# Beyond our wildest dreams, an evaluation of conversational learning using Information and Communication Technology (ICT)

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## ABSTRACT

This article provides summary of research which examines interaction between lecturers and learners involved in an on-line Masters degree in Education. Having used traditional qualitative research methods of the research moves into the relatively new realms of researching online. Applying a methodology known as 'cyber-ethnography' insight is gained into the experience of staff and students. Those involved identify the advantages of asynchronous communication in providing time for reflection and considered response. Further advantages are identified in the opportunity to consult across the globe on issues to do with practice. The disadvantages link to technology and issues of access, equity and support. The recommendations are for specific focus on tutorial support in virtual learning situations.

## Keywords

Cyber-ethnography, virtual learning, conversational learning, communities of practice, asynchronous conferencing.

## INTRODUCTION

This paper focuses on research carried out in one U.K University, using computer facilitated learning to deliver a Masters level degree programme established in 1999 and leading to the award of an MA in Education. The course is modular by design, and is offered alongside two established MA degrees programmes, one offered as a taught MA to 'home' students and the second for international students who study following a two week summer school, by correspondence. This research records the first year of operation for the ICT (Information Communication Technology) degree known as the Open MA delivered by e-learning.

To gain the full award at 'M' level course participants are required to achieve nine modules at pass grade or above. The theoretical content of each module is based on the same material used for the 'home' MA. Tan (1997) describes such electronically available resources as 'static' since they are simple emulations of their conventional paper based counter parts. Once 'posted' on a communal bulletin board the theoretical content of the module becomes the focus of discussions and conference debate. Each module follows a similar structure of theoretical input, workshop activity, set tasks, participant led seminars and individual conference time with a tutor to refine the focus of the assessed work.

## RESEARCH METHODOLOGY

Using the case study approach to provide 'illuminating evaluation' (Parlett and Hamilton 1972)' the aim was to provide ecologically valid data (Mitchell 1983) to bring to light the advantages and disadvantages for students and lecturers involved in computer

facilitated course delivery. This is a very small scale piece of research into an innovative model of teaching and learning on one course, in one university, serving a cohort of only twelve students. The course is, however, innovative and worthy of research on the basis that much is still to be learnt about 'virtual learning'.

To support this process the research incorporates the views of both the lecturing team and the participating students. In-depth interviews were carried out with key staff, a structured questionnaire was given to participating students during a summer school taught session and 'cyber-ethnographical'(Ward, 1999) methods applied, in the form of an analysis of a virtual discussion held between a tutor and the participating students.

Cyber–ethnography, as a developing research methodology, involves becoming immersed in virtual culture and observing interactive web sites and virtual communities as issues are discussed. On the cyber-ethnography web site, cyber-ethnography is defined as 'a study of on-line interaction' (http:www.pitt.edu-gajjala/define.html). As a newly developing methodology it has much to offer but needs the support of academic discussion to bring it to the fore of academic acceptability. Hind (2000) uses the term virtual-ethnography to describe this research which starts form the premise that what goes on within the Internet is social interaction. The methodology has been used in situations were researchers are examining interaction, communication and community on the internet (Jones,1998). It involves the researcher in observing within the virtual communities, immersed in the developing culture they are studying. Cyber-ethnography is used in the research to provide insight into the experiences of a small cohort of students using virtual communication as a learning medium.

## ANALYTICAL TOOLS

Interviews with the staff formed the starting point for the research. It was their enthusiasm which had led to the conception of the programme and their motivation which had resulted in the change (Browne 2000). The staff interview data provided a rich source of information to support the design of the questionnaire which consisted of both open and closed questions. The tool adopted to draw out re-occurring themes in the interview data was a thematic grid chart. A process of progressive focusing supported the production of some key themes which were inserted in the design of the student questionnaire to allow for comparison and triangulation. The quantitative data gathered from the closed questionnaire was analysed using simple graphical representations, the qualitative responses were recorded in the form of a bullet point summary. A selected sample of the data is presented in this report. The virtual data was also analysed using a thematic approach with specific focus on issues to do with learning and teaching.

## THE SIZE AND SCALE OF THE RESEARCH

The research draws on the views of the three staff delivering the programme and one manager from the institution who had overall responsibility for this area of the university curriculum. The 12 students, from all over the globe, who were registered on the programme participated in the research by completing a questionnaire. The researcher gained the approval from all involved in the programme to 'lurk' on the network and research the interaction. This agreement was acquired through face to face communication followed by written consent from all those involved. Although small scale the research demonstrates some of the benefits and pitfalls of conversational learning. The findings stand as testimony to the depth of conversation to be gained through computer communications and as such 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 (Hannafin 1984).

## THEORETICAL FRAMEWORK USED TO SUPPORT DATA ANALYSIS

Lin and Hsieh (2001) summaries a number of learning models used in ICT learning and teaching. on the basis that

*the use of the internet in an educational setting will reflect some model of learning*(p.378).

The model of learning defined as *cooperative learning* ( Lin and Hsieh) whereby learning occurs as individuals:

> *exercise, verify, solidify and improve their mental models through discussion and information sharing*(p.379)

is the model implied in the design of this case study programme. Co-operative learning shares many similarities with what is known as

'*conversational learning'(Pask,1976,p.23).*

The concept of a conversational theory of learning was originally posed by Gordon Pask (Pask, 1976). It proposes that learning occurs through conversations which seek to make knowledge explicit. The learning process is further enhanced through discussion and testing out of understandings with another. This provides a model which supports the investigation of the processes involved in

learning complex subjects under controlled conditions. The starting point for conversational theory is the idea 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).*

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 at Masters level.It is Pask's theory of learning and Lin's model of cooperative learning which is at the basis of the framework for conversational teaching and learning discussed here. The course under study follows a structure which demonstrates great similarities with the above models and also follows the key elements of this type of learning, identified in Laurillard's work 'Conversational Frameworks'( Laurillard 1993). These are: Interactivity, Adaptivity, Discussion and Reflectivity. These categories will be defined and applied to the research findings here discussed to illustrate how virtual conferencing, as a medium of interactivity, supports learning:

> *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 , 166).

## THE DATA

The introductory part of the research questionnaire revealed some interesting statistical data about the student cohort. Eleven were women, with only one man. Ten rated their previous experience of ICT as adequate, minimal or even non-existent, only two felt confident with the technology before commencing the course. Eleven had been self taught ICT users, with all twelve now making considerable or extensive use of the

internet in their research. Ten of the students stated that they made average use of library books whereas CD-Rom received the full range of responses from extensive to none, in almost equal distribution. The most used ICT facility was not unexpectedly word processing with two respondents using a data analysis package and one using spreadsheet.

When asked why they had chosen this course only one specifically mentioned the use of ICT. Nine regarded 'flexibility' as the key reason with two recording 'institutional status' as their rationale for choice. None of the students had a diagnosed disability or learning difficulty and all could see further use for ICT to increase access, deliver more degree level programmes and enhance student learning.The responses to open questions were revealing and provided data about student perceptions and experience. This data was analysed alongside the staff interviews to provide triangulation. Further use was made of the cyber-ethnographically produced data to gain access to the real experience and emotions of those participating on the course. The findings from this part of the research are discussed below using the categories identified in Laurillard's research as outlined above.

## INTERACTIVITY

For Laurillard, interactivity involves student action and feedback (Laurillard,1993, p. 102). This process started during the 1999 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. Relationships were formed with the course members during this period and close personal contact was maintained throughout the academic year. The bulletin board used to post notes and information was illustrative of the type of information provided with more and more personal anecdotes about family and work issues as the weeks progressed.

In gaining access to the virtual debate the cyber-ethnographic research was born. It became apparent that the group was supporting one another in both personal and academic terms. One student commented specifically on this issue in the open section of the questionnaire:

*It is easy not to participate although if you don't someone soon notices and asks where you are*

This was also identified by one of the staff on the team who when interviewed commented on how the students supported one another and asked for comments if one student had not 'dropped in' for a chat for some time.

The ethnographic data revealed that a community of learners (Seeley Brown and Duguid 1996) had been established for sharing not just issues to do with the course but with everyday problems in the work situation. Issues discussed included:

> how do deal with a bereavement in the classroom
>
> how best to help a twin with low self esteem,
>
> how to cope when not gaining an internal promotion.

Reflecting on this element of the course one of the lecturers commented on the *' touchy feely nature of the group'* . This is a small scale piece of research and it would be interesting to explore whether this is a chance event or part and parcel of learning communities established in cyberspace.The virtual space of the computer conferencing facility 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 recalls 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. 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. The debate between the students was not always harmonious and this needed careful staff management. At one point a number of participants complained on the bulletin board (in full site of all the course members) that some students were not participating as much as they should. Rather than use the one to one private space with the tutor to raise this issue a participant chose a public approach thus involving all course participants.

> *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 their is less information from body language and facial expression to help the interlocutors'*
> (Laurillard,1993,p. 166).

The management surrounding this issue involved a great deal of negotiation and tact on the part of the course tutor to ensure that all members of the student group stayed on course. The lecturer when interviewed described this as an:

*exercise in people management far more demanding than anything ever attempted before in my career*

The cyber-ethnographic data provides illustrative evidence as to how the group and the course tutor worked through the problem and reached a mutually agreeable solution. One of the outcomes of this episode was the recommendation that future cohorts of students start their programme by agreeing a 'Code of Conduct' for conferencing debate over the net. The existence of an open discussion board enabled participants and staff to air concerns and negotiate a way forward when problems arose.

It is apparent from reading the discussion board that the participants were aware that they were part of an innovative learning experience. Course review and evaluation was almost on-going with weekly comments from participants 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.

> *This is an extremely lazy and surreal way to study, by talking to people across different continents but it works!'*

When the course team had to change (due to staff personnel leaving the university) and a new tutor allocated to a number of the students, the virtual debate indicated some concern and a period of re-adjustment of four weeks ( from March to April 2000) while the students adjusted to the change. One students admitted that:

*the change of tutor had phased me a little.*

The newly appointed tutor was not new to the course. She had been a module leader and had worked with the students before. The students identify some confusion in relating to her as a tutor in the same way as they had their previous tutor. The ensuing discussion, gained by having access to the virtual web site and being able to interrogate the ethereal conversations, revealed just how important the personal tutor role is to students studying at a distance.

A too short time of '*getting to know you*' during the summer school is identified as one of the reasons for the strained relationship and 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 and 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 (since it is not clear how long students take to settle to changes of staff during face to face teaching), the cyber-ethnographical data has provided an interesting insight into what it feels like to be a student in these circumstances. These findings support the work of Harkin (1997 )who highlights the key role that personal support has to play in the teacher/learner relationship.

## 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 more considered discussion.

A review of the data produced from the cyber debate shows how much discussion has gone on between the participants. One specific discussion focused on the length of student responses to seminar topics. The tutor comments that many discussion points are like long essays rather than the discursive comments that might be made in a face to face seminar situation. What is apparent is that the lecturer and the participants are negotiating the operational elements of the course as the programme progresses. The data demonstrates a high level of debate between participants and the tutor's role in trying to offer solutions.

One student expressed concern that she was having so much fun communicating on the conference board that when it came time for *'real work'* she would be unable to contribute. The evidence to date is to the contrary, the staff team, when interviewed, all commented on the quality, depth and focus of the work which is being produced.

## REFLECTIVITY

This category emphases 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 interestingly highlighted the benefits for her:

> *having time to consider and respond in line is particularly encouraging for me, a hesitant contributor*
> *who needs time to think before committing my thoughts in a public arena*

The interview data with the lecturing staff provided even more evidence to support this process. Two of the staff mentioned surprise at the quality of student responses during seminar session which were:

*much more considered than the quick response given in traditional debate'*.

One lecturer drew attention to the extra time demands the course 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.

This element of reflectivity is particularly useful for 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 comments specifically about 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 were able to reflect on mail bulletin comments, try out something new in the classroom and report back the following day on their own successes and failures. The links of theory to practice were becoming real as course participants communicated with one another and suggested solutions to problems. A community of professionals communicating across the globe were seeking advice on issues to do with practice (Wenger,1998). An informal support network developed which produced worldwide discussion

of a student with a specific learning difficulty and in-depth support for a member of staff who was experiencing some difficulties at work. The close nature of the relationship that developed between the learners provided the researcher with access to conversations to which a professional lecturer may not normally be privileged.

From the learners perspective one problem that received common mention was the limited capability of the technology to meet all student needs. Because the programme was new a number of technical problems arose to do with the page set up, and print size which needed specialist help not always available. Some students found: ' *the conference site too complicated' 'too problematic' 'frustrating'.* This is an issue which requires attention as the technology used needs to be reliable and fit for purpose if we are going to entrust it with so much responsibility in facilitating course delivery.

**ACCESS ISSUES**

Laurillard's categories of classification have been a useful tool to analyse the research data. 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 the oyster is only as large as issues of finance, language and access permit. Further issues about confidentiality, ethics and legalities also need clarification. Mann and Stewart (2001) highlight the need for greater awareness of 'netiquette' (p.14) in on-line interaction and research. There are a number of practical, theoretical and methodological issues which need clarification for the researcher practitioners and learners involved in e-learning.

# CONCLUSIONS

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. From the perspective of the students and the staff this is clearly a success story in conversational learning with some lessons to be learned in respect of the conduct of discussions and the suitability of the technology.

In the main the evaluation from staff and students is very positive. Students are enjoying communicating across the globe and learning at the same time. Student anxieties are apparent. They like the staff record how much more demanding this course is of their professional knowledge skill and time. The research community needs to be aware that this is no short cut in time and commitment as a staff resource issue nor a quick and easy way to gain a qualification.

The twelve students discussed here will all agree that they are experiencing something very 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 all as we embrace the scope of opportunities that ICT has in store. But is the technology ready to meet the challenge that new learners are requiring of it, can it match the needs of the new paradigm for learning? Certainly many of the critical comments recorded in this research seem to focus around 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. They will be 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.

During the research process the researcher gained access to a number personal communications between established friends. It is possible that her presence as an invisible researcher (although agreed too), may have been forgotten. Mann and Stewart (2001) suggest that the invisible nature of the researcher in this relationship adds a new dimension to the ethical, confidential and legal issues surrounding the research exercise.

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