow the leader. In the authorization process, all users, who are personally acquainted by the manager-leader or chosen from new members, may not be viewed as the leader by other members. On the other hand, in the study of Faraj, Kudaravalli, & Wasko (2015), in which they examined the structural and behavioral background of leadership in online communities, they asserted that sending too many messages or being social are not adequate for being a leader; but the individuals, who can enable the group to fulfill their actual function, could be viewed as leaders by the members of the group (in this study, the dialogues about technical subjects are provided as examples). Hara (2007) stated that in online communities of practice, communicative transactions occur either through personal communication or sharing news/information. For that reason, the group member/members, to which authority will be delegated, will be determined through using information technologies utilities.

Gray (2004) stated in his study that the biggest issue he had while he was instructing an elective course was not having the same power an instructor of a must course had, thus he was only able to encourage and not manage. Similarly, it is expected that manager-leader will complete this process by encouraging the member/members, to whom he will delegate authority.

A2D Cyclical Model - Second Section

The second section of A2D cyclical model consists of emergence of new manager-leader. The authorization and delegation of authority, which are completed in the first section of the model, cyclically continue in this stage. The periodical growth and decrease of online

community of practice depend on the leader-manager as mentioned in the literature.

LIMITATIONS

In communities of practice, in some cases leadership negatively affects the sustainability of the community. Leaders may use other main elements of the community such as domain, community and practice in their own favor. Especially, when a community grows too large, becomes a potential financial resource and starts having political power, the leader may not want to delegate authority. In such cases, leaders tend to use their leading function for self-interest relationships, to make profit by publishing advertisements on community's virtual platform, to allow visible subject headings, which are irrelevant to the community's domain and to prevent the subject headings, which are in contrast with his/her self-interest. The members, who realize such situations, will split their ties with the community, thus continuity of the community will be threatened. In order to prevent such cases, it is necessary to correctly analyze the purpose of the potential leaders for their existence in the community and to properly coordinate the assignments given to the leaders.

CONCLUSION

The communities of practice are used in various studies in the literature. The communities, consisting of people who are voluntary to work together regardless of whether they have an organizational relationship or not, are made up of three elements including community, domain, and practice. The previous studies indicated that these organizations cannot be externally managed and they also highlighted the importance of certain members' leadership in the community. However, the literature suggests that leadership in voluntary communities has to overcome certain challenges and when these challenges are not overcome, the continuity is decreased or even terminated. It is observed that the communities of practice, which are connected with an organizational structure, are able to overcome these challenges. Through the online communities of practice - sustainable leadership model that we have suggested, it is aimed that the community is kept sustainable through changing leadership positions cyclically in the communities of practice which are not associated with any organizational structures.

In the suggested communities of practice - sustainable leadership model, the subjects of creating and developing leadership are not mentioned. Other subjects such as the qualities a leader should possess, how to acquaint leadership qualities etc. have been discussed in the literature, and various models are presented for such subjects. However, in this study a cyclical model for leadership is suggested for online communities of practice, which are not associated with an organization, so as to ensure continuity. The efficiency of the suggested model could be investigated through case studies and improvement points can be generated.

Moreover, the literature suggests that another problem frequently seen in online communities of practice is members' lack of technological knowledge and whether they are sufficient or not. In the suggested model, the managers-leaders are expected to determine new managers-leaders by using the technological utilities and knowledge. However, this issue is not developed in the suggested model, and it is believed that further studies could tackle this issue.

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