

Virtual Groups in Learning Environments: Collaboration, Cooperation or (Self) Centred Individualism?

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Abstract

The paper argues that whilst computer mediated conferencing and virtual learning environments facilitate collaborative and cooperative learning, the actions taken by non traditional undergraduate distance learning students may not reflect the intended learning outcomes of constructivist learning. The paper considers the behaviour of non traditional undergraduate students engaged in task based group work whilst studying wholly online in an open access learning environment. It examines the approaches taken to achieve the task. The outcome of this research has implications for the anticipated change in demographics within Higher Education in the UK.

The introduction of virtual learning environments into distance education has provided the opportunity to move away from the industrial model of self instructional materials and independent study (Garrison, 1997). The social environment and connectivity affords the student the opportunity to develop deeper understanding through their own construct in dialogue with peers and tutor. The paper argues that the participants on this course approached their study from an individual goal, activity or learning orientation rather than from a collaborative and constructivist learning perspective. Findings are based on the authentic student voice, through the use of computer mediated transcripts within the online environment, student reflections and post course interviews.

Keywords

Online group work, cooperative learning, collaboration learning, non traditional learners

Introduction

The use of computer mediated conferencing (CMC) and virtual learning environments (VLE) facilitate collaborative and cooperative learning, however the actions taken by non traditional undergraduate distance learning students may not reflect the intended learning outcomes of this constructivist pedagogy. This paper considers the behaviour of non traditional undergraduate students engaged in task based group work whilst studying wholly online in an open access learning environment. It examines the development process of small groups undertaking assessed group work and considers the approaches taken to achieve the task. The outcome of this research has implications for the anticipated change in demographics within Higher Education in the UK and the ramifications of the Leitch Report (2006).

The introduction of virtual learning environments into distance education has provided the opportunity to move away from the industrial model of self instructional materials and independent study (Garrison, 1997). The internet, information technology and CMC has afforded collaboration and cooperation not previously experienced in distance learning, allowing students to engage in constructivist learning through discussion. Collaboration and cooperation offer more than just communication, the terms imply an obligation to peers through social interaction (Bruffee, 1984; Ravenscroft et al, 1999; Jones, 2007) and links to Vygostky's (1978) social development theory and the development of cognition (Johnson, et al. 2000). The social environment and connectivity affords the student the opportunity to develop deeper understanding through their own constructs in dialogue with peers and tutor, students therefore have the possibility of becoming active learners which may lead to them engaging in "deep learning" (Entwistle, 1988). The use of asynchronous computer conferencing, in principle, provides a more equal opportunity

for participation in group work as participants do not need to be present at the same time (Berge & Collins, 1995). However, cooperative and collaborative learning requires active engagement rather than passive transmission (Lehtinen et al, no date). Mason (1992) draws attention to the issue that interaction is not the same as participation.

Participation in cooperative and collaborative learning were important elements of the course, which fosters positive goal or reward interdependence (McConnell, 2000). This is, however, inconsistent with the self directed tenet in adult learning theory (Tough, 1967; Brookfield, 1986; Knowles, 1996; Knowles et al, 1998). It is acknowledged that this loss of independence, in respect of pace and flexibility, when students engage in collaborative distance learning is one of "the most serious disadvantages" Weller (2002, p70).

Context

This small study was based on three tutor group cohorts of United Kingdom Open University foundation level students, forty four students, studying in a wholly online learning environment; course material was delivered through the web and supported primarily through FirstClass conferencing facilities, with telephone support when appropriate. The UK Open University provides open access learning opportunities, with no requirement for pre entry qualification at foundation level, the aim being to develop "excellence without exclusion" (Open University Media Relations, No date). The student profile was diverse; the age range was from eighteen to post retirement and students had a wide range of prior educational attainment, from no formal educational qualifications to second degrees. The students engaged in a series of small, task based, group work activities throughout the duration of the eight month course; group work was assessed through their individual reflection on their contribution, participation and application of netiquette. The task output was not assessed.

The use of collaborative group work was an unfamiliar concept; some older learners had no educational experience on which to base their understanding. The practice of sharing ideas was also challenging as this previously would have been perceived as cheating (Kennedy and Duffy, 2004; Nelson, 2004). This was compounded by the stress put on the perils of plagiarism in the early weeks of the course. Prior learning experience for most students in this study would have been teacher/tutor led, didactic or transmission mode delivery. In this study students not only encounter a new pedagogical approach to learning, through constructivism but were also studying within a post modern learning environment of web based delivery. These students, in many cases, were digital immigrants in a the digital world.

Methodology and data collection

A mixed methodological approach was taken to the qualitative research, with the application of ethnography and grounded theory, using the three cohorts as individual case studies. The use of ethnography within the virtual learning environment provided an opportunity for participant observation, as a practitioner researcher, and therefore moved the methodology towards virtual ethnography. The application of grounded theory also required a more flexible approach as Charmaz (2006, p15) states:

"Neither observer not observed come to a scene untouched by the world. Researchers and research participants make assumptions about what is real, possess stocks of knowledge, occupy social status, and pursue purposes that influence their respective views and actions in the presence of each other".

The application of constructed grounded theory legitimises the adoption of a flexible strategy for data collection and analysis (Glaser and Strauss, 1967, Charmaz, 2006). The data collected included the full conference transcripts for each group work task; which was verified as the complete record through interviews conducted after completion of the course. Other sources of data included reflection on the group work process, submitted as part of the summative assessment, the end of course assessment together with tutor notes taken at the time. Triangulation of the data was achieved through the cross-referencing of the data sources with the evidence used to support individual reflections on the group work process in the assessment (see diagram).

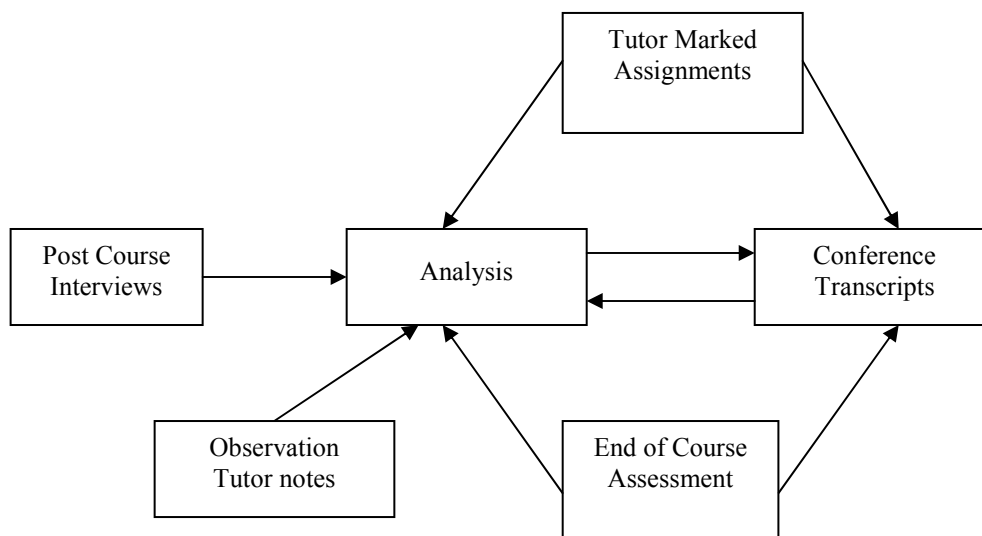


Figure 1: Triangulation of data

Emerging Themes

Within the literature relating to cooperative and collaborative learning there is discussion about the definition of the terms; which are frequently used interchangeably (McInerney and Roberts, 2004, Jones et al, 2007).

For clarity a brief comparative summary is provided.

	Traditional Learning	Collaborative Learning	Cooperative Learning
Tutor role	“Sage on Stage”	Learning Facilitator	Guide
Learning	Passive, transmission, didactic delivery	Active interaction for knowledge acquisition	Knowledge developed through discussion with peers
Students	Operate as individuals	Operate as a groups	Operate as a group
Submission of work	Individual	Individual	Group
Character	Competitive	Respect for individual contribution. Interdependence and mutual assistance	Working together as one for a common goal, de-emphasis of the individual.
Learning techniques	Individual	Student to student interaction with mutual engagement	Have a need to work in groups. Division of labour to produce a final goal

Figure 2: Comparative Summary of Learning

A detailed comparison of cooperative learning and traditional learning is provided by McConnell (2000) outlining the active nature of engagement and the construct of knowledge within cooperative learning. Laurillard (2002) makes the claim for the value of students working together through CMC, so emphasising the value of the shared sense of community through discussion but acknowledges the need for tutor presence for guidance and direction.

The participants in this study demonstrated elements of all three modes of learning within the course. Assessment was based on individual submission but the task based group activities required cooperative learning techniques for example through the division of labour.

Collaboration

Within the task function of the group work the students had, by necessity, to communicate. This frequently involved the provision of information in an individual and pragmatic way rather than through negotiated contribution, for example:

- “I found some ...”
- “I have links to ...”
- “My choices for a ...”
- “I’ve had a look around for ...” (Extracts from conference transcripts)

In the early stages of the course there was an emphasis on the application of the principles of netiquette within the group communication, this also formed part of the assessment. It was, therefore, not surprising that contributions made by group members were acknowledged with zeal:

- “Your effort looks splendid, and your scheme for progression is very sound.”
- “Well Done J nice job.”
- “Thanks but I think we all worked well as a team ...” (Extracts from conference transcripts)

Polite interaction was also seen when students were seeking opinions for instance:

- “If anybody has any feedback regarding this I would appreciate it as it may help with the TMA.”
- “Has anyone got any other preferences?”
- “Would you go with this?” (Extracts from conference transcripts)

This superficial level of interaction did not develop the content of postings to a deeper level, contributions were not challenged beyond correction of trivial mistakes. Fung (2004) attributes this passive approach to lack of time, however, I would argue that the influence of netiquette appeared to restrict this level of collaborative interaction with the emphasis that “This is just my opinion of course...”. Although, the interviews confirmed that the students saw the importance of contribution and giving peer feedback to the group, with comments such as “... very important to play a part. It’s not about being right or wrong”, this did not manifest within the transcripts. Students wanted to receive constructive feedback which could be used developmentally, although this was recognised as being difficult to deliver. An example from a student reflection:

“In my experience the biggest disadvantage is not receiving feedback from your group when something is not quite right. Receiving positive feedback is excellent, however, I found that up to completing the compulsory critique exercise in module 3 criticism of any form has not been evident. Correcting each other online is not easy, failure to do so is a real disadvantage to student’s learning.” (Student reflection)

The timeliness of receipt of peer feedback was critical to the self esteem of the student who had asked a question or sought advice, with student reflections identifying the contrast with face to face group work. One example:

“During normal [face to face] group discussion I receive an answer instantly, but it takes hours and days for an electronic reply to arrive. I can demonstrate this on one and only experience of mine, where I had been waiting for an answer for a week, only to find out that it had been a misunderstanding.” (Student reflection)

The commitment to the group, in terms of individual contributions was also deeply felt, with guilt when deadlines were missed or information shared late. For example:

- “Sorry Guys, I have only just picked up this activity.”
- “I’m sorry I can’t be of further help this time.”
- “Sorry to be so late with this information.” (Extracts from conference transcripts)

This was particularly noticeable when one student had technical problems during the early stage of the course, who stated:

“One of the problems working online is the inevitable system breakdowns. I had serious problems at the start of the course and felt really isolated. This in turn lead (sic) to other insecurities because when I eventually returned online and posted my excuses/apologies, I felt that my colleagues would think I was not sincere.” (Student reflection)

The opposite perspective is well documented where active participants feel irritated by non contribution (Groom 2003). This demonstrates the importance of the tutor presence to follow up absentees and to share reasons for absence sensitively.

Collaborative learning was present albeit in a surface, tokenistic manner. Contributions were made offering specific information. How this contributed to the development of peer knowledge is not clear, as clarity and further questioning was limited within the online conferences. The depth of development of shared knowledge and understanding was not evident within the transcripts or reflections.

Cooperation

On this course, the task based group work was not assessed as a group contribution; students were required to reflect on their contribution to the group. In order to complete the group work component of the assessment students were required contribute to the group work task. The tasks were too large for an individual to complete within the time scale, so negotiation and division of labour was required. This was clearly stated by the tutor in the details of the task.

Division of labour did occur in some instances, where a self appointed leader distributed tasks. This frequently ended with a caveat like “... if anyone has any serious objection to this could they post by midnight tonight ...”. For others allocation of tasks was on a volunteer basis, here a posting would be made which went unchallenged and consequently became assumed agreement. Individuals made suggestions but without contribution or acknowledgement this proved frustrating, for instance:

“This has do be done quickly so that we can then assign jobs to each other. Although if some people would like to volunteer for certain jobs then that would make things easier.”
(Extract from conference transcript)

This ad hoc process was a cause for concern, with comments such as “How do we know what the others are doing or do we just plod on?”

The role of leader in the small group activities was not allocated by the tutor; this was made clear in the introduction to each group activity. Leadership became a transient role within the groups. Whoever was currently online within the small group was the leader at that point, posing the next question to move the task forward for instance “Any ideas on who should do what part of the exercise?” and “For the moment there only seems to be three of us participating in the tutorial so I would suggest splitting the jobs down into three groups.” Only one student reflected on leadership in their overall group work reflection and that was an acknowledgement of the development of employability skills rather than their role.

Individualism

Traditional, paper based correspondence course, distance learning allows the student to take control of pace and place of study. A study guide is provided as a guide to time management and planning but it would be down to the individual student to take control on traditional Open University courses. The online course provided a similar guide but the timing of the group activities were prescribed by the course team. This necessitated students having regular access to the internet during those periods. Work commitments for some students, such as those in the armed forces or working abroad, became a barrier to engaging in group activities; for instance pre planning access to the internet whilst working on contract in rural Russia was not possible. The strategies adopted by other group members to deal with absent peers were pragmatic, demonstrating their individual and focused approach to their study. For example:

- “Dealing with absence – ignored them. Never thought to contact them individually”
- “Concentration on doing your bit” (Extract from interviews.)

Students undertaking distance learning courses do so for many reasons, one of which is not wanting to engage with others during their study (Bradley, 2000). Despite the pre enrolment details outlining the group activities within the course some students chose not to engage, this was the first posting made by one such student, "I have too much other studying to do. I am studying another 60 point course." The course was a pass/fail course and it was possible to achieve a bare pass without engaging in the group activities but the added value of the social contact with others would have made this difficult. McMurray and Dunlop (1999) suggest that the distance learner gets more value from collaborative learning than the traditional on-campus student. The first time distance learning students in this study would be unaware of this added value.

Discussion

A number of studies have been conducted regarding computer mediated conferencing (see Asensio et al, 2000, Groom 2003, Fung, 2004, McConnell, 2006), however these studies primarily focus on postgraduate students where motivation, skills development, learning experience and cognition are anticipated to be at a higher level than undergraduate students. This study offers an alternative perspective from students who, whilst interested in learning, have different drivers. Quantitative research on the course in the study has been extensively reported (Weller and Mason, 2000; Robinson and Weller, 2002) however this study offers an in-depth analysis using the authentic student voice, through the observed actions within the online environment and student reflections from post course interviews, highlighting the humanistic aspects of a technologically enabled and enhanced course.

Computer mediated conferencing can be characterised as a key element in the third generation distance education with the provision of two way communication and the opportunity to develop higher level cognitive skills rather than just comprehension (Bates, 1995). The reasons for this lack of development of these high level skills are many. Groom (2003) cites procrastination, lack of experience and expertise, conversational drift as potential triggers, all these were evident within the group activities, however this was rarely expressed overtly in the study. The frustration expressed perhaps was only noticed by the tutor, as observed in personal notes:

"Do you think we should make a start - at least try and plan a timetable." (Conference extract)

"Hint of frustration or plea?" (Notes from analysis and tutor notes)

The affordance offered by computer mediated conferencing, in distance learning, to group work and collaboration does not provide a panacea. As Alexander (1992) says:

"Collaborative learning cannot be guaranteed to occur successfully simply by giving students a CMC system and telling them to get on with it. It is far preferable to devise activities in which collaboration is an essential part."

If it becomes a requirement, necessitating engagement with collaborative and cooperative learning, some aspects of learner control, a tenet within adult learning theory, are removed. Dirks and Smith (2004, p134) argue:

"... that students demonstrate a profound ambivalence toward online collaborative learning, fuelled in part by the emotional dynamics associated with the force of individuation (Boyd 1991) and group development (Smith & Berg, 1997)".

The participants on this course approached their study from an androgical perspectives; goal, activity or learning orientated, rather than from a collaborative and constructivist learning approach. The use of collaborative learning, through articulation and dialogue, is one of the principles for social construction of knowledge. There is an expectation that collaborative learning will encourage and develop critical thinking in learners (Fung, 2004). This approach does not take into account the motivation, of some students, to undertake this course under the category "playtime: education for leisure" (Evans, 1994, p99) for instance:

- "...liked computing, something new not done before."
- "Enjoyed TU170 so much wanted to continue"
- "[I] Wanted something different to work." Extracts from interviews

Conclusion

The students in the study undertook the course for a variety of reasons. Whilst computer mediated conference affords social interaction and facilitates collaboration Harasim (1990) highlights asynchronous CMC provides the tool to undertake group work with distance learning students. This still requires a sound pedagogic purpose for asking students to engage. Incorporating collaborative and cooperative learning because it is technically possible does not provide sufficient justification; the purpose has to be explicit (Kear, 2004) and the students need to be aware of the added value to their individual and personal learning experience. As McInnerney and Roberts (2004, p211) state:

"Do students need to work together for the betterment of the group to be able to learn properly? While desirable, we contend that this is not necessary in every case. That is, individuals may still learn even if the group dynamics are not ideal."

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