# Learning, Community and Technology: Ultralab's recent experience

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## Abstract

The use of online communities for professional learning is an emerging field, particularly in education in the UK.

This paper reports findings from ULTRALAB's experience with online learning communities in two contexts. The first is our work on online masters' level modules in the MA in Education. The second is our work with the National College for School Leadership in the online elements of the NPQH learning programmes.

In this work we explore some of the issues arising from our preliminary research and analyse some of the different contexts in building such online learning communities. Such issues that are emerging include developing participation, promoting supportive yet challenging tutoring/facilitation, structuring learning opportunities, connecting formal and informal learning and overcoming isolation.

## Models of online learning

Salmon (2002) identifies four possible models for the future development of e-learning

- content as the basis for learning
- learning objects
- m-learning
- learning through community

Both the content and learning objects models offer a resource hungry approach. The need to identify suitable content, to make it available to learners and to break it into learning objects places the online teacher, tutor or facilitator at the centre of learning. It disempowers the learner. The time required to source the content and to keep it up-to-date is disproportionate to the learning gains.

M-learning, delivering learning to mobile devices, is, as yet, a little understood option with potential as the technology moves on and with potential to link in a community model. We, at Ultralab, are engaged in a pan-European project to look at the uses of m-learning. This project is outside the scope of this paper. Information may be found on the Ultralab website at http://www.ultralab.net/projects/.

Our view is in line with Salmon's analysis, that it is the community model that seems to us to offer the most potential as a vehicle for professional learning in the immediate future. Learners on our programmes are professionals – serving teachers and school leaders. Our view is based on that of Eraut (1994) that their learning comes from making the professional experience-based knowledge explicit. We do this through providing opportunity for interaction. To allow learners to be scaffolded (Vygotsky, 1978) in reflecting on their knowledge-in-action (Schön, 1983, Eraut 1994).

To do this we employ the use of online communities, concurring with the view of Salmon (2002) that it this model that is provides the adult learner with the tools to truly engage in online environment for the purposes of learning. The use of online community also provides a means of addressing Knowles' (1984) model of successful andragogical learning. This model states that adults learn best when learning is:

- based on solving problems not assimilating content;
- negotiated with learners, so that their expectations and needs are met;
- relevant to their immediate context, in their professional lives;
- experiential.

This view is partly based upon relating the use of technology to what we know of the best professional learning processes including learning through

reflection on experience, constructing understanding in work-based and social contexts, and basing learning on the learners needs and priorities. These key ideas about learning are linked to a model of tutoring based upon creating, and 'facilitation' of, an environment where professional learning is enabled and supported.

In designing our online community spaces, we do not eschew content altogether. Rather we provide stimulus and starter references, to allow the development of participative online discussions. The discussions are central to the learning, and the summaries of earlier cohorts or topics are used as resources for future groups. If the knowledge is to be found in the experience and reflection-on-action of the learners, then these summaries, which make that knowledge explicit, are as valuable as any from third-party writers.

## Case Studies, Methodology, data and evidence base

At Ultralab we have been engaged in developing online learning projects since the early 1990s. Since January 2000, we have worked with the UK's Department for Education and Skills (DfES) and, after its establishment by the Department, the National College for School Leadership (NCSL) in the use of online learning communities for school leaders. As part of Anglia Polytechnic University (APU), we also run online modules in the MA in Education's CPD field and projects with serving teachers undertaking action research. These are also based wholly, or partly, in online community.

We adopt a case study, ethnographic approach. In establishing the value of any particular component to the learning of an individual, we are inevitably engaged in the collection of interpretive data as learners reflect on the impact of the components on their own learning. We cannot ever be absolute about the veracity of the data as the evaluative and reflective comments are necessarily the opinion of those canvassed.

Throughout these projects we have collected data through interviews, surveys, both online and in paper form, and external evaluation reports. We have also built in reflective activities to the communities themselves and the contributions to online dialogue provide evidence of the learning process in action.

Two projects are described here. As with the majority of Ultralab's work, they are projects in which staff are actively engaged – in these cases, as tutors or facilitators – and are carrying out action research. The findings of the research come not from detached observers, but rather from those working at the heart of the projects. Another important principle guiding our work is that the projects are not pilot ones for the sake of research**.**

## Case 1: Ultralab Learning, MA Modules and action research

Ultralab's online modules are offered as part of the University's MA in Education (CPD field). We have been offering these since 1996. Fully online, they are aimed at serving teachers and tutors. In 2001, we revamped the those available and now offer 30-credit modules explicitly in Online Learning. Two cohorts of students have studied our Online Learning: Tutoring and Facilitation (OLTAF) module during 2001/02. In this coming semester, the first cohort will undertake Online Learning: Learning and Learners. The focus of the former module is on the tutor or teacher, while that of the latter is on the learner. The two modules thus complement one another.

OLTAF puts online teachers enrolled on the programme in the position of online learners. In doing so, we explicitly ask those enrolled on the course to reflect on how it feels to learn in this environment and how they perceive the impact of the learning on their role. One participant reported,

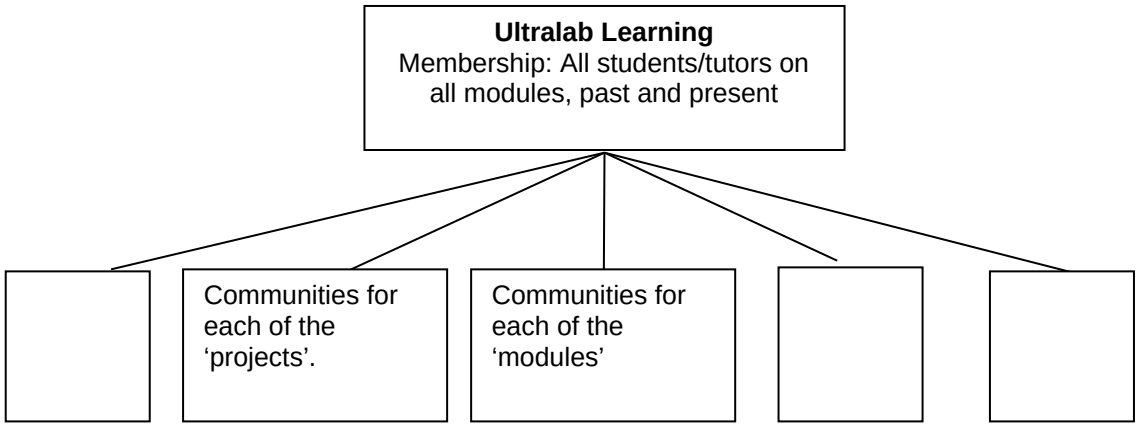
> *One of my first learning points has been to feel the pressure of having to make contributions in order to support the community. My response to this is to try to concentrate on the key points in discussion and support the insights of others. It will be interesting to explore the notion of community for learning as a learner without also being the tutor.*

The Online Learning modules, are assessed in the traditional manner of assignments handed in at the end of the module. For one of these assignments, learners are required to submit an annotated portfolio. This consists of snippets from the module and their own practice, with reflections on the effectiveness of tutoring, styles of learning, space design, and evidence of learning. The other assignment is an action enquiry report.

We complement our MA modules with school-based activity such as the West Essex Action Research (WEAR) project. Six schools are currently taking part in this project. Project teams in each school plan a piece of practitioner research to develop teaching and learning. They develop base line assessment and exemplar teaching strategies, and then collect data on how the strategies have developed pupil learning in the school. Discussions are conducted online about each phase of the research and enable practitioners across different schools to exchange ideas. The community is also a means of keeping in touch and on course over the period of the project.

In 2001, the online space used for these modules was rationalised and an online community, Ultralab Learning, established. Those enrolled on MA modules or other programmes such as WEAR, are all members of this community. The space is an overarching area, used for induction and social discussions. Students also use it to share thoughts and learning from their module in a more general context. The metaphor being used is one of a university social area. Online this, social, part of the space is known as The Shack, after a student bar at the former Brentwood campus of the university!

Students can download guidance material for and tutorials from the Ultralab Learning community. These are held centrally so as to remove the need for duplication, and to prevent valuable materials being locked in private community spaces. From Autumn 2002 this community will also house the cybrary, that is the resources and links used on the individual modules and programmes. Specific discussions related to specific modules, with links to appropriate part of the cybrary, are housed in the learning community spaces dedicated to particular to those purposes. Students are thus members of two communities – Ultralab Learning and that relating to their specific module or programme.



## Case 2: NCSL programmes

The National Professional Qualification (NPQH) programme was remodelled and relaunched in January 2001. Aimed at teachers aspiring to school headship in England, the evaluation that led to the redesign emphasised the need to focus on learning and assessment through school-based activity, the practitioner as reflective learner and the use of ICT in delivering learning opportunities.

Ultralab were contracted to research and develop the use of online learning communities. Working with the Department for Education and Skills (DfES), and later the National College of School Leadership (NCSL),and the ten regional training providers across England, we established a three-tier model of community.

- A national community, named Virtual Heads;
- Regional communities, for discussion with others enrolled on the same stage of the programme (access stage or development stage;
- Tutor communities, for candidates to share summaries of learning with their tutor.

Our preliminary findings were reported to BERA in 2001 (Bradshaw, Chapman & Gee, 2001):

- Candidates more readily engage in a direct question and answer with a nominated expert (the hotseat) than share their learning with peers.
- Summaries of learning presented to tutors often contain a richness that is not borne out by the contributions in public debate.
- Some candidates need to have feedback from, and presence of, their tutors in the community spaces to sustain the discussion.
- Moving tutors from 1-1 to community/group discussion requires both acceptance of the new technology and understanding of the new culture. Where tutors have problems, they often fall back onto e-mails with individuals.
- Candidates read 5 to 10 times as much as they contribute. This is in line with other online community projects run at Ultralab.

In the year since these findings, we have refined and developed the model of communities.

- The regional discussion groups have been enlarged to include all candidates in a region, previously there had been two or three groups per region
- The tutor/candidate communities have been merged so that each tutor has only one community. All candidates' summaries of learning are open to all other candidates in the group. Previously each summary was private between the candidate and tutor.

- Special interest pages have been added to the national community for candidates in special school settings and for those in church schools, or those of a particular faith

Ultralab has also been engaged in the development of an online community for the Certificate of School Business Management Pilot. This is an NCSL programme aimed at school bursars. One of the significant features of the programme has been the introduction of blended learning – mixing online learning community with a managed learning system. Unstructured feedback from learners is that they appreciate the community and see it is the centre of their learning – a place where they learn with others. The findings and experience from NPQH influenced the learning and community models used in this pilot project. The project and its evaluation are the subjects of a paper at this year's BERA conference.

The development of these online learning programmes followed Ultralab's project for the NCSL/DfES in the design, implementation and facilitation of the online community for headteachers in England – Talking Heads.

Talking Heads is an online community for headteachers established as a pilot project by the DfES in February 2000, developed into a working model and placed under the remit of the National College of School Leadership (NCSL) in August 2000. From its inception through to the current date, Talking Heads has been a research and development project based at Ultralab. The project has focused on developing an engaging an informal online learning community through active facilitation by educational professionals trialling a variety of strategies. The project's aims were to reduce isolation and enables headteachers to share good practice.

The original pilot project began with over 1300 members, and developed into a phased introduction to large-scale use from 2001 onwards. At the time of writing membership of Talking Heads is approaching 6000.

## Key findings

The fundamental challenge faced was generating participation, without this there is no online community, and no learning. Both informal online communities, such as Talking Heads, and more structured programme-related communities are effective in enabling professional learning, but to make them successful is a complex task requiring a number of component elements to be put in place. It is easy to underestimate this complexity.

It is possible to generate a vibrant and relevant online community that also enables headteachers to generate and exchange insights regarding their practice, considerably assisting in building capacity for school improvement. For the individual at its most effective, this manifests itself in school leaders and teachers taking a self-directed approach towards their professional learning.

Our findings from evaluation and experience in all of the communities outlined in the case studies are summarised here:

### *Induction process for online learners.*

Time needs to be given to induction, with specific activities designed to negotiate expectations, provide guidance to the online space and resolve problems. We support this with synchronous online activities – 'chats'. This is a departure from our normal use of asynchronous activities.

### *Encouraging participation by also using the online environment as an area for social interaction.*

When engaged in any CPD activity, teachers often report that the social interaction and networking is as important as the formal sessions (Terrell, 2002). To engage learners in online community, opportunities for social interaction have been provided by some tutors. These allow for the informal networks developed at induction to continue and provide an online equivalent of the learning circle face-to-face meetings arranged by candidates.

### *Support for community discussion through reminder e-mails, telephone and synchronous activities.*

The online space can be an isolating one, with comments made asynchronously and by individual remote learners. Learners appreciate tutors who support the community through other channels of communication.

### *Modelling behaviour and presence.*

Where online teachers are overtly engaged in conversations, providing feedback, setting focuses, acting as either facilitator or expert, candidates are more likely to respond. Where the tutor is not overtly engaged, candidates are likely to focus on the barrenness of online space. It is also apparent that where a tutor or hotseat guest provides lengthy answers, this will invoke similarly lengthy future contributions. There is a fine line here between the desire for brevity for readability, and the need for in-depth responses for deep professional learning.

### *Informal versus formal professional learning spaces*

The Shack is used an induction space, and so all are encouraged to contribute there initially. When analysing the contributions in 'The Shack', it is clear that some students feel that this is as natural a place to discuss their learning as the more formal module space.

> *The orientation time was useful, but I can see a need to balance the 'playing' and 'wanting to get on' according to different needs and experience. Welcoming comments in the Shack are good icebreakers…*

### *Formative versus summative learning.*

There is a tension between the formative nature of learning exhibited during the conversations and the requirement for a summative report to be submitted at the end of the module. The structure of the modules relies heavily on the use of asynchronous discussions. Some students feel that they are repeating work by having to write an assignment at the end, and their main reason for enrolling on the module is for pragmatic practice-related learning whish they perceive as disjoint from the demands of the academic masters level criteria.

> *In honesty… I'm not really concerned about the assessed outcome of the unit. I'm working this course as a stand alone to experience online learning and to learn about its methodology. Hopefully this will help me to tutor on NPQH more effectively.*

This attitude often causes students to fail to submit work to the deadline or standard required as they have gained more from taking part in the course than from the demands of the formal assessment.

### *Assessing contributions*

Addressing the above, we have considered the accreditation of comments in the discussions. We have looked at models used elsewhere (e.g. Open University IET, Stirling) in which marks are awarded for the contributions of students during the asynchronous conversations. We have a problem with

this being a driver for participation as we feel it would distort the authenticity of comments, with students contributing purely to gain marks. Developing this model, however, we have an assessment of student portfolio, supplementing the action enquiry report.

### *Practice knowledge versus propositional knowledge.*

The portfolio is created through the collection of screen shots of conversations in the module, and comparative examples from the students' own practice or elsewhere. These are then annotated to make the learning explicit. For example, students are asked to look at the style of facilitation and tutoring used in the module and elsewhere and comment on its effectiveness. This assessment product allows second-level reflection. At the first level, students are reflecting on styles of tutoring as the asynchronous discussion proceeds. They then reflect again on their, and others', comments when their portfolio is submitted.

### *Impact of software and design*

Some students use the CMC software as a barrier to participation. One group of students were averse to its use and preferred to focus on the technicalities of the environment rather than the interaction with others. To minimise this effect we have redesigned the interface to provide less need for navigation and providing more structure within the module. We have found that we have reduced the number of negative comments about the software by having

- fewer places to contribute
- fewer units per module (five, as compared to up to eleven in earlier modules)
- only one or two units live at any one time, with only one conversation per unit
- static pages with navigation to conversations remaining unchanged throughout the module

### *Distance learning and e-learning*

Some learners will read all the resources made available to them before they feel able to contribute to discussions even stating that they are not prepared to discuss anything before they have learned about it. Individual preferences for learning styles play a part here as no doubt does past experience and expectations of what constitutes learning. Stephenson (2001) accepts that this should be both expected and worked with. There is need to consider learners' preferred learning styles. Those who report a more assimilative style will tend to read the resources before contributing. This needs to be acknowledged in course design.

We have found that by providing fewer resources at the beginning of a conversation, and focusing the discussion on students' own practice reduces the effect of this time-delay. We have also built in reading weeks into the programme, and made the conversations and activities more time-limited. Our experiences concur with those reported by Martin Owen (Owen, 1999) in that the use of conversations alone is not enough. They must be supported by resources, activities and support the recording of learning in portfolios.

### *Collaboration and community*

Speaking at the UACe conference in Bath in March 2002, Mary Thorpe of the Open University's IET spoke of the 'rhetoric of collaboration'. Asynchronous discussions are by their nature not conducive to shared contribution, as members can post at any time. We have introduced activities that force students to work offline in pairs to come up with findings that they then post for others to comment on.

### *The Online experience of 'Time'*

It seems to us that time in an online learning programme exhibits some unusual behaviours, at least in the minds of participants. In the MA modules, as in NPQH, we have experimented with having few or many units and conversations open at once. On the one hand, the asynchronous nature of the space allows time to be slipped and for students to contribute whenever they wish. This should be liberating, and is a theme that appears in evaluation comments from learners. One commented on this liberation of time:

> *I have welcomed the opportunity to continue my own professional development within my own time without geographical constraints…*

On the other hand, time slippage has meant that students typically look to deadlines to complete activities and without them, fail to participate. It is as if with no structure to time, students cannot structure their learning. We have moved to a set of time-limited activities with a clearly defined pathway through them. This has been criticised by some students who look to e-learning to provide open paths.

> *Time restraints on discussions have been the greatest barrier to the action enquiry module, being ready to contribute to a discussion, only to find it ending two days earlier. It would help if all discussions were open until completion of the module.*

Previous models of having all conversations open at any one time have resulted in little or no interaction, however, as the presence of learners in any one conversation is diluted.

## Conclusions for a model of learning and teaching

We are engaged in developing a model of learning and teaching that comes from the interaction of traditional learning, the theories of communities of practice and of situated professional learning and the use of technology. This is a model designed for learning that is manifested by the developing professional practice of the learners. Much of the knowledge and understanding is tacit, and a key objective is to make this knowledge explicit, sharing learners' reflections on it and its application to their professional role. There is a balance here between the knowledge acquired through participants' previous experience, new knowledge and understanding through reflection in- and on-action and the selection and use of appropriate propositional knowledge as a tool for reflection and analysis.

There is also a balance between the formal and informal learning. This is very marked in face-to-face situations, and needs to be reflected on line. The use of the Shack allows for informal interaction. We are constantly looking to develop self-directed and collaborative learning, but this needs to be nurtured – it does not happen on its own.

Our model, see figure 2, is underpinned by notions of community, the components of the learning programme and the role of the tutor, or facilitator. These three come together to shape the learning experience and influence the design of the programme and the online space in which it takes place. In this concluding section, we look at each of these in turn and summarise our approach.

The community aspects of our online learning programmes are used to overcome isolation and to develop social learning. Through their use, learners are encouraged to reflect on their experiences and the tacit knowledge they have developed. Within the community there is a common domain, that of professional educators, and through active participation, this reflection is taken further as each learner analyses and critiques the individual and shared understandings of the group. There is also the dimensions of identity and personality, crucial to online environments. Through induction and synchronous events the role and persona that people exhibit online is explicitly discussed to try to overcome the issues of only receiving partial information about fellow learners through text-based communication.

The components of an online programme are as listed above - discussions, activities, resources and knowledge. In designing our programmes we are conscious of the balance between the immediacy time demands of synchronous events. We provide some synchronous opportunities but they are generally only popular with a few learners. The bulk of the activities and discussions are asynchronous, with contribution being possible at any time. We do have a tight timeline for activities though, so that the group is kept ontrack and together. Previous experience with open-ended deadlines

or having many discussions running in parallel have not been successful. Learners have become frustrated by the lack of activity in the particular discussion they are engaged in if others are engaged elsewhere. Time is a difficult concept online. For those who are engaged it can run very slowly and they can make many contributions in a short period. For others time can seem to move very quickly and, if they have not contributed for a while, they can lose the thread of the discussions very easily.

We provide resources in the form of an electronic library (cybrary), but are careful not to overstock this as a large proportion of learners prefer to read all resources before contributing. This results in a stagnation of discussion. Included in these resources is the summary of the discussions from previous cohorts, thus developing the shared knowledge. In this use of computer-mediated conferencing we are distinguishing our programmes from the traditional distance learning models, but the resource-based nature of these latter still has a role and is valued by many students.

The role of the online tutor is key in balancing the demands of time, drawing out the personalities to involve all members of the group, structuring and designing the online space and meeting individuals' needs and styles. Expectations are shared at the beginning of each programme and the tutor needs to support the online community activities and discussions with telephone and e-mail communications, sometimes referred to as 'back channel'. We encourage tutors to have a weekly or fortnightly communication with all students, to be overt when they are in community and to model behaviour. If a tutor has the habit of always contributing, challenging and following up comments made then learners are more likely to follow suit.