

Paper 9:

# Learning Community On-Line: Developing Shared Spaces in the Academic Context

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## Summary

- It is generally cited as the key advantage of a virtual learning institution that it is time and space independent. And, to date, the dominant environment for academic learning on-line has been asynchronous (e-mail, discussion lists, and computer-mediated conferencing). Counter to this, discourse around the virtual community as a type of the post-modern community draws on continuities with traditional understandings of community as defined by location and time, and in particular emphasises the appropriation and domestication of notional on-line spaces through the evolution of local cultures and conventions. This paper approaches the concept and practice of an on-line learning community as an intersection of these two perspectives, and also as a site of tension between them.

The main case study from which illustrations are drawn is a six-month period covering the establishment of an on-line collaborative learning group. The context was an award-bearing professional development course and the environment asynchronous conferencing (primarily Lotus Notes, but the outcomes and method are not closely software dependent.) It is hoped that the conference session can be fairly interactive, using the broad framework of an analysis laid here to discuss more detailed examples of community-building interaction.

## Introduction

- Networked learning's conquest of time and space constraints on education has been widely celebrated, from quite opposed perspectives. From the emancipatory learner-centred perspective, liberation from barriers of distance and timetabling offers a voice to the marginalised or the diffident (eg Harasim, 1993, McConnell, 1994). From organisational or policy-making perspectives, the major implication is a shift in the location of learning from institutional to individual settings - workplace, home or community centre - often with a parallel shift to individual responsibility for the resourcing of learning, especially for the management of learning time (The Learning Age, 1998; National Grid for Learning, 1997).

Other papers in this conference will address and critique the emancipatory potential of networked learning, the extension of our conceptions of students and of study. In this paper and presentation, I will try to focus on some of the frameworks of dimensionality which the participants in networked learning, whether as "producers" and "clients" or as "co-learners," bring to on-line interactions; and on how (or whether) the models from time and space located learning situations help us to interpret, and plan for, on-line experiences.

In detailed discussions here and in the accompanying conference presentation, I shall be referring primarily to networked learning activity taking place in the setting of an formal graduate level programme, and using a broadly social and constructivist pedagogy, incorporating self-directed learning activities and action research projects. Thus to an example which refers itself to two divergent organisational contexts, that of the on-line community and that of the academic award-bearing course, and may begin to expose some of the interactions and tensions between those contexts. The software used is an instance of the currently dominant type for on-line learning - the asynchronous conferencing environment.

## Constructivist approaches and the learning community concept

- There should be little need, in the context of life-long learning, to argue the case for learning as collaborative activity, in which socially- and cognitively-oriented interaction from teaching to self-directed learning has accompanied the convergence of information and communication technologies in the last fifteen years. Whether we attribute this, pragmatically, to the explosion of knowledge and consequent demands for reskilling through flexible and contextualised forms of provision (eg Norris, 1996) or prefer to invoke radical shifts in theories of cognition and identity (cf Sherman, 1995), as educational designers we can no longer overlook the significance of peer interaction and group working practices.

For the academic context, socially situated knowledge has been persuasively presented by Laurillard as constructed by negotiation within a discipline framework (Laurillard 1993); in an adult learning context, it may be understood as evolving through reflective practice, in a group conceived as a "learning community" (eg McConnell, 1994). Either scenario assumes the construction of a shared social reality, bounded and supported, like other forms of community, by co-location. Co-presence may be understood a defining value of intellectual community, as in Mitchell's (1995) reading of the information architecture of traditional academic institutions;

"Residential institutions (...) integrate rooms for scholars and provide hierarchies of informal and formal meeting places. The demand that colleges and universities typically make is to be "in residence" - to be part of a spatially defined community. And these communities enforce, as well, strict compliance with academic timetables, classroom schedules, and calendars."

For the learning group convening in virtual space and time, however, both these orienting dimensions become problematic.

## The Space of the Virtual Institution

“Virtual Institutes” and “Virtual Colleges” have now joined the “Virtual University” as common-places of on-line learning, transpositions of physical institutions into their time- and space-distributed variants. A pervasive metaphor is that of the “Virtual Campus” on which the different activities of organisational life are represented by special purpose “locations” with varying uses facilities and access restrictions. A typical virtual institution may provide a library, an administration block, departmental notice-boards and teaching faculty offices, as well as lecture hall and tutorial or seminar rooms, all accessible through an Internet or intranet connection. The whole institution” view may even be visually styled as an architectural vista (cf the Scottish Universities’ Clyde Virtual Campus at <http://cvu.strathclyde.ac.uk/campus.html>, Simon Fraser’s Virtual-U [http://virtual\\_u.sfu.ca/vuweb](http://virtual_u.sfu.ca/vuweb)).

The instant accessibility of all campus facilities through such a unified network interface enhances the individual user’s sense of control, but is not entirely positive in its effect on community. Acker (1997) reminds us of how the centralised campus model of the large mid-20th-century university was engineered to facilitate serendipitous contact between the diverse populations of the institution:

“‘circulation’ became a goal of campus construction (...) and functional division occurred so that people had to move about. Faculty offices were constructed away from classrooms, and libraries were freestanding and triangulated from offices and classrooms to further encourage chance encounters and the building of community”

(Acker, 1995)

The loss of informal interstitial communal spaces is often recognised in the virtual campus model by signposting “common rooms”, “bars”, “terraces” or “cafes” in the form of discussion lists, bulletin boards or computer-mediated conferences where students are free to contact each other and exchange ideas. Such provision cannot address the thrust of Acker’s argument that the richness of academic community life depends on social interactions which are discrete, sequential and unpredictable; conditions which are designed out of the virtual institution interface.

From the perspective of socially-based learning, we might add that course-specific open spaces narrow opportunities for social contact; that open spaces afforded by generic software as a built-in function alongside facilities for reading materials, doing exercises, submitting assignments, receiving feedback from tutors are impersonal; and that any separate social provision that demands the same kinds of attention, and offers the same kinds of reward and interaction, as task-oriented elements of the course is likely to be neglected in favour of more time-critical course activities.

## The Temporal Dimension of Virtual Study

The temporal dimension of the virtual campus remains that of “compliance” with calendars, if not with the detail of timetables, an expression of the gatekeeping function of the institution. The time of the student from the institutional perspective is measured in completion rates, pre-requisites for progression, and credits derived from notional study hours, within a formal enrolment period extrapolated from contact course models. For Masters’ candidates joining Sheffield’s MED in Networked Collaborative Learning, for example, the institutional perspective takes the form of a commitment of 15 hours per week to on-line discussion and research and assignment work through a specified coursework period.

However, the immediate temporal context of virtual course participants is that of their own professional duties, and personal responsibilities, and in these chronologies the time of on-line engagement often registers merely as absence rather than commitment elsewhere. While lack of time for on-

line activity is a regular source of anxiety, this may be partly a problem of giving oneself permission for virtual activities, as these comments from four (out of six) members of one group reviewing their first two weeks on a pilot on-line professional development course illustrate:

- Guilty as charged, for my part. I haven't been able to grab as much time as I planned to, \_even though\_ I can set aside time at work to participate.
- I have actually only been able to read and print ... I have had almost no time to think, and little time to use online at work. [This participant's home Internet connection was out of order at the time.]
- I seem to be able to log on only in the evenings at the moment.
- My initial response was to feel guilty at not having been more active in the past week. But on reflection I think this is simply the reality of this sort of collaborative learning, especially when there are often (more pressing) demands on one's time.

Source: on-line discussion, DoODL Project course Introduction to Collaborative Learning, February 1998. (For DoODL courses, see the on-line catalogue at <http://www.idb.hist.no/doodl/>)

More subtly, time pressures can invite or even mandate a "strategic" approach to participation in on-line learning activity, which is inimical to both collaboration and reflective practice.

Another crucial difficulty of group interaction in an asynchronous environment (though this cannot be illustrated in detail here) is that the common space of discussion lacks a common time dimension. Participants have a different view of group activities, depending on the time at which they update their local version of the postings.

## Community Model

- In trying to address some of the problems of discontinuity and dislocation sketched above, socially-based learning may draw on the emerging models of virtual communities

In the rhetoric of the on-line community the "space" of cyberspace is presented as a new frontier (or last frontier) trackless, though open to exploration by intrepid pioneers (a metaphor deployed to characterise innovatory academic practice in, for example, Taylor (1996) and explored in relation to earlier narratives of colonisation by Fuller and Jenkins (1995). Alongside the strongly individualistic connotations of pioneering (compare Rheingold's account of selective co—presence based on the virtual homestead (Rheingold, 1995) with Mitchell's evocation of academic co-presence quoted above) the colonisation metaphor also draws attention to the collective enterprise of "settling", the process of familiarisation and domestication, leading to the creation of spaces of mutual interest, or perhaps mutual self interest. It is this process of settling which Baym (1995) has sought to characterise through her longitudinal study of an established community of interest, concluding that:

Community is generated through the interplay between pre-existing structures and the participants' strategic appropriation of the resources and rules those structures offer in ongoing interaction.

Through interaction around the drawing and negotiation of boundaries, place and sequence become localised and meaningful, and social realities are constituted. In the case of potential communities primarily focussed on learning activities, tasks and resources can serve as significant structures around which community can be developed.

Although the spatial and temporal backgrounds still figure in this account, two additional dimensions are identified as critical to the realisation of on-line community:

- shared customs and conventions
- recognition of roles and identities.

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While much of this understanding may escape formal expression in the traditional community, the on-line community constituting itself in written space has unparalleled access to its own past in the accumulation of discussion postings. Feenberg (1989) has suggested that we should view this accumulation as a form of "social memory"; but a key issue for research is how far this repository of explicit precedent is activated in the day to day on-line discussion of all participants, and how it contributes to the active self-definition of a community .

## Implications of the Community Model for Designing an Academic Course Environment

In the remainder of this paper, I shall be drawing on the experience of the MEd in Networked Collaborative Learning at Sheffield, which has been delivered since its inception in March 1996 in part-time distance mode using asynchronous conferencing, supplemented by three face-to-face meetings per year.

To undertake community-building in virtual space implies providing some initial boundaries while allowing scope for appropriation, including reshaping of the learning space, as communal activity and experience develop. Three design requirements follow from this:

- a clear and supportive initial environment design
- at the software level, potential for recurrent customisation
- techniques for monitoring and evaluating the use of the environment

The first of these has been derived from an adult learning conception of learning activity as multi-stranded, encompassing a variety of roles; projected into a virtual environment this requires a flexible range of working spaces or environments, predicated on concerns and activities of the participants (Graebner, 1988, Christiansen and Dirck-Holmefeld, 1995).

For the 1997 (second) MEd cohort, the initial design was differentiated by areas of learning concerns (Fig1).

CONCERN	SPACE & PARTICIPATION
1. <b>Technology orientation</b> -operational and practical concerns	Whole cohort, tutors, expert advisor (system administrator)
2. <b>Group Orientation</b> - group organisation and administration - social interaction and "finding a voice"	Whole cohort, tutors.
3. <b>Domain Orientation</b> - resourcing and information-sharing	Whole cohort, tutors, expert advisor (library/information resources)
4. <b>Construction of Knowledge</b> - conceptualising and discussion - preparing assignment projects	Small learning groups/sets - 6-8 including one course tutor
5. <b>Assessment/Course Requirement Orientation</b> - collaborative assessment of projects	Small learning groups/sets - 6-8 including one course tutor
6. <b>Reflective On-Line Practice</b> - reviewing activities	Small learning groups/sets - 6-8 including one course tutor

Fig 1: Areas of learning concern of the 1997 (second) MEd cohort.

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Some criteria for selecting group learning environment software emerged directly from the reflective collaboration ethos:

- threaded as well as chronological views of the discussions, essential to developing themes over time.
- multiple work areas for a range of user groups and activities, including electronic mail for one-to-one communications.
- asynchronous off-line working predicated on a client/server software architecture
- provision for annotations, graphics and diagrams, and for attaching longer documents to the postings.
- a coherent graphical interface to minimise the focus on the medium (together with a contextualised help systems to speed the initial learning curve).

The ideal environment would have included some form of whiteboard or group document facility, and the seamless integration of remote Internet resources. The choice was made from software versions available by early 1996.

Monitoring and evaluation in the early stages has been principally by embedded strategies: reflective discussion threads (item 6 above) a course team discussion area, and reviews at face-to-face sessions; other investigative approaches are sketched in the following sections.

## Investigating the appropriation of on-line spaces

The corpus under consideration here consists of around 1500 messages posted to whole group discussion areas; including all the messages in discussion threads initiated over a period of six months from the setting up of the on-line course environment. Just over half of these were in the "general purpose" area; the remainder spread fairly evenly across the resources and technical support areas and an additional social area which had been set up on the suggestion of incoming course members for shared use between the two course cohorts.

A longitudinal view is clearly essential to track evolution; at the same time, to investigate how much the collective traces are active as "social memory" in day to day practice requires a close reading of individual themes. But with plural and differentiated community spaces there is also a need to characterise the ecology of different spaces, and to identify shifts over time. An aggregative approach, is arguably less intrusive for this purpose than more traditional ethnographic approaches, (cf Paccagnells, 1997) especially using the in-built data-handling capacity of the software environment, which has the additional advantage of being - in principle - accessible to all members of the course group. It will also gather features not visible at the level of professed intention or strategic intervention (cf Guzdial, 1997).

The following paragraphs sketch some results of this approach, which is followed up at the level of detail in the conference presentation.

## Appropriating On-line Spaces

- This section contrasts the development of two of the open group areas; the first with a technical support, and the second with a purely social function.

### "Using Lotus Notes" Discussion Area

This was the area set up to address immediate concerns about use of working environment and report problems. As the space where success with setting up the communications software was to be reported, it was ensured broad initial participation. Half of the course cohort originated topics in this area. The area had a resident expert who was also the system administrator for the conferencing software. Of the 15 new discussion threads in the 1st month of use, 5 were initiated by the resident expert. However, all subsequent topics were initiated by students - or occasionally tutors. Most of these (17 out of 27) were requests for clarification, or worries about malfunctions. In other ways, the discussion went beyond a simple technical "question and answer" pattern:

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although new topics in the first six weeks were largely reactive, subsequently a new type of strand began to appear - raising "what if" issues about the software environment, including enhanced or alternative uses (7 topics);

some of the threads were quite extensive - peers not only came in to add their own experiences and encouragement, but more proactively to speculate on reasons for problems and offer explanations; for example a query at the beginning of the fourth week about the facility for marking discussion entries as read or unread attracted 13 responses, with several peers intervening ahead of the system administrator.

there were also some (self-consciously) stereotypical roles being played out from very early on: the naive user, the Luddite, the Macintosh (or PC) partisan.

Overall, then, this practically focussed area had provided a strong initial base for cooperative interaction.

## The "Saloon" Discussion Area

This was added as a purely social area shared between the two course cohorts, after discussion with the incoming second course group. The terms of reference were looser than elsewhere.

The number of participants involved at one time or another was quite high at 28 (though with both cohorts involved the potential number was well over 40) and the total traffic was 87% of that in the "Using Notes area". On these parameters, the "Saloon" looks not much less active than the practical support area.

However, the majority of these - eighteen - were fairly short term or reactive participants, responding to leads from others' messages. (All four course team members who participated were in this category, perhaps indicating something about strategic use of on-line time.) A substantial minority - nine - made more proactive use of the area, posting messages once a week over the first two months, while four continued to visit well beyond the period of this study. Some of the most active members in the Saloon areas were also very prolific

contributors elsewhere; but other active members were participants who had been showing more diffidence or a lower profile in the focussed discussion areas.

On the other hand, some course members subsequently expressed the view that the lack of precise focus had made this area less attractive to participants than the others.

A notable characteristic of message content in the "Saloon" area was the breadth of reference to current and local contexts off-line - sightings of the Hale-Bopp comet, comments on the fell-running culture, etc - as well as the occasional announcement of a local event. This was a dimension which was absent - and remarked on at a later stage by one or two participants - in the Forum area, where the sense of community beyond the virtual was expressed much more through sharing views and expressing solidarity around professional experiences, such as Ofsted inspections. In the Saloon area, it seemed that a sense of regional collective identity was drawn on, often quite deliberately, to support the sense of on-line community.

## Developing conventions - establishing a shared time-line

Within the period of the study, a number of strategies can be seen to have evolved, designed to overcome the sense of relativity around time, by establishing "time-lines" of relevance in discussion threads. All of these were deployed in the focussed discussions of the Forum area, though in some cases at least the strategy had emerged first in small group discussion.

- reference back through threads in the headings of new postings;
- In addition to referring by title to the message addressed, or by name to its originator, these headings were often playful, mimicking or parodying previous headers.
- the brief "spontaneous" response - where a single point, quip or query is offered as a response to a substantive posting. While these may be interpreted as an indication of the "breadth not depth"

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quality of on-line exchanges (cf Guzdial, 1997), they also serve the social function of confirming the “presence” of the listeners.

- conventions of indicating a deferred response of the form: “will print and reflect”, “will think and respond”. The opportunity to reflect is one of the key advantages of asynchronous debate, and frequently mentioned by course participants; though they were also aware that in the distributed time of the on-line discussion such responses ran the risk of being overtaken by a shift in their own priorities or, when posted, left as “orphans” because intervening contributions had pre-empted them.
- use of a different font or colour to distinguish quotations, or interlineations in writing a detailed commentary, thus beginning to create a collaborative document.

## Questions arising from the discussion

- Even the brief sketch above illustrates that evolution of community can vary along multiple dimensions. We may have to accept that, just as in the face to face community, virtual learning community members will vary in the needs and energies they bring to different activities, leaving aside the effects of variations in the pace of acclimatisation to on-line working and questions of access.

From the viewpoint of academic course planning, the experiences so far suggest that we should at least be cautious about projects to accredit on-line performance in collaborative learning directly, and that there is still a place for offering supplementary or alternative activities alongside asynchronous conferencing.



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