Paper 7:

Supporting a Culture of Collaborative Study: Collaborative Study in Undergraduate Courses using a Computer-Based Conferencing System

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Summary

In this paper I present an account of four short undergraduate courses which ran between 1992 and 1995, three using a computer-based conferencing system (FirstClass) to support collaborative study practices, and one using a paper-based conference for the same purpose.

The seriousness of the emphasis on collaborative study was communicated to the students not only by means of the conference discussions, but through the use of student writing as set reading

material for the course, and the use of material from the conference discussions as the basis for the final examination.

Students responded best in courses in which the tutor participated in conference discussions in a similar style to them. Even when some of the computer-based features were lost, as in the final course which used a paper file for public writing, students made significant use of this forum. However factors outside the design of the system for supporting collaboration seemed to play the strongest part in determining the extent to which students would find value in using the system.

Among the factors influencing the success of the course 'philosophy' appeared to be the physical conditions, the initial induction process, the tutor's participation style, and the assessment practices. None of these are particularly surprising, but the experiences reported here indicate that learners respond differently to quite fine differences in the instantiations of the course design.

Why Collaborative Study?

My design of the courses was grounded in a commitment to encouraging a culture of collaborative study, and to legitimating students' informal practices of collaboration (Rimmershaw 1993). I also wanted to raise their consciousness concerning academic study practices through collaborative engagement in them.

This is in contrast with many other contexts for the development of computer supported collaborative learning (CSCL), which have often involved part-time students, distance learning, (Steeples, Johnson & Goodyear 1992), high student numbers (Crook and Webster 1997, Stainfield 1997)), or the need for interactions beyond the study group (Hughes 1991) where the use of computer-based communications technology has been in part driven by the need to overcome logistical problems of communication between participants. In this case however, the learners were full-time students in an undergraduate programme who would normally be timetabled to meet face-to-face for two hours a week, and who could also meet on campus in their own time.

I communicated my rationale to the students in much the following terms:

a) Collaboration is a common academic practice - professional academics do it all the time, and find it useful. Students are judged in academic terms, and should therefore engage in similar types of practice.

b) Collaboration is a common "real-world" practice - lots of people work in teams.

c) Collaboration is good for learning - knowledge-making is not a zero-sum game; you don't lose any by sharing it with others; in fact you are likely to improve your own understanding.

d) Collaboration is ethical - in learning encounters (interacting with books, tutors, and fellow students) knowledge is jointly constructed, so explicit collaboration encourages us to make explicit the part others play in our learning.

It has been argued (Clark & Ede 1990) that collaborative learning can be a poor trick played on students by well-meaning teachers; merely disguising the continuing authority of the teacher's position and the corresponding lack of authority in the students'. They argue that the social constructivist position (implicit in rationale 'c' in my formulation above) "ignores powerful cultural, political and ideological realities" (277). Whilst it would be naive not to recognise the force of the institutional context in which both the students and I would operate, their critique of collaborative learning is based on an equation of collaboration with consensus and accommodation. However my conception of collaboration, which I tried to design into these courses, also encompasses debate, dispute and even resistance. Understandings which are jointly constructed are not simply additive exchanges. Indeed the conventions for the academic writing in which our understandings are made public involve both an identification with and a distancing from other people's positions, as I am doing now.

The Course Design

Since the courses were short, and most or all of the students coming to them could be computer naive, learning to use a new study technology would only make sense if it was easy, and supported a substantial part of the course activity. I chose FirstClass, by SoftArc, Inc., an integrated system offering on-line chat, e-mail, bulletin boards and public and private conferences.

I hoped this system could support

- **topic conferences,** where students could define key questions, explore the relationship between theory/research and practice/experience, test out their own ideas, ask for help in making sense of a concept or argument, design exam questions, engage in debate

- **reading clinics,** where students could clarify confusions, ask for explanations, discuss the credibility and value of the claims made, try out critiques and share their reactions

- **a course bibliography,** for sharing annotations, and additional sources

- **collaborative assignments,** where students could not just comment on each others' work in progress, but jointly own it

- **learning diaries,** where students could keep track of the role of others in the development of their own ideas

For each course the system was set up as two sets of conferences. One represented the pre-defined subthemes of the course (topic conferences), and the other the reading students would do (biblio conferences). The three biblio conferences were for the core readings all students were expected to do, supplementary readings suggested by the tutor, and further relevant readings discovered by any course member whilst the course was active. There was a folder for public messages, and private e-mail, within the system.

Students engaged in a variety of group activities related to the course content at weekly meetings. They were encouraged to write their coursework collaboratively. The form of the final examination was decided in negotiation with the students having regard to two principles: that it should be fair - giving them a chance to show what they had learned; and appropriate - matched to the way they had been learning on the course. In three of the four courses this led to part of the assessment involving discussion of other students' contributions to the conferences.

The Courses in Practice

The FirstClass system was set up for three optional courses. A student might take one, two, or all three of them. As they were new, experimental courses, small numbers were expected. The students would have about one quarter of their private study time available for working on the course, a two-hour timetabled block of whole-class contact each week, and 24 hour access to a network of MAC computers.

Course One recruited eight students in autumn 1992. The computer-based work took place in the Psychology Department at the other end of the campus. I participated in the conference discussions alongside the students with their agreement.

Course Two recruited eight students in spring 1993, four of whom had already taken Course One. I was unable to run the introductory sessions, attend class meetings or join in conference discussions. I wrote to them weekly with guidance and suggestions for what to do in the class meetings, and they wrote back saying what they actually did. A colleague set up the conferences and ran the introduction to FirstClass in the same location.

Course Three recruited twelve students in spring 1994. The computer-based work took place in a public lab near the centre of the campus. I participated in the conferences, though less often than in Course One. Towards the end of the course the hard disc on the file-server became corrupted, eliminating most of the conference discussions, which we were only partially able to reconstruct from participants' printouts.

Course Four, a repeat of Course Two, recruited fifteen students in spring 1995, five of whom had already taken Course Three. Given the lack of confidence in the computer-based system engendered by the crisis in Course Three, the conference work was done in two paper files located in the Departmental coffee room, alongside a set of the course readings, with access during office hours only. The first had three sections, one for the course topics, (equivalent to the FirstClass topic conferences), one for planning assignments and finding collaborators, and one for comments and suggestions about the course (some of the functions for which students had previously used the bulletin board and e-mail). The second file also had three sections, replicating the three biblio conferences in FirstClass. A system of marginal numbering allowed cross-referencing between items. Students either wrote their contributions by hand in an easy chair, or pasted in items written elsewhere. I only wrote in a conference when asked a direct question.

Students' Responses

There is insufficient space here to detail the students' responses to their experiences of the courses. I will present them at the conference (drawing on Rimmershaw & Warwick 1993 and Warwick 1994, and on debriefing interviews), and content myself here with a few general observations.

The contexts of the most and least successful courses

In terms of generating a fruitful culture of collaborative study, Courses One and Four were more successful than Courses Two and Three. Several factors probably contributed to this. In Course Two those students who had used FirstClass on Course One made substantive contributions to the conferences at first, but these fizzled away when contributions from the new users were not forthcoming. This suggests that either the *induction process* or the *tutor's active participation* may have been critical in setting the right tone for the more successful courses. In the most successful conference (Course One), I did teacherly things, like posting messages inviting students to make a certain kind of contribution as a follow up to some class activity, but I

also responded to students' contributions as if I was one of them, thus modelling the taking seriously of each others' ideas or experience that I wanted them to practice.

The *location* of the computers, which made conference work seem an effort for Courses One and Two, might have been an improvement on Course Three had it not been for the greater competition for access in the lab where it ran, and the loss of *confidence in the system* when the backup procedures proved unreliable. The Course Four conference was not only located in the most convenient place, but in also a different *environment.* The room used had a social rather than study function, and was softly furnished, with a coffee machine, a carpet and easy chairs facing inwards. By contrast the labs were all hard surfaces, and had workstations facing the walls, on which notices reminded students that no eating or drinking were allowed.

The importance of the initial relationships developed in the group

If someone had wanted to put collaborative learning to the test by asking the most unlikely group of students to work together then the Course One combination would probably have been it. The eight students included three who were in danger of failing their degrees, two who needed top-class degrees in order to go on to postgraduate study, (at least) one with mental health problems, and two who were usually silent in seminars. I can only suggest that the explicit emphasis on collaboration, together with the shock of finding who they had to collaborate with, made these students (and me!) work particularly hard at forging good relationships.

They were certainly inventive in finding ways of sharing out course members they perceived as "difficult". For example they made a rota of partners to work with in preparing for class meetings. They also organised themselves to work in a different pair for one conference session each week, so that the knowledge of how to use various features of the system got spread around the group. These strategies not only protected individuals from being stuck with someone scary, but were also in keeping with the cooperative spirit of the course. Fortuitously in the initial introductory session one

student found the on-line chat feature of FirstClass. The spread of this informal communication throughout the group during this session may also have played a part in generating a sense of community. It was reflected in the extent to which this group made use of the e-mail facility in FirstClass for personal support and encouragement.

There was strong resistance to any suggestion of relying entirely on the conferences for studying on the course. The class meetings were valued, not only for the learning activities we engaged in then, but also because the face-to-face contact seemed important in building the group-spirit on which the quality of contributions to the conferences depended.

The pros and cons of the paper-based relative to the computer-based version

In FirstClass students could copy messages from the public conferences into their own folders and organise them as they wished. Some students did this, and others printed out messages they wanted to work with. It was more labour intensive to keep a personal record of learning from the paper-based conference; students could not so easily take away contributions for their personal use. However the course readings were available in the same place as the conference files so that they didn't have to transport their personal copies of reading materials to refer to when contributing. If they wrote something in advance, they had only to paste it into the file rather than write it out again, and they were able to use the course files to share some of their non-assessed classwork and newspaper cuttings relevant to the course topics.

On the other hand they had no private space for communicating, no equivalent to e-mail. This seemed to make them confine themselves more narrowly to my set readings and my definitions of the themes to be explored. They offered no alternative themes or academic reading, and made almost no use of the bulletin-board-equivalent pages. No doubt the office hours access meant this feature was less useful.

Using FirstClass there was a greater disjunction between public and private study which some students found frustrating. They found themselves

reading at home and making notes, then writing up what they want to say in the biblio conference and coming in to the lab to copy-type what they'd written so it could be shared. In the public lab (Course Three), the pressure of other students wanting to work there meant they couldn't be sure of access or feel relaxed about taking time to read and respond.

Emerging Issues

The role of assessment practices in encouraging use of the conferences

The different ways these courses were assessed seemed to make a big difference to how the students embraced the conference work. The assessment was only partly determined in advance. Students could choose whether or not to submit joint coursework. They negotiated with me (and the external examiner) the format of the examination. This process was part of the induction into the collaborative ethos of the courses. In Course Two it had to be carried out by correspondence, so that my voice carried least weight in the group discussions. The outcome was that the students collaborated in class to review what they had learned and use the review to set a conventional exam paper. Although this process had a collaborative study element, it did not generate further collaborative study. By contrast, in the courses where I was physically present at class meetings, and so my suggestions and arguments were more difficult to ignore (though several were resisted), I was able to 'sell' the usefulness of basing the assessment on their shared learning activities. In Course One they used the exam to respond to and reflect on their own personal selection from the contributions by other course members. In order to do so they had to re-read all the conferences, and/or the personal records thay had made from them, in order to review what had been most thought-provoking, puzzling, or revelatory for them. This generated a) a sense of responsibility to others to contribute to the conferences, and b) an extra reason for paying serious attention to what others were saying. In Courses Three and Four the final exam design also included some element of this.

The significance of making a place for non-assessed public writing

Whilst I am arguing that involving the conference debates in the course assessment was probably a key factor in making them work, it also seemed important that the contributions themselves were not assessed. This possibility was put to the students when we negotiated the form of the examination. Their resistance was unanimous in Course One, and by a big majority in Course Three. Their arguments were first that there were big differences in familiarity with computers in the group (ranging from no previous exposure to more experience than me); second that knowing their writing would be assessed would inhibit them tremendously. The experience of Course Three members in the spoken domain seemed to bear out their judgement. In that course the students asked to be assessed on their group presentations. This was a learning device I had used for several years with this subject matter, but the presentations, assessed for the first time, were the least adventurous I had seen.

It is interesting to note that relative to no role at all for the electronic debate in assessment, Goodyear (1995) found that assessing conference contributions generated debate. The kinds of contributions valued by his students suggest that low-risk contributions (without rhetorical flourishes, wild speculations or biting humour) were the order of the day. My students' arguments against assessing their discussions indicate that they saw the conferences as potentially both 'public' and 'safe'; that without the incubus of assessment they would be able to take more risks.. This is consistent with the findings of Mabrito (1991) who found that peer-response via e-mail was a much better means of exchanging comments on writing than face-to-face situations for 'high-apprehensive' writers.

Defusing concerns about 'plagiarism'

When the word 'plagiarism' is used in the context of computer networks and electronic communications, it is often in connection with alarms and panics over cheating (Sterling 1991), and intellectual property rights (Scollon 1995). There is concern that professional academics and students will incorporate material from public websites into their own work without acknowledgement, or that

an international market in ready-made down-loadable term-papers will develop. In an educational culture where product is valued over process, and the accumulation of publications or of good grades is a dominant goal, these practices would not be surprising. Of course (pace Clark and Ede) the students on the courses discussed here are still in search of good grades, but the emphasis in the course conferences was on reflecting on *all* resources available. This included material specially written by the tutor, students' writing from earlier versions of the course, practical activities engaged in at class meetings, group discussions at class meetings, tutor-set and student-discovered published writings, their own relevant experience, memories and observations, and contributions to the conference so far.

Coursework assignment specifications encouraged students to refer to all of this range of sources. Participating in the ongoing conference exchanges made acknowledgement both of each other's contributions and of published work happen naturally. To the extent that the forms of assessment also fitted the collaborative culture, the 'danger' of plagiarism in formal assessed work vanished.

Reinforcing or undermining the dominance of the written word?

It was very noticeable that the students most voluble in the conferences were not necessarily those most talkative at class meetings. I found myself gratified when a student who said almost nothing in the face-to-face group made a lot of thoughtful contributions to the conferences, a phenomenon also noticed by McConnell (1990). But on reflection this was also a cause for unease. Students who talk and listen better than they read and write are discriminated against throughout the education system. Using a system which supported collaboration through the written word potentially perpetuates this inequality.

However there were also effects operating in the other direction. The writing done in the conferences, being non-assessed, was in some respects closer to the informality of seminar talk, than to the formality of essay writing. Taking that informal writing seriously, for example by using quotations from it as the basis of the examination, represented

a move towards acknowledging a wider set of sources of knowledge and ideas than those available in published professional writing. Taking this direction further leads to acknowledging other people's spoken ideas and formulations, from public lectures and conference presentations, seminars and group discussions, and private conversations. Such acknowledgements are currently much more rare in published academic work than the realities of academic life and our knowledge-making processes could justify. I had better hastily acknowledge the discussions of the Teaching of Writing Group at Lancaster for stimulating these reflections on plagiarism and on the dominance of the written word.

Lessons Learned

- A mix of public and private spaces for writing, easy access to the conferences and to common reading materials at convenient locations, and a work environment reflecting the communality of the course, all contributed to students' perceptions of the courses as relatively **'congenial'**.

  High-profile participation on the part of the tutor, indicating that setting up the conferences was not just a way of fobbing students off was probably significant too. My collaboration in their discussions may have contributed to students' perceptions of the course principles as relatively **'credible'**.

  Trying to ensure that the assessment of the courses was in accord with the learning principles they claimed to espouse seems to have been particularly important in students' perceiving the collaborative elements of the course as **'coherent'**.

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