

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

Abstract

This article provides summary of part of a Doctoral research thesis entitled 'The

Management of Change : Can ICT widen participation and support inclusion? Although

the study is based in two institutions the research reported here takes its focus from one

part of the whole and examines participant and staff perceptions of a masters level degree

programme which uses computer conferencing to facilitate teaching and learning across

the globe. The article concludes by identifying a number of issues associated with

computer facilitated learning.

The Structure of the Degree

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.

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, for those unaccustomed to this 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. It has been used in situations where researchers are examining

interaction, communication and community on the internet (Jones, 1998). The method

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 in the form of a bullet point

summary. A selected sample of the data is presented in this report. .

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. 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 sceptics 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

In an interesting article by Lin and Hsieh (2001) an attempt is made to summaries a

number of learning models 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'*.

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, Discursiveness 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,p 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 and the tutor

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 there 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 on a course such as this'

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 student 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 tutors role in trying

to offer solutions.

Reflectivity.

This category emphasizes 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 of the lecturers 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.

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.

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.

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 needs consideration 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.

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. The

categories proposed by Laurillard have provided 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 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. One participant

commented on how much fun she was having in communicating across the world and

yet learning at the same time. Student anxieties are apparent. One expressed concern

that since the debate is happening so naturally the assignment writing will

be so much more difficult. 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. They record too 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 resourcing issue.

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. 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 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 many of the critical

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. One question remains unanswered. Is the technology

ready and available to reach all learners so that the new paradigm for learning can impact

on all learners equally and support the demand for learning that will inevitably arise as

the potential of virtual learning is fully realized?

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