

Building an online learning community

Yu-Chien Chen
University of Washington

Introduction

The Internet was not invented for education at beginning (Pett Grabinger, 1995), but it has influenced educational systems considerably, especially by providing another way for distance learning. This powerful communication function is superior to any other educational media. Students can conduct their own self-directed learning without interacting with others in an online learning environment. However, several scholars asserted that interaction would increase the learning quality in online learning. People who advocate Constructivism also claim that knowledge is built through interaction with environment, including materials and people (Jonassen, Peck & Wilson, 1999). Moreover, because of physical separation, it is more important to have social support due to the fact that we are human beings, and societal animals (Winn, 1997). In recent years, the MIT Media Lab (<http://persona.www.media.mit.edu/SMG>) has been devoted to develop online tools which will facilitate online communication to eliminate the “sociable spaces” (Karahalios & Donath, 2003). Therefore, the current trend of studying online learning has developed into the study of online learning interaction (Hung & Chen, 2001; Hung & Nichani, 200; Tu & McIsaac, 2002; Conrad, 2002), switching from technical to social aspect.

Along with the development of the Internet, some virtual communities have grown up, too. These virtual communities are groups where people share common interests (Rheingold, 2000) and discuss through computer-mediated communication (CMC). Some virtual communities survived and still operate well, while some of them disappeared. What kind of characteristics do these survival communities have? What contributes to their success? Online learning community is also one kind of virtual communities. The purpose of this paper is to discover the feature of virtual communities and propose some suggestions from experiences of successful virtual communities to building learning communities. The research questions are as follows:

1. What characteristics do successful virtual communities have?
2. How can we apply those experiences to enhancing online learning communities?

Literature Review

To begin with the literature review, the features of virtual communities will be discussed. Then examples of virtual communities will be examined. Last, some literature about how to build an online learning community will be analyzed.

Virtual community

In the past, the definition of “community” often contains three elements: the common interest of its members, linkage or interaction, and common location (Hillary, 1955). However, a community constructed on the Net is not restricted by physical space anymore. It is a community which is more liberated from transportation and telecommunication (Wellman, 1979). In a virtual community, people can even be liberated from their daily lives. But, can we say that once we log into the Net, we enter a virtual community? A virtual community is a “social aggregation” in which amount of people participate in discussion for sustained periods, thus constituting interpersonal networks (Rheingold, 2000). Although a virtual community is not limited by physical boundary anymore, it still exists “the sense of place” (Coate, 1997). Only then, will the appearance of community be fostered.

In a virtual community, the communication pattern is based on text. People there can communicate synchronously and asynchronously. Synchrony means one can communicate with one or many people in real time, such as by using MSN messenger or ICQ. On the other hand, in an asynchronous situation, like E-mail, there might be no simultaneous response. Even so, people can still share information and it can be called “the compressibility of time and space” (Lin, 1996) in an asynchronous environment. In addition, people can not express moods or emotions by only using text. Some emotional expression symbols or graphs were created to help people express themselves. Another feature of virtual community is that in an online environment, people are anonymous and there is no face-to-face contact with others. In this situation, people can have more privacy and be encouraged to express themselves more freely. However, it does not mean that they do not have any chance to meet with each other (Chen & Lai, 1996; Rheingold, 2000) and this kind of face-to-face meeting plays a great role in online interaction. One

member of the online group TaNet Elephant-fan Association (TEA), said, “before meeting each other, what important is the Internet; after meeting each other, the Internet just becomes a tool for communication. The meeting enhanced the online interpersonal relationship.” Furthermore, in the virtual community, people can find and provide social support and build their own social networks (Wellman, Salaff, Dimitrova, Garton, Gulia & Haythornthwaite, 1996). Generally speaking, exchanging information is the basic function in virtual communities. Chatting is another. They also build friendships and a sense of belongingness. Sharing information and self-disclosure will help them build such interpersonal relationships.

Examples of virtual communities

In order to understand how virtual communities work, three virtual communities will be examined. The first one is TaNet Elephant-fan Association (TEA), a discussion group on NTUEE Maxwell Bulletin Board System (BBS) in Taiwan. It is an online group built in 1995 by people who supported one of Taiwan’s professional baseball teams - Elephant Team. The second one is The Whole Earth ‘Lectronic Link (WELL), an online gathering place which started in 1985. As The WELL website announces, “the heart of The WELL” is conferences (<http://www.well.com.conf/conference.html>). The third one is Big Sky Telegraph (BST), which was organized as a telegraph conferencing group for teachers’ online learning in rural Montana in 1988. The basic function of these three communities is to provide social support and exchange information. According to their function, they are also called virtual social communities. As successful virtual communities, there are some similarities and differences between these three sites (see Table 1).

First, an obvious difference is that both The WELL and the BST were built in the 1980s, while the TEA was constructed in 1990s. The reason for this is perhaps that the development of the Internet has been faster in the U.S. than in Taiwan. The theme of each group is also different. The topic of the TEA is about baseball, while The WELL has several discussion topics, such as parenting conference (Rheingold, 2000). Meanwhile, for BST, was a group composed of teachers, discussing teaching and learning topics. As to the interface the participants employed, BBS is the major interface used by the TEA members; WWW is the base for The WELL, while the telegraph technology is for the BST. BBS is the simplest, cheapest, text-based infrastructure and it is a grassroots element of the Net subcultures (Rheingold, 2000). As a versatile interface, WWW is not only text-based but also pictures and multimedia can be displayed. Telegraph is also a text-based CMC tool, similar to BBS. Fourth, as to the operation tools, both the TEA and the BST rely on the keyboard to input the commands, such as posting articles or turning to other articles. In contrast, The WELL uses a mouse to “point and click” the commands. Compared to the other two groups, in the TEA, people can check other members’ online status to see who is online, and they can send instant messages (throw water balls) to each other. Checking online status can create an atmosphere as if “we were together”. By sending instant messages, members online can talk to who they want to talk to personally and receive instant responses.

The other difference is the membership fee. It was free for both the TEA and the BST members, but in The WELL, it requires a membership fee. As for knowing who you are talking to, The WELL requires its members use their real names to communicate because they think using real names can make their conversations and relationships real, so does BST. But for the TEA members, they are anonymous with their NetID acting as their personal identity.

Although they have many differences, there are still some similarities among these sites. Both the TEA and The WELL provide member list and require members to disclose their basic personal information. In addition, the TEA and The WELL provide nickname function, which can show members’ mood, thought or whatever they want to share with other members. All three sites have hosts to manage groups. In the TEA, one of the responsibilities of the host is to sort daily articles and collect important articles into digests so the members or visitors can review what other members discussed previously, and read some important game records. Last, all of them provide opportunity for members to see each other in real life. Despite one of the characteristics of the Net is anonymity, along with their community development, members of the TEA and The WELL developed face-to-face meetings. It is not mandatory. On the contrary, it is voluntary. Members of the TEA and The WELL indicated that meeting each other in person is quite important to build their relationships. For the BFT, it is not mentioned that their annual meeting is mandatory or voluntary, but the author Uncapher (2000) also pointed out that once the members of the BFT met each other, they could have deeper and more meaningful discussions.

The themes of these three groups are different, but they are based on common interests and set hosts to organize group activities. Personal identity is shown on the screen (ex. nickname) and other members’ information can be read, too. Some self-disclosure is necessary to let others know who you are and to exchange information. As a matter of fact, each group has developed their own patterns to run their group dynamics.

Table 1 Comparison between TEA, The WELL and BST

	TEA	The WELL	BST
built year	1995	1985	1988
theme	baseball	parenting	Teacher
interface	BBS	WWW	Telegraph
operation tool	keyboard	keyboard, mouse	Keyboard
online status check	yes	unknown	Unknown
instant message	yes	unknown	Unknown
cost of membership	free	member fee	Free
personal information	required and open	required and open	Unknown
member lists	yes	yes	Unknown
anonymity	Net ID	real name	real name
nickname	yes	yes	Unknown
host	yes	yes	Yes
providing digests	yes	unknown	Unknown
face to face meeting	yes	yes	Yes

In face-to-face meetings, people can see other members' facial expression or body language. Also, people can express their emotions online by using symbols or graphs. For example, in MSN messenger system, emotional expressions are provided (see table 2). With these symbols or graphs, people can see others' expressions more concretely. However, emotional expressions differ from interfaces. On the BBS interface, it is convenient to conduct commands by keyboards, but people can just use simple symbols, instead of graphs. It takes more time to create graphs on the BBS interface. On the contrary, it is easier to do so by either symbols or graphs on the WWW interface. WWW also allows voice or real time camera transmission. Therefore, using WWW is more advantageous to communicate these expressions.

Table 2 Graphs and Symbols of emotional expressions

Graph	Symbol	Graph	Symbol
 Smile	:-) or :)	 Open-mouthed	:-D or :d
 Surprised	:-O or :o	 Tongue out	:-P or :p

Online learning community

Similar to the three examples described above, online learning community, is one kind of virtual community. However, it owns specific function of learning and education. It is a virtual entity which combines learning and community together (Downes, 1999). There, one can learn not only online courses but also how to interact with other participants. In order to build an online learning community, Clark (1998) proposes three principles. First, he emphasizes that a learning community is not built, but grown itself. Clark indicates that a community will be strong if it is molded by its members to create its own environment. Therefore, members should clearly communicate the purpose of the community, and make guidelines and regulations. Once they can realize that they are as one part of the community and support each other, this community will be sustained. Second, strong leaders are needed. Leaders are not only responsible for managing the community but also have to adopt the role of facilitators. The third principle is that personal narrative is encouraged. Clark asserts that personal narrative is "the sun that makes communities grow." Exchanging experiences or opinions can make members feel closer and provide identity. In addition, Downes (1999) also points out that for learning communities, creating a sense of commitment is important. Once members can build their trust into this community, they will share their learning and personal experiences more. As to the attributes of successful learning communities, Downes also makes several suggestions from course management, function of the facilitator, and the tasks of students. For course management, he proposes that contents and communication should be integrated together and it is allowed to generate contents by some members. Also, multiple resource access should be provided. In terms of the function of the facilitator, the facilitator should share his enthusiasm with all members and become involved in discussions. Moreover, this facilitator should link members and content together, as a moderator between them. For students or members, they should build their trust in this community and establish relationships with others, thus increasing the quantity and quality of discussions.

On the website “principles of online design” (<http://www.fgcu.edu/online/design>), some guidelines are stated from the perspective of instructional design. For promoting an online learning community, it declares that the instructor should have social contacts with students in the instruction plan and creates an atmosphere for sharing as well as using some tools, such as e-mail or a discussion board to increase interaction. It is also asserted that in online learning, students are required to participate in discussions and interact with others. On the other hand, Differding (n.d.) in his online article “preparing students to join the online learning community,” focuses on the conversation rather than course design. In Differding’s opinion, informal communication is allowed into conversation to build one’s identity. He suggests that jumping into the course content is not immediately necessary. Instead, some space for informal conversation is needed to “warm up” the atmosphere. In addition, students are required to introduce themselves and share their interests to others. Although the purpose of the learning community is “learning”, Differding suggests that social interaction is strongly encouraged and the instructor should design group projects to provide students with some opportunities to engage in one task in order to increase their peer interaction and common experiences.

In other aspects, some scholars assert that face-to-face meetings are important to online learning communities (Conrad, 2002; Palloff & Pratt, 2001; Edstrom, 2002). They stress that meetings can motivate students and strengthen their social networks. As to the impact of communication format on online social presence, Tu (2002) indicates that e-mail is the highest level of social presence, followed by real-time discussion and the third one is bulletin board in text-based CMC.

In sum, to facilitate social interaction in an online learning community, incentives are required to attract students to participate, which include the designed activities, face-to-face meetings, and the provision of appropriate online communication tools. Once all members are encouraged and participate in the community activities enthusiastically, it is possible to build an online learning community.

From virtual social community to learning community

As Delahoussaye remarks (2001, derived from Differding, n.d.), because of the separated space, online education is “an isolating and lonely experience.” In traditional classrooms, body languages and the interaction atmosphere are important elements in facilitating learning. Therefore, how to generate an active, interactive online environment is one of many challenges for online learning. As a participant of the TEA, the author tries to propose the way to build an online learning community from the view of social interaction. The following analysis is based on her online experiences, and other research results.

According to the group development and roles of both teachers and students, four factors are considered to build an online learning community. They are: beginning, activities, communication form and environment.

Beginning

Creation of the community is the most important stage. If newcomers can feel comfortable, they have a willingness to share their ideas or experiences; thus, his learning community is formed in the right way. In this initial stage, the following events will motivate group dynamics. The teacher should act as a facilitator or talk with students as a peer. Meanwhile, students will be required to share their personal information or experiences.

(1) Posting personal information

For the teacher, before beginning the online course, he or she should decide what personal information will be posted, such as gender, and e-mail address, and then asks everyone to post their required information. It is mandatory rather than voluntary. The teacher also has to post his/her information, thus encouraging students to do so.

(2) Greetings and informal talk

The teacher will greet students online first and talk about such as weather, their interests or other informal topics, non-course issues first. Informal talk is one tool to enable people to have a sense of “we”, which makes people feel warm and therefore it increases self-disclosure during the conversation. Even one word is allowed in these online chats. These informal talks are also permitted when community members start to discuss the course.

Activities

There are several activities that enable interaction and familiarity with others.

(1) Group identity

In the TEA, there are some ways to form group identity. One is playing games on providing nicknames. In one period of time, the TEA members edited their nicknames into the same format, such as constellation + name + personality description. When they went to the main member list of the NTUEE BBS, they found easily who was a member of the TEA easily and knew other members' information by reading the nicknames. Another identity creation method in the TEA is to create and produce uniforms which allows people to recognize other TEA members more easily when walking on the street. For learning communities, the host can design such similar games or rituals to bring people together.

(2) Making rules

Another element in creating a sense of group is making rules. The teacher could propose some rules and post them online. Then discuss these rules with students. Let all members in this community decide on which rules to accept. Making rules can provide members with specific references when there is any question about group dynamics. With these adopted rules in place, people will know how to respect others and behave properly online.

(3) Synchronous chatting

In the TEA, members like to chat at the same time on the discussion board. It is a relay board where people post or reply the previous articles. It is a ritual to create the atmosphere of "we were here and together" and members have an opportunity to be involved in this community. In other words, it is a sense of participation. In the learning community, the host can select a specific time for group discussions, including both formal and informal talks.

(4) Picture showing

It seems normal that human beings have the tendency to associate the face of someone with the person they have talked to. In the TEA, the BBS interface does not allow people to show their pictures. However, on the WWW, it is easy to show pictures. Picture posting is an incentive, but it is not recommended to show pictures at the beginning. Instead, it is better to do it after some discussions. Teachers can show their pictures first. Then at the middle or early middle of the class, ask students to show their pictures as well so that other members can know who they are talking with.

(5) Video conferencing

In addition to pictures, video conferencing is another way to make virtual life "real". However, this technique needs more supporting infrastructures.

(6) Face-to-face meetings

Face-to-face meetings are the most distinct feature for these three virtual social communities. Members in these three communities enthusiastically approved of this function. This event really helps in building the sense of community. If the members of the online courses are located regionally, the teacher or the host should arrange the opportunity to meet together.

(7) Group projects

Conducting group projects is a more academic way to gather people together. The teacher should propose some collaborative projects in order to allow students to work together.

Communication form

In a learning community, in addition to the discussion board, e-mail and listservs helps people to transmit messages. If it is possible, the teacher or the host can provide an instant message function because people like to receive immediate responses rather than delayed ones. Instant communication makes people more involved in the conversation. If an instant message function is not affordable by the teacher, MSN messenger or Yahoo messenger systems are alternative choices.

Environment

In addition to activity design and providing communication tools, a well-designed environment also contributes to participants' interaction.

(1) Host

The host is the soul of the community, like the president to the country. The Host is responsible for managing the group dynamics, arranging the posting articles and digests. Moreover, he or she would design some activities to inspire the whole community. Usually, the teacher is supposed to be the host. However, students can be the host too. They can regularly rotate the host position. Being the host can make students have a sense of responsibility to the community. Also, by serving as a host, they have more opportunities to participate in community affairs.

(2) Online status check

Being online is an isolated behavior because only you interact with the computer. However, if you know who are also online with you, you will not feel alone anymore. Thus, providing online status checking function facilitates the sense of “we”. Furthermore, in the online status check function, people can choose who they like to have an instant conversation with.

(3) Providing the nickname function

As mentioned before, nicknames are one of the formats to enhance group dynamics. Moreover, by using nicknames, people can express their mood or thinking without posting articles. Another function of the nicknames is that when people read articles, they can know some personal characteristics of the author via nickname description.

(4) Providing emotional graphs or symbols

Because people can not see each other online, emotional symbols and graphs help people expressing their feelings. Sometimes, after long communication periods, people can even create their specific emotional expressions which only belong to their community. In a learning community, if emotional graphs or symbols are provided, it is believed that participants’ interaction can be facilitated.

Conclusion

Although an online learning community is a kind of virtual social community, it still has some distinct features. First, it may be a problem to build an interactive environment due to the limitation of an academic period, say one quarter or semester. The social interaction here is more condensed than in the TEA or The WELL. Therefore, it is questioned that whether the whole group developing process can be built during an academic period. Second, in a learning community, people have to accomplish assignments and be graded. These may be the barriers of their discussion and idea sharing. Third, how to lead social dialogues into academic dialogues may be a challenge for teachers. Even so, it still has great possibility to build an online learning community. The major reason is that users today are more familiar with online environments than ten years ago. Before they (both teachers and students) go to online courses, most of them have had online experiences for several years. With their digital literacy, they will get into situation more easily, thus providing more possibility to build an online learning community.

References

- Chen, Y.C., & Lai, Y.S. (1996) “The development and interaction in Net group: A Case study on TANet Elephant-fan Association (TEA),” paper presented at the 1st Conference of *Information Technology and Social Transformation*, Taipei, December 20-21, 1996.
- Clark, C. J. (1998). Let your online learning community grow: 3 design principles for growing successful Email Listservs and online forums in educational settings. San Diego State University. Retrieved Dec. 9, 2003 from www.noendpress.com/caleb/olc/3Principles_Online_Comm.pdf
- Coate, J. (1996). Cyberspace innkeeping: Build online community. In P. E. Agre and D. Schuler (Eds.) *Reinventing technology, rediscovering community*. London: Ablex Publishing Corporation.
- Comunale, C.L., Sexton, T.R. & Pedagano Voss, D.J. (2001). The effectiveness of course web sites in higher education: An exploratory study. *Journal of Educational Technology Systems*, 30(2), 171-190.
- Conrad, D. (2002). Deep in the hearts of learners: Insights into the nature of online community. *Journal of Distance Education*, 17(1), 1-19.
- Differding, G.A. (n.d.) Preparing students to join the online learning community. Retrieved Dec. 6, 2003 from <http://coe.sdsu.edu/eet/Articles/stuprep/start.htm>
- Downes, S. (1999). Creating an online learning community. University of Alberta. Retrieved Dec. 6, 2003 from http://www.downes.ca/files/Learning_Community.ppt

- Edstrom, K. (2002). Design for motivation. In R. Hazemi and S. Hailes (Eds) *The digital university- Building a learning community*. UK: Springer.
- Hillary, G. A. Jr. (1955) "Definitions of community: Area of agreement", *Rural Sociology* 20, 111-123.
- Huang, D., & Nichani, M. (2001). Constructivism and e-learning: Balancing between the individual and social levels of cognition. *Educational Technology/* March-April, 40-44.
- Hung, D., & Chen, D-T. (2001). Distinguishing between online and face-to-face communities: How technology makes the difference. *Educational Technology/* November-December, 28-32.
- Jonassen, D.H., Peck, K.L., & Wilson, B.G. (1999). *Learning with technology- A constructivist perspective*. NJ: Prentice Hall, Inc.
- Karahalios, K. & Donath, J. (2003). Scale, form and time: creating connected sociable spaces. MIT Media Lab. Retrieved Dec. 1, 2003 from <http://persona.www.media.mit.edu/SMG>
- Lin, L.F. (1996). A study of interpersonal relationships online. Unpublished Master's thesis of Graduate Institute of Journalism, National Taiwan University, Taipei, Taiwan.
- Palloff, R.M., & Pratt, K. (2001). *Lessons from the cyberspace classroom- The realities of online teaching*. New York: Jossey-Bass.
- Pett, D., & Grabinger, S. (1995). Instructional media production. In G.J. Anglin (ed.) *Instructional technology: Past, present, and future* (2nd ed). Co: Libraries Unlimited, Inc.
- Rheingold, H. (2000). *The virtual community- Homesteading on the electronic frontier*. London: The MIT Press,.
- Tu, C.H. & McIsaac, M. (2002). The relationship of social presence and interaction in online courses. *The American Journal of Distance Education*, 16 (3), 131-150.
- Tu, C.H. (2002). The impacts of text-based CMC on online social presence. *The Journal of interactive online learning*, 1(2), Retrieved Nov. 20, 2003 from <http://www.ncolr.org/jiol/ARCHIVES/2002/2/06/index.html>
- Uncapher, W. (2000). Electronic homesteading on the rural frontier- Big sky Telegraph and its community. In M.A. Smith and P. Kollok (Eds) *Communities in cyberspace*. London: Routledge.
- Wellman, B. & Gulia, M. (2000). Virtual communities as communities- Net surfers don't ride alone. In M.A. Smith and P. Kollok (Eds) *Communities in cyberspace*. London: Routledge.
- Wellman, B., Salaff, J., Dimitrova, D, Garton, L, Gulia, M., & Hoythornthavaite, C. (1996). "Computer networks as social networks: Collaborative work, telework and virtual community", *Annual Review of Sociology*, 22, 213-238.
- Wellman, B. (1979). "The Community question: The intimate networks of East Yorkers", *AJS* ,84(5): 1201-1231.
- Winn, W.D. (1997). *Learning in hyperspace*. Invited Keynote Address at the workshop, The Potential of the Web. University of Maryland University College, College Park, MD.