Research and Practice in Technology Enhanced Learning
Vol. 2, No. 3 (2007) 195–212

CONNECTING ADULT LEARNERS WITH AN ONLINE COMMUNITY: CHALLENGES AND OPPORTUNITIES

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While online communities of various nature proliferate in cyberspace, our understanding of the reasons underlying their success or failure is still at the initial stage. The present study contributes to this area through examining an abortive attempt to build an online learning community of part-time postgraduate students. The objective is to identify design considerations and strategies for extending an offline community to online. In this paper, we first elucidate the defining attributes of an online community and the key factors enabling an offline community to extend to online. On the basis of that, we explore the motivating and inhibiting factors for online participation, together with the challenges encountered by the externally initiated online community. Lastly, guidelines for developing online communities as extensions of physical ones are proposed. In particular, the interplay between designed and self-emergent aspects of community building are highlighted. The result of this study can provide guidelines for our future work and other similar community building endeavors.

Keywords: Online community; adult learners; higher education; community design.

1. Introduction

As the Internet penetrates into every fiber of our society, online communities of various nature and scale proliferate in cyberspace. The social impact of online community and its relationship with real-life community have attracted research attention in many fields. The Internet has been argued to increase (e.g. Kraut, Kiesler & Boneva, 2002), decrease (e.g. Kraut, Patterson, & Lundmark, 1998) or supplement our social capitals (e.g. Brown & Duguid, 2000), and the supplementary relationship between online and offline life has gained increasing currency in recent years. However, a virtual community developed as an extension of a physical group has not gained enough research attention (Etzioni & Etzioni, 1999). We still have rather limited knowledge regarding the crucial factors that enable an offline community to extend online. Moreover, the challenges encountered by intentionally created communities have not been fully investigated (Dubé, Bourhis & Jacob, 2005).

Our study seeks to fill in these research gaps by examining the reasons behind a failed attempt to extend an offline community to online. It focuses on a group of part-time students in the Doctor of Education (EdD) program at the University of Hong Kong. With their full-time job obligations, this group of adult learners has neither the time nor the opportunity to meet regularly face-to-face. For this reason, the students' coordinator initiated an online community to augment the exchange of resources, experience and social support. However, not long after the launch, the online discussion faded. This problem provoked our inquiry into the drivers and barriers to online engagement among EdD students.

The online community in our study has three main characteristics: firstly, it was externally initiated. Secondly, it was built upon an existing physical group. Thirdly, it was not associated with any particular coursework. On the basis of these characteristics, two research questions were developed to guide our inquiry: (1) what are the critical factors determining EdD students' engagement in the online community built as an extension of the physical community? (2) What are the challenges or issues confronted by an externally initiated online community? The results of our study not only contribute to a deeper understanding of people's perception and behavior in the virtual realm, but also inform online community building efforts in the future. In particular, our findings are relevant to virtual communities initiated in a top-down manner and as an extension of an offline community.

The rest of the paper will be structured as follows: first, we will elucidate the defining features of online community and the key enablers for an offline community to extend to online. Then the context and background of the online community initiative will be introduced followed by the description of the context and data collection process. In the discussion section, we will elaborate on the reasons for members' disengagement in the online community, and propose recommendations for future community design. At the end, we will conclude with a summary of major insights gleaned and the directions for future study.

2. Online Community

The essence of community, Fernback (1999) claims, is commonality — something shared by members, such as neighborhood, interest or professional practice. Aggregated on the common ground, group members need communication or interaction to bond them together (Jones, 1997; Lee, Vogel & Limayem, 2003; Watson, 1997). In an online community, communication is mediated through computers. However, an online community is more than a group of people who communicate through computers. Interaction among community members has to meet two conditions: first, it needs to be constant and continual for an extended period of time (Conrad, 2005; Erickson, 1997). Trust, sense of connection, and group cohesion can only develop over time. Second, the interaction should be multi-way (Rafaeli, 1997) with a variety of communicators involved in a two-way communication (Jones, 1997). The interaction is governed by social infrastructure constituted by policies, rituals,

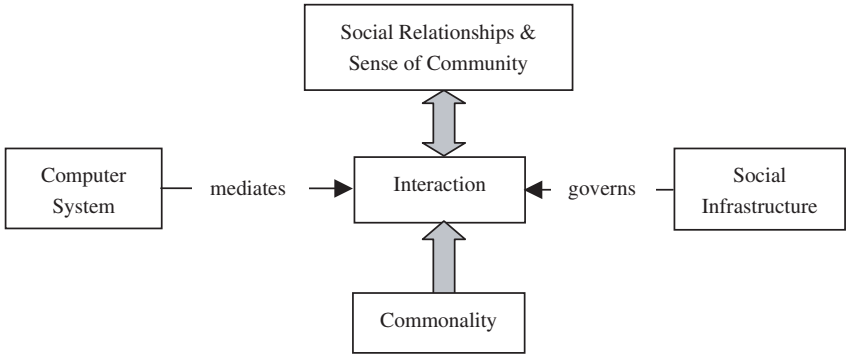

Figure 1. Structure of an online community.

protocols (Preece, 2000) or shared conventions, and language (Bagozzi & Dholakia, 2002).

Through ongoing interaction, members mutually develop social relationships and attachment to the community. The community commitment, or sense of community, is a sense of belonging, "a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9). The social connection and the sense of community, in return, can enhance the online interaction (McDermott, 2000). Figure 1 above sums up the aforementioned features of an online community.

3. Extending an Offline Community to Online

The underlying rationale for extending an offline community to online is the supplementary relationship between our online and offline life. Web-based communication can extend and supplement face-to-face interaction (Koku, Nazer & Wellman, 2001; Kraut, Kiesler & Boneva, 2002). The reverse is also proved to be the case: face-to-face ties are often viewed as a necessary precondition for online trust (Blanchard & Markus, 2002) and in-person meetings can reinforce online affiliation (Wellman & Gulia, 1999). The prior social liaison could serve as a catalyst for online engagement (Kavanaugh, Carroll, Rosson, Zin & Reese, 2005) since it could mitigate the problem of trust and social presence online (Ardichvili, Page & Wentling, 2003). In light of the reciprocal relationship between online and offline communication, it is recommended that an online community be built when an existing group has limited opportunity for face-to-face communication (Sproull & Kiesler, 1991). The online community can be viewed as an extension of a physical group or another channel to augment face-to-face interaction. This new channel of electronic communication calls for an online social infrastructure that deals with issues such as the goal, guidelines or roles of online participants.

In addition to the social dimensions — social relationship and sense of community, the informational dimension is also a vital factor for online engagement. The

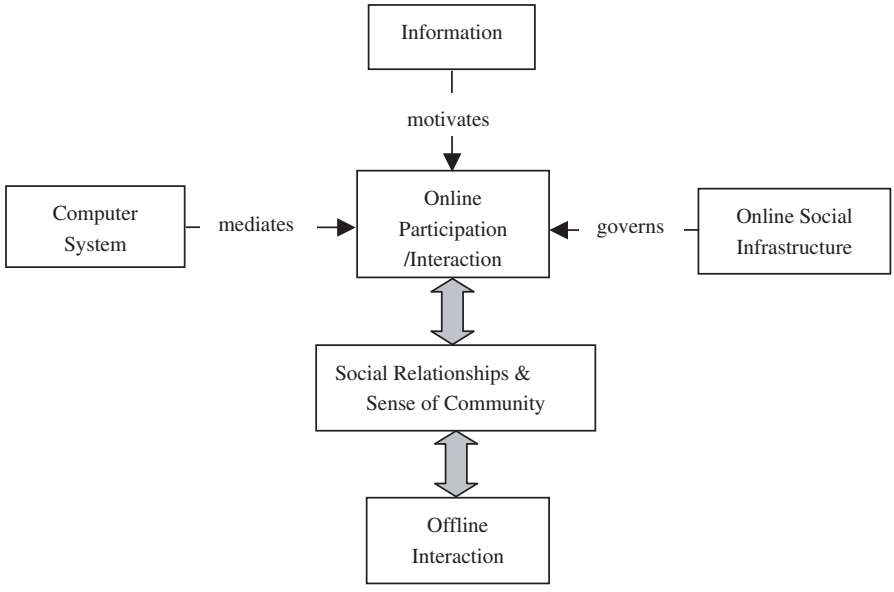

Figure 2. Key factors enabling an offline community to extend to online.

tangible return, in the form of useful information or solutions to personal problems, is the major determinant for online community commitment (Butler, Sproull, Kiesler, & Kraut, 2002; Wasko & Faraj, 2000). Admittedly, community members can generate content, but "it takes content to draw people to the community areas" (Powazek, 2002, p. 17). The diagram above (Figure 2) might help to illuminate the key enablers for extending an offline community to online space.

Despite its positive effects on online communication, the extant social connection can also be counter-productive. A densely knit community might make the extra online interaction seem redundant (Ardichvili, Page & Wentling, 2003). In other words, if the co-located community can fulfill people's needs, the extra online discussion might seem unnecessary, except for planning and coordinating meetings and other co-located events. The need for community does not translate directly into the need for *online* community. Therefore, the existing social fabric, too tight or too loose, might influence people's engagement in online communication. As a result, the overlapping of offline and online networks calls for special design attention. The current study intends to address this issue and contribute to the understanding of the critical factors enabling an offline community to extend to cyberspace.

Before we proceed, it is necessary to explain some of the key concepts used in our discussion:

(1) community initiation
(2) online extension of an offline community
(3) community design

Community initiation refers to the initial community building efforts. Generally speaking there are two methods for community initiation: top-down and bottom-up. A top-down community initiative usually involves design intervention such as proposing a community goal, rules for participation, and boundaries of the community. For a community evolved in a bottom-up manner, there is no predesigned community structure or rules. The roles of leadership and other participants are emergent and spontaneous (Arnold & Smith, 2003). In this paper, we prefer to use *"an online extension of an offline community"* to refer to an online community built on the basis of an existing physical community. The online community does not replace the physical community, but augments it. Quite often, it is also called a blended (see Volpentesta & Frega, 2007) or hybrid community (see Gaved & Mulholland, 2005). A hybrid community is defined as a group of people who interact socially using both online and offline modes of communication (Gaved & Mulholland, 2005). However, the term — blended or hybrid community — only depicts the mixed condition of online and offline interaction without any indication of how the community was originally formed. *Community design* refers to design interventions mostly executed in a top-down fashion. Unlike community initiative, which concerns mostly the start-up of a community, community design is an ongoing and iterative process (Bruckman, 2004). In a general sense, community design might encompass the community initiation and ensuing iterative design and development cycles.

4. Method

4.1. *Study context*

Our study is contextualized in a part-time EdD program at a local university in Hong Kong. As a professional doctoral degree, the EdD is offered to experienced practitioners in the field of education. With their full-time job obligations, this group of part-time adult learners were unable to meet regularly on campus. To strengthen the social connection within the community, an online discussion forum was set up by the students' coordinator on a web-based system called Interactive Learning Network (ILN). This is a home-grown learning management system with built-in features including announcement, resource, task, forum, calendar, chat, quiz, and evaluation/survey. A screen shot of ILN is shown in Figure 3.

The discussion forum on ILN is an asynchronous environment with a thread-based structure. This web-based platform was developed based on the concept of community and aimed at providing a conducive environment for collaborative and cooperative learning. An online community space will be created with the new enrollment of students. A student can belong to several communities or sub-communities based on their course or program enrollment. For example, all EdD students belong to one big community and several sub-communities were also created for each division within the Faculty of Education.

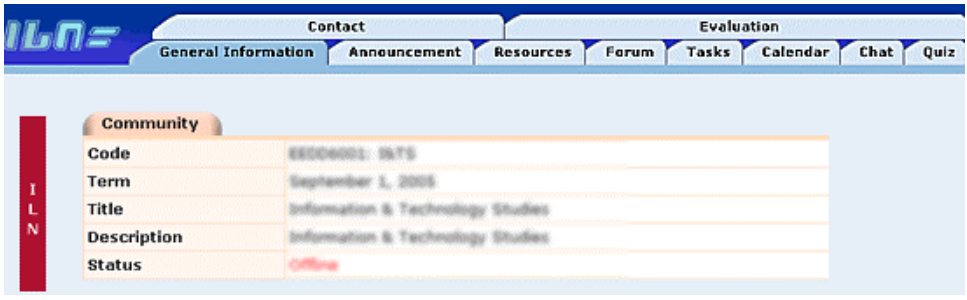

Figure 3. Screenshot of ILN.

4.2. *Data collection*

The current study adopted an exploratory approach to provide a qualitative description of the reasons behind the failed uptake of online communication. First, the student coordinator — the initiator of the online community — was interviewed to provide background information on how the online community was initiated. Secondly, we examined the online activities from September 2005 to May 2006 for a better understanding of the problematic situation. Thirdly, five EdD students were selected from a subgroup of the EdD community for an individual interview to gather rich and in-depth data on their perceptions, experiences and attitudes regarding online communication.

An informal interview with the student coordinator suggested that the online community was "set up for the convenience of students" and the online participation was voluntary. Since an online community space was already allocated for EdD students and all the EdD students were already members within this community by default, it seems reasonable to make use of the available platform. To encourage students' online participation, he advocated the use of online platform during the group meetings and initiated the discussion on ILN. An email message was sent out to all the EdD students in this subgroup to encourage their online participation. A guideline was also distributed among students with weekly topics proposed for online discussion. However he did not see himself as the owner or facilitator of this online group; in his view, it was up to the students to decide how they wanted to utilize and benefit from the online discussion.

During the period from September 2005 to January 2006, only one discussion topic — "my research experience & thoughts on methodology" — was created by the coordinator. Altogether five students posted ten messages in the online discussion space. Figure 4 shows the number of online posts. From February 2006 to the time of this study (May 2006), there was no activity on the discussion forum.

A closer look at the online posts revealed that there was no interactivity among them. The pattern of communication was just one-way broadcasting. The content of the online messages was mostly related to reviewing or reporting the readings.

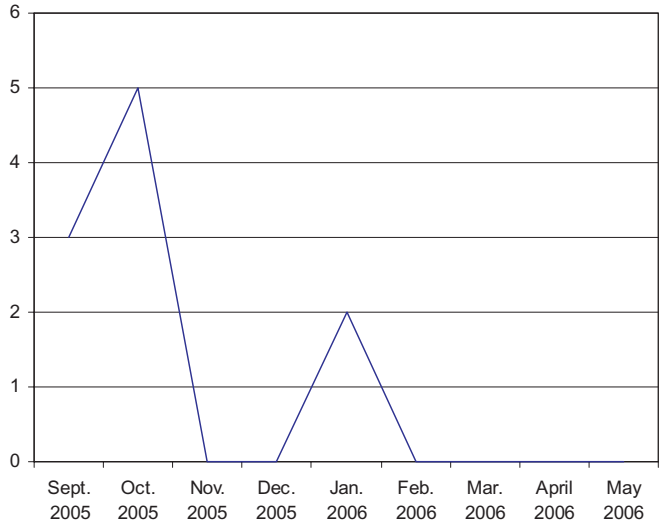

Figure 4. Posts in online discussion forum.

The following is an excerpt from an online post by one of the students.

> *"My research is on using IT in students' learning. I have read an article on Learning Strategies for Learning Technologies and the author's ideas are summarized. . . . Teachers may also find this article useful. . . . Pls feel free to comment."*

For the individual interview, we purposefully chose five students in one EdD sub-community — Information & Technology Studies — due to a number of reasons. First, the student coordinator is also a staff member in this division. Secondly, it was assumed that students in this sub-community should have higher technical competency and more interest in using technology in their own learning. Among the five participants, there were four males (John, Jack, David, and Rick) and one female (Robin). All the aforementioned names are pseudonyms. John worked for the police academy and was in charge of the development of an e-training program for police officers. Jack was an experienced teacher who had taught accounting for 18 years. David was an information technology director of a local secondary school. Rick worked as an English instructor in a local university and was interested in utilizing e-portfolio in his teaching. As a computer officer, Robin was also employed by a local tertiary institute. At the time of the study, the participants were close to the end of their first year doctoral study.

Interview questions consisted of both structured and semi-structured questions. They aimed to elicit members' needs for, and expectations as well as perceptions of online communication. In particular, we were interested in the perceived drivers and barriers for their participation in asynchronous discussion. We also examined

participants' need for and availability of social support in real life. Although the technology dimension was not the major focus of the current study, we felt it was still necessary to ascertain users' comfort level with technology, previous online experience, and learning preference. The main purpose was to detect whether technology posed as the major barrier to their engagement in online community.

5. Results

5.1. *Users' perceptions of internet communication*

All of our respondents used the Internet as a vehicle for information and social interaction. When comparing face-to-face conversation with asynchronous computer-mediated communication (CMC), Jack expressed a preference for in-person interaction over CMC at all times since he was not very comfortable with web-based technologies. In contrast, John said he was very comfortable with technical tools and felt face-to-face and CMC were more or less the same. The other three interviewees believed both ways of communication had their advantages and were appropriate for different situations. For example, Rick and Robin shared the similar view that face-to-face was important at the initial stage of group formation. David mentioned: "if I just have a vague idea, I prefer face-to-face conversation; if I have something concrete, like a document, I can use email to attach it and send it out for others' comments".

5.2. *Social support*

As to the role of social support in their postgraduate study, four students considered this very important while Rick thought it was somewhat important, but not essential. Among the four adult learners who considered social support as vital, there were some discrepancies in terms of their perceptions of social support available. Two perceived the current condition of social support as acceptable, as David remarked: "I expect (research work) to be a lonely journey. For most of the time, we have to work by ourselves". John thought he was content with the occasional meetings with his supervisor and peer students on campus. In contrast, Jack and Robin felt the peer support was not adequate due to everyone's busy schedule. Social support was interpreted as support, sharing and caring among peers. It could be either intangible, such as emotional support, or tangible, like sharing materials.

5.3. *Perception of online community*

When it came to the initiative to extend their communication to online, the interviewees expressed diverse perceptions. Four thought it was a good idea, but showed various concerns. Jack commented: "It's good to have something like this, but I don't know how successful it will be". David and Rick were still not quite convinced of the necessity of extending communication to virtual space. Robin, on the other hand,

capitalized the role of facilitator and active members in communities: "in every newsgroup, we need a facilitator to initiate discussion; and also it is important to have a group of core members who contribute regularly".

When asked what they expected to derive from online participation, our interviewees emphasized two things: useful information and help from others. They wanted a place to seek useful information and help for various personal or academic problems. Besides, John thought that the online community could also provide "a sense of support, a sense of belonging; or a channel to express our feelings". Jack also anticipated that online conversation could cement social connections with other peer students. Closely associated with their expectations for online participation is the issue of motivation. Useful information is recognized as the major driver for online engagement. However, our respondents viewed themselves as quite passive participants. As David said, he seldom initiated online discussion; but if there was anything interesting, at least he would participate as an audience. Similarly, Rick expressed the need for a facilitator who can kick off the discussion by posting interesting topics or "provide what I need". However, when asked who should be responsible for producing useful information, four students thought it was the duty of the facilitator or active members. Only Jack said "everyone is responsible to make it work". Having said this, all the informants showed willingness to answer others' questions if time and ability permitted. In addition, the issue of need for the online community was brought to the forefront by John as he mentioned: "there are a lot of communication channels. If we can search on the Internet, then why bother using the online community?" Likewise, David showed confusion over the purpose of online discussion: "I am not sure what I should expect from the discussion forum; information could be obtained through other channels like email or web-based announcement. . . . If it's something I can only get from there, of course I will spend more time on it".

When it came to the concerns and barriers to their online participation, different voices were heard. Three students identified the time constraint as a major deterrent for asynchronous communication. In addition, Rick was afraid that diverse research topics and backgrounds among peer students could jeopardize group cohesion and interaction. For Jack, technology was perceived as a barrier as he called himself a "non-technical person". All interviewees showed no concern over others' identity and credibility since real names were used in online discussion.

6. Discussion

An online community initiated externally with the purpose of strengthening the connection among dispersed adult learners failed to take shape. The upcoming discussion will elucidate the major factors inhibiting its emergence together with the challenges confronted by such an intentionally built online community. On the basis of that, we will propose some guidelines for extending an offline community to online.

6.1. *Factors enabling an offline community to extend to online*

In general, adult learners in our study did not feel a strong need for online interaction. Although most of them felt peer support was important, the impetus for online communication was not intense. Many of them thought an online community would be something nice to have, but remained skeptical about its usefulness. Through probing into their low level of motivation, three issues emerged. The first issue was the perceived nature of postgraduate work. For some of our respondents, research work was "a lonely journey" by nature. This resonates with the findings of Ardichvili and associates (2003) in that when people perceived their work as a solo task, the community-based activities became neither necessary nor desirable. The second issue was related to the availability of social support from co-present communities. Just as Dunham (1998) and Turner (2001) noted, the availability and quality of social support in real life are a significant driving force for online interaction; when students felt that the support from their immediate social surroundings was enough, there was low incentive for going online. The third issue pertained to members' perceived value of virtual community. What our informants expected from online participation could be summarized as information, emotional support and sustained social relationship. They commented unanimously that the appeal of the virtual community resided in interesting and useful content. Only two students recognized the benefit of online community to psychological well-being and social capital. For those who only regarded the online community as the source of information, confusion and uncertainty arose. As one of the respondent remarked, "Information can be obtained from the Internet. What's the point of using the discussion forum then?" As a matter of fact, online communities can provide their members with diverse resources, including information and social and emotional support (Haythornthwaite, Kazmer & Robins, 2000). Additionally, online discussion boards can provide a sense of place, context and history (Kim, 2000). The community memory is preserved in digital form (Rheingold, 2000) and search function can be executed easily. Unfortunately, these advantages of web-based community were not recognized by all of our informants. Our findings support the claim that people need to see the added value of going virtual (Dubé, Bourhis & Jacob, 2005). Without the awareness of the extra benefit an online community can afford, their motivation for online engagement can be seriously undermined.

Besides members' needs, useful online content and the facilitator were identified as vital determinants for online engagement. The importance of content becomes especially critical in virtual communities where the physical cues are absent (Bagozzi & Dholakia, 2002). In an online learning community, the content might consist of useful learning resources and asynchronous communication among members. Since this community of EdD students was not connected with any particular course, no subject matter content was provided online. As a result, the generation of the online content, to a great extent, depended on members' contribution. In this respect, even though prior social relations were perceived to dissolve the concern of

online identity and credibility, they were not perceived as effective drivers for members' participation as Kavanaugh and associates (2005) observed. A possible explanation might be that the community cohesion of this group was not strong enough. Another factor, arguably more critical, was the underdeveloped social infrastructure of the online community. Our earlier discussion about the attributes of an online community revealed that a vibrant community called for a well-thought-out social infrastructure (Rheingold, 2000). In addition, a facilitator can play a critical role in initiating dialogue, maintaining motivation and engagement (Anderson, Rourke, Garrison, & Archer, 2001; Youngblood, Trede, & Corpo, 2001). All these sociability elements of community building were absent.

In addition to the social infrastructure, the usability of the computer system can also pose as a major impediment to online engagement. It has been widely documented that the usability issue, either associated with the interface of a program or the technical skills of users, could become a major hurdle for the adoption of technology (e.g. Vonderwell & Zachariah, 2005). Some of our respondents pointed out that ILN–the web-based platform used for online communication–was not easy to navigate. Yet, we chose to focus on the social aspect of community building in this study not because we consider usability less important, but because modification and revamp of the software system require extensive resources in terms of time, money and manpower. It is hoped that our discussion can inform community developers on how to make a difference with sociability construction under the "not-so-perfect" condition of usability.

6.2. *Challenges for the externally initiated community*

As mentioned earlier, members' needs for online communication are the fundamental driving force for their participation. When a community is not emergent from members' needs, three major issues surfaced in our study. The first is the ownership of the community. By nature, a community is a collective entity with its ownership shared among all members. When the community is externally initiated, this sense of ownership will be hard to instill. This was reflected, in our case, through members' self-image as passive participants. As Kollock and Smith (1996) noted, the phenomenon of free-riding without contributing to the virtual commons is relatively common in online communities. In our case, the informants viewed themselves mainly as consumers of information, not producers or contributors. They hoped that a facilitator or other active participants could provide useful information and initiate discussion that was interesting to all. Secondly, an online community initiated in a top-down manner heightens the demand for external guidance and nurturing. A dedicated facilitator and a group of core members are particularly critical at the launching stage of an online community (Godwin, 1994). These active participants can play an exemplary role and set the keynote for the online interaction. Thirdly, the goal and the focus of the online communication might be ambiguous or poorly matched with members' needs. In our case, students were not sure what was

expected from them as participants and what should be expected from the online interaction. A well-defined focus and community goal are essential.

All in all, an online community initiated in a top-down manner with little design consideration and efforts would be difficult to develop. In the upcoming section, we will propose some design guidelines for extending an offline community to online. In particular, we will address the interplay of the designed and emergent aspects of online community building.

6.3. *Recommendations for design*

To set the stage for the upcoming discussion, it is necessary to look into one question: can an online community be designed? Or can it only be self-emergent? On one hand, many believe that a community cannot be designed (Wenger, 1998) and the sense of community cannot be given, but will grow within the community (Conrad, 2005). On the other, an online community will not automatically take shape through the availability of the online space (Rheingold, 2000). In other words, online connectivity does not ensure the emergence of an online community (Foth, 2003). Design can play a pivotal role in creating conducive conditions for group formation and evolvement (Conrad, 2005). Thus, referring back to the question we raised earlier, it might be a matter of balance between the designed and self-emergent aspects of community building, instead of a choice between the two. To reach the balance between design intervention and the self-emergent nature of online community, the "minimalist design" (Wenger, 1998) can serve as an overarching framework. The essence of the "minimalist design" is to create an environment that is conducive for a community to emerge and evolve. It engenders a demand for a role shift from consumers to contributors or co-designers on the part of community members (Fischer, 1998). In this way, "learners are co-designers mutually determining the purposes, value and worth of the emergent design" (Schwen & Hara, 2004, p. 170).

When it comes to building an online community, all efforts should start with discovering members' needs and concerns (McMillan & Chavis, 1986; Preece, 2000). The overlapping of offline and online networks warrants special attention. The needs assessment should center on understanding the conditions of the existing practice (Guribye, 2005), identifying those needs that are not ideally met by the traditional media, and determining how the innovative features of web-based media can come into play (Hollan & Stornetta, 1992). The goal of the online community should center on those needs that cannot be satisfied in the existing social network.

To understand the *physical* context of a community, the structure of the community we presented earlier could serve as a road map. Some questions that need to be raised include:

- What constitutes the commonality of members in this community?
- What kind of media do members use to communicate? What are the major benefits and limitations of the media in use? What are the main purposes and rules

of interaction? Are there any group leaders? What is the teacher's role in this community?

- What is the nature of the social relationships and social structure within the community? Are there any sub-communities?

On the basis of the needs assessment, an online community development has three major areas: usability, sociability (Preece, 2000) and content. The usability dimension focuses on the human-computer interaction. Usually the teacher or the designer chooses or designs the web-based environment. However, that does not necessarily mean that a system will be imposed on the users. The choice of the technical tools or platform will take into account users' technical skills, preferences and their communication needs. Adequate technical support should be provided to ensure that technology will not pose an inhibiting factor.

The availability of the web-based system itself is by no means enough to drive the online participation. Our respondents commented that useful online content was the vital motive for their online participation. As Butler and colleagues (2002) noted, lurkers or silent participants valued the information benefit most. Although this EdD online community is not associated with any coursework, useful information such as survival skills or tips for postgraduate students can be valuable for our adult learners. In particular, useful resources not easily available offline should be provided. For example, senior postgraduate students can be invited to share their research experience and answer various questions. The key is to provide a combination of "services, content and relationships that is difficult to obtain elsewhere" (Williams & Cothrel, 2000, p. 90).

Besides the provided content, a vibrant online community depends on the active and continuous participation of its members (Butler, Sproull, Kiesler, & Kraut, 2002; Kollock & Smith, 1996). Continuous social construction is vital to encourage and sustain the online interaction. The sociability dimension deals with the social planning process that includes key elements such as a community goal, guidelines and roles of various participants. Grounded in the needs assessment, the general community goal and guidelines can be proposed to guide the online interaction. When a community is initiated externally, members need to have the general sense of the direction and the focus of their online communication. The student coordinator or the community designer can take the role of an online facilitator during the initial stage. Since the sociability can only be supported, not designed (Barab, MaKinster & Scheckler, 2004), members should be encouraged to further negotiate social infrastructure and pursue the activities that have personal meaning. In particular, a group of core members should be recruited to take a lead in online discussion. Efforts should be made to reward the active members and cultivate leadership. In this way, the continuous online interaction and emergent leadership can lead to a self-sustaining online community.

Additionally, efforts should be made to diminish the negative effects of the existing social networks. If the existing sense of community or social liaison among

members is not very strong, efforts should be made to foster these. A face-to-face gathering can be organized either in a formal or informal manner to cement the existing social connection. On the other hand, a tightly-knit community might make online communication redundant. Thus, the added value of having online communication is brought to the foreground and should be tackled explicitly. Members' needs for online communication can be cultivated through instilling the awareness of collective efficacy and advantages of online communication. The online activity should try to amplify the unique advantages of computer-mediated communication and serve as a supplement rather than a competitor or replacement of the co-present proximity. In other words, we should exploit and harness distinctive strengths of the new medium to create online community "beyond being there" (Hollan & Stornetta, 1992).

On the whole, building an online community requires a delicate balance between external design intervention and the emergent online community in a bottom-up fashion. Too much design intervention might engender a low sense of ownership and motivation to participate; whereas an entirely self-emergent community might be fragile and hard to sustain (Arnold & Smith, 2003; Liff, 2005). A vibrant online community demands the combination of designers' "minimalist design" and community members' active participation.

7. Conclusion

In this paper, we attempt to unveil critical factors determining an abortive online community intiative and the main challenges of an intentionally built community. Disengagement in online discussion can be attributed to the lack of motivation and underdeveloped social infrastructure. The perceived nature of postgraduate work, the low value of online community and the availability of social support in real-life community were identified as the main cause for the low motivation. When building an online community as an extension of an offline one, the motivation issue was brought to the forefront. The extra time and effort spent on asynchronous communication in virtual space has to be justified by its unique benefits. In addition to needs, useful content and a facilitator are critical factors that might drive or inhibit members' participation. One of the key lessons we learned is that the development of an online extension of an existing community initiated in top-down manner demands careful design efforts. This is especially the case when the social connection among the existing group is not strong enough to ensure spontaneous community evolvement.

Our findings have some important implications for online community development on the foundation of an offline community. First and foremost, any community-building attempt should start with understanding members' needs and making these the purpose of community engagement. The needs assessment should scrutinize the *status quo* of the co-located community: social fabric, users' characteristics, and so on. For the community with loose connections, efforts should be made to cement

unity within the community. For the other end of the spectrum — a group with tight links — community developers can focus on educating people about the added value and amplifying the unique advantages of online communication. On the basis of the needs assessment, we consider useful online content, usability and sociability as three main areas of online community development. Extending an offline community to online involves a delicate balance between deploying "minimalist design" and involving members as co-designers.

As an exploratory study on a small scale, the current work has some limitations. The findings are tentative and might be unable to be generalized to other contexts. Additionally, it centers on the sociability aspect of community building and omits the usability aspect. Still, we gleaned some valuable insights and sketched a road map for our future design work. The next stage of our work will involve a design-based study with an aim to build a learning community among EdD students. A major revamp is presently being planned to improve ILN in terms of its functionality and interface. Several emergent technologies such as weblogs, wikis, and tagging will be integrated into the next generation of ILN. We believe a more powerful and flexible system coupled with the informed design efforts can facilitate the development of a vibrant learning community.

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