

Cyber-ethnography: the emerging research approach for 21st century research investigation

Dr Liz Browne
Oxford Brookes University, Oxford,
United Kingdom, OX9 2AT,

Abstract

As the use of technology in teaching and learning grows at a pace a research approach is gaining in popularity among student researchers and academics. This article describes the development of cyber-ethnography as a research tool, identifies its use as a research method and provides summary to a research project that examines interaction between lecturers and learners engaged on a Masters degree in Education delivered on-line. Drawing on the benefits provided by cyber-ethnography new perspectives on the student learning experience are identified and explored. The course specific research findings are discussed and the process of researching in virtual space evaluated. The findings identify advantages to the learner when asynchronous communication provides time for reflection and considered response. Further advantages are identified in the opportunity to consult across the globe on issues of practice. Disadvantages are identified with the technology itself and associated issues of access, equity and support. Recommendations arising from the research are for greater focus on the role of the tutor in virtual learning situations. Evaluation of the research methodology highlights the need for a clearer definition of cyber ethnography, greater understanding of the social worlds inhabited in cyberspace and a code of practice for those researching on the net.

Keywords: Cyber-ethnography, Technology, Virtual Learning, Ethics, Reflective Learning.

1. What is Cyber-ethnography

Cyber-ethnology is a recent addition to our research tools located within an interpretive paradigm gaining momentum in use and credibility in reputation. With its roots in 'ethnography', as part of the social science branch of anthropology, its focus is on the study of mankind and cultures. Traditionalists surprised to see ethnography used this way should remember that ethnography has been adaptive and explored myriad cultural connections although this fact is often forgotten by modern ethnographers who deplore the use of their art to study the virtual world (*Hine*:www.openanthropology.org/ANTH498).

Cyber-ethnography, as a research methodology, involves becoming immersed in virtual culture and

observing on interactive web sites and in virtual communities as issues are discussed. One web site dedicated to cyber-ethnography defines it as a 'a study of on-line interaction' (<http://www.pitt.edu-gajjala/define.html>). Ward (1999) argues that as a newly developing methodology it has much to offer but requires the support of academic discussion to bring it to the fore of academic acceptability.

Cyber-ethnography as a research methodology represents a move to reconceptualise the traditional notion of 'the field' as adopted by ethnographers and take it to another special level. In cyberspace the boundaries of the observed field are both virtual and free from location in place or geography. As people conduct more activities online and leave digital tracks (pictures, blogs, emails), researchers can study human behaviour in cyberspace. Cyber-ethnographers participate in and observe blogs, Web sites, and chat rooms. They analyse how people form social networks or groups online and establish cultural identity. When applied to interrogate the developing use of technology as a means of teaching and learning, cyber-ethnography permits the investigation of the social and cultural conditions that best promote learner engagement. Through cyber-ethnography we can explore how digital technologies support the needs, abilities, aspirations and circumstances of learners and learning communities.

The digital world is massive producing a digital discourse of blogs, wikis, texting, instant messaging, internet art, video games, virtual worlds, websites, emails, podcasting, hypertext fiction and graphical user interfaces. Simply in terms of this size and volume it is worth exploring the potential advantages and disadvantages that the cyber world might offer to a research community.

2. How can it be used to benefit learners and researchers alike?

Cyber-ethnography permits the exploration of the conditions of the environments most likely to improve productivity of practitioner and learner time, thus revealing how collaborative and individually based communications in the learning environment can best be utilized. It provides evidence-informed analysis of the benefits and roots of personalized learning through technology across the life course. Through cyber-ethnography we can explore how digital technologies help to support the needs, abilities, aspirations and

circumstances of learners and learning communities. In addition Cyber-ethnography enables the exploration of the social support networks that connect learners to learn where, when and with whom they wish. It gives access to personal learning environments and offers culturally, educational and psychologically appropriate tools, resources and support for learning.

Technology is now a common aspect of learning and everyday life. In 2005 UK research revealed that 68% of 15 year olds report using computers frequently for school work with larger numbers routinely using ICT for entertainment and communication. Estimates in May 2005 by Nielsen/NetRatings indicate there are 455 million inhabitants of the 'digital universe' who spend roughly 26.5 hours per month of their time at home connected to the Internet

In addition there has been a rapid increase in all education sectors in the provision and use of technology to support learners. Since 2002 the use of subject specific software in schools has more than trebled. In Further Education there has been a 15% growth each year in the number of colleges delivering a broad range of activities through learning platforms and in Higher Education nine in ever ten institutions in the United Kingdom report delivering substantial amounts of teaching material in this way (www.dti.gov.uk/innovation/technologystategy/tsb/index/html)

3. The Ubiquitous Use of Technology

The mass use of technology in teaching and learning can be further evidenced in the literature which refers to the global phenomena of 'emergence' - the internet domination of interactive, self-evolving non-hierarchical structures (Johnson, 2001). Such structures develop self-sustaining intelligence through user contributions. Examples of this include Wikipedia, Google, E-bay, Facebook, Myspace, You-Tube and Amazon. According to Johnson (ibid), the import of such sites has not been lead but is more the result of user-generated interactions and creativity such as in the formation of special interest groups and user feedback. Furthermore, user-designed free open-source software such as Mozilla Firefox and OpenOffice are competing with traditional commercial approaches for design authoring and control. Moodle is typical of this global phenomena, being free to use (unlike competitors BlackBoard and LearnWise), and is designed and updated by its users, relying on them to create and govern content. As digital communication is in its infancy Solove argues that social norms are changing, with individuals more willing to reveal personal information online without considering the implications of this being permanently available: '*Cyberspace is the new place to hang out...the pressure to fit in, to do what*

everybody else is doing, overrides concerns of privacy'(Solve, 2007 p.200).

Without a socially agreed ethical code, users are naive about the loss of privacy and the ease and speed with which information might be spread. This aspect of cyber-research adds additional responsibility for researchers to deal sensitively with information which may be received.

Such concerns have to be considered within the overarching benefits that virtual correspondence might offer. Blass and Davis (2003) argue that it fosters a learner-centred approach where the place, time, pace and style is chosen by the learner rather than the lecturer. Johnson (ibid p.102) highlights the additional benefits of using technology in the development of communication, IT, social networking skills and literacy skills. In essence he sees virtual learning as supporting a more praxis approach to curriculum where the skills developed are as important as the subject specific ones.

Moodle can certainly support a range of approaches. At its base level as a depository of information, it supports a linear curriculum model, helping the learners to have a store of information organised for them to access. When interaction, individual and group contributions are enabled more radical possibilities, such as reflective and collaborative practice become apparent.

4. The Research

This study focuses in the use of a Virtual Learning Environment as part of Masters programme delivered across country boundaries, following an initial face to face engagement at a United Kingdom based summer school. Following this initial induction period electronic communication was a course requirement with the intention that learners could develop both individual responsibility and social learning skills from which a vibrant, interactive and reflective learning community would emerge. The aim was to empower professionals to challenge what Coffield (2008) views as interfering hierarchical structures within which modern education functions and to think differently about the processes involved in learning and teaching. Finally, through learner participation, the intention was to enable learners (who were all teachers) to evaluate whether the adopted Virtual Learning Environment could benefit their learners.

5 .Research Design

The research focuses on an International MA Degree in Education consisting of 9 taught modules delivered using elements of computer conferencing. The research draws on the views of the three staff and students from all over the globe engaged in virtual participation in on line discussion groups. The research, although small

scale, demonstrates the benefits and pitfalls of conversational learning. The findings stand as testimony to the depth of conversation to be gained through computer communications and answer the criticisms of many skeptics who believe that computers fail to deliver the eclectic elements of learning which form a central part of practice based degree courses at Masters level.

6. Research Approach

The theoretical stance for the research is borrowed from the work of Pask (1975) based on conversational theory with the view that:

‘complex human learning is a concept involving communication between the participant in the learning process, who commonly occupy the roles of learner and teacher’ (Pask, 1976 p.23).

Degree level qualifications, which rely on the use of computer conferencing, have taken the tenets of this learning model and applied them to produce interactive learning opportunities.

The Masters level programme under study with its linear approach follows Pask’s model. Better understanding of the approach might well be gleaned by adopting Laurillard’s ‘Conversational Frameworks’ (Laurillard 1993, p.80) which identify four pedagogic categories for classifying on-line media use these are: ‘Interactivity, Adaptivity, Discursiveness and Reflectivity’ (Laurillard, 1993, p.83).

Interactivity

The specific course under study uses virtual conferencing as the medium of interactivity:

‘Conferencing is a one to many medium, making it a sensible way to provide access for many soles to a remote academic expert’ (Laurillard, 1993, p.166).

For Laurillard, interactivity involves student action and feedback (Laurillard 1993, p. 102). The basis for this process was started during the 2009 two week long Summer School when students wishing to study using computer conferencing were invited to attend core sessions on research methods and professional profiling. The student group heralded from countries all over the world. By gaining access to the interactive process involved in completing the degree the cyber-ethnographical research was born. The virtual space of the computer conferencing facility used with more traditional research methods such as interviews provided the medium for the additional elements of Laurillard’s framework namely, adaptivity, discussion and reflectivity.

Adaptivity

Research interviews with the staff revealed creative ways in which both the students and staff were adapting to their ethereal learning environment. One member of staff recalled starting the term by recording in type that she was entering the virtual classroom, opening the windows, setting out the tables and chairs and looking forward to the discussion she expected to emanate from the text that was to be discussed that week. Another lecturer commented how the students supported one another and asked for comments if one student had not dropped in for a chat for some time. When the University system ‘went down’ in January the students informed each other of problems with access and supported one another until the system was up and running again, become self sufficient independent learners by necessity.

‘The skill of conducting a fruitful dialogue via conferencing, unlike one to one or one to many, is as important here for the success of the interaction as it is in face to face situations, perhaps more so as there is less information from body language and facial expression to help the interlocutors’. (Laurillard 1993, p. 166)

For the operation of the taught sessions a set text formed the basis of work studied in each module. When an unplanned choice of text was made available (as a new and very relevant text) this led to additional work for the students and to some frustrations being expressed when some colleague participants failed to engage in the conferencing. However the openness between the participants and ability to discuss issues freely enabled the students to assess the problem and pose a solution for future modules which involved earlier access to course materials and an imposed limit of key texts to only 5. Throughout the course an open discussion board enabled the participants and staff to discuss their concerns.

Course review and evaluation was almost on-going with weekly comments from students about the way they were learning.

‘Isn’t this a fascinating way to learn, do you think we could try it with our students’ e-mailed a teacher from Argentina.

When the course team had to change (due to staff personnel leaving the University) with a new tutor allocated to a number of the student the virtual debate indicates some concern and a period of re-adjustment of four weeks while the students adjusted to the change. One student admits that:

‘ the change of tutor had phased me a little’

here the students identify some confusion in relating to a lecturer in the same way as they had their previous tutor. These rich insights were gained through access to the virtual web site and being able to interrogate the ethereal conversations. A too short time of 'getting to know you' during the summer school is identified as one of the reasons for the strained relationship with the negotiation and change of tutor being carried out 'out of sight' without consultation. After a number of re-assurances from the tutor the students seem to adapt, the most vociferous writing to apologise saying:

'I am feeling quite secure again knowing that you have an understanding ear/eye on the other side of the "screen"'.

The period of change obviously needed an equivalent period of adaptation on the part of the students who, because of distance and limited 'visual' contact seemed to require more personal assurance than one might expect from the traditionally delivered MA student cohort. Although this issue may need further analysis the cyber-ethnographical data provided an interesting insights into the importance of continuity in the student learning experience.

Discussion

This category involves an openness and accessibility to ideas for both the teacher and the student. The level of debate prompted by the conferencing mode was, according to one member of staff 'beyond our wildest dreams'. In setting up the course to run on the same lines as a more traditionally run MA the staff admitted concerns that the level of debate would be stifled by computerised discussion. Contrary to their fears, the freedom of time to respond (the conferencing could not be synchronous because it crossed hemispheres) enabled a deeper level of discussion and debate. Students were spending more time in thinking about responses to issues raised, as were the staff.

The necessity of committing to type produced a considered discussion. The data produced from the cyber debate shows a high level of discussion between the participants. The debate is a reflection on the length of some student seminar responses being more like essays rather than succinct comments as one might expect in a more traditional seminar format. The data demonstrates the level of debate between participants and tutors when working together to find learning solutions.

Reflectivity.

This category emphasis the power of reflection in a virtual space when time again can give the process more depth and consideration. The time allowed for reflection and analysis on virtual courses is far greater than that provided by traditional methods which are tied to time, place and pace. (Bosworth 1991).

One student as a self diagnosed 'hesitant' learner found the space between conferencing in terms of time, very beneficial. The interview data from the lecturing staff provided more evidence of enhanced and developed reflective responses. Two staff praised the quality of student responses during seminar session which were 'much more consideration than the quick response given in traditional debate'.

One lecturer drew attention to the extra time demands this was making on the staff team, since they too were having to offer more conceptually considered responses than might be expected in an open discussion.

Promoting reflectivity is particularly valuable on courses which involve the combined elements of theory and practice. During the course debate, observed through the virtually produced data, one student is noted to have commented that she found the seminars most useful when the discussion centred around practice. She commented specifically on being able to improve her own practice with support from all over the world.

The process is enhanced by the opportunity for reflection, observation and support from other students as well as the staff team. Students have been able to reflect on mail bulletin comments, model new approaches in the classroom and report back the following day on their own successes and failures. In such circumstances the links between theory and practice can become real as course participants communicate with one another and suggest solutions to problems.

An informal support network developed which produced worldwide discussion of a student with a specific learning difficulty and in-depth support was offered to a course participant who was experiencing some difficulties at work. When the University communication system went off-line the students continued supporting one another and carried on with weekly task until the staff were again available to join the discussion.

7. Summary

This report has given only snap shot evidence from a much wider research project which is investigating the use of ICT to widen participation for students across the globe. The categories proposed by Laurillard provide a useful tool to support the analysis of the research data.

From the perspective of the students and the staff this is clearly a success story in conversational learning. In reply to one questions in the questionnaire a student commented on how much fun she was having in communicating across the world and yet learning at the same time. Anxieties were apparent during the conferencing; since the debate was happening so

naturally concerns were expressed that assignment writing might be more difficult. The evidence was to the contrary, the staff team, when interviewed, all comment on the quality, depth and focus of the work produced.

There is another dimension relevant to the success of conversational learning using ICT and that is the issue of accessibility. This is a global success story but global reach is only as large as issues of finance, language and access permit. The students discussed here will all agree that they were experiencing something novel and exciting but there is still a long way to go if we are to allow peoples from all over the world to benefit from e-learning. The mutual benefit to all learners who can support and learn from one another and gain enriching experiences from discovering how different cultures learn, practice and deliver pedagogy, is an opportunity opening up to us all as we embrace the scope of opportunities that ICT has in store.

But can we be sure that the technology is ready to meet the challenge that new learners are requiring of it, can it match the needs of the new paradigm for learning? Certainly the negative comments recorded in this research seem to focus around technological issues to do with complex web pages and unreliable technology.

What is apparent from this research is that the opportunity to reflect not only on the taught material, but on the process by which the course was being delivered, has provided critical thinking Masters level students who are committed to e-learning as a quality experience. All of these students have experienced a new type of learning and will be well prepared to sing the praises of electronic learning in the future and more importantly committed to e-teaching and e-learning for their own pupils as computer delivery of traditional classroom activity becomes more common place across the globe.

What we have to ensure is that the freedoms of time, place and pace are equally accessible to all learners so that conversational learning has the enriched benefit of access to debate across cultures and nationalities to include all learners in a global process of learning together.

A number of questions remain unanswered about the technology but also in relation to the research methods applied in this study. The research was carried out within an agreed ethical code of practice, with the researcher introducing herself to the participants face to face during a summer school, explaining the context for the research, gaining written permission from each individual participant to 'lurk' on the virtual programme whilst also agreeing to follow confidentiality clauses included in the research agreement form. Acting in this privileged position as a researcher also has its

drawbacks. These relate to potentially being privy to private information and sources of data that could be professionally damaging to the careers of colleagues and students alike. Interestingly the virtual debate always remained professional, located in educational practice and never verging into discussions associated with religious, political or personal belief systems. This might always be the case, and there are potential conflicts for researchers and colleagues alike involved in virtual communications that could challenge belief systems and moral codes.

It was apparent during the research as time progressed that the researcher's presence was forgotten as participants discussed personal traumas and work challenges in a less than a confidential way. As the researcher I felt obliged to remind the participants during the study period that I was in the room. Although such a requirement was not a necessity the researcher in this case felt morally bound to declare their presence. This raises questions of appropriate cyber practice. Should a declaration of presence be an expectation for all researchers using cyber-ethnographic research methods. There is the potential for visual absence whilst being very much ethically present to offer great insights for the researcher, but where should the ethical boundaries be set? Should greater controls be implemented to ensure private conversational spaces free from the eyes of researchers, where learners can with confidence and privacy share their most personal learning moments and if this were the case, what nuggets of research data might be lost to the research world?

8. Summary Evaluation of Cyber-ethnography

This research has focused on the positive benefits of using cyber-ethnography as a research methodology. As very little is written about it as a methodological approach the research community would benefit from clearer definition. In addition there are currently very few boundaries drawn in the field of cyber communication and there is limited understanding of the social worlds inhabited in cyberspace. It is essential that the academic community work quickly to develop and implement a code of practice for those researching on the net so that cyber research is seen as credible and valuable, revealing rich and meaningful data, rather than mere extrapolation of the private world of our learners.

9. References

Blass, E. and Davis, A. Building on a solid foundation. Establishing criteria for e-learning development. **Journal of Further and Higher Education** vol 27. Issue 3, 2003, pp227-245.

Bosworth, D. **Open Learning-Issues in Education**. London. Cassell. Pub., (1991)

Coffield, F. **Just suppose Teaching and Learning Became the Main Priority**. London: LSN publications, Pub., 2008

Hart, G. **Some Perspectives on Established On-line Communities in the UK**. Ultralab- Anglia Ruskin University. Pub., 2001

Hine, C. www.openanthropology.org/ANTH498/ 2009

Johnson, S. **Emergence: The connected life of ants, brains and software**. London: Penguin pub., 2001

Laurillard, D. **Rethinking University Teaching and Learning- a framework for the effective use of information technology**. London. Routledge pub.,1993

Nielsen/NetRatings at www.nielsen/netratings.com (accessed 11.11.09)

Pask, G. Conversational Techniques in the Study and Practice of Education. **British Journal of Educational Psychology, Vol 2 1976 no 46,pg 12-25.**

Solove, D. **The Future of Reputation- gossip, rumor and privacy in the Internet**. Yale: Yale University Press pub, .2007

Her Majesty's Stationery Office (HMSO). **UK government technology strategy: BIS. We Need Research to Develop Understanding of the Co-evolutions and Social Shaping of Technologies and their use (2009) HMSO**

www.dti.gov.uk/innovation/technologystrategy/tsb/index/html

Ward, K. J Cyber-ethnography. **Sociological Review vol.9.number 2 1999 pg.8-9.**

Ward, K.J. Cyber-ethnography and the emergence of the virtually new community [Journal of Information Technology](#), Volume 14, Number 1, March 1999, pp. 95-105(11)