Establishing a CALL Laboratory in an ESL Program

The word-processing capabilities of the microcomputer were integrated into an English as a Second Language (ESL) writing program at a university in Hong Kong by establishing a Computer-Assisted Language Learning (CALL) laboratory. The word-processor chosen was PC-Write. Initial feedback indicates that word-processing is a powerful instructional tool for student writers and could play a central role in an advanced English as a Second Language (ESL) writing curriculum.

Several years ago, two colleagues and I, working in the English Language Teaching (ELT) Unit of The Chinese University of Hong Kong, resolved to introduce the microcomputer into some of our ESL writing courses. We were motivated by our own positive experiences of using the computer in our research and writing efforts. Our commitment to introduce the microcomputer to our students was translated into a pilot project in the autumn of 1985 when our institution funded the purchase of six IBM-compatible PCs and two Epson FX-80 printers, together with 200 square feet of office space, for the establishment of a CALL laboratory. We selected a group of undergraduates to participate in the pilot project and decided to use only the word-processing capabilities of the personal computer. We encouraged our undergraduate subjects to produce all of their written work on the word-processor. We named the project "CALL," and the instructors involved became the "CALL Team."

Before going into detail about the CALL project, it is helpful to know something about the ELT Unit, the teaching department responsible for the CALL laboratory. Established within the last few years, the ELT Unit had previously been a part of a larger English Department. Staffed by 21 qualified language teaching professionals, the unit offers two levels of courses: the First Year English (FYE) program of courses and the Advanced English Proficiency (AEP) program of courses consisting of elective courses open to all undergraduates. Students enrolled in the AEP courses generally possess higher motivation to study and improve their English, while the students enrolled in the compulsory FYE courses tend to be less motivated and more in need of remedial ESL instruction. Every year the ELT Unit enrolls over 1,500 students, roughly one third of the undergraduate student body.

Preliminary CALL Contact

The first select group of students had their initial computer contact in the CALL laboratory in September, 1985. The students selected for the pilot project were from the group who had elected to take one of the AEP courses offered by the ELT Unit. The course in question was Writing Skills, a process-based writing course which is described in the university bulletin as a course designed to provide both instruction and practice...

> ...in the writing process in general. Instruction is given in techniques of getting ideas and arranging them, executing them in writing, and revising and editing what has been written...Methods of idea development such as the use of descriptive details and exemplification are covered, as well as writing beginnings and endings and style. (The Chinese University of Hong Kong Prospectus 1985-8, p. 28).

In teaching the course, we did not force but rather encouraged students to produce their required writing assignments with the aid of a word-processor in the CALL laboratory.

Introducing Students to the Microcomputer

The CALL Team decided that the best way to introduce students to the microcomputer was to teach them a relatively unsophisticated word-processing software program. Furthermore, it was decided that initial emphasis should be confined to the basic editing functions, such as deleting, inserting, moving, searching, and saving. As a team, we decided not to introduce software which Wyatt (1986) classifies as instructional and collaborative. From reports in journals such as the *CALICO Journal* and *Educational Technology,* such software is often relevant for the teaching of writing. Ingenious and creative as such software is, however, the members of the CALL Team did not think that it would be appropriate for our intermediate and advanced ESL writing students. Instead, we chose to concentrate on the facilitative software mode, i.e., software applications which—as the term suggests—make it *easier* for student writers to improve the quality of their prose.

Influenced by the findings of researchers like Smith (1982), we took as our basic pedagogical principle the fact that the essence of good writing is rewriting; we capitalized on the potential of the computer as a revising tool. It is in the area of rewriting that colleagues in the humanities and professional writers have reported computers to be most beneficial.

Basic Assumptions

The CALL Team hypothesized that if we trained students in word-processing, they would be imbued with greater motivation and incentive to spend more time in revising and rewriting their English assignments. Although all the students in the pilot project had studied English for over 14 years, the maturity of their writing facility was incommensurate with the years spent in the study of English. This gap between years of study and writing sophistication is due largely to the examination orientation of formal education in Hong Kong.

Aware of this gap between years of study and writing ability, we did not want to provide the pilot project students with yet one more year of the same type of grammar-translation instruction they had already experienced; instead, we wanted our CALL laboratory with its word-processors to be used in a process-oriented fashion which would give the undergraduates the opportunity to use all the grammatical knowledge they had assimilated over their many years of ordinary, grammar-translation language study. We counted on the educational application of the computer to be instrumental in enhancing student motivation and morale to the point of rekindling or engendering an enthusiasm and interest in writing better English.

Selection of Software

For our word-processing package, we selected the relatively unsophisticated software program called *PC-Write.* An easy to master software program, *PC-Write* is used by numerous colleagues at The Chinese University of Hong Kong. We found that our pilot project students—given good initial training—could use the software productively after approximately two hours of hands-on instruction. Readers interested in a review of this word-processing program can find a detailed examination of it in Waddell (1985).

Our criteria for choosing this word-processor went beyond the obvious user-friendliness of the program. A second criterion for choosing *PC-Write* was cost. Since the CALL project was operating under a modest budget, we could not afford to spend hundreds of dollars on software which was only to be used on one designated microcomputer. *PC-Write 2.5* only costs US$75.00 for a registered copy, and it may be copied for student use.

Training Students on Computers

Many students electing the Writing Skills course are non-science majors from the humanities and social sciences—students who generally have minimal contact with computers in their course of study. Keeping this fact in mind, we designed the computer training sessions in such a way that these students would take with them from the CALL laboratory experience not only improved writing skills but also a positive attitude toward computers.

The pace of the lessons was deliberately methodical and slow. We built into the training

sessions components that removed the many myths and misconceptions that have arisen around computers; we explained the basic functions of computers, e.g., how to load a disc into the drive, how to turn the computer on and off, the layout and features of the keyboard. We assumed no prior computer knowledge and kept computer jargon to a minimum. If we had to use "computerese," we explained it carefully and tried to show students the logic for inventing such terms.

Guidelines for the CALL Laboratory

After the two year pilot project of training students enrolled in the Writing Skills course in the use of *PC-Write,* the CALL Team has codified its observations and experiences into a set of provisional training guidelines for the CALL laboratory. Because our experiences are not unique, these guidelines have applicability and relevance wherever teachers are using computers to improve the writing skills of their students.

No More than Two Students per Computer. In the training session, instructors should always place more than one student at a computer. Students do, in fact, assist one another and are less inhibited if they can collaborate with a classmate. The computer as a writing tool does not seem to alienate and depersonalize students; instead it seems to bring them together in helpful cooperation. The ideal number of students for each machine is two, because with three students per machine, one tends to be left out.

Instructors as Facilitators. In our experience with the computer as writing tool, we discovered that an instructor staring over the shoulders of a timid computer neophyte triggers panic in the student who tends to freeze up and slow down. Instructors should be relaxed and non-directive in the training sessions; they should facilitate where necessary and encourage experimentation. The teacher's role as authority figure should be mitigated during training.

Teaching via Analogy. When relating and explaining computer functions, instructors should use analogies relevant to student experience. Translating computer functions into the language of pen and paper is a useful training device. Occasionally giving the computer anthropomorphic qualities, such as transmitting messages to the "little man" inside the machine to foster pressing the Enter key to execute computer commands, can go a long way in helping students understand computer functions.

Show-and-Tell Approach. It is essential to have a blackboard or a large screen relay of the teacher's video output to indicate the order of keystrokes and to provide an indication of what the computer screen at the student stations should look like.

Discovery Learning. Discovery or inductive learning is well-suited to the training session as a means that enables students to understand the logic of the computer. It is useful in this context to ask "What do you think went wrong?", or "The next step is?". It is also helpful to set tasks that encourage exploration such as "Use the next couple of minutes to discover the difference between the Del and the Bksp keys.". Discovery learning encourages students to work independently and gives them confidence when they do, in fact, succeed.

Absence of Typing Skills. Although many teachers suggest that the absence of typing skills complicates and hinders students in the use of computers and inhibits performance, even after two years, we have not found lack of typing skills on the part of students to have a noticeable negative effect on motivation, performance, or quality of work with the word-processor.

Sample Training Texts. For all training sessions, instructors should ask students to bring a practice text to type into the computer. We have found that students find it difficult to be creative and spontaneous while facing a blank screen.

Teaching Minimum Functions. An instructor should not teach too many word-processing functions in the early training sessions. Teaching the minimum functions which enable students to do their assignments comfortably is a more productive approach. Experienced tutors (i.e., paid student consultants) should, however, be on hand in the CALL laboratory at certain specified times so that students using the laboratory can ask questions in order to solve their computer-assisted writing problems. From our experiential perspective, it takes students approximately two hours to acquire sufficient, minimal knowledge

of *PC-Write* to produce their undergraduate writing assignments.

Preliminary Evaluation

After two academic years, over 200 students per year have had the benefit of the *PC-Write* computer training course and are permitted to use the ELT Unit's CALL laboratory on a regular basis. Two hundred users is the maximum our six-machine CALL laboratory can accommodate. If having to turn students out at closing time is an indication of popularity and usefulness, then the CALL laboratory qualifies for that distinction.

The working hypothesis of the CALL Team that the personal computer attracts and motivates and thereby encourages students to rewrite and revise their prose has been substantiated. Diligent students reported spending more time on revising and rewriting their assignments when using the computer. Evidence that use of the computer increases interest in writing comes from the fact that before opening the CALL laboratory, the Writing Skills course normally was not full, nor were students standing in line to get into the course; it has the reputation of demanding more work than other ESL courses. The opening of the CALL laboratory and subsequent word of mouth brought about a significant change in registration for the Writing Skills course. In some instances, there were as many as 25 students competing for 15 places.

As previously mentioned, most students who elect the Writing Skills course are either from the humanities or the social sciences. Now that students are aware of the elective word-processing component of the course, a larger than usual number of science students is enrolling in the Writing Skills course. In some of the writing classes, more than 50 per cent of the enrollment is from the Faculty of Science. This is a noteworthy phenomenon because science majors traditionally avoid language courses.

Confident in its working hypothesis that the quality of student composition improves as the result of computer use, the CALL Team is, nevertheless, aware that the professional literature (Opack and Perushek, 1986) suggests that there is no conclusive data which shows improvement in student prose as the result of computer use. Nonetheless, the CALL Team is convinced that the use of the word-processor in a CALL laboratory context, combined with a sound and rigorous writing curriculum, is not only a potent instructional tool but also responsible for the improvement of student writing skills. We are confident that if our efforts were rigorously measured in a mass experimental study, the results would yield conclusive data showing significant improvements in the quality of English prose.

Researching the Long-Term Effects

When research funds become available, the CALL Team intends to study the long-term effects of integrating the CALL laboratory into an ESL writing program. The team would like to explore more efficient pedagogical methods for using the computer. Many questions arise: How does the technology fit into traditional ESL curriculums? How does the technology affect cognitive writing processes? How does the technology help or hinder the successful attainment of learning goals and objectives?

Conclusion

The establishment of a CALL laboratory for our ESL writing program is a good example of how information technology can be effectively integrated into a language program. We envision the day—in the not too distant future—when every language student at The Chinese University of Hong Kong will own a computer or have access to a CALL laboratory. Such access to computer technology will not only enable students to produce information but also make it possible for them to receive information in quantities previously considered impossible and unimaginable.

Author's Note

The author is especially indebted to Professor T. C. Chen, Professor of Computer Science & Electronics, who introduced the author eight years ago to the "magic" of word-processing on the mainframe and then to *PC-Write* six years later, and to Dr. Ronald Turner-Smith, a mathematician by training, who showed the author that computers belong in the humanities.

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