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Towards a computer-based learning environment: a pilot study in the use of FirstClass

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Abstract

This article outlines the nature of the FirstClass computer conferencing program and considers its effectiveness in helping to develop a computer-based learning environment in modern languages at the University of Ulster. A wide range of different transactions is outlined and surveys of staff and student reactions are assessed. Their positive responses demonstrate that FirstClass is effective in establishing such an environment, enable us to draw encouraging lessons from our experience and indicate exciting possibilities of immediate further development.

1 CALL and communications software

To say that recent years have seen an explosion in the use of e-mail and the Internet is to state the obvious. Using computers to communicate with each other has, along with mobile phones, become part of general culture. It is a highly fashionable thing to do. In response to this trend, CALL devotees have sought to take advantage of this popularity by using communications software to enhance language learning. Often this use has been linked to the concept of the Internet as 'edutainment'. It is within this context that we have sought to consider the value of FirstClass.

2 Research experience

Research at the University of Ulster has shown that, at the moment, CALL does not fit easily into existing pedagogical structures, either in terms of course structure or module content, and that in many cases it can still be seen as an adjunct to traditional methods or as a waste of time. Yet we have found that CALL does make a difference to language performance and the acquisition of language skills. Research outlined at EUROCALL conferences in Dublin and Leuven showed, among other things, that the benefit of CALL is considerably enhanced by the integrative effect of computer conferencing, which sets up a more thoroughly computer-based learning environment, and that resistance to CALL is therefore reduced (Gillespie and McKee, 1999a, 38–46; Gillespie and McKee, 1999b: 441–455). Jane McKee and I argued that the development of a

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computer-based learning environment is necessary for the proper embedding of CALL into our university courses. Such an environment would be valuable not only in terms of educational efficiency, but also because it would be open-ended enough to integrate with other information sources and developments such as Web access.

That argument was based, to an extent, on our initial experience of the use of FirstClass in 1996–97 and 1997–98. The first year was limited in its use, the next year more extensive. In both cases the results were positive and promising, although the scope of the investigation was limited. On the basis of that experience it was decided to use FirstClass to begin developing a computer-based learning environment on all our modern language courses. This paper seeks to outline my findings concerning that development during the academic year 1998–99 as I sought thoroughly to assess the response of both staff and students to its wider introduction and to test the hypothesis that FirstClass provides an effective computer-based learning environment.

The FirstClass program, developed by SoftArc, enables asynchronous closed computer conferencing and is widely used throughout the world, especially in North America. It has also been adopted extensively within the Open University in the United Kingdom. Its successful use elsewhere was another factor in encouraging us to believe that it would provide a basis for what we wanted to achieve.

3 The FirstClass program

The FirstClass program enables any number of closed computer conferences, accessed by password, to be set up to enable teacher and students to communicate effectively. The interface is windows based, but platform independent – we use Apple machines on one campus and MS Windows PCs on the other. Online discussions are also possible. Each student has access to each of the conferences for which s/he has been enrolled.

When students log on to the system they arrive at a desktop window which contains the icons for all the conferences they are eligible to join. Clicking on the appropriate icon reveals the messages that have been sent to the whole class. Each user has a mailbox in which s/he can access all the messages sent specifically to her by clicking on the mailbox icon. Similarly, a member of staff accessing the system will find on his/her desktop the icons of the modules which s/he is teaching and a mailbox containing the messages sent to him/her by students. All the modules for a course or a language can be linked in a joint conference, enabling messages to be sent to all students, for instance, on the Applied Languages course.

Messages can be sent to individual students taking a module, or to all those on any particular module either by the tutor or any student. The student's name is the address, as from it the system recognises the user-id. Such messages are usually asynchronous, but synchronous conferences are also possible. Messages can be sent in a variety of styles, fonts, formats and colours to wordprocessing standard and documents can be attached. Attaching documents is simple and the downloading of attachments merely requires a mouse click on the name of the attachment in the message window before it is saved to a location specified by the user. Consequently different kinds of resources may be sent via FirstClass, saved to disk and printed out when required.

FirstClass also permits monitoring. Messages are stacked on the conference windows with the name of the sender, the title of the transaction, the date and the time. If course-

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work is being received, it makes it clear exactly when it arrived. Previous messages can be stored in folders. The totality of the transactions for any conference is always visible or, if stored in a folder, available. The history of a message can be traced – when it has been read, who has read it, whether an attachment has been downloaded and so on.

Support for the system – the server, the registration and licensing facilities and general administration – was provided by the Computer Services section of the university. Although time consuming at the beginning while all the students and their tutors were being registered, this arrangement caused little problem over the course of the year, except when students forgot their passwords and had to re-register.

4 The use of FirstClass

At the University of Ulster last academic year our use of FirstClass was more extensive and ambitious than before, although still, as the figures quoted below indicate, relatively limited in size. Six different members of staff used it – five in French and one in Spanish; four on one campus and two on another. All students on two specialist language courses, Applied Languages and International Business Communication, had experience of FirstClass for at least two, and in the case of French and Spanish students, all of their language modules, and those on Humanities Combined French and Spanish for at least two and as many as four (in our institution, full-time students take six modules per year). Some others on a European Business Studies degree also had access for one of their modules. The following tasks were carried out using FirstClass:

- Transactions relating to modules were undertaken. Administrative messages regarding timetabling, class location, course content, examination and coursework requirements were sent, both initially and throughout the semester concerned.
- Lecture notes in outline or detailed form were made available, often in the target language, e.g. for Area Studies classes.
- Language materials were sent: for example word lists, and details of difficult grammatical points.
- Students submitted their coursework, whether essays or translations, to their tutor.
- The tutor returned corrected work to students.
- Students built up databanks of presentations and essays (duly revised after correction) by sending them to all members of the module conference.
- FirstClass was also linked to the use of CALL software e.g. MetaText, a HyperCard package developed as part of the work of the TELL Consortium for developing translation skills in a computer-based environment. For students undertaking a translation the sequence was: complete the translation on MetaText taking advantage of the grammar and vocabulary datacards and other helps, send it to the tutor via FirstClass, have it marked online, receive it back via FirstClass, return it to MetaText to produce a fair copy and then send the fair copy to the tutor on FirstClass. Students working in pairs were encouraged to send each other translation data on FirstClass as well. All of these transactions were marked as part of the coursework for that module.

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- FirstClass was used to link Internet surfing and data gathering with the management and communication of the material gathered. Students were asked to research a particular topic on the Internet, build up a wordprocessed dossier and then send it to the tutor for checking.
- Students undertook independent learning tasks and sent them to the tutor.
- Requests for information and for help were frequently sent by students to tutors.

Some staff carried out all the transactions mentioned above using FirstClass. Other staff did not use it for sending and receiving coursework, or for transmitting lecture notes, but even in their case it became part of the learning environment for all their students.

5 Reactions to FirstClass

I have assessed the value of FirstClass by questionnaire and observation. Analysis of the level of transactions in each conference, which was extensive, does not form part of this present study.

5.1 Positive

The responses to this year's questionnaires (three for students, one for staff) were the most positive results we have had for any program. The questionnaire data (on the basis of a five point scale in each case), relates to students from all three academic years on two courses – Applied Languages (AL) and Humanities Combined (HC) French: 1st year AL, 2nd year AL and 4th year AL/HC. Class observation also supported these very positive results.

Research has shown that software considerations are crucial in the learning environment. If the software is opaque and difficult to use, it is virtually impossible to interest and retain the attention of students of widely divergent levels of computer literacy. Almost all students found the FirstClass system easy to use (50% very easy; 44% fairly easy; 6% average [n = 62] on a scale which also included difficult and very difficult). It responded quickly to transactions undertaken and was intuitive to navigate. As a result it had the effect of breaking down the resistance of computer technophobes.

Students were very happy with those aspects of the system which brought obvious benefits: receiving lecture notes or sending and receiving translations. The translations were marked, from their point of view, more quickly and efficiently and there was not the same danger for the tutor that an important translation would be lost. It also softened student attitudes to CALL software such as MetaText when used in conjunction with FirstClass.

FirstClass was perceived as a positive means of keeping in touch with staff (37% very useful; 29% fairly useful; 11% average) and getting administrative details, module handouts and so on (53% very useful; 29% fairly useful; 16% average). Students welcomed the fact that they could ask individual questions, explain absences, get help with an essay question and so on.

The students reacted favourably to potential developments of the system, and in particular welcomed the idea of linking conferences to an Internet gateway (63% very useful; 18% fairly useful; 11% average) and the development of extensive data banks of

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shared presentation material (56% very useful; 23% fairly useful; 16% average). In addition, a significant number of students commented that they found using the system fun.

5.2 Negative

There were very few negative responses, that is responses in categories 2 and 1 of a 5 point scale, but there was a clear pattern to them. A small minority of students were less happy with, or interested in:

i. communication with each other (21% very useful; 26% fairly useful; 23% average; 10% slightly useful; 11% of no use)
ii. the proposal that there should be discussion on the system (16% very useful; 36% fairly useful; 16% average; 15% slightly useful and 8% of no use)
iii. the idea of fair copies of translation work being made available to all the other students in the module (45% very useful; 27% fairly useful; 11% useful; 7% slightly useful; 7% of no use) although there was clearly a strong positive response.

Even though the figures make it clear that the negative reactions relate to a small minority, they indicated that there was a certain unwillingness on the part of some students to be completely independent of the tutor and to have to reveal their skill or lack of it to other members of the class. Such problems are not computer related, nor extensive. It is anticipated that they can be overcome as the culture of a computer-based learning environment becomes more fully established.

In addition to the more positive results noted above, some were reticent about contact with the tutor (5% slightly useful and 11% of no use).

5.3 A better environment?

In response to the question "How do you think FirstClass compares to traditional methods of class communication?" the best results were obtained from final year students who had had the greatest experience of the old pen, paper, handout and noticeboard environment. The results were as follows:

Year 4: 25% much better; 50% better 25% same
Year 2: 5% much better; 38% better; 33% same; 20% worse; 5% much worse
Year 1: 8% much better; 54% better; 38% about the same

The global figures were clearly encouraging: 15% much better; 47% better; 31% same; 6% worse; 1% much worse, in other words it was better or much better for 62%; or the same or better for 93%.

These responses confirm that, as more staff have begun to use FirstClass, and more students have been exposed to it, it has become more popular. The number of staff, at six, represents a third of those teaching modern languages full-time at the university (French, German, Spanish). As this was the third year of its use with the greatest number

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of students using it, it shows that the skills are being learnt and reinforced and that the acceptance of the environment is both profound and widespread.

5.4 Staff reactions

Staff reactions were, if anything, more enthusiastic. FirstClass was seen as being much better than the old ways: four thought it much better; one better; and one the same. Significantly, staff who are not computer enthusiasts used FirstClass and saw it as an important and useful way of enhancing the quality and effectiveness of their teaching. The results of the staff questionnaire bore this out. They all found it very easy to use. All used it for conveying module information and coursework outlines. All used it or intend to use it for the distribution of lecture notes and materials and for making student presentations available in fair copy form (five found it very useful for that purpose and one found it fairly useful). They also regarded the provision of an Internet gateway to permit the further integration of material into the teaching process as having considerable potential (five thought it would be very useful; one useful).

They appreciated it as a way of managing material on courses, and as a means of contacting students, although some were more hesitant about using it for the purposes of marking translations and returning work. In the opinion of the staff, students had found it fairly useful overall: two thought they had found it very useful and four fairly useful, a slightly better response than the students provided themselves (although the question was not put to the students in quite the same form).

Because of these positive reactions it has been easy to get other colleagues to start using FirstClass this current academic year. In short we have managed to achieve a sea change in the way very experienced colleagues approach their work.

6 Lessons from FirstClass

It is possible for us to conclude from this data and from class observation that:

- FirstClass has advantages as a learning environment over the traditional pen, paper, handout and noticeboard environment. It allows asynchronous communication between tutor/student and student/ student and is a reliable means of conveying and receiving all information regarding a course or module.
- It is successful because it is an open-ended infrastructure. Other forms of CALL can be added to it and new approaches to teaching encouraged. It provides practical connectivity.
- It establishes, for both staff and students, a computer-based social context for computer-based work that overcomes resistance and creates confidence. It provides human connectivity.
- It is a useful reinforcement of computing skills: students learn that computers are valuable tools.
- It is successful because the software is very easy to use– intuitive, clear and above all quick.
- It is administratively superior. It saves time and enhances student contact with staff and vice-versa.

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- It breaks down student resistance to computers in general and to CALL in particular. Because of this environment, stand alone CALL programs are much better accepted. The credibility that computers gain through the use of FirstClass and also the Internet is highly significant.
- It permits the development of peer/cooperative learning.
- It reinforces written skills in a non-assessed mode where corrections can nonetheless be made.
- It can be used successfully for the transmission, correction and return of assessed work, which is especially valuable for the frequent submission required in language work.

7 Future developments

The success of this testing has been such as to encourage us to plan to develop the computer-based learning environment even more extensively in future. The complete adoption of FirstClass by all staff on all modules in all Modern Language courses, is in process this academic year. So far the training of staff has been straightforward. They quickly master the software and the computer-based learning environment.

One feature that we intend to develop is the use of online module discussions using the private chat or the message facility. We will also undertake a more complete integration of CALL packages with the FirstClass-based environment by introducing CALL into grammar classes, particularly in the first and second years. In addition we will develop an intranet gateway for the accessing of class material on the Web from within FirstClass.

Alongside that development we are establishing Web-based distance access using the Web version of FirstClass as a gateway, enabling students on part-time courses to interact on a regular basis with their tutors, and students on their year abroad to get supervision for their academic work from a distance.

We have also set up a project which links students on our Coleraine campus with students in partner institutions in France and Spain to enable exercises in tandem learning to take place. It is our intention to develop our study of computer-based learning environments for languages further in the light of these developments.

8 Conclusions

The results of this pilot study of FirstClass have shown the value of the system in providing a computer-based learning environment. It has enhanced various forms of communication and contact between tutors and students on our full-time courses (see especially section 5.1). Clearly it is no substitute for personal contact between staff and students, but is, rather, a valuable extension of the learning process which helps to integrate its various aspects. Crucially such an environment helps to bring computers and computing into the mainstream of the student's learning experience. This environment could, obviously, be valuable in subjects other than languages. However it has provided us with the context which is particularly valuable for the development of language skills, not least because it has enabled us to integrate CALL effectively into that environment.

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