

# ***LAYING THE GROUNDWORK FOR THE DEVELOPMENT OF LEARNING COMMUNITIES WITHIN ONLINE COURSES***

**Jennifer V. Lock**  
University of Calgary

## ***INTRODUCTION***

Virtual learning environments are rapidly emerging across various sectors of society. In education, opportunities to access a wide range of courses and professional development services are now available on the Internet. Within these learning environments, a different kind of community is emerging—an online learning community.

For educational leaders, developers, and practitioners, a serious question emerges: what must be done in the design of the online courses to promote the development of learning communities?

On the theme of *laying the groundwork* for the development of online learning communities, we must first understand what is an online learning community and what are the characteristics and practices of such a community. How can active networks of people using technology develop and sustain a learning community? How do conceptual and theoretical frameworks guide the utilization of technology

in creating and sustaining a learning community within an online learning environment? By developing a sound conceptual understanding of this phenomenon, educators designing such learning environments will be better prepared to explore various learning community features and capabilities. The challenge is to integrate pedagogical and technological concerns through the design process to promote and foster the emergence of vibrant and stimulating learning communities.

## ***CONCEPTUAL AND THEORETICAL FRAMEWORK***

### ***Conceptual Framework***

A community is not an entity or a product. Rather, it is a process, which is fluid in nature. A community evolves through nurturing conditions. It “requires a highly interactive, loosely structured organization with tightly knit relations based on personal persuasion and interdependence” (Kowch & Schwier, 1997, p.

---

• **Jennifer V. Lock**, Education Tower 1244, 2500 University Dr. NW, University of Calgary, Calgary, Alberta, Canada, T2N 1N4. E-mail: [jvlock@ucalgary.ca](mailto:jvlock@ucalgary.ca)

---

The Quarterly Review of Distance Education, Volume 3(4), 2002, pp. 395–408  
Copyright © 2002 Information Age Publishing, Inc.

ISSN 1528-3518

All rights of reproduction in any form reserved.

2). It is a supportive and empowering environment that accommodates and is responsive to the members' actions, interactions, and reactions. The relationships, the intimacy, the negotiations, and the engagement of participants all influence the evolution of a community. The growth and longevity of a community are directly related to the community meeting the needs of members. Conditions and characteristics associated with a viable community need to be fostered and nurtured, if a learning community is to exist and evolve. It is through mediated communication within this online learning environment that a community comes to life.

### *Theoretical Orientation*

Constructivist theory is the predominant philosophy in education and especially in online learning (Palloff & Pratt, 1999). Jonassen, Peck, and Wilson (1998) state that learning communities are "models of thinking about instruction, based on the dual platform of technology and constructivist theory" (p.1). There is, however, a distinction between cognitive and social constructivist theory. The focus of cognitive constructivism is on "individual constructions of knowledge discovered in interaction with the environment" (Bonk & Cunningham, 1998, p. 32). From a Vygotskian social constructivist perspective, the sociocultural context influences the thinking and creation of meaning (Bonk & Cunningham, 1998). "Meaning making is a process of negotiation among the participants through dialogues or conversations" (Jonassen, Peck, & Wilson, 1999, p. 5). The opportunity to interact with other learners in sharing, constructing, and negotiating meaning leads to knowledge construction.

The theoretical orientation is critical when examining how a sense of community can be promoted in an online course. Within a constructivist philosophy, learning is based on constructing meaning from experience, and interpreting the world largely through the social environment. Learning involves both

individual and social processes (Jonassen, 2000). "Active, constructive, intentional, authentic, and cooperative learning" (Jonassen, et al., 1999, p.7) are five attributes of meaningful learning. In this learning process, learners, groups of learners, working together and supporting each other will use a variety of tools and information resources to achieve the learning goals (Wilson, 1996). Technology can be used as a tool in exploring, representing and articulating knowledge. In addition, technology provides the medium for conversing and collaborating within this learning environment (Jonassen, et al., 1999). A constructivist learning environment promoting community development fosters a social context in which all members, both students and teachers, are active participants in the learning process. Online learning communities are networks of social relationships, where engagement and interaction are critical factors within a constructivist learning environment.

### *Characteristics of Online Learning Communities*

Cothrel and Williams (1999) defined community as "a group of people who are willing and able to help each other. In this sense, community is more than a way a group of people defines itself: it is a capability that can be developed and improved over time" (p. 60). Jonassen, et al. (1999) defined it as "a social organization of people who share knowledge, values and goals" (p. 118). The social grouping of people in a community involves communication, relationships, activities, identities, memberships, and a shared history.

The concept of learning community has been defined by various scholars (e.g., Astin, 1985; Kowch & Schwier, 1997). Jonassen, et al. (1998), for example, claimed that learning communities are unified by a "common cause of mutual support and learning, and by shared values and experiences...Learning communities provide a means for learning within an atmosphere of trust, support, common goals, and respect for diversity" (p. 4). Those who

form the membership of the community are drawn together for a common purpose, and, to some extent, a purpose that provides a boundary or exclusivity that assists in defining the community.

Online communities have been a part of the Internet since its beginning through the use of newsgroups, listservs, and virtual worlds (e.g., the WELL). Kearsley (2000) stated that the creation of online learning communities "is a new phenomenon in education" (p. 58). Palloff and Pratt (1999) described the learning community as "the vehicle through which learning occurs online. Members depend on each other to achieve the learning outcomes for the course....Without the support and participation of a learning community, there is no online course" (p. 29).

To develop a deeper understanding of the complexity and multifaceted nature of this concept, we must examine some of the key elements. Schwier (2001) has articulated ten elements or characteristics of a virtual learning community. The following includes seven elements identified by Selznick (1996) and three additional elements that Schwier has identified: *historicity*, *identity*, *mutuality*, *plurality*, *autonomy*, *participation*, *integration*, *an orientation to the future*, *technology*, and *learning* (Schwier, 2001; Misanchuck & Anderson, 2000). Schwier asserts that all these characteristics may not appear in every community and that the degree of presence of each characteristic varies within and throughout the evolution of a community. Interactivity among these elements influences the evolution of a community.

### ***Pedagogical Issues***

Riel (1996) argued that building a community is not the same as building a physical space. Tools such as listservs, Web pages and conferencing forums do not define community. She claimed that it is the partnerships and interactions between and among the people who gather together that define community. Instructional designers and online educators

who are developing courses with a view to promoting community need to have an understanding of the pedagogical issues and the factors that foster or hinder community development within an online learning environment.

Communication, collaboration, interaction, and participation are four cornerstones in a learning community framework. Nipper (1989) described the third generation of distance learning as having a focus on both communication and learning as a social process. In this new generation, communication among learners is no longer marginal. This coincides with the development of the fifth generation of media, which includes digital networks that provide various types of interactivity between and among people and provide access to large quantities of multimedia information stored on digital networks (Bourdeau & Bates, 1997). This interactive communication technology has now advanced to a point where diverse interactions (one-to-one and one-to-many), synchronous (e.g., chat, desktop videoconferencing, and whiteboards) and asynchronous communication (e.g., e-mail, listservs, and bulletin boards), and multiple modes of communication are available to serve learners' needs and to facilitate the learning process and community.

Communication is pivotal in an online community. Without effective communication, it is not possible to generate interaction, engagement, or alignment. In other words, there can be no community (Schwier, 2001). Communication has to be open to all members. Frequent communication with members using various modes of communication needs to be part of the instructional plan (Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Bauman, 1997). Individuals have the option and the ability to use such means as synchronous and asynchronous communication, private and public forums and one-to-one and multi-party channels. Bauman (1997) recommended using a high level of public interaction to make all participants aware of the topic, to provide an electronic space for non-course-related interactions, and for instructors to ask questions

and to promote interaction among students. Hill (2001) notes that it is easy for people to lose contact with their online colleagues. She recommends that multiple means of communication be available to facilitate contact with others and to assist in maintaining a link to the larger community. Herrmann (1998) has found that language patterns become guideposts in community development. Civil language (e.g., being positive and friendly) and conflict resolution mechanisms are also important factors in creating and sustaining a community over time.

In their research using written contracts to foster community building within Web courses, Murphy, Mahoney, and Harvell (2000) identified four key communication factors that support an online community environment. First, there is a need for frequent and open communication between students and instructor, among students, and between groups. Second, the instructor's communication provides both information and feedback within the community. Third, the establishment of bonds and cohesion is based on group communication. Fourth, the use of well-written contracts assists in the creation of group cohesion. Contracts do provide a structure and framework within which students can work as a group. However, since communities function on the basis of commitment and not necessarily on contracts, it cannot be assumed that using contracts will lead to commitment, expanded communication, and community growth.

Collaboration is another factor that needs to be fostered in online courses to promote learning communities. Dennen (2000) defined collaborative learning as "a process that involves interaction amongst individuals in a learning situation" (p. 1). She described it as being grounded in a theory of learning that asserts that knowledge is constructed through social interaction. McLellan (1997) summarized Schrage's (1990) position on collaboration by saying that the "goal in creating collaborative experiences is to create a *shared experience* rather than *an experience that is shared*" (p.

185). The experience needs to be participatory, not passive. Collaborative learning engages all participants (both students and instructors) in working together in the learning process.

Two other factors that contribute to community development within online courses are participation and interaction. Kearsley (2000) defined participation as the "involvement and presences" and interactions as "some sort of dialogue is occurring between the student and the instructor, other students or the content" (p. 80). Participation has both social and academic components that are integral parts of a community. Community members need to have opportunities to shape the style and degree of their participation. Guidelines and norms of participation need to be present, which can be established by the online educator and shaped by community members. In addition, the participant may perform multiple roles within an online course. For example, participants may interact at times as discussion moderators and at other times as discussion participants. To some degree, engagement in a community is dependent on the invitation to participate. Haythornthwaite, et al. (2000) found that the interaction and the participation of community members need to be monitored and supported. Strategies need to be in place to launch dialogue and exchanges and to familiarize people with the environment that fosters a learning community.

Instructional context, more than instructional delivery, is a major pedagogical factor when designing online courses that promote community. Attention needs to be given to a relevant context that supports authentic learning. The use of real world problems, problem-based and case-based learning are instructional approaches that can be used. The use of collaborative learning environments helps to foster situated learning and to promote multiple perspectives among students and educators (Tam, 2000). These approaches help to cultivate an environment in which community members work together in a student-centered learning environment, sharing expertise, contributing to knowledge, and owning their own

learning outcomes. In addition, they provide opportunities for leadership and for learners to take on various roles in support of their learning process (Palloff & Pratt, 1998). For this to occur online, learners need to have access to appropriate technologies that can be used in constructing and sharing knowledge. Kozma (2000) believed that creating learning environments will result in learners taking charge of designing the context of their learning using various tools and resources.

Jonassen, et al. (1998) stressed that in learning communities the emphasis is on “the whole group, which should then collaborate and support each other towards their learning goals ... This model depends on both students and teacher taking responsibility for their learning and motivation” (p. 2). Garrison (2000) acknowledged the need for distance education instructors to understand that they are members of a community of learners, and not just external agents who are only involved in creating pre-packed learning materials. In the online environment, educators need to have an understanding of the learning community and need to play a dynamic role within the community to strengthen it as a community of learners.

An educator may take the lead role in an online course that promotes community development, but that lead needs to be shared among community members. For example, Enomoto and Tabata (2000) found that, as the course progressed, it transformed into a “student directed, peer learning experience” (p. 5). At the start of the course, students had limited exchanges with peers. However, as the assignments progressed, so did the number of interchanges among students. Their messages developed a more personal tone. Relationships developed among themselves, and they began to exchange messages on non-academic subjects, shared frustrations and problems, and began to provide feedback and to introduce new materials to each other. This interaction and degree of engagement fostered greater social bonding and a more student-centered environment. Through their actions, members formed a community of “equals by supporting,

complimenting, reinforcing and responding to each other” (Enomoto & Tabata, 2000, p. 5). Although these findings are interesting, there is no discussion in this study of the design or instructional strategies used to promote engagement and social interaction. No information has been shared as to participants’ familiarity with the technology. Nevertheless, their observations do indicate the capacity of an online course to evolve as a community.

Students need to be aware of the pedagogical framework of a learning community. Shapiro and Levine (1999) recommended that students need to be open and to be willing to reframe their roles as learners. A learning community does require students to be active learners, to use teamwork, to be interdependent (Riel & Fulton, 1998), and to understand that the community is the basis of authority. Wiesenberg and Hutton (1996) found that instructors need to encourage students in “becoming self-directed by creating a community of learners who depend on themselves and each other (as opposed to the teacher) for ideas, information and feedback” (p. 14). O’Sullivan and Miron (2000), in their research into building a learning community online in a computer science unit, recognized that students need to “make a paradigm shift in their learning strategies” (p. 7). Having students shift into a learner-centered, active learning environment that fosters a network of social relationships and promotes leadership and collaborative learning, does require an induction into this new paradigm. Designers, developers, and online educators need to have support structures in place to foster this paradigm shift.

The development of pedagogical relationships and the collaborative nature of a learning community help to foster the learning process. Serious consideration of pedagogical issues from both instructional and student perspectives need to occur when planning an online course that is striving to promote a learning community. In addition, the pedagogical framework needs to guide access to and the use of technology in promoting a learning community.

### *Technological Issues*

Communities need a gathering place or an online space. In the online environment, this place may be a listserv, chat room, bulletin board, Web site, or a combination. The gathering place has to be supportive of the purpose of the community and must meet the needs of users. Cothrel and Williams (1999) found that the lack of activity in a designated online place (e.g., conferencing forum) may not be reflective of a failed community. Rather, what is considered the community discussion space may need to be extended beyond what has been designated as the "community place." Discussions going on outside the designated place may be contributing greater value to the community than those within the designated area. Therefore, consideration needs to be given to the various electronic places where people gather.

Jonassen, et al. (1999) argued that technology plays a critical role in a constructivist learning environment, because it provides the means for "storing, organizing, and reformulating the ideas that are contributed by each community member" (p. 118). Technology assists in representing the synthesis of student and collective thinking within this community. Using these telecommunication tools and applications effectively in developing and sustaining learning communities within online courses is a challenge. However, scholarly literature in the areas of computer-mediated communication, online environments, and learning networks should be used to guide the selection and utilization of various technological tools and devices that may be appropriate within online courses.

One of the challenges in the creation of learning communities lies in creating a sound technological environment. Hill (2001) has found that technology needs to be flexible and people need to experience minimal technical "glitches," if community is to be fostered. In Kearsley's (2000), *Online Education*, a number of key questions arose in terms of hardware and software environments that impact the cre-

ation of online learning communities. He highlighted a few of the problems that may hinder the development of community. For example, participants who access the online environment using a lower bandwidth may not be able to successfully use compressed desktop video-conferencing or may become frustrated with the length of download times. The storing and archiving of threaded discussion messages may be an issue. Barriers such as connectivity may impact who can or cannot connect to the learning environment, as well as the quality and quantity of their interactions. Other issues, such as server connections and limitations or constraints within software, may hinder the depth and breadth of community development.

The technical design of the online environment has an impact on community development. Brown (1997) has studied the features of an effective online course focusing on the pedagogical rationale of the design. She has identified *hypertext*, *active and collaborative learning*, and *learner-centeredness* as three central design features that need to be considered in creating online courses that promote community. First, hypermedia and hypertext provide greater control for the user and provide diverse sources and pathways to explore. Second, designing a collaborative and active learning environment requires compatible technology to sustain purposeful learning. Third, learner-centeredness has an association with the interface design. The interface has to be responsive to the learner's needs. It needs to be intuitive to the user, must complement the learning goals and put learning to the forefront. From a technical perspective, the interaction design of the online community needs to support intuitive and user-friendly orientation, navigation, usability, and functionality (Kristof & Satran, 1995).

Preece (2000) believed an environment that promotes community needs to address *sociality* (social interaction) and *usability* (focus on human computer interaction). Preece stated that good usability of software provides intuitive and easy completion of tasks. The interface also needs to be consistent. Items such as

dialogue, navigation, feedback, and archiving features must all be factored into the design of technological environments suited to the target audience. The following dimensions of human diversity have an impact on online community design: physical, cognitive and perceptual, personality, cultural, experiences, gender, age, and capability (Shneiderman, 1998). Therefore, linking the needs of the target audience with user characteristics and preferences is critical when creating the interface design to support sociability.

Kowch and Schwier (1997) claimed that the technology needs to permit each of the following conditions to exist in a virtual learning community: *negotiation, intimacy, commitment, and engagement*. Selecting or designing digital media to meet such conditions is a serious challenge and has a bearing on developing online courses that foster community development.

The “use of the technology does not spontaneously cause communities to occur; communities of learners must be planned” (Moller, 1998, p. 120). The essence of community is related to the nature of human experiences and interactions mediated within the online environment. The creation and promotion of a community of learners involves an effort by all stakeholders and it takes time. In the design process, an instructional designer cannot create a “community.” Rather, one can plan and create conditions that foster and nurture the evolution of community. Given the establishment of relationships, intimacy, and trust through effective pedagogical strategies, technology can be used to create an environment where people can engage in learning experiences that foster the development of community.

### **Community Building**

Communities are complex. It is not simply a matter of applying a number of specific rules or guidelines. Rather, it “is an act of supporting the natural development of relationships” (Schwier, 2001, p. 1). Several factors need to

be considered when creating learning environments that promote community. First, there needs to be an atmosphere within the online environment that is conducive to a learning community. The atmosphere of an online course needs to be “failure safe” (Hill, 2001, p. 9). Participants need a safe environment where they can express their feelings and thoughts, are able to freely work and communicate and are able to learn from their mistakes without feeling intimidated. The development of community is based to a large degree on trust (Poole, 2000; McLellan, 1997, 1998). If members do not feel comfortable and safe or lack trust within a community, they might not actively contribute to the community (Haythornthwaite, et al., 2000).

The encouragement of an “atmosphere of adventure” (Hill, 2001, p. 9) and the promotion of a “togetherness” environment are other factors to be nurtured within an online environment. Lowell and Persichitte (2000) found that developing a sense of connection within the course could assist in improving the quality of learner interactions within a virtual community. It is the nature, not the quantity, of interactions that leads to a sense of connection. To foster an environment of trust, friendship, and respect, communication barriers associated with the academic, social, and technological elements need to be eliminated. The “establishment of importance of community at the inception” (Hill, 2001, p. 10) must be made explicit to all members. This helps people to appreciate the benefits and the value of a community and to be aware of how they can take advantage of the various opportunities it provides. If this does not occur, it is more difficult to foster a learning community. For example, Brown (2001) found participants in her study who did not develop a sense of community. They did not perceive community to exist online and they did not place a high priority on devoting time to fostering relationships. If an educator and the designer want to foster a community philosophy, they need to make participants explicitly aware of it and to provide opportunities to engage in contributing to the

evolution of a community and to fostering a sense of connection.

Selwyn (2000) demonstrated that participants need to foster community within the space they are using. It cannot be assumed that, if people have access to online forums and are of the same profession, a communal or a collaborative culture will emerge and prosper. In his study of teachers using electronic discussion groups over a period of 24 months, teachers used the forum for information and empathetic exchanges, but with no fostering of community. For example, a large portion of the online discussion originated with a small core group of participants. Why did the other participants not actively engage in the online forum? The discussions were stimulated by personal reasons. For this group, no community or group identity developed. Rather, only personal identities emerged.

Schwier (2001) described communities as being multifaceted. The social, personal, academic, and cultural dimensions cannot be overlooked in creating the online learning environment. In his learning community model for using asynchronous communication, Moller (1998) has identified two functions of a community: *social reinforcement* (meeting self-esteem needs) and *information exchange* (involves collaboration and constructing knowledge). He has put forth the idea that within the learning community there are three types of supports, which to some degree overlap with each other: academic, intellectual and interpersonal. Providing support and activities in these three areas helps to foster the learning community.

The evolution of a community does take time and not all members within a course will have the same sense of community. As part of her theory, Brown (2001) has developed time triangles to represent the amount of time new and veteran online students spend in the following four areas: *community building*, *course content*, *teaching method*, and *technology*. She has found that veteran students spend a greater degree of time focused on community building, because they are familiar with the technol-

ogy and pedagogy used in online courses. In contrast, new students spend more time on becoming familiar with the technology, the content, and collaborative and learner-centered pedagogy. This time triangle concept is reflective of the experiences of most students in online courses and online programs. However, it may be inferred that a person works through each level of the time triangle in a linear fashion. But, is that an accurate inference? Becoming familiar with specific technology, content, and pedagogy may occur simultaneously. In addition, course content and teaching methods have been identified as part of the triangle, but no explanation has been given as to what are the critical issues taking students' time. How can they be used to help support and foster community building?

Brown (2001) also identified three levels of community development. The first level is *online acquaintance* or the *making of friends*. At this level, participants find others who have similar backgrounds or ideas. Prior to this level, new participants need to become familiar with and confident with the technology and the learning environment. The second level is *community conferment* or acceptance. Brown noted that many participants referred to this as "being like a membership card for the community of learners" (p. 7). There is a sense of personal satisfaction and an affiliation with the larger community as a result of extensive interactions and discussions within the course. The final stage is *camaraderie*. At this level, participants have been involved in long-term interactions and have developed various affiliations with other participants. These individuals may have enrolled in other classes together, communicated outside of various courses and may use other technologies to interact. Brown's three levels help to promote an understanding of the process of community development. However, she does not examine the design of the course, specific pedagogical issues, or how specific technological factors influence the development process.

The process of developing a learning community in an online course is only one aspect

of the capacity of a learning community. From Brown's (2001) research, when students associate at the camaraderie level they have developed long-term associations, trust relationships, respect for members of a community, and an identify as members of the community. This affiliation is associated with the online course but also with the larger learning community outside of the course. For example, McLellan (1998, 1997) found that the virtual community in a course dissolved at the end of semester, but concurrently long-term relationships were established and were evident as part of a larger community. The essence of the community can extend beyond the online course. However, a degree of adaptability needs to exist for such a community to be resilient beyond the course. This leads to the question of what conditions help community members to foster this community association beyond the scope of the online course? How can educational organizations capitalize on the potential of long-term learning based on existing community milieu?

## CONCLUSION

A building contractor begins a construction project by carefully studying blueprints as a guide to laying the groundwork and building the foundation for the project. The careful installation of footings, the use of supports and careful construction provide a solid foundation for what is to be constructed on this base. The same is true in laying the foundation for the creation of online learning communities. The foundation needs firm footings and structures in place to allow for future scaffolding and the building of a community.

Although there is as yet no accepted set of rules or blueprints for community building, there are concepts and theories (e.g., the seminal concepts of *gemeinschaft* and *gesellschaft*), studies, strategies, and examples that hold much promise and can be used to guide our thinking and practice in developing online courses that foster learning communities.

Designing courses that support community development also calls for designing dynamic learning environments that foster a learning culture. It is dynamic action within social groups, which gather together, mediated by technology, taking on shared responsibility for their own learning, that nurtures community development. All members of the group share their expertise and, through multiple means of communication and collaborative effort, accomplish tasks and meet learning outcomes that are valued by the community (Bielaczyc & Collins, 1999). Synergistic relationships are vital components of a learning community.

In the absence of clear direction based on empirical studies in this area, one can only extrapolate key factors from the literature and formulate a series of guidelines that educational stakeholders may use as they develop and nurture online learning communities. These guidelines fall into two distinct categories: the creating of online learning communities and the sustaining of online learning communities.

## Five Guidelines for Creating an Online Learning Community

Course developers and instructors must pay attention to a number of basic issues as they begin to plan and develop online courses that foster a strong sense of being a community of learners.

First, there is a need for an awareness of community and of the sense and the value of a learning community. These individuals must ask themselves what factors they need to be aware of when designing and developing an online course and a learning environment that will foster a sense of community among course participants.

Second, design issues for online courses that support community need to be addressed. What can developers and instructors deliberately do in designing a learning environment that will provide opportunities for participants to develop and influence the growth of a community of learners? As they reflect on these

questions, these individuals need to consider how they can create and implement mechanisms that will create an online culture based on the four cornerstones of communication, collaboration, interaction, and participation. For example, what role will communication have in online events? Is it practical for instructors and/or students to work together in small groups? How can various small groups and large groups interact within a course and at the same time interact with people outside of the online course structure? Consideration must be given to the technical design of the course and to the online communication applications used, if the learning environment is to support interpersonal interaction and to foster the mediated sharing of human experience.

Third, mechanisms need to be in place that will facilitate the collaboration of community. Educational stakeholders, who support the development of learning communities, need to examine the mechanisms that are being used to sustain feelings of affiliation and connection within online courses, between online courses and beyond particular course environments. It is one thing to strive to create a sense of community within an online course. But what mechanisms are in place to facilitate the sense of community connection beyond a particular course?

To achieve Brown's (2001) third level of community development, *camaraderie*, people must be aware of and have access to a variety of tools and applications that will accommodate and facilitate ongoing interaction and communication beyond the course environment. What technical factors and applications must educational stakeholders consider to accommodate the continuous evolution of a community of learners?

Fourth, is the creation of community within the "big picture." The starting point here is to understand what is a learning community within an online learning environment. If the notion of learning community is to be fostered within courses, it is critical for educators to look beyond the scope of courses and to understand how the concept of a learning commu-

nity can be interwoven throughout the course, the curriculum, the institution, and globally within professional organizations and professional thinking. Kearsley (2000) suggested expanding community beyond the course environment by providing discussion forums that go beyond online courses, the creation and continuous updating of a directory of all participants, and the accommodation of functional user accounts for an indefinite period of time.

Within online course environments, educational organizations determine what will be learned. However, adapting learning modalities into non-course environments puts greater control and autonomy in the hands of community members. As a result, leadership becomes a vital feature in fostering long-term learning relationships. Therefore, how can educational stakeholders work to develop and nurture a long-term learning philosophy within online learning communities?

Fifth and finally, ongoing research is required to provide direction and support for the development of learning communities. Designers and instructors of online courses are in a favourable situation, where they can take advantage of opportunities to conduct action research. Data gathered from online participants and online events can be used to feed into iterative design decisions for the purpose of enhancing the online learning community environment to best meet the needs of participants. Other research methodologies may also be used to extract empirical data that can be used to develop and sustain understanding of online learning communities.

#### ***Four Guidelines for Sustaining an Online Learning Community***

Although fostering and sustaining an online learning community can be addressed within particular online courses, consideration must also be given in how learning communities can be nurtured within educational institutions. As noted earlier, breaking down course walls with the purpose of expanding communication and facilitating greater interaction among learners

is a continuing challenge in sustaining a learning community.

The first guideline in sustaining an online learning community is the articulation and acceptance of a shared vision, goals, and aspirations of the community. What is the purpose of the group and of the community and how does this purpose influence group and community members? Mitchell and Sackney (2001) claimed that there needs to be "some sort of 'glue' that holds the members together" (p. 2). All factors creating the cohesiveness of the community must help to sustain it over time and through its evolution. Community members have an active role in shaping the vision, the understandings and the goals of the community's development, and must be continually responsive to the needs of the membership.

Second, within the online learning environment, there is a need to articulate and to apply necessary knowledge, skills, and attributes that facilitate the development and the evolution of a sense of community. Lawrence (1999) stated that online instructors have a critical role in developing and sustaining the online learning community. It is the instructors who must intentionally create a climate that fosters collaboration and interaction. For online instructors to be in a position to sustain a learning community, what knowledge, skills, and attributes do they need to possess in order to achieve this goal? What intentional actions do they need to take within the online environment to foster collaboration and to sustain a learning community? These questions need to be explored by all the online community participants.

Educational stakeholders who support an online learning community need to consider how institutional, organizational, and interpersonal factors can be utilized to meet these goals. Mitchell and Sackney (2001), in their learning community model, identified three capacities: *personal*, *interpersonal*, and *organizational*. It is in the building of organizational and interpersonal capacities that educational stakeholders must pay particular

attention to expanding and sustaining a learning community over time.

Within an educational institution, decision makers must examine how they can utilize the knowledge, skills, and attributes of those who have developed a sense of community within and among online courses and who utilize this resource in transforming and sustaining the sense of community within a larger context. Consideration must also be given to the permeability of course walls in terms of accommodating interaction among and between community members (past and present) who may or may not be enrolled within specific courses. How flexible is the administrative structure in accommodating the fluid nature of the learning community over time?

Third, participants need to understand the personal investment required and the fluid nature of a learning community. To sustain a learning community, requires personal investment and commitment by all community members. The level of personal commitment varies with each person and within particular situations. The senses of meeting, participating, affiliation, trust, belonging, and personal needs are all attractors that may help in sustaining the sense of community. Community membership will vary over time and this no doubt will have an impact on the cohesiveness of the community. Course designers and learning community members may need to explore ways in which, over time, they create opportunities for strengthening relationships and the sense of group affiliation.

In striving to sustain the sense of community, the following three questions must be addressed: Who is responsible for promoting and nurturing the longevity of a learning community? What is required of community members and educational decision makers in sustaining a learning community? What is required of institutions in creating a history and sense of connection with those who have been involved in online learning programs in the past, present, and future?

The fourth guideline has to do with the development and support of community lead-

ers. The sustaining of an online learning community requires the development of a philosophy of community that engages leaders, students, instructors, and administrators who value and support the idea of a learning community. These individuals must have a personal investment in nurturing and expanding the sense of community. It may well be these individuals who take a learning community to new levels of accomplishment and who expand the scope of the initial vision of the community. Those individuals, through their personal interactions and their sense of connectedness, may well act as role models for other members of the learning community. From a designer and developer perspective then, how can the leadership role be supported and nurtured with the purpose of sustaining the development of a learning community?

In conclusion, it can be said that, as members of an online learning community, managers, designers, educators, and students must accept new responsibilities and new roles. The integration of such characteristics as "ownership, social interaction, group identity, individual identity, participation and knowledge construction" (Misanchuk & Anderson, 2000, p. 5) is needed in the evolution of strong online learning communities. Administrators, instructional designers, and online educators play key roles in planning and developing these structures and in fostering the relationships that help build communities. In a word, it is the informed initiative of members and the leadership of the community that influence and foster and sustain the vibrancy and resiliency of an online learning community.

## REFERENCES

- Astin, A.W. (1985). *Achieving educational excellence*. San Francisco: Jossey-Bass.
- Bauman, M. (1997, April). *Online learning communities*. Paper presented at the Second Annual Teaching in the Community Colleges Online Conference TCC-L Conference. (On-line). Available: [http://leahi.kcc.hawaii.edu/org/tcc\\_conf97/pres/bauman.html](http://leahi.kcc.hawaii.edu/org/tcc_conf97/pres/bauman.html)
- Bielaczyc, K. & Collins, A. (1999). Learning communities in classrooms: Advancing knowledge for a lifetime. *NASSP Bulletin*, 83 (604), 4–10.
- Bonk, C. J. & Cunningham, D. J. (1998). Searching for learner-centered, constructivist, and socio-cultural components of collaborative educational learning tools. In C. J. Bonk & K.S. King (Eds.), *Electronic Collaborators: Learner-Centered Technologies for Literacy, Apprenticeship, and Discourse* (pp. 25 - 20). Mahwah, NJ: Erlbaum.
- Bourdeau, J. & Bates, A. (1997). Instructional design for distance learning. In S. Dinkstra, N.M. Seel, F. Schott & R. D. Tennyson (Eds.), *Instructional Design: International Perspectives: Vol. 2: Solving Instructional Design Problems* (pp. 369-397). Mahwah, NJ: Erlbaum.
- Brown, A. (1997). Designing for learning: What are the essential features of an effective online course? *Australian Journal of Educational Technology*, 12 (2), (On-line). Available: <http://cleo.murdoch.edu.au/ajet/ajet13/su97p115.html>
- Brown, R. E. (2001). The process of community-building in distance learning classes. *Journal of Asynchronous Learning Networks*, 5 (2) (On-line). Available: [http://www.aln.org/alnweb/journal/Vol5\\_issue2/Brown/Brown.htm](http://www.aln.org/alnweb/journal/Vol5_issue2/Brown/Brown.htm)
- Cothrel, J. & Williams, R. L. (1999). On-line communities: Helping them form and grow. *Journal of Knowledge Management*, 3 (1), pp. 54-60.
- Dennen, V. P. (2000). Task structuring for on-line problem based learning: A case study. *Educational Technology and Society*, 3 (2) (On-line). Available: [http://ifets.ieee.org/periodical/vol\\_3\\_2000/d08.pdf](http://ifets.ieee.org/periodical/vol_3_2000/d08.pdf)
- Enomto, E. & Tabata, L. (2000). Creating virtual learning communities through distance learning technologies: A course examined (On-line). Available: <http://waltoncollege.uark.edu/distanceeducation/listing.asp>
- Garrison, D. R. (2000). Theoretical challenges for distance education in the 21<sup>st</sup> century: A shift from structural to transactional issues. *International Review of Research in Open and Distance Learning*, 1 (1) (On-line). Available: <http://www.irrodl.org/content/v1.1/randy.pdf>
- Haythornthwaite, C., Kazmer, M.M., Robins, J. & Shoemaker, S. (2000). Community development among distance learners: Temporal and technological dimensions. *Journal of Computer Mediated Communication*, 6 (1) (On-line). Available: <http://www.ascusc.org/jcmc/vol6/issue1/haythornthwaite.html>

- Herrmann, F. (1998). Building on-line communities of practice: An example and implications. *Educational Technology*, 34 (1), 16–23.
- Hill, J. R. (2001, April). *Building community in Web-based learning environments: Strategies and techniques*. Paper presented at the AusWeb01 Seventh Australian World Wide Web Conference, Lismore, AU. (On-line). Available: <http://ausweb.scu.edu.au/aw01/papers/refereed/hill/paper.html>
- Jonassen, D. H. (2000). *Computers as Mindtools for schools: Engaging critical thinking* (2nd. ed). Upper Saddle River, NJ: Prentice Hall.
- Jonassen, D. H., Peck, K. L., & Wilson, B. G. (1999). *Learning with technology: A constructivist perspective*. Upper Saddle River, NJ: Prentice Hall.
- Jonassen, D. H., Peck K. L., & Wilson, B. G. (1998). Creating technology-supported learning communities (On-line). Available: <http://carbon.cudenver.edu/~bwilson/learncomm.html>
- Kearsley, G. (2000). *Online education: Learning and teaching in cyberspace*. Belmont, CA: Wadsworth.
- Kowch, E. & Schwier, R. (1997). Considerations in the construction of technology-based virtual learning communities. *Canadian Journal of Education Communication*, 26(1), 1–12.
- Kozma, R. (2000). Reflections on the state of educational technology research and development. *Educational Technology Research and Development*, 48(1), 5-15.
- Kristof, R. & Satran, A. (1995). *Interactivity by design: Creating & communicating with new media*. Mountain View, CA: Adobe Press.
- Lawrence, R. L. (1999). Cohorts in cyberspace: Creating community online. *Proceedings of the 19<sup>th</sup> Annual Alliance/ACE Conference*, Saratoga Springs, NY (On-line). Available: <http://www.nl.edu/ace/Resources/Documents/CohortsCyberspace.html>
- Lowell, N. O. & Persichitte, K. A. (2000). A virtual ropes course: Creating online community. *ALN Magazine*, 4 (1) (On-line). Available: [http://www.aln.org/alnweb/magazine/Vol4\\_issue1/lowell.htm](http://www.aln.org/alnweb/magazine/Vol4_issue1/lowell.htm)
- McLellan, H. (1998). The Internet as a virtual learning community. *Journal of Computing in Higher Education*, 9(2), 92-112.
- McLellan, H. (1997). Creating virtual communities via the Web. In B. H. Kahn (Ed.). *Web-Based Instruction* (pp. 185-190). Englewood Cliffs, NJ: Educational Technology Publications.
- Misanchuk, M. & Anderson, T. (2000). Building community in an online learning environment: Communication, cooperation and collaboration (On-line). Available: <http://www.mtsu.edu/~itconf/proceed01/19.html>
- Mitchell, D. & Sackney, L. (2001). Building capacity for a learning community. *Canadian Journal of Education Administration*, 19 (Online). Available: <http://www.umanitoba.ca/publications/cjeap/Mitchell%20and%20Sackney>
- Moller, L. (1998). Designing communities of learners for asynchronous distance education. *Educational Technology Research and Development*, 46 (4), 115–122.
- Murphy, K. L., Mahoney, S. E., & Harvell, T. H. (2000). Roles of contracts in enhancing community building in Web courses. *Educational Technology & Society*, 3 (3) (On-line). Available: [http://ifets.ieee.org/periodical/vol\\_3\\_2000/e03.html](http://ifets.ieee.org/periodical/vol_3_2000/e03.html)
- Nipper, S. (1989). Third generation distance learning and computer conferencing. In R. Mason & A. Kaye, *Mindweave: Communication, computers and distance education* (pp. 63- 73). Oxford: Pergamon Press.
- O'Sullivan, M. & Miron, D. (2000) Building a learning community online in a second year computer science unit . *UltiBASE Journal* (On-line). Available: <http://ultibase.rmit.edu.au/Articles/online/sullivan1.htm>
- Palloff, R. M. & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass Publishers.
- Poole, D. M. (2000). Student participation in a discussion-oriented online course: A case study. *Journal of Research on Computing in Education*, 33 (2), 162-177.
- Preece, J. (2000). *Online communities: Designing usability, support sociability*. Chichester: John Wiley & Sons, LTC.
- Riel, M (1996). The Internet: A land to settle rather than an ocean to surf and a new “place” for school reform through community development. (On-line). Available: <http://www.globalschoolhouse.org/teach/articles/netasplace.html>
- Riel, M. & Fulton, K. (1998, April). *Technology in the classroom: Tools for doing things differently or doing different things*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA. (On-line). Available: [www.gse.uci.edu/Vkiosk/Faculty/Riel/riel-fulton.html](http://www.gse.uci.edu/Vkiosk/Faculty/Riel/riel-fulton.html)

- Schrage, M. (1990). *Shared minds: The new technologies of collaboration*. New York: Random House.
- Schwier, R. A. (2001). Catalysts, emphases, and elements of virtual learning communities: Implications for research and practice. *The Quarterly Review of Distance Education*, 2 (1), 5-18.
- Selwyn, N. (2000). Creating a 'connected' community? Teachers' use of an electronic discussion group. *Teachers College Record*, 102 (4), 750-778.
- Selznick, P. (1996). In search of community. In W. Vitek & W. Jackson (Eds.), *Rooted in the Land* (pp. 195-203). New Haven: Yale University Press. Recall.
- Shapiro, N. S. & Levine, J. H. (1999). *Creating Learning Communities: A practical guide to winning support, organizing for change, and implementing programs*. San Francisco: Jossey-Bass Publishers.
- Shneiderman, B. (1998). *Designing the user interface: Strategies for effective human computer interaction* (3<sup>rd</sup> ed.). Reading, MA: Addison-Wesley.
- Tam, M. (2000). Constructivism, instructional design, and technology: Implications for transforming distance learning. *Educational Technology & Society*, 3 (2) (On-Line). Available: [http://ifets.ieee.org/periodical/vol\\_2\\_2000/tam.html](http://ifets.ieee.org/periodical/vol_2_2000/tam.html)
- Weisenberg, F. & Hutton, S. (1996). Teaching a graduate program using computer-mediated conferencing software: Distance education futures. *Journal of Distance Education*, 11 (1) (On-line). Available: <http://cade.athabascau.ca/vol11.1/wiesenberg.html>
- Wilson, B. (1996). Introduction: What is a constructivist learning environment. In B. Wilson (Ed.), *Constructivist learning environments: Case studies in instructional design* (pp. 3 -10). Englewood Cliffs: Educational Technology Publications.