Learning academic skills online: Student perceptions of the learning process

Lynne Jump and Richard Jump
School of Health and Social Care
University of Greenwich, United Kingdom

There is a certain inevitability that the use of web based e-learning will proliferate and be used in widening participation contexts. However, such an approach is controversial and requires further evidence that it provides a genuinely educational experience. This study examines the experience of students preparing for a number of undergraduate Health and Social Care courses by attending an academic preparation course delivered entirely online. The principles of social and collaborative learning underpinned the design of the website. A questionnaire called the Perceptions of Learning Environment Questionnaire (PLEQ ll) investigated perceptions of learning by asking the students to comment on the various components of the web site and how they helped or hindered their learning. They were invited to comment on their own behaviour as well as others, and directly to state who they think is responsible for their learning. Analysis of findings suggest that there is a fragile relationship between the perceived advantages of working collaboratively and learning so publicly and that fellow students had very little to contribute to an individual's learning. The study concludes that the management of such learning processes must be handled sensitively and with considerable skill to embed online activity within a context of trust and safety.

Keywords: academic skills, student perceptions, social and collaborative learning

Introduction and background to the study

This paper describes a qualitative research study which documents the experiences of learners undertaking an online, internet based Academic Preparation course. The setting for the study is an academic preparation course designed for students entering a number of undergraduate Health and Social Care programmes. It is intended to be delivered entirely online via WebCT, a virtual learning environment that is widely used within the University. The course is intended to aid the transition into undergraduate study for students admitted into programmes with a diverse array of entrance qualifications in the context of widening participation. All students on the course are mature learners and have not participated in any form of formal education for up to thirty years. The course is completed by the learner in eleven weeks, one academic term.

The rise in the use of learning technologies and the demand for courses that prepare students for academic study has created a certain inevitability that the use of web based e-learning will proliferate and be used in widening participation contexts. Yet despite an increase in the amount of literature that focuses on research methods for the evaluation of online courses, there is a need for greater evidence for claims that e-learning initiatives can lead to better teaching and learning experiences for learners (Kember et al., 1997; Thorpe, 2002). Within this context, the use of e-learning in a widening participation study skills course becomes controversial. This is largely because there are questions as to whether e-learning has the potential to provide learners with a genuinely educational experience. Some believe that it may produce even more barriers to widening participation (Gorard & Selwyn, 1999) and the critique here lies with the perception that e-learning simply provides a form of information transmission which cannot lead to learners developing improved reasoning skills or an ability to value differing perspectives.

This paper attempts to document insights into the learning process arising from the design features of the course. The design of the course is intended to avoid the notion of information transmission by taking note of the considerable literature available to guide the design of online learning environments, such as Moore and Kearsley (1996). He claims that physical distance leads to transactional distance and the greater the distance the more there are likely to be communication gaps and a psychological space of potential misunderstandings between teachers and learners. Also Peters (1998) who states that the level of transactional distance depends on whether learners are left alone or can communicate and interact through

dialogue. Added to this literature are those authors concerned with democracy and emancipation within education such as Paulo Freire. The concept of dialogue within education was central to his revolutionary pedagogy as a critique to formal education as an instrument of oppression (Blackburn, 2000) rather than one of liberation which emphasises democratic principles and shared responsibility for learning.

The evidence for the study is drawn from the use of a qualitative questionnaire which asks learners to describe how components of the course helped or hindered their learning, the findings from which are then analysed with a view to understanding just how this particular teaching and learning strategy within an e learning context, impacts on the perceptions of learning.

Theoretical framework

The design framework for the course is intended to encourage student development through the use of activities. Conceptions of learning in this case were based in theories of cognitive development which is regarded as an individual process supported by the guidance of the teacher (Vygotsky, 1987). The importance of social relations between teachers and the group of learners as they are engaged in common activities is also embedded within the design.

Research suggests that online environments can provide powerful resource rich environments for adult learning (Hammond, 2000). Lee (2005) also found that internet based discussion groups provide scope for meta cognitive development. He describes a number of advantages that come with the use of internet based discussions forums. These include using the written word as the main form of communication for discussion and dialogue which enhances the use of language. He goes on to describe the internet as a powerful information resource with hypertext links used to take people 'information mining' (p54). Added to which they can use the relevant information to support arguments and reject others. There is also a higher chance of people making contact with other people who have differing perspectives and tastes using discussion forums and chat facilities than any other communication system. The resulting archived interaction functions as a collective memory for the group with guidance and feedback that can be accessed by all the members. The aim of the course therefore is to make a direct link between the communicative discussion, personal experience and theoretical insights. This, Hammond (2000) states, will provide a link between lifelong learning and meta cognitive skills.

Felix (2005) states that social learning is particularly important for e-learning contexts as a means of overcoming isolation and for reducing the possibility of drill and practice teaching methods with very little or poor feedback. The success of the course therefore, is dependent on the students being active and taking responsibility for their own and others learning. Devlin (2002a) compared traditional university students perceptions of their learning against the Structure of Observed Learning Outcomes (SOLO) taxonomy and found that students, despite accepting responsibility for their learning expect to be 'spoon fed' facts and procedures and they are unlikely to adopt study and learning practices that lead to higher level thinking. Descantis et al (2003), however, found that the design of computer mediated environments can influence the kind of learning processes that unfold as learners interact with one another. Those experiences are also influenced by the mechanisms used to manage online interaction. Jung et al (2002) also suggest that the skills of the lecturer in terms of facilitating the interaction and providing regular feedback are important factors in promoting online participation.

In a study skills course at this level, the feasibility of engaging students effectively in activities within an online environment is unknown. There is, however, considerable evidence that social interaction is becoming the primary use of home computers and that people are forming relationships with those whom they meet through email, chat rooms and instant messaging etc (McKenna et al, 2002). People who chat online are the heaviest users of internet websites (Brignall & Valey, 2005) and investment in maintaining relationships in cyberspace is the same as any other space (Carter, 2005).

The aim of this paper, therefore, is to explore the perceptions of participants of a University based study skills course, in terms of how an online, internet based course designed to support cognitive development and social interaction, helped or hindered learning.

The course

The design of the course is based upon the concepts of high levels of dialogue, reduced levels of structure and high levels of autonomy (Peters, 1998). The concept of dialogue is interpreted as referring to interactions between the lecturing staff and the students. Thus, content modules are carefully designed to provide structure to the teaching and learning and to be accessed by the student in a flexible way. Autonomy is interpreted in this context as helping the students come to terms with academic environments by linking their learning to previous and current experiences. This is intended to facilitate a degree of self control over the learning process and takes the form of a self designed case study of a health or social care issue that they wish to research, which then becomes the basis for a series of independent activities. There are also a number of resources available to the student to assist with any individual learning needs such as spelling or grammar.

The aim of the course is to make explicit the processes of academic study that are often hidden and implicit, such as literature searching, using the internet, constructing arguments and thinking critically. Also, it is designed to introduce the students to the discourse of academic study within a Health and Social Care setting. The teaching and learning philosophy of the course is based on the principles of constructivism in that knowledge is constructed by individuals. By interacting with lecturers, fellow students, course materials and the computer itself, the learner constructs, tests and refines cognitive representations to make sense of learning within a University environment (Boyle, 1997). There is an emphasis on social learning through the design and use of learning activities that encourage collaborative learning as a means of facilitating meaning making.

The resulting learning environment consists of a home page which provides links to:

- A reception area – which explains the rationale of the layout of the site
- The course handbook – which contains the aims and learning outcomes of the course and assessment details.
- A calendar – which is intended to provide a time structure to the course
- The course lessons – which contains all of the pre-designed content modules.
- A conferencing area designed for interaction between lecturers and students and for students and students. Regularly posted collaborative activities provide the structure for the discussion. The activities are designed to encourage student to student dialogue and feedback rather than encouraging the students to interact primarily with the lecturing team.
- An email facility is available also for one to one private communication.
- A resource area – this is an area for independent studies, with links to the BBC skills wise site, free computer courses, Harvard referencing manual etc. Also there are a number of self assessment quizzes here so that students can assess their own progress in relation to key topics in the course.

This environment provides all the necessary resources for each student to complete the course. They begin the course by choosing a topic relating to Health and Social Care and to their future undergraduate programme. The content modules combined with the activities and additional resources then assist the learner to move through the various stages of academic writing such as:

- Mindmapping and the appropriate construction of search terms;
- Searching the internet for appropriate literature;
- Reading the resulting literature at various levels of complexity from basic comprehension to a more critical level of understanding;
- Gaining a level of understanding of just what research is;
- Presenting information in a variety of formats; and
- Reflective writing.

The course is then assessed by the submission of a portfolio of evidence that the formative activities have been completed to an agreed level and a 1500 worded report critiquing an academic article.

The study

The aim of the study is to investigate the learner's perceptions of the process of learning. A questionnaire, initially designed by Clarke (1995, 1998 in Devlin 2002b, p281) and subsequently modified by Devlin (2002b) called the Perceptions of Learning Environment questionnaire (PLEQ II) asks learners what they perceived helped and hindered their learning, and importantly why they hold such views (Devlin, 2002b) - it was considered to be an appropriate tool for the purposes of this investigation.

The questionnaire was adapted for a course designed for electronic delivery in that students were asked to consider the components of the website (eg, conferencing area or course lessons area) and comment on how each of these had helped or hindered their learning. Having made minor adaptations to the questionnaire all students taking part in the pilot course were asked to participate in the evaluation by completing the questionnaire at the end of the eleven week course.

Participants

A total of 11 students were enrolled on the course which was designed to last over a period of eleven weeks. All of the students were returning to study having not undertaken any formal education for some time, for four students this was 15 – 30 years ago, for the other students it was 5 and 10 years ago. All students were aged between 30 and 55.

Data collection

The questionnaire is designed in two parts. Section one asks the student to comment on the various components of the e-learning environment. In section two the questionnaire asks directly for the learners perceptions about who they think is responsible for their learning by allocating a percentage to a number of options i.e.

- You
- Your fellow students
- The lecturer
- Others (to be defined)

The total percentage must add up to 100%. In section one the various components of the learning environment are listed, however it was left to the learner to choose which of these they wished to comment on.

Devlin (2002b) argues that the validity of the questionnaire is increased as the learners firstly choose the components of the learning environment that they wish to comment on and they are then invited to comment on their own behaviour as well as the behaviour of others as contributing to learning. These comments result in an indirect view of the learning process. The third indicator is a direct indicator of where students perceived responsibility for their learning which increases the validity of the findings further. Students taking responsibility for their learning, Devlin (2002b) states, is the necessary basis for constructing knowledge.

Findings and analysis

The results of the study show that parts of the learning environment were perceived by the learner to have affected their learning in terms of helping or hindering. The number of times that each component was chosen by the learners to discuss on the evaluation form is shown as a percentage of all of the chosen components (Table 1).

Table 1: Choice of e-learning components

Reception area	10%
Lecture theatre	17.5%
Discussion area	40%
Library	12.5%
Course handbook	5%
Self assessment quiz	5%
Calendar	10%

Table shows the number of times a component of the e-learning environment was chosen to be discussed on the questionnaire, as either helping or hindering learning, as a percentage of the total.

The significance of the discussion area to the design of the course was recognised by the learners as they chose this area to discuss in their evaluation form so many more times than any other.

The underlying theory behind a learning environment underpinned by social constructivism is that a group of learners actively build their understanding helped by teachers and each other. This inevitably requires the group to move through the learning activities together and at a set pace. There is a requirement for learners to organise themselves sufficiently to provide time for the construction of relationships and dialogue. The responses from the questionnaire provide evidence that the online internet based environment had supported them in the process of organising themselves:

The reception area had helped by describing the layout of the whole site:

> 'It made navigation of the site easier and it was well explained.'

The calendar had helped by detailing the scheme of lessons activities and highlighting deadlines:

> 'Because it enables me to prioritise my work and work at my own pace.'

> 'It gave an indication of just what the next activities were.'

The course handbook provided an overview of the whole course and helped also:

> 'It provided guidelines for my weekly studies and I planned my time.'

Organising time was obviously influential when facilitating private study as well:

> 'Once disciplined in allocating time you could read lectures when it suited you.'

> 'I allocated time for study rather than fitting in.'

The learners here clearly expressed an ability to take responsibility for organising their time, which contradicts the view that lack of time is an issue and a common reason for mature students (particularly women) not completing their studies (Morrison, 1992).

However the ability to organise time in relation to being able to work with fellow students was less obvious as learners made reference to the conflict this caused in relation to their individual needs:

> 'I found that I was behind schedule and I thought that I was slower than everyone else in understanding the course.'

> 'I thought I was the only one lagging behind.'

> 'I would sometimes like to move faster than the rest of the group.'

> 'When I have to wait for comments I cannot clarify whether I am on the right track or not.'

Individual needs within a social constructivist learning environment are clearly problematic for some, as the pace of study became inappropriate. There was a real need in terms of supporting learners and helping them to judge the time needed to work with other learners, set priorities and to cope with the group activities.

Similar difficulties emerged when the learners discussed the role that others played in their learning related to building confidence and the sharing of ideas and perspectives. The learners saw the benefits of working with other learners in relation to:

- removing isolation

  'I could see the tutor and student comments and it made me feel I wasn't alone.'

  'It made me feel that I was not on my own doing the course.'

- building confidence

  'Some questions I had were asked by other students making me feel I wasn't completely stupid – the best area on the site.'

  'Contact with tutors and students sharing information was invaluable and reassuring.'

The greatest number of benefits documented however related to the sharing of ideas and perspectives:

> 'When discussing issues with other student you see things differently, also you realise you are not the only one who doesn't quite understand things.'
>
> 'Working in a group highlights areas for learning that may not have been uncovered otherwise.'
>
> 'I gained confidence and joined in discussions, which made me ask questions and share my knowledge with colleagues.'
>
> 'I managed to correct my own mistakes from reading others comments – because different ideas widens my thinking.'

Despite the fact that all students seem to view the discussion area very positively for a variety of reasons the relationship between each other was clearly fragile. The same students who made the positive comments also suggested that other students had in some cases decreased their confidence:

> 'I struggled to express my opinion – I thought my thinking was wrong.'
>
> 'Sometimes reading other students work I felt I was not following the activity correctly.'

The sharing of ideas and perspectives had in some cases caused some difficulties also:

> 'Reading other student's critiques I felt that maybe mine were not up to the standard expected.'
>
> 'Other students input were or seemed to be of a much higher standard than mine.'
>
> 'I felt that I was slow in understanding the course.'
>
> 'I could not express my ideas because I thought I was going to say the wrong thing.'

The underlying problem presented by these comments would appear to fall into two categories: firstly the students appear to lack confidence when contributing to collaborative activities; and secondly students appear to feel unsafe within the environment to express themselves as they may wish, and to learn so publicly. Yet the underpinning assumption in the design of the course is that appropriately structured

activities will enable students to study together successfully and to develop their understanding of the course materials as a result of dialogue and discussion with each other.

However, there were problems relating to their view of themselves in terms of confidence to learn so publicly and to put trust in the environment as a safe place to expose their needs. Others such as Feng et al (2004) state that in order for online communities to survive and thrive it is important that there is online trust between people, this theme is supported by the next section of the study.

In the next stage of the study the students were asked directly for their perceptions of responsibility for learning, the results are shown in Table 2.

Table 2: Responsibility and learning

Self	60%
Fellow students	6.75%
The lecturer	26%
Others(stated to be partners and work colleagues)	6.25%

Table shows how the participants assigned numerical percentages to people and/or factors they view as responsible for their learning

The learners attribute most responsibility for learning to themselves, just over a quarter to the lecturer and the lowest percentage was attributed to the contribution of other students, just a little more that other people, ie partners and work colleagues. This suggests that the students on the course did not see fellow students as having very much responsibility for their learning.

Discussion and implications for practice

The purpose of this study was to explore the potential of an academic preparation course to reduce transactional distance through the design features which support a teaching and learning strategy underpinned by cognitive development and social interaction in an e-learning environment. This strategy included the use of real dialogue between learners mediated by activities specifically designed for this purpose. By analysing the course qualitatively through the use of the Perceptions of Learning Environments questionnaire (II) problems with online interaction have been found.

It is therefore, important to interpret the data in the context of existing research and raise some ideas about the implications of this for e-learning practice. Some of the student comments demonstrate that participation within online discussion did lead to perceived advantages in terms of individual learning; some comments, however, highlight the difficulties of ongoing interaction in relation to making comparisons and personal confidence. The potential coherence of these responses may be analysed within a context of public and private interests. Wasko and Faraj (2000), when studying electronic communication, found that when knowledge is shared for a common good then people participate and share knowledge which is motivated by moral obligation and community interest; however, when knowledge is perceived as being for private good then learners are more reluctant to share and act out of self interest rather than any form of social responsibility. Success on the Academic Preparation course is determined by assessing individual competence and therefore may drive an ethos of private good. Lee (2005) also differentiates between public and private boundaries in interaction within online discussion groups. On the one hand all messages are public in that they share information and knowledge. On the other hand they can be read as private as they reveal information about the identity of the poster. This, Lee (2005) suggests, impacts on the manner in which online interaction is experienced. He found that anonymity is a strategy often used to secure privacy within internet discussion groups. In a more general study of interaction on the internet McKenna et al (2002) describe the relationship between anonymity and greater intimacy and closeness. Turkle (1995) takes this further by demonstrating how the anonymity of the internet allows people to express themselves without fear of disapproval and sanctions.

Anonymity within an e-learning context would be both impractical and inappropriate. However, the data suggests that there is a lack of trust when revealing a vulnerable side of the 'self', ie intellect. Feng et al (2004), emphasise the importance of online trust between learners. In order to win online trust they state

that there is a need for interaction that demonstrates empathy in terms of interpreting feelings correctly and giving appropriate responses. The context and mission of the dialogue, however, will affect the level of trust. The context in this study was a group of learners on an online academic preparation course at the beginning of their academic studies. Conrad (2002) suggests that if left to their own devices, it is unlikely that these students will be concerned with a sense of community with either fellow learners or the lecturer. Their concerns are more likely to be mastering the business of the course and their personal integration into University life.

The resulting conclusion, therefore, is that dialogue and interventions from the lecturer that are critical in this context. Hammond (2000) states that for communicative discussion to take place learners will need supporting, lecturers need to explain what is being attempted and why. Some literature places importance on both social and interpersonal feedback in online learning (Jung et al, 2002) whilst others emphasize specific actions of lecturers including the ability to facilitate deep discussion to support and develop individual capabilities and potential (Descantis et al, 2003).

There is, however, no one theoretical framework to support a detailed response to the finding of this study. Forster (2002) states that any response from the lecturer is inductive and that teaching to encourage participation within social constructivist environments requires self reflective practice and an ability to question the assumptions upon which learning design is based. Interestingly Forster (2002) also differentiates between courses such as Academic Preparation and others that are taught at a much higher level such as post graduate courses, and says that when lecturers function on the boundaries of their competence (such as in postgraduate courses) they are much more likely to learn from the learners and be more open to dialogue and ideas to support engagement. In this context lecturer feedback becomes a signal to support student engagement and articulation of views and concerns. May be, she suggests, this openness is lost when the lecturer is on very familiar ground.

To conclude, therefore, this is a small scale study and the findings of it must be considered within that context. The study has drawn strongly on the views of a group of students who are caught up in a process of personal change and challenge. E-learning has offered opportunities for study that cross the boundaries of time, place and space. However the study has demonstrated that the management of such learning processes must be handled sensitively and with considerable skill to embed online activity within a context of trust and safety. The instrument used in the study has been adapted from its original use without any problems and has given considerable insight into the experiences of this particular group of learners in order to bring a different perspective to student support in a context of widening participation. Data collected revealed that the relationship between the individual learner with the social group is a fragile one and that skills of collaborative learning need to be learned along with other academic skills.

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Contact details

Lynne Jump Senior Lecturer in Open and Distance Education
School of Health & Social Care
Tel: 020 8331 8100
Fax: 020 8331 9926
Email: L.Jump@gre.ac.uk

Richard Jump Senior Lecturer in Managerial Leadership
School of Health and Social Care
Tel: 020 8331 8494
Fax: 020 8331 9926
Email: R.E.P.Jump@gre.ac.uk

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