A Preliminary Investigation of Self-Directed Learning Activities in a Non-Formal Blended Learning Environment[i]

Richard A. Schwier Dirk Morrison Ben Daniel
Virtual Learning Communities Research Laboratory
Educational Communications and Technology
University of Saskatchewan

Cite as: Schwier, R.A., Morrison, D., & Daniel, B.K. (2009, April). *A preliminary investigation of self-directed learning activities in a non-formal blended learning environment*. Paper presented at the annual conference of the American Educational Research Association, San Diego, California.

Abstract

This research considers how professional participants in a non-formal self-directed learning environment (NFSDL) made use of self-directed learning activities in a blended face-to-face and online learning professional development course. The learning environment for the study was a professional development seminar on teaching in higher education that was offered to ten novice professors over the course of one academic year in a western Canadian research-intensive university. Autonomous activities were compared to online and face-to-face social networking activities, and the effect of structure on the amount and type of self-directed engagement will be examined. We consider whether there is a need to adapt basic theory on formal virtual learning communities to understand self-directed learning and pedagogical practices in non-formal online learning environments.

The purpose of this investigation was to examine the self-directed learning activities of learners in a non-formal professional development course that included online and face-to-face learning opportunities. We compare group characteristics and catalysts for learning we found in this non-formal learning environment with key elements of online learning communities we have found in formal environments in earlier studies (Schwier, 2007). This preliminary study was conducted in the 2008-09 academic year, and will be used to inform a research program that will span the next three years. We report preliminary findings in this paper, and discuss methodological issues that will drive future research. Specifically this pilot study examined two central questions:

1. Were characteristics identified in formal virtual learning communities found in a non-formal online learning environment, and did unique characteristics emerge?
2. How did the context and structure of the course influence self-directed learning by participants?

Background

The need for and design of collaborative online learning environments has been well-documented in the literature (e.g., Cox & Osguthorpe, 2003; Hung & Chen, 2002; Kirschner, et.al., 2004; Milheim, 2006; Murphy & Coleman, 2004; Reeves, Herrington, & Oliver, 2004; Uribe, Klein, & Sullivan, 2003). But the literature is focused principally on formal learning environments (principally post-secondary courses offered in higher education). Formal environments typically require learners to engage each other online in specific, externally defined ways, whereas non-formal environments impose fewer controls on learner activities. The nearly exclusive attention to formal settings limits our understanding of how learners make use of virtual communities for self-directed learning.

Our own research program has contributed to this myopia. In recent years we devoted significant attention to developing a model of virtual learning communities (VLC) and how they operate in formal online

learning environments such as post-secondary courses. That program of research focused on theoretical work that included communities of practice and social capital (Virtual Learning Communities Research Laboratory, 2009). At the same time, considerable research has appeared that describes the experiences of instructors and students in formal virtual learning communities, and identifies characteristics of those communities (cf. Anderson, 2003; Brooke & Oliver, 2006; Garrison, Anderson, & Archer, 2003; Luppicini, 2007; Murphy & Coleman, 2004).

As an observation about this line of research generally, the research on formal VLCs has helped shape a myopic view of how learning communities form, grow and flourish—an unfortunate side effect given the growing importance of non-formal learning to learning generally, and specifically in online social environments. We suggest there is a need to use existing models of formal VLCs to examine whether similar characteristics of community are manifest in non-formal virtual learning environments that emphasize self-directed learning, and whether characteristics unique to non-formal learning environments emerge. Consequently, this research program will explore the fundamental characteristics of self-directed learning in non-formal settings, and examine what social and pedagogical factors influence the use of virtual learning communities in non-formal learning environments to support self-directed learning. This research will focus on two broad goals of SDL, namely, to enhance the ability of adult learners to be self-directed in their learning, and to foster transformational learning as central to SDL (Merriam, et al, 2007, p. 107).

In this preliminary work, our research concentrated on building a non-formal learning environment that would promote SDL activities, and on identifying the characteristics of community in the VLCs.
By *formal, we refer to* educational contexts usually characterized by learners in classes being taught by teachers who deliver comprehensive, multi-year curricula, which is institutionally bound to a graduated system of certification (Coombs, 1985). In sharp contrast, *informal* education is often characterized as unorganized, unsystematic, and regularly serendipitous (Selman, et.al., 1998). This type of learning is the lifelong process of learning by which people acquire and accumulate knowledge skills, attitudes and insights gathered from a lifetime of experiences. For the purposes of this research, we focus on a third category of education, *non-formal* learning, that straddles these two seemingly polar learning contexts. Selman, Cooke, Selman, and Dampier (1998) identify non-formal learning as that which "comprises all other organized, systematic educational activity which is carried out in society, whether offered by educational institutions or any other agency. It is aimed at facilitating selected types of learning on the part of particular sub-groups of the population (p. 26). For example, non-formal education may include such activities as professional development interest groups or community education initiatives. These alternative group learning contexts are usually characterized by participants who share expertise and knowledge, and may or may not include a content expert.

Extrapolating from definitions of formal learning environments by Eraut (2000) and Livingstone (1999; 2001), non-formal environments can be characterized by:

- a prescribed but unfettered learning environment which emphasizes learning that is intentional, not casual or serendipitous.
- a structure for learning defined externally, usually by an instructor or facilitator who organizes learning events and activities and is present during the operation of group learning events.
- learner control of the objectives of learning and the level of participation in learning activities and events; personal intentions outweigh externally defined intentions
- internal, self-defined outcomes guide the learning path
- organizational expectations around participation, investment, persistence and completion

Within the context of non-formal learning environments, learners need to exercise various degrees of self-directedness in their approaches to their learning. Some authors have characterized the self-directed learner as learning alone, whether under the tutelage of an instructor or agency, or completely independent of such structures (Tough, 1971; Selman, Cooke, Selman, & Dampier, 1998). However, we would expand the notion of independence to include being independent of the structural contexts of education; any particular learner or group of learners may manifest elements of self-directedness in their learning whether it be within a formal, non-formal, or informal learning environment. This study will examine these phenomena

in the context that includes the development of a learning community in a blended environment—one that includes regular online and face-to-face engagement among learners.

This paper also considers how learners in non-formal environments form communities. The metaphor of community has been used to describe a wide range of contexts, from distributed communities of practice in the corporate world (Kimble & Hildreth, 2007) to virtual community networks (Bullen & Janes, 2007; Lambropoulis & Zaphiris, 2007). In order to understand the characteristics of community in formal online learning environments, we developed a conceptual model of VLCs from existing literature and later refined it (Schwier, 2007). This model of formal virtual learning communities included three interacting categories of characteristics: catalysts, emphases and elements, and it is this model that will serve as the conceptual framework for this study.

Catalysts of Virtual Learning Communities. Communication is a catalyst for community, and a recent meta-analysis of key variables in online learning pointed to the significance of synchronous and asynchronous communication in facilitating learning (Bernard, et.al., 2004), and other studies point to the importance of good sociability being critical to the development of productive lifelong learning environemtns (Klamma, et.al, 2007). Where there is communication, community can emerge; where communication is absent, community disappears. Four factors were found to act as catalysts and orbit communication in formal virtual learning communities: awareness, interaction, engagement, and alignment (Schwier 2007; Wenger, 1998). These are the products of communication when it acts as a catalyst for community.

Emphases of Virtual Learning Communities. Formal learning environments emphasize different purposes, and we suggest these are important to understanding how a VLC operates. The model suggests five tentative emphases: ideas, relationship, reflection, ceremony and place. Each of these purposes defines a focus for individual participation. While some communities are deliberately constructed to promote one or more of these purposes, any particular emphasis is also the result of the individual's intention for using the community.

Elements of Formal Virtual Learning Communities. What turns the group into a community rather than merely a collection of people with a shared interest? Some time ago, we discovered a discussion of terrestrial communities that identified six elements we also found in our own analysis of VLCs: historicity, identity, mutuality, plurality, autonomy, and participation (Selznick, 1996). We added seven features to this list based on our research: trust, trajectory, technology, social protocols, reflection, intensity, and learning. The thirteen elements were identified in a series of grounded theory studies of online graduate-level seminars and subjected to social network and modeling analyses (Schwier & Daniel, 2007). These elements underscore the idea that communities are a complex of many factors and variables. Any adequate understanding of virtual learning communities needs to recognize that these variables interact multi-dimensionally, at least, in formal learning environments.

Methods and Analysis

The context for the study was a professional development course on teaching in higher education that was offered to ten novice professors over the course of one academic year in a western Canadian research-intensive university. Participation in the course was voluntary, and there were no professional incentives available to participants beyond what they believed they could learn from the course to improve their teaching performance. The course was deliberately designed to be non-formal and to emphasize self-directed learning by explicitly addressing each of the definition items described earlier (see Table 1).

Table1. Introduction of Non-Formal Learning Characteristics into Course Design

Characteristics of Non-Formal Environments	Course Design Implications
a prescribed but unfettered learning environment	Participants were encouraged to consider topics in

which emphasizes learning that is intentional, not casual or serendipitous.	the course syllabus, and initial readings and resources were provided, but students were encouraged to go outside the provided resources to explore the topics broadly. They were also invited to suggest their own topics. An outline of topics defined the order and content of the course.
a structure for learning defined externally, usually by an instructor or facilitator who organizes learning events and activities and is present during the operation of group learning events.	A syllabus, complete with due dates, topics and recommended readings and activities was provided. Although maleable, it was the default template for the course. An instructor and a teaching assistant were present in face-to-face and online sessions to facilitate discussions.
learner control of the objectives of learning and the level of participation in learning activities and events; personal intentions outweigh externally defined intentions	Participants were invited to invent their own course topics and activities. A "no guilt" agreement was met, where participants were free to participate or not participate in any parts of the class they chose.
Organizational expectations around participation, investment, persistence and completion	Participants, although free to determine the level of participation in particular activities, were encouraged to invest deeply in the course and follow through on personal commitments to participate. A Certificate of Participation was issued to participants.
Internal, self-defined outcomes guide the learning path	There were no grades, marks or formal assessments in the course. Beyond the suggestion that an appropriate outcome would be some form of professional teaching portfolio, participants were invited to determine their own outcomes for the course.

Although the course ran for a full year, from September to April, this preliminary study considers only data from term one, which ran from September to December. During term one, seven topics and key questions were defined, with each topic occupying a two-week segment of the class schedule. Students in the course investigate a defined topic by consulting resources that are provided and other resources they find elsewhere. Each student was encouraged to read at least one article, and to participate in an online discussion organized around central questions from the topic (see Table 2).

Table 2. Sample of In-Class and Self-Directed Learning Activities in the Non-Formal Learning Environment

Dates & topics	**In-class activities**	**Self-directed learning and preparation**
Sept. 29- Oct. 10 Learning styles and teaching styles	Meeting: October 10 Method: style groupings Discuss:	Sept 29-Oct 9 prep & think: Learning and teaching styles For starters: Brown; VARK; TPI Extras: Knapper; Felder; Horil; Gusthart video Oct 3: Post to online discussion board "Teaching styles"

	-VARK Inventory -Teaching Perspectives Inventory	Complete the Teaching Perspectives Inventory found here: http://teachingperspectives.com/html/tpi_frames.htm, print out the results and bring them to our next group session. Looking at your TPI, are your results fairly evenly distributed, or are there obvious preferences? If you have obvious preferences, do you think this might be problematic? In what ways? How might you address this? Do you think that you teach the way that you best learn, or by the way you were most commonly taught? Oct 4-9: read & comment on others' posts

At the end of each two-week segment of the course, participants assembled for two hours to discuss the topic and the results of their investigations and online conversations.

To facilitate online conversations and reflections, we created an online community site at http://ning.com that included participant profiles, a discussion board for asynchronous communication and a blog space for each participant to use to write about personal reflections, questions, observations or to share resources. The site was private, but individual participants could make any of their own blog posts public if they wished. At the start of each two-week segment of the course, a new discussion topic was added to the discussion board, and participants were encouraged to post their thoughts. During the first face-to-face meeting with the group, a one-hour training session was held to familiarize participants with the online tools, and to help participants create their user profiles.

Data for this preliminary study included transcripts of postings by instructors and participants to the threaded asynchronous discussion board, transcripts of blog posts and follow-up comments, and transcripts of a focus group that was held participants following the completion of the first term of the course.

Analyses include charting online interactions among students using interaction analysis, including measures of density, intensity and reciprocity using Fahy, Crawford and Ally's (2000) Transcript Analysis Tool (TAT) formulae. Transcripts of online conversations were coded independently by two researchers for elements of community at the message level of analysis (Rourke, Anderson, Garrison & Archer, 2000). Two types of coding were performed. First, transcripts were coded for catalysts and elements drawn from the formal model of VLCs proposed by Schwier (2007) (see table 3). Free coding was also employed to ferret out unique characteristics of community that were evident in non-formal, self-directed settings. Given that this is a preliminary study, we were not concerned with establishing high inter-coder reliability; one of the goals of the study was to refine our coding procedures. However, two independent rounds of coding were completed on the data, and results were compared. Where differences occurred, the research team discussed the discrepancies and resolved them. If the team could not achieve consensus on an item, the coding of the item was removed, resulting in a consensus-based, conservative analysis of the data.

Table 3. Codes and Operational Definitions Employed in the Study

<u>Catalysts</u>

Awareness Knowledge of people, tasks environment - or some

	combination of these.
-Social awareness	Awareness that people have about the social connections within the group
-Task awareness	Awareness of how a shared task will be completed
-Concept awareness	Awareness of how a particular activity or piece of knowledge fits into an individual's existing knowledge
-Workspace awareness	Sensitivity to the context, and what is appropriate or inappropriate in a particular work setting
Interaction	Interplay or activity with others without deep engagement
Engagement	Confronting or exploring ideas, people and processes first presented by someone else in the group

Elements

Social Protocols	Rules of engagement, acceptable and unacceptable ways of behaving in a community.
Historicity	Communities develop their own community and culture.
Identity	The boundaries of the community - its identity or recognized focus.
Mutuality	Interdependence and reciprocity. Participants construct purposes, intentions and the types of interaction.
Plurality	"Intermediate associations" such as families, churches, and other peripheral groups - other communities that individuals use to enrich the new community. In the case of virtual environments, this may include physical/geographical communities.
Autonomy	Individuals have the capacity and authority to conduct discourse freely, or withdraw from discourse without penalty.
Participation	Social participation in the community, especially participation that sustains the community.
Trust	The level of certainty or confidence that one community member uses to assess the action of another member of the community.
Trajectory	The sense that the community is moving in a direction, typically toward the future.
Technology/Technical	The role played by technology to facilitate or inhibit the growth of community.
Learning Process	Formal or informal, yet purposeful, learning in the community.
-Intentional	Learning related to central purpose for being in the community.
-Incidental	Learning related to things other than the central purpose for being in the group
Reflection	Situating previous experiences, postings in current discussions, or grounding current discussions in previous events.
Intensity	Active engagement, open discourse, and a sense of importance or urgency in discussion, critique and argumentation.
Alignment	Individuals shifting positions or opinions to closer agreement

Results and Analysis

The TAT measures for density, intensity and reciprocity (Fahy, Crawford & Ally, 2000) are presented in Table 4. Density was defined as the ratio of the actual number of connections observed to the total potential number of possible connections. It was calculated by using the following formula: Density = 2*a*/N(N-1), where "*a*" was the number of observed interactions between participants, and "N" was the total number of participants. In formal settings, the TAT measure for intensity is based on interactions that exceed the number of required interactions in a group. Since there was an expectation, but not a requirement, that participants would participate in online discussions, the measure of intensity was drawn on the assumption that each participant would post once to the discussion board and receive one comment on each topic as the threshold of expectation for interaction, so intensity measures were based on interactions that exceeded that threshold.

Table 4. Interaction Data and Analysis from Discussions and Blogs

Messages From

Messages To	JM	DS	DP	JH	ST	HR	CU	FS	PL	**Total**
JM	—			1	1					**2**
DS	6	—		1	2					**9**
DP	4	2	—		2					**8**
JH	5	1		—	3					**9**
ST	3	1		1	—					**5**
HR	2				1	—				**3**
CU	1						—			**1**
FS								—		**0**
PL									—	**0**
General	7	6	5	6	6	2	1	2	1	**36**
Total:	**28**	**10**	**5**	**9**	**15**	**2**	**1**	**2**	**1**	**73**
S-R ratio	**14.0**	**1.11**	**.625**	**1.0**	**3.0**	**.67**	**1.0**	**0**	**0**	

Density = 2*a*/N(N-1) = 2(17) / 9(8) = .472
Intensity = # of postings / # of expected postings = 73 / 9(14) = .579

The intentional coding for catalysts and elements of VLC resulted in the following frequencies of codes being employed in the analysis of discussion and blogs (See Table 5). These data provide no compelling evidence of a community forming in this environment. There were low measures of density and intensity, and the reciprocity metrics indicated that the instructors (JM and ST) were the primary individuals postings while receiving few responses from students. Only rarely did students participate in the online environment, and when they did participate by posting something, it seldom received any acknowledgement from other students. The instructor and teaching assistant, by comparison, replied to every posting, and they requested general and specific participation several times during the operation of the course.

The sparce evidence of a learning community was reinforced by the coding analysis of the transcripts. Only one element and three catalysts of community drawn from the model of formal VLCs were manifest in this non-formal setting to a significant degree (threshold =10), and most of these indicators were attributed to the postings made by instructors. A closer examination of the dominant elements in the data set reinforce the idea that that students were engaged with content when they posted (task awareness, concept awareness, engagement with ideas, reflection) but seldom engaged with each other.

Table 5. Frequency Table of VLC Model Codes Appearing in the Analysis of Discussions and Blogs.

Catalysts		Elements	
Concept awareness	33	Reflection	15
Engagement (ideas)	32	Alignment	9
Task awareness	16	Technology/Technical (negative)	9
Workspace awareness	9	Learning - Intentional	9
Social awareness	7	Learning - Incidental	4
Interaction	2	Identity	9
		Social Protocols	2
		Historicity	0
		Mutuality	2
		Plurality	3
		Autonomy	2
		Participation	5
		Trust	3
		Trajectory	0
		Intensity	3

Free coding identified a number of additional learning activities occurring in the group, and these also underscored the attention paid to content in the course, and the relative lack of attention paid to social engagement among members of the group (See Table 6). Of note in the free coding data is the relatively high number of messages of agreement, which could suggest that the group was amiable and agreeable for the most part, but just not deeply engaged with each other in the online environment.

Table 6. Frequency Table of Free Codes Identified in Transcripts of Discussions

Elaboration	18
Shared experience	18
Explicit information	15
Agreement	12
Peer support	9
Suggestion	8
Uncertainty	8
Argument/disagreement	5
Clarification	4
Observations	4
Shared understanding	4
Summation	4
Opinion	3
Probe	3
Feedback	3
Questioning self	2

At the same time, the instructors and students reported that the interactions in the classroom sessions were lively and engaging. So there was evidence of a community forming, or at least some group affiliation, during the group sessions that did not regularly find its way into the online discussions. But there was evidence that relationships formed and influenced how participants used online discussions.

> *I have a relationship with you. I know it's Digger - he knows we're all busy, and he's not going to waste our time unless it's something really good. Then I'll go and look at it kind of thing.*
>
> *I was suggesting that another reason to be motivated now to get online is that someone who was here, in the room, can't attend these sessions [this term], but is still committed to learning and being part of this group. So that's a new motivation to perhaps get myself in gear -- one of those things that will draw me to be online more perhaps. Just ratchet it up on the priority list. It makes sense that if he's present online, then I should do my part too.*

The focus group held with the students reveals some reasons why they did not participate more actively in the online setting, despite a genuine concern for the content and affection for others in the group. What barriers and incentives to participation in online episodes did the students identify?

The most prominent was a lack of time. This course, because it was voluntary and non-formal, was given a lower priority than other professional responsibilities. And given that the group was comprised of new professors who were struggling with the intense demands of an academic life for the first time, it was not surprising that they found it difficult to find time to participate actively.

> *Well last term it was easy to make time for it, so it was pretty easy to keep it as a priority. This term it's more hard, so it's getting squeezed in, so it seems to vary depending on what else is going on… So among some other things, it's been very difficult to address this specifically.I haven't been nearly engaged in the chat area that I have been [earlier].*
>
> *It's a time factor, yeh. That's not to say that if I really focused on it I probably could make more time for it, but it's been something, more pushed aside as*

> *something I'll do when I get this other stuff done, and then of course you never do.*

This finding was not surprising, and consistent with earlier research that found that a lack of time and competing priorities were the most significant deterrents to teachers sharing knowledge in online settings (Hew & Hara, 2007; Poelhuber, Chomienne, & Karsenti, 2008; Rivern & Stacey, 2008; Sheehy, 2008). Research from the private sector suggests that even where attitudes about e-learning are positive and seen as relevant, learning activities need to be scheduled during regular work hours, and time made for participation (Rabak & Cleveland-Innes (2006). In an academic setting, where work hours are less prescribed, this could prove to be a challenge. It may require that participants be given responsibility, along with the expectation, that participation time will be built into the regular workload.

Does the assignment of lower priority mean that non-formal environments such as these are considered optional or less important? Yes, probably. In non-formal, self-directed settings where participants have little discretionary time, their attention to these kinds of commitments may suffer from neglect. However, this is probably similar in other parts of their lives, where balancing family, community, and personal interests with professional obligations is typically a struggle. So it does not seem to indicate that the online community was distasteful in some way, but rather that it failed the test of relative importance. It is possible that in non-formal, self-directed learning environments where the participants have fewer external demands, that online communities might form more readily. This is speculation, however, as we have not examined these types of groups; however, the signals we received from this group were clear.

> *And, you know, we have a job, so there's a requirement about the job. So when that comes and this comes, I have no choice. It's very difficult, it's why I said "I don't have time."*
>
> *Well, [it comes down to] choices and energy. If it becomes a thing where you have all the other priorities at the end of the day … when you have the time to sit down and do something, say online with it, the tempation to just do something else, relaxing is pretty great, so it needs more of a bargain to do it, more of an imputes.*

Another barrier for some participants was the technological environment itself. Some participants were explicit about their preference for face-to-face engagement. In some cases, they rejected outright the notion of communicating in online settings.

> *Well, to be honest, I more like person [to person]. I like [classes] to be in person rather than online, ...online is good… but I like this much more.*
>
> *This back and forth conversation. This answering, questioning and discussing is much easier in person rather than online. What you can do it, but to say something, you have to wait another day for someone, and then you will reply to that. So it's going to take lots of time. It's valuable, but for me personally, it isn't.*

In this instance, the mode of delivery was mixed, including regular face-to-face and online elements. Is it possible that the blended approaches encouraged students to consider the face-to-face sessions as the default learning environment, and the online portion of the class to be an optional resource. As a self-directed non-formal learning environment, the online portions of the course were envisioned as of equal importance, with the intention that learners would use the online spaces to explore and expand their own inquiries. Clearly, the students did not interpret the online portions of the course this way, but they did suggest that they adapted the online portions of the course to their own needs and interests, consistent with previous research (Ural, 2007).

> *I think if it was just online, it would get lost. Because that's the easiest thing to*

turn off. … Getting here is not the problem; I kind of view the stuff they've put online for us as a resource, and I've gone to it after we've talked about it sometimes.

If I signed up for something that was purely online, I'd guess I would make more of an effort. In the times that I have gone online, more often it is when somebody said something --that they refer to something that happened online. They made a comment or made reference to something, and then when we were here I've gone back to look for it. So, there had to be sort of a connection to it.

One of the reasons that learners may have given preference to face-to-face sessions is because it is a familiar pedagogical approach for them. For many adult learners, and particularly successful academics, online learning environments and conversational approaches to learning are foreign concepts.

You know, this is not how we learned, the same model we used, so I'll always think coming here is more important than discussing online. You know if I have to pick one, I'm going to come here and spend my time coming here, and I am not end up online.

This will be a generation type of thing, I mean. I think students I've got right now would probably engage in something like this quite. It's got to be something kind of a, £This is not what I'm used to.

Participants were drawn from nine different disciplines, and included participants from health sciences, agriculture, professional colleges, mathematics, linguistics and bio-technology. For most of them, the traditional university classroom was what they expected to encounter in the course. The blended, nono-formal learning environment was unlike anything they had experienced previously. This was interpreted as enjoyable, but recognizing the actual learning value may have been elusive for participants.

This environment, this course, I think is pretty unusual within the university system, because we are sitting here two hours. Although there are people doing tremendous jobs thinking about what they are doing here, [they are] relaxing and discussing, like having coffee and discussing. In the workplace in today's world … today you have to finish this, tomorrow you have deadlines. It is not so much about sitting and discussing; it's about having the job done, you know. This is … different…. How many times do people [participate in] … open talk, talking about something; it's like having a coffee. You are free for two hours, not building something, no no, we're just talking about how do you feel, how is your life, this small thing. So this is unusual, … there is no pressure here.

You see, sorry, (...this is not some personal business), here is personal, it is not just business, [When I teach] I don't know what is happening to your life, but you have to do this. You lost your father, I don't care, but you have to do this. Oh sorry, you have to do this; it is not personal, it is business. Without saying, it gives different character to this kind of academics.

But what we are doing here, what we are really doing is relaxing ourselves, right? There's something here, you're right, I think that after two hours when you leave this room, your mind is actually more relaxed. You usually feel like you may be more tired, but you're actually relaxing. So the online amost has to be like that. Well, you want to learn, but again, there's this outside pressure. And I think they do it very well here. So after the end of this, I always feel more relaxed. Oh yah, because it's relaxing period.

The non-formal structure of the course was seen as inviting, perhaps most importantly because it provided a non-judgmental arena for learning. Given that the course was not a required activity, the non-formal structure allowed learners to participate in ways that accommodated their own perceptions and priorities. And the focus group suggested that they might not have joined the experience, or have completed it, had the learning environment been formal.

> *You know, I've not always been on top of my reading everytime, but I read them after the fact, something twigged I think we talked about this so I went back to it and read it when I had the time… So it's kind of nice that there's no pressure. I can still come to this place and not be prepared or not to have talked to anybody for the past week and it's still a welcoming place to come to. And so that makes it not hard to prioritize this space (ASIDE: Darrow is referring to the f2f meetings).*
>
> *If it was formal, I wouldn't have signed up. As I said, personally I think it's a fantastic thing; it's just there are so many things that you have to do.*

The tyranny of expectations

There were conflicting expectations about what constitutes an appropriate post in an online setting, and the learning environment we were investigating exacerbated them. Academics, as a rule, write carefully, and they have learned that when they write, they will be judged, and this creates a "fear of being criticized unjustly due to misunderstanding" (Hew & Hara, 200, p. 587). So a discussion board is not a place where they automatically feel comfortable throwing out incomplete ideas and haggling over them. Their expectations for communicating mature thoughts interfered with online communication in two ways: the discussion board was not seen as a place for sharing incomplete, exploratory thinking; and it took a much larger investment of time for participants to contribute anything, so they were reluctant to invest the effort.

> *It takes a lot of effort the way it's structured right now, I felt I had to, because I knew everyone else was going to be reading it, when I did come in I took a long time to do it. To say, no, no and shape it; I don't want to look like an idiot and everything. … I felt like I had to give a big response, and maybe if it was more of an "I offer up", I sort of determine the scale of my response a little more, then maybe I would have been less worried about it.*
>
> *Online discussion is a little bit different, but somewhere between the quick, off the cuff comments that you make in face to face, that have their own downside, right, maybe not as well thought out versus the online essay. But somewhere in between where you can quickly think about something, respond to it, get some conversation going. But for any individual it's not an onerus task. You know you're not going to be there for three hours, which you don't have; you've got three minutes. Or maybe ten.*

One of the more active participants reflected on the nature of his online postings, and suggested that he rambled and gave responses that were too long. This may have been a comparative reflection; his responses were not longer than most, but he was more diligent than other participants about posting regularly and thoroughly. But it does suggest that the participants valued brevity, precision and ease of communication, but the environment was seen as a place for elaboration.

> *I tended to blah, blah blah. No no, but I did. (laughs). That's what I felt like,*

> *anyway. I would get on there and blah, blah, blah, blah. and, but I would spend a lot of time on those blah, blah, blahs. Yeh, and I think it would have been far more useful and a way to prompt quicker responses so an actual conversation starts. Cause I think that's what they wanted, was a conversation, but they never really developed*

It is likely that the training conducted with participants at the first class meeting was insufficient to persuade participants to use discussion boards effectively. The training was focused primarily on the technical aspects of using the software, and almost no treatment of how to use the environment was included. Instructors relied on modeling and encouraging participation, neither of which was adequate to shape the quality of engagement in the group. This reaction may be confined to academic groups of this sort, but we suspect that it is not a phenomenon confined to this group alone. Any group of people who are reluctant to write on a discussion board may display a similar pattern. In future iterations of this research, greater attention will be paid to acquainting participants with discussion board incentives and protocols to see if discussion board intensity will increase.

Conclusions

In this context few of the formal elements of community were in evidence in the non-formal setting. The data suggested participants had stronger connection with the content of the course than with each other. The structure of the course and the culture of the university both contributed to this orientation.

This study also suggests that online NFSDL environments may be inappropriate for some individuals, if the primary goal is the development of an online learning community. While it might be possible to persuade or cajole individuals who are reluctant to participate online, there is an ethical question about whether this is coercive, and a practical question about whether it is effective. Given that the learning setting is intentionally self-directed and non-formal, those who reject online engagement are acting out their right to self-direction. Beyond identifying the potential learning benefits of participating in online discussions, an instructor needs to decide whether the decisions of participants about whether or not to participate should be respected in self-directed settings.

At the same time, it is clear that these types of learning environments, technology-based and non-formal in nature, are foreign to some groups of learners. Strategies for informing participants about strategies and reasons for learning in online settings may need to be deliberate, innovative and strategic to overcome the inertia brought on by years of exposure to formal learning environments as students and now as teachers.

Is it possible that there was strong bonding among participants in the course, but that the type of community that formed was sufficiently different to elude us? This is unlikely, but possible. Our intention is to replicate the course and the study in the coming year, adjust the training and support for learners, be more deliberate about learner expectations, and see whether something we might call a learning community emerges. Ultimately, we intend to investigate whether there is a need to adapt basic theory on formal virtual learning communities (VLCs) to include self-directed learning theory in order to understand successful learning and pedagogical practices in non-formal online learning environments.

References

Anderson, T. (2003). Modes of interaction in distance education: Recent developments and research questions. In M. Moore and G. Anderson (Eds.), *Handbook of Distance Education* (pp. 129-144). Mahwah, NJ: Erlbaum.

Bernard, R.M., Lou, Y., Abrami, P.C., Wozney, L., Borokhovski, E., Wallet, P.A., Wade, A., & Fiset, M. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research, 74*, 379-439.

Brook, C., & Oliver, R. (2006). Exploring the influence of instructor actions on community development in online settings. In N. Lambropoulos & P. Zaphiris (2006), *User-centred design of online learning communities*. Hershey, PA: Idea Group.

Bullen, M., & Janes, D. (2007). *Making the transition to e-learning: Issues and strategies*. Hershey, PA: Information Science Publishing.

Cox, S., & Osguthorpe, R. (2003). Building an online instructional design community: Origin, development, and the future. *Educational Technology, 43*(5), 2003, 44-48.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology, 70*(1), 113-136.

Fahy, P.J., Crawford, G., & Ally, M. (2001). Patterns of interaction in a computer conference transcript. *International Review of Research in Open and Distance Learning*, (2)1. Retrieved July 28, 2008 from http://www.irrodl.org/index.php/irrodl/article/view/36/74.

Garrison, D.R., Anderson, T., & Archer, W. (2003). A theory of critical inquiry in online distance education. In M.G. Moore & W.G. Anderson (Eds.), *Handbook of distance education* (pp. 113-127). Mahwah, NJ: Lawrence Erlbaum.

Hew, K.F., & Hara, N. (2007). Empirical study of motivators and barriers of teacher online knowledge sharing. *Educational Technology, Research and Development, 55*(6), 573-595.

Hung, D., & Chen, D.T. (2002). Understanding how thriving internet quasi-communities work: Distinguishing between learning about and learning to be. *Educational Technology, 42*(1), 23-27.

Kimbel C., & Hildreth, P. (Eds.), *Communities of practice: Creating learning environments for educators*. Greenwich, CT: Information Age Publishing

Kirschner, P., Strijbos, J.W., Kreijns, K., & Beers, P.J. (2004). Designing electronic collaborative learning environments. *Educational Technology Research and Development, 52*(3), 47-66.

Klamma, R., Chatti, M.A., Duval, E., Hummel, H., Hvannberg, E.H., Kravcik, M., Law, E., Naeve, A., & Scott, P. (2007). Social software for life-long learning. *Educational Technology & Society, 10*(3), 72-83.

Lambropoulos, N., & Zaphiris, P. (Eds.) (2006), *User-centred design of online learning communities*. Hershey, PA: Idea Group.

Livingstone, D.W. (1999). Exploring the icebergs of adult learning: Findings of the first Canadian survey of informal learning practices. *Canadian Journal for the Study of Adult Education, 13*(2), 49-72.

Livingstone, D.W. (2001). *Adults' Informal Learning: Definitions, Findings, Gaps and Future Research, NALL Working Paper No. 21, OISE/UT, Toronto*. Retrieved July 28, 2008 from http://www.oise.utoronto.ca/depts/sese/csew/nall/res/21adultsifnormallearning.htm.

Luppicini, R. (2007), *Trends in distance education: A focus on communities of learning* (pp. 17-40). Greenwich, CT: Information Age Publishing. Luppicini (Ed.), *Trends in distance education: A focus on communities of learning* (pp. 17-40). Greenwich, CT: Information Age Publishing.

Merriam, S. B., Caffarela, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide*. (3rd ed). San Francisco: Jossey-Bass. pp. 105-129.

Milheim, W.D. (2006). Strategies for the design and delivery of blended learning courses. *Educational Technology, 46*(6), 44-47.

Murphy, E., & Coleman, E. (2004). Graduate students' experiences of challenges in online asynchronous discussions. *Canadian Journal of Learning and Technology, 30*(2), 29-46.

P.H. Coombs, *The world crisis in education: The view from the Eighties* (New York: Oxford, 1985).

Poelhuber, B., Chomienne, M., & Karsenti, T. (2008). The effect of peer collaboration and collaborative learning on self-efficacy and persistence in a learner-paced continuous intake model. *Journal of Distance Education, 22*(3), 41-62.

Rabak, L., & Cleveland-Innes, M. (2006). Acceptance and resistance to corporate e-learning: A case from the retail sector. *Journal of Distance Education, 21*(2), 115-134.

Reeves, T.C., Herrington, J. & Oliver, R. (2004). A development research agenda for online collaborative learning. *Educational Technology Research and Development, 52*(4), 2004, 53-65.

Riverin, S., & Stacey, E. (2008). Sustaining an online community of practice: A case study. *Journal of Distance Education, 22*(2), 43-58.

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Methodological issues in the content analysis of computer conference transcripts. *International Journal of Artificial Intelligence in Education, 12*, 8-22.

Schwier, R.A, (2007). A typology of catalysts, emphases and elements of virtual learning communities. In R. Luppicini (Ed.), *Trends in distance education: A focus on communities of learning (*pp. 17-40). Greenwich, CT: Information Age Publishing.

Schwier, R.A., & Daniel, B.K. (2007). Did we become a community? Multiple methods for identifying community and its constituent elements in formal online learning environments. In N. Lambropoulos, & P. Zaphiris (Eds.), *User- evaluation and online communities* (pp. 29-53). Hershey, PA: Idea Group Publishing.

Selman, G., Cooke, M. Selman, M., & Dampier, P. (1998). *The foundations of adult education in Canada. (2nd ed)*. Toronto: Thompson Educational Publishing.

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.

Sheehy, G. (2008). The wiki as knowledge repository: Using a wiki in a community of practice to strengthen k-12 education. *Tech Trends, 52*(6), 55-60.

Tough, A. (1971). *The adult's learning projects: A fresh approach to theory and practice in adult learning* (Toronto: Ontario Institute for Studies in Education.

Ural, O. (2007). Attitudes of graduate students toward distance education, educational technologies and independent learning. *Turkish Online Journal of Distance Education, 8*(4).

Uribe, D., Klein, J.D., & Sullivan, H. (2003). The effect of computer-mediated collaborative learning on solving ill-defined problems. *Educational Technology Research and Development, 51*(1), 5-20.

Virtual Learning Communities Research Laboratory (2009). *Virtual Learning Communities Research Laboratory*. Retrieved March 18, 2009, from http://www.vlcresearch.ca.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.

---

[i] The authors gratefully acknowledge the considerable contributions of Jaymie Koroluk and Xing Xu to this research, and to the critical analysis of earlier versions of this paper. This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.