

Getting Acquainted:

Learning communities and collaborative distance learning

Joan Greenbaum^a & Lars Svensson^b
joanbaum@ix.netcom.com^a and lars@udd.htu.se
LaGuardia College/City University of New York^a
Laboratorium for Interaction Technology,
University of Trollhattan Uddevalla^b

Abstract

This paper reports from a joint project between two groups of students from New York and Uddevalla, Sweden. A web based discussion board facilitated their communication. Analysis of the interaction patterns tells a story of 'getting acquainted', but also of building a community for collaboration and learning. The students gradually moved from polite dinner table-like conversations to active discussions on course related subjects, often with a cross-cultural dimension. The results of this study illustrate the importance of situated learning as a base for extending learning over distance.

Keywords: Communities of practice, Collaborative learning, Distance education

BRT Keyword: IA

1. Introduction

As the dust begins to settle from the hype about distance learning some of us who have experimented with it have once again come to realize that learning is a set of complex activities that can not be easily designed into technological features. At the same time, as the study documented here illustrates, we have also begun to realize that some very simple concepts from our daily lives are also important in building communities for learning. In our case, a joint web site discussion board shared by students in Uddevalla, Sweden and New York City, we recognized that the course site was a 'place' where the students began to get acquainted with each other. And as Lave and Wenger have pointed out their book entitled *Situated Learning* (1991, new understanding doesn't exist in isolation; rather people learn through their relations to events, people and communities. The view of learning through distance which we present here is markedly different from the more standard approach to distance learning where it is claimed that technology such as teleconferencing and web site use collapse time and space and make for more expedient learning (see for example Sproull & Kiesler, 1991) or (Laurillard, 1993).

A central problem with the claim that distance learning enables students to learn faster and at their own time, rests on a view of learning as product. This view of product and test-based learning is fundamentally linked to individualized learning. While educators, in the U.S. in particular, repeatedly test students on their knowledge of content at the end of a semester, that 'content' is not necessarily synonymous with 'knowledge',

nor is it a stationary product of a learning situation.

In contrast, we view learning as a process, and as Lave and Wenger explain in *Situated Learning* (1991),

..."we emphasize the significance of shifting the analytical focus from the individual as learner to learning as participation in the social world, and from the concept of cognitive process to the more-encompassing view of social practice". (p. 43)

In the experimental project we are about to describe we depart from the individual and isolated models of packaging learning products to be provided at a distance. Our focus is on the social aspects of learning processes: how people interact in the social world in order to use their knowledge through their experiences with others. We denote another element in our departure in that for our experiment we are defining the social world as the interactions the students experience using the course web site discussion board.

2. Using distance to expand learning: what we did

In our study we set out to use distance in the process of learning, with a particular interest in the cross-cultural interaction of people 'talking' to each other from different country perspectives. Our connections were through themes in "Computers and Society" courses in two universities which were linked in three ways:

1. the use of a joint course web site, including a discussion board;
2. a common reading assignment;
3. and a similar analysis and design project.

Thus distance was not the objective of the learning mode (as is more common in distance learning projects), but rather a vehicle to extend multicultural interaction in the learning process. The course web site which is described in section 4, was hosted in Uddevalla Sweden, and was designed and modified for this project.

In both countries the students read Donald Norman's *The Design of Everyday Things* (1988) as the central text, and both groups had a similar assignment to analyze an everyday artifact that 'annoyed' them and redesign it using Norman's principles. It turns out that both the book and the problem-oriented assignment were a good basis for cross cultural discussions, and provided a solid range of projects involving redesign of objects as varied as hard to open snack bags, to microwave ovens and, of course, ubiquitous cash machines.

The educational environments were vastly different, as were the background and expectations of the students. At the university in Uddevalla, Sweden, the students were studying the second year of a three year program in Systems Analysis. The students were located in learning centers in six small communities in the outlying districts of the university. The course discussed in this paper was a voluntary extra module, labeled Computers in Society - a design perspective. 30 of a total of 60 students signed up for the course and all six learning centers were included. Parallel to the studies, they also took a ten-week course in Business Administration.

In New York, at LaGuardia Community College of City University (CUNY) all of the course work was in small, seminar classes, and was taught by only two faculty members. The students were incoming Liberal Arts majors, who were part of a required and physical learning community called a 'cluster'. In addition to the Computers and Society course, they shared other courses in literature and social science. The students were young (under 21) and working only part-time. Not uncommon for a New York

public environment, half of the students were recent immigrants to the U.S., coming from a range of countries and languages, and rapidly trying to acculturate themselves to America, New York City and the English language. While the students in Uddevalla were familiar with using computers, the group in New York was mostly newcomers to computer use, with the exception of three students who had home computers. But prior computer use nor did not turn out to be an influencing factor in either the course work or in their patterns of communication. There were 29 Swedish and 18 American students involved in the course, both groups with approximately 40 % female students.

3. Getting Academically Acquainted: what we planned

What follows is the telling of a story about getting acquainted. It unfolds as most stories do, through a series of seemingly chance encounters, through incidental events emerging into a form of language and practice between the people and the groups. Imagine, if you will, that you are joining a dinner party of people you don't know, or entering a reception at a conference where most of the people are new to each other. Awkward and perhaps unsure of ourselves we fall back on a set of social 'rules' for getting acquainted. We might talk about the weather, of course, or sports, or national and international events, as ways of testing the water and finding common ground. And once into a common topic we might talk about it for a short time, before closer conversation with one or two people about more interesting and mutually agreeable topics, like our own work or interests or indeed lives. And such was the pattern of our joint course web site. Although it took us time to realize that is how the students were using it, and it took a good deal of data analysis (see Section 4) to better understand the interactions. Like most educators, we had established some learning objectives and some technical choices through which we imaged the learning would take place.

We found, as a result of analyzing the web entries, that web site learning, like dinner party or cocktail talk, takes some getting acquainted. The lessons we have learned from our project, we believe will help us and others in establishing a more realistic view on how to foster learning community building in distance learning situations. The lessons can be useful for both preparing the pedagogical practices for courses using distance, and for looking at design strategies for drawing students into an environment in which different learning processes can take place.

Initially, of course, we had great expectations for both our pedagogical approach and for the research project we embarked upon. One of us envisioned a joint web site course-board where academically-inspired reflective dialogue would help students clarify their thinking and writing (in English) about design concepts. The other imagined the outcome as a joint televised conference where students would present their project findings and 'show off' their new designs. But such is the enthusiasm of many researchers, and the naivete of experienced teachers who often plan courses as if 'good' course design and pedagogy will somehow pour new learning into students. Try as we might, to overcome the 'empty vessel' concept of teacher-driven learning in students, this old style lives long and deep in our consciousness. While overtly we had organized a pedagogy and a web site of learner-centered, problem-oriented discovery, as teachers and researchers, we held the optimism of the perennial professor: this time the course will be Great!

During the semester, the student 'chat' on the joint discussion-board appeared at a

glance to be disappointing. Reflective analytical discussions over issues like Norman's concepts of "affordances" and "mapping" were not taking place, at least not in an academically structured way that one might expect in a classroom. Indeed, in a presentation of the project to a group of university deans in New York, several deans asked "what's this got to do with the design?". But it did. And in analyzing the 'data' of the course-board interactions we saw three distinct patterns which we believe provide pointers for others who plan to extend learning processes through distance.

The three patterns that we found in the interactions were:

1. initial 'getting acquainted' entries, which served as a form of community building;
2. course discussion entries mixed with fascinating cross cultural descriptions; and
3. finally as the semester neared the end, entries which were more flavored by community maintenance activities.

These patterns or stages of discussion were based on an analysis of our coding of the 'data' of the discussion board entries. In constructing our experiment with two student groups communicating through the same web site we had planned to use the entries as the primary unit of analysis. Our intent was to use genre analysis to study the language and communication styles of the students as they responded to the assignments and to each other. The fact that the separate entries are structured into threads is a key element of the board, which provided a structure for grouping messages (Fjuk, 1998). This aspect made it necessary to conduct a second level of analysis, where we focused on the 'essence' of the discussion threads and labeled them according to the phenomena that we thought best described the thread as a whole. And, as the following data analysis and discussion indicate, we also came up to a more general level of analysis where we observed and clustered groups of threads into the patterns highlighted above. Thus our analysis of the student web site entries is layered in the following ways:

1. coding of individual entries using a modified genre analysis coding scheme
2. labeling clusters and groups of entries and threads
3. grouping the clusters and threads into patterns.

4. Analyzing acquaintances: coding and using the entries

4.1 Overview

The entries constituted the data-source for this study. Each entry was coded with respect to a number of elements which were based on a coding scheme used by Orlikowski and Yates (1994) for genre analysis in an organization. We set out to check each entry for structural elements like the use of opening salutation, sign off, emoticons and pseudonyms. The entries were also judged with respect to language characteristics such as anger, humor or sarcasm. The primary and secondary purpose of each entry was categorized as follows as

- a question,
- a reply,
- agreement or disagreement with an earlier entry,
- a general comment or statement
- For Your Information (FYI)

- thanking or apologizing to previous entry.

In addition we added, where known, some demographic variables about each author, including gender, nationality and identity. The following gives examples of the entries and details the results of the coding and our analysis of the interactions on the web site.

Hi..

I just don't like to see that this page is empty so I will write about nothing and hope that it soon will be a lot of messages here..

This page is like a wall that newly has been painted. Everyone try to keep it clean but when someone make a little something on it, it will soon be full of messages etc.

I'm looking forward to "meet" our new mates...

Have a great day!

hugs

This was the first entry to the board, posted by a Swedish student on the 23rd of September (98) and it was to be followed by 324 more messages during a period of 11 weeks. The text hints at the author expecting the discussion board to become a meeting point for two groups of people, rather than for 50 individuals. There were indeed many factors that encouraged her (and us) to approach the course from such a group perspective, since the characteristics of the two groups in many ways were different.

On one hand the Swedes; older students living in small communities on the countryside, studying their second year of a rather technical distance education program. All of them experienced computer users with more or less unlimited access to the Internet.

On the other hand, the young Americans; immigrants to a world metropolis, studying Liberal Arts in classroom-based seminars, many of them working on the Internet for the first time.

Yet another aspect that could be argued to enhance the sense of two communities was the six-hour time difference between Sweden and the East Coast of USA. This was expected to result in entries being added to the board in alternating "chunks" from the two sides of the Atlantic. To some extent this was also actually what happened, but the effect was reduced by the fact that the Americans did most of their posting during the daytime, from the computer-lab on the campus, whereas the Swedes did a lot of posting from home, in the evening.

There were 29 Swedish and 18 American students involved in the course, both groups having a similar gender-mix with approximately 40% women. Although the groups varied in size, they both ended up with a more or less equal number of entries. From table 1 we can also see that men and women were equally active in posting.

Table 1: Entries to the board with respect to Gender and Country.

No of Entries	GENDER			
NATION	F	M	X	Total
Swe	43	101	10	154
US	64	92	6	162
X	1	1	7	9
Total	108	194	23	325

The discussion board is accessed from the course website (www.udd.htu.se/boards/compinsoc) and the start screen shows a list of hyperlinked text-rows, where each row corresponds to an entry. The text contains a subject, an author and the date and time of the posting. The list is indented to indicate the threaded nature of the board, with the seeds aligned to the leftmost margin. The threads are sorted in descending order with respect to the seed, the same principle of order is used within each follow-up-level of the threads. A mouse-click on the entry-header launches the full text of the entry on the screen.

At the top of the page, a writer can choose to start a new discussion-thread (post a seed). As a result, a page with text-boxes is displayed. These boxes should be filled out with name, email (optional) and subject, there is also a larger text area for the message and optional boxes, if the writer wants to include a URL or an image file to the message. The page ends with a button for submission to the board. The procedure for posting a follow up to an entry is done in the same manner.

4.2 Purpose indicators

The table with frequencies of the primary purposes shows that the board had a discursive and interactive function, and was more than just a bulletin board where each entry would be more or less isolated from the others. The best indication of this discursive nature is that 25% of the entries agree or disagree with other messages. Also the rich amount of Replies and Questions (32 %) are evidence of that conclusion. Studying the length of the discussion threads gives more support for this. Only 37 of the 99 threads were solos (consisting of the seed only). An additional 16 seeds had one single follow up, and the remaining threads had an average length of 5.5 entries.

Table 2: Purpose of entries

Agree	14 %
Disagree	10 %
Comment	10 %
For your information	28 %
Question	10 %
Reply	22 %
Apology	0,3 %
Thank	0,6 %
Other purpose	6 %
Total	100%

Comparing the primary purpose of an entry with its structural and lingual indicators indicates the following patterns.

- Openings are more common when the purpose is to pose a question or to give a reply.
- Signoffs are also common in replies, but rarely present in disagree-entries
- The comments often have a humorous content, but are seldom classified as emphasis-entries
- Most sarcastic entries were coded to have the purpose of disagreement
- The angry entries were mostly found among the for-your-information (FYI) entries, but seldom occurred in questions or replies.

Students from both countries used most purposes with equal frequency, but the Swedes more often replied to questions and the Americans were dominant in giving comments.

4.3 Genre analysis

In a previous study of how the Swedish students used the discussion board in their first two courses, three distinct clusters was detected (see Svensson 1998). These genres were labeled Query, Feedback and Smalltalk. The Query-genre contained discussions over course-related issues like exercises and assignments. Feedback referred to all entries concerned with evaluating different aspects of the courses (i.e. administration, content, technology and teacher performance) and finally the Smalltalk entries reflected on social, humorous and everyday life issues.

In the previous study the entries were similar in many ways with respect to rich and typified use of the structural elements and a familiar and informal tone. They differed mainly with respect to language and purpose indicators.

Analyzing the data from this course one can, to some extent, argue that these genres survived the change of language and the influence of new community members. The Swedish students remained faithful to their use of structural and lingual components. However this was not completely adopted by the American students. On the board of this course there was nothing that corresponded to the feedback-genre and Query and Smalltalk seems more or less blurred and to some extent merged into one another.

In light of the differences between the Americans and the Swedes described above it was necessary to depart from the threads in order to find relevant clusters. The intention was to grasp the collective essence of a thread instead of looking strictly at each separate entry. This analysis resulted in five categories, labeled according to the frequency- table below.

Table 3: Genre categories of threaded discussions

Category	Threads %	Entries %
Course /book	25%	13
Community	37%	42
Coming Out	2%	2
Gadget Design	26%	29
X-Country	10%*	14

Note: Ten of the threads (78 entries) labeled as Course/ book, Gadget design and Community also had an element of X-country comparisons.

Cross-country

This series of entries started with a long discussion of the Clinton-Lewinsky affair and continued with political and social events like the Gothenburg fire , typical national phenomenon such as the Swedish moose-hunts and ended in moral and social topics like homelessness, drugs and assisted suicide which were research topics the American students were investigating. Clearly as in any dinner or cocktail party the Clinton-Lewinsky affair an easy conversation opener, but as the Swedish students quickly found out, the "Americans" were, for the most part, in agreement with them, and the

'conversation' fizzled out. The following example is the seed of a thread titled Can you recycle politicians in the US? Posted by a Swedish male student.

Today it was the opening of the new elected Swedish parliament. The prime minister presented his new staff of ministers. Within the ministers there were two who were scandalized earlier: Rosengren(Ex leader of a big Union; Scandal:Sexclub) and Salin (ex vice prime minister; Scandal:Creditcards)

Is it possible to do so in US?

An American male wrote this follow up.

Most probably Not. US politicians are very image conscious. They wouldn't dare align themselves with someone who has a tarnished reputation. It's all about winning, not who is the best person for the job. On the other hand if a politician feels that he will gain an advantage by aligning himself with a serial killer he probably would do it.

To answer your question briefly, It's very contradictory and depends on the situation.

Community

These threads were directed towards building, and later maintaining and protecting what was mutually shared, i.e. the board and its content. The example is a follow up to a seed, probably posted by a person outside the course-community. The seed, labeled OPPORTUNITY, recommended everyone to send \$1 to five addresses and promised lots of money in return.

This type of entry from an outsider called spam is aptly named after the puzzling, unwanted meat product, spam (rhymes with "scam" and "sham") is Net-speak for unsolicited junk email.: A student on the course board responded in the following way

Hi again Opportunity!

Well if I didn't make myself clear above or if there are anything that are indistinct, then please reply to this or read some more anti-spam pages. Just follow my link below ;-) I guess this isn't part of our studies, and I also guess that most of us in this course aren't interested in listening to this kind of "crap"... I really like to be straightforward ;-)

So please go spam your news in another board! I would not like to hear from these "OPPORTUNITIES!" around here anymore.

Community related types of entries were particularly evident towards the end of the semester when the students on both sides of the Atlantic were posting short "Adios" and "Farewell" messages.

Course /Book

This was the category with the closest resemblance to the query-genre, presented in a previous section. It contained mostly short threads and solos and was directly related to the course book. The following example was written by an American student as a follow up in a thread labeled Cool book.

I like the book "Design of Everyday Things". I think it is really interesting to walk around everyday life and notice how so many things are poorly designed. In New York, for example, there is a new Metrocard system to pay for the subways. Well often, it simply doesn't work. They tested it in labs with engineers, but they didn't test it with real people in real subway stops.

This is the seed of a thread with the title 'Knowledge in the head and world'.

In Norman's book "The Design of Everyday Things" in chapter 3 he tells us about knowledge in the head(memory) and in the world. The contents in your head is stored in long and short term memory. Learning something like counting and the alphabet is stored in your head forever because you have to repeat it over and over again throughout life. Short term memory would be remembering to wash the dishes before you go to bed. Everyone has different ways of keeping organized. Arbitrary relationships have no meaning or particular relationship to one another. The items to be retained form meaningful relationships with themselves or with other things already known. You do not have to remember something in order for you to explain later on.

Gadget Design

Entries and threads in this category were related to the common redesign assignment and covered rich discussions about a variety of poorly designed artifacts. The threads did not only contain reports on failure, but also constructive proposals and discussion about how to improve the design. A wide variety of objects were discussed, for instance soda cans, water faucets, ATMs and microwaves. In the following two entries it is the remote control that is the subject of discussion.

The thing that ERK'S me the most are the new remote controls.

These new controls have so many functions that you really don't need like the edit mode and these new

rewind and fast forward these features are not very hard to learn but how about settings!

most of the new T.V and VCRs has to be set on the remote control, and therefore have a lot more buttons.

It's a big issue when it comes to people who don't speak the native language. You have to read the manual to understand the remote control!

That freakish!!!

JOHN

Hi there...

This could be a real problem, but I do think that most of the TVs and VCRs sold here have OSD with support of many many languages. But the remote control might need a redesign! I don't think that it's 100% possible to learn all the functions. Perhaps the simple things like colour and that could be easy to learn. But my VCR has all these strange things for satellite stuff, and some kind of editor to make videos look better. I find it almost impossible to use these functions without the manual...On the other hand, I don't see how they could make

the RC more userfriendly. I guess you could make it much bigger, that could help a little bit. But

who wants to drag around with a big RC??

/Björn

Many of the student design discussions evolved into comparisons between the conditions in the two countries. For the American students who were also studying sociology, this type of cross cultural analysis about the social use and design of artifacts was expected in their seminar discussions and thus was encouraged on the web discussion board.

Coming Out

In the last period of the course two interesting threads emerged with very personal content. This is the seed of the first one, labeled My personal scare of breast cancer. It was followed up by five more entries made by other students.

The other coming out-thread had the title Herpes, and was written under pseudonym.

When I was 17 years old I discovered a lump on the right side of my breast. I was taking a shower and happen to have come across it. I was completely terrified. At that moment time froze, and I realized that if it is a tumor that I could die. I told my family members and that same day I went to the doctor. She told me that she wanted it removed as soon as possible. As a result I decided not to register for the second semester of school and have my surgery. It was a small proceduer that only lasted 20 minutes. The next few weeks were agonizing. I already new that I had an uncle that died from cancer at the age of 7 seven and another who had just recently died of cancer. So I knew that I had cancer in my family. When I finally went back to my surgeon for a followup he told me that it was not cancerous. I was relieved but he told me it could return. Through the whole ordeal I realized that there was so much I did not do in life and the most important thing of all, that you can get breast cancer at any age and it also does not matter what sex you are, cancer does not discriminate. Before this incident, because I was young I felt I was invincible to these things and I am sure there are alot of young peolpe who today feel like I use to feel. People should always be aware of all the changes that your body goes through and if you think something strange is going on go to your doctor do not delay because tha longer you wait the worse it can get. Let me repeat again

CANCER DOES NOT DISCRIMINATE!!!!

5. Analysis of coded entries

The overall patterns and the genre analysis discussed above show how the students found ways to get acquainted with each other through their reading, assignments and country topics. In addition, our analysis included an assessment of individual entries, and characteristics of threads which provide a background for further comparison in future studies. The following illustrate some of the structural characteristics of the entries themselves.

5.1 Entry author analysis

The posting-activity differed between individual participants of the course. We (the authors of this article) were responsible for 12 entries each which were mainly seeds to spark discussion or replies to questions. Eight of the Swedish and one of the American students did not post at all. A group of 15 students only posted once or twice. The data material is too small to base any thorough discriminant analysis upon, but looking to the

most active posters with respect to the primary purpose of their entries, some profile-patterns are vaguely hinted.

The far most active person on the board was an American male student who signed his name to 34 entries. Together with one Swedish student (19 entries) he acted in a sense as a host for the board. Like skillful hosts on a dinner party, they were seeding or planting conversation starters and were active in many threads, doing follow ups with the purpose of replying, agreeing or disagreeing to earlier entries. All of the activities of these two students were beneficial to keeping the conversation going and in a sense caretaking of the community as a whole.

Another group of three students, (2 Swedes and one American) were more particular in their choice of discussion topics, they seldom seeded and did not ask questions but were active in answering others.

Then there were two students with a very careful and defensive approach to the discussion. The majority of their postings had a primary purpose of agreeing with someone else or replying to the questions of other. Most of the threads they participated in were found in the Community category.

5.2 Structural indicators

The table below shows to what extent the structural indicators coded for in this study was used. The coding simply stated an objective Yes or No to indicate whether the component was represented in the entry or not, hence no recording of repeated use within one message.

Table 4: Structural Indicators used in entries

Structural indicator	Frequency (%)
Emoticons	10
Opening	33
Signoff	37
Pseudonym	8
Item-list	3
attached url and/or image	4
new subject*	4
embedded text*	50

* *seed entries excluded*

There is no proof of gender having been a significant factor with regard to the use of structural components, there is however a small tendency towards more frequent use of emoticons, opening salutations and signoffs among the men. More obvious differences are revealed when analyzing the data from a nationality-perspective.

All the entries that contained *emoticons* (Galagher et al, 199x) like the smiley, ":-)" or body language indicators (i.e. *sigh*) were done by Swedes.

The Americans more frequently erased the text of previous message(s) when posting a follow up. Only 17% of the American entries (seeds excluded) contained text from one or more of the previous entries, the corresponding number regarding the Swedish entries was 78%. However this structural feature was seldom used in a

constructive way, i.e. mixing new comments with old text. 63% of the Swedish messages were started with a salutation, nearly five times more frequent than the Americans, similarly 45% of the Swedish and 24 % of the American entries ended with a signoff. In 6% of the entries the name-field of the message contained text that made it impossible to identify the author. The nature of these "pseudonyms" varied from name-like signatures such as Mr Loverman, Queens Finest, T-DOG and X to sentence-like texts referring to the content of the entry, i.e. More Wolves and Bears, herpes and Welcome to the students from NY! In some of these entries it was still possible to determine the nationality and or the gender of the author.

There are no strong indications that the use of structural components changed over time. A small increase in the use of smileys and an interesting decrease in the use of pseudonyms in the latter half of the course were however hinted.

The structural indicators could be viewed as part of the affordances of the discussion board. They are a means of expression and tools for using the board-application to its full capacity. Some of these possibilities were practically not exercised at all. For instance, the possibility to advert the essence of the message through changing the default subject that is automatically generated when posting a follow up was never used by the students.

The fact that the Swedish students more frequently used structural means of expression could have several plausible explanations. Emoticons, attached URL's and images are perhaps signs of a higher level of computer know-how. It is hard to tell whether it is a question of natural use, or if it is more of a conscious way of showing of.

The use of an Openings could be a simple way of stating the primary target of the entry. Is it addressing the whole community, parts of it or is it aimed at a specific debater? Together with signoffs, openings are also used to create a more familiar tone. This familiarity was a significant characteristic in all the previously studied courses (Svensson 1998).

5.3 Language indicators

The coding consisted of subjective interpretations of whether or not the entries expressed anger, humor, emphasis, sarcasm or any other "feeling". Furthermore the entries were judged according to a three-level ordinal scale with respect to the level of formality and grammatical quality.

Table 5: Language Indicators

	Frequency %
Emphasis	35
Humor	12
Anger	5
Sarcasm	10

Emphasis and sarcasm were independent of both gender and nationality whereas humor was twice as common among the men and anger was four times more frequent in the American entries (13 and 3 entries respectively). Most entries (80 %) were judged to be of medium formality, but the Americans wrote nearly all of the entries that were classified to have a high level of formality. Perhaps surprising, only a vague tendency

towards a higher grammatical quality was found in the American entries, although as previously noted, half of the Americans were recent immigrants. 13 % of the entries was sorted into the lowest level of the scale. The following example was posted by a Swedish student is a representative example of that category.

Hi there.

All of the sudden this board just exploded, nice! I'm not sure if this is bad design or not, but I will tell you anyway. Probably is it that we are afraid of new technology. However, have you ever sent a email and wondered if it reach it's reciever? I know I had several times. And yes, I know that you are being sended a mail if you didn't type the right adress, but anyway. If the receiver hasn't answered my mail within one hour, I get really confused and sometimes I had called to the receiver and asked him if he got the mail or not! And when he say : "I haven't check my mail, what was it"? I say : "Read the mail", and hung up. I think it's because we don't trust this new technology yet.

It is probably wise to be careful in drawing to strong conclusions from the results of the language indicators. Firstly the coding is done with subjective interpretations of the texts and secondly the variation in length of the entries makes it even more difficult to do a strict categorization. Short messages are hard to code with respect to language indicators, and are therefore a potential source of skewing bias to the material.

6. Discussion: situated learning over distance

We see the use of our course site as an example of using distance to enhance learning processes. Seen in this context the concept of learning needs to be placed in the broader more situated arena of learning communities and students active participation in them. In their book *Situated Learning*, Lave and Wenger (1991) explain it this way:

"Conceiving of learning in terms of participation focuses attention on ways in which it is an evolving, continuously renewed set of relations; this is, of course, consistent with a relational view of persons, their actions and their world, typical of a theory of social practice". (p.50)

While Lave and Wenger examine physically co-located communities of practice, such as midwives and tailors, we believe that similar aspects of situated and participatory learning can be an analytical lens for viewing the process of learning over distance. The use of coded entries on the Discussion board gave us a vantage point from which to view the participation of the students and the evolving nature of their discussions. In Section 3 we mentioned the three larger patterns which became apparent from clustering groups of entries and threads. These patterns told a familiar story of community building; one where members or would-be members begin by

- 1) getting acquainted through general discussion topics and then go on to
- 2) discuss more serious issues, in this case the course assignments, and then
- 3) follow-up with more personal communication in an attempt to maintain the group they may then feel part of.

Sections 4 and 5 discussed the actual coded entries in more detail showing that a genre approach yielded topics that the students most frequently focused on. These included discussions about

- Norman's *Design of Everyday Things* 25% (the assigned reading),
- communications about the community that they then associated with 37% (the

Discussion board),

- exchanges about 'gadget' design 26% (the analysis and redesign project assignment they were required to do).

In each of these topic categories the entries became lively interchanges, but only after the getting acquainted period had run its course. Additionally 10% of the exchanges were about cross-country interests, although it should be noted that a large proportion of the 'gadget' design and community building topics were also concerned with curiosity about students' values and interests in the other country. From our perspective this was an important finding for it reinforced one of our learning objectives--the extension of learning over distance and between cultures.

The data in Section 4 and 5 was based on a genre coding scheme developed from a study of organizational use by Orlikowski and Yates (1994). Their study focused on email use among an existing professional community within an organization. We modified and expanded the coding scheme because web based communications are significantly different from organizational email use, as was our use of the site to enhance learning among two groups of students who had had no prior contact. Nevertheless, the practice of having coded entries and linking them through threaded discussions was useful for uncovering patterns and categories of use and for identifying purpose and response patterns among entries. In future studies we will explore expanding genre analysis along non organizational lines, possibly borrowing from Engeström (1995) where the social outcomes of interactions are studied.

Learning as a process includes, among other things, motivation on the part of the learners and the teachers. We believe that the course board as an extension of the small in-person, project-based group work, served as a motivational mechanism over the semester. It gave the students a chance to share their projects and a place to ask questions or 'try out' ideas. As teachers we did not involve ourselves in their discussions (expect for occasionally seeding new discussion topics) and it appeared from both the number and the content of the entries that the students found the site a comfortable place to exchange ideas.

This is to some extent contradictory to the results reported by Starr Roxanne Hilz (1998). She concludes that small groups, actively mentored by an instructor are critical success factors in Web-based courses.

Initially some of the entries seemed to resemble attempts at a Chat room style, although these disappeared rather quickly as they were not followed up. Since a course web site for discussion is different from chat rooms, bulletin boards, email lists and news groups, it would be interesting to explore follow-up studies to compare and contrast genre and social exchange among participants.

The Discussion board on our web site was in no way intended to replace classroom or in person learning experiences. It was rather planned as a space where new learning experience could arise and be shared by students not present in the physical environment. The process of learning in universities involves some form of getting acquainted, as does any process of learning from general social practice through specific on-the-job learning. Rather than viewing learning as individual knowledge acquisition, we believe that our study offers pointers to how web-based learning sites, coordinated through problem-oriented pedagogy, can extend learning situations for acquainting students with others in learning communities.

Acknowledgements

We want to thank all the students, from both sides of the Atlantic, that participated in the course, we also want to thank Maj Gunnarsson, Maria Magnusson and Pia Stahl-Falck at Laboratorium for helping out with the coding of the entries to the board.

References

- Engeström, Ritva (1995) "Voice as Communicative Action," *Mind, Culture, and Activity*, Vol. 2, No. 3, Summer 1995.
- Fjuk, Anita (1998) *Computer Support for Distributed Collaborative Learning: Exploring a Complex Problem Area*, Dr. Scient Thesis 5, University of Oslo, dept of Informatics, Norway
- Galagher, Jolene & Sproull, Lee & Kiesler, Sara (1998) Legitimacy, Authority, and Community in Electronic Support Groups *Written Communication* Vol. 15, No 4 Oct 1998, pp. 493-530, Sage Publications.
- Hilz, Starr Roxanne (1998) Collaborative learning in Asynchronous learning networks: building learning communities, *Proceedings of WebNet 98, AACE, Charlottesville, USA*
- Lave, Jean and Etienne Wenger (1991) *Situated Learning, Legitimate peripheral participation* (Cambridge University Press).
- Orlikowski, Wanda and Joanne Yates. (1994). "Genre Repertoire: The Structuring of Communicative Practices in Organizations," *Administrative Science Quarterly* 39: 541-574.
- Norman, Donald (1988) *The Design of Everyday Things*, Doubleday Press, New York.
- Sproull, Lee & Kiesler, Sara (1991) *Connections: New ways of working in the networked organization*, MIT Press, Cambridge, Massachusetts, USA.
- Svensson, Lars (1998) Query, Feedback and Smalltalk: Genre Repertoire in a Distance Education Project, *Proceedings of Iris 21, University of Aalborg, Denmark*.