Computer Assisted Instruction at Thai Universities

Jeremy Ward
Suranaree University of Technology

ABSTRACT

This article describes the computer-assisted language learning project at Suranaree University of Technology. It deals with the background to the project and the benefits gained in terms of pedagogic efficiency, economy of resources, and student behaviour. Finally, some of the obstacles to the success of the programme are detailed.

Higgins (1988) quotes a speaker at a conference on the use of computers in the teaching of chemistry thus: "...in ten years' time we will say 'What a silly title! It's as if we were to have a conference on the use of paper in the teaching of chemistry.'" Computers have not yet become a commonplace, unremarkable tool for language teachers (the above quotation came from 1985, 10 years ago). Expense is of course a major factor in this; I suspect that teacher resistance is another. I say this as a person who myself doubted the feasibility of computer assisted language learning (CALL) until recently. My doubts sprang from my experience in the 1980s of some commercial CALL packages — games such as "London Adventure" and "Ice-cream"; the Cambridge/Eurocentre software for grammar, vocabulary and examination preparation; reading-related packages such as "Quartext" and "Storyboard"; and, later, so-called interactive laser disc technology as in the BBC's "European Connection." It seemed to me that such packages served mainly to demonstrate, first, that language-learning activities cannot be made more interesting or more useful simply by being programmed onto a computer and, second, that computer software is subordinate to the goal of programme development, and not so intrinsically interesting of itself that it should dictate how student time is spent. One read articles describing more interesting uses for computers (see, for example Windeatt [1988]) but they never seemed to appear in commercial packages. Unless the applied linguist was also a programmer he was very much restricted in choice.

And even for the programmer, ratios between pro-gramming time and instructional material time of 50:1 (see Pankhurst 1988) — 50 hours to produce 1 hour's material — would be rather intimidating.

Recently, however, advances in technology have greatly increased the possibilities open to the materials developer and would-be CALL practi-tioner. It is now possible to write computer-based multimedia teaching materials without any great programming expertise. It is the purpose of this paper to describe how these developments have benefited the English programme at Suranaree University of Technology (SUT) and what prob-lems have arisen in the process that could usefully be guarded against at other institutions. I will be-gin by describing the background to the SUT programme.

SUT students study science and various branches of technology. SUT management is com-mitted to exploring the possibilities of computer-assisted instruction. Now the primary foreign-language need of SUT students is to be able to read their textbooks in English. Given this "receptive" need (see Wyatt [1984] for support for the view that receptive skills are not susceptible to most objections to CAI) and staffing constraints in SUT's School of English, the English programme was one obvious place for an experi-mental project in CAI (CALL). It was decided that in trimester 1 of academic year 1995/6 two 3-credit EAP courses involving about 1000 stu-dents would be taught entirely through the medium of the computer.

Part of these courses dealing purely with academic reading had already been taught in traditional textbook form. The School of English used a multimedia software package — Author-ware Professional 2.0 — to transfer this to computer and to add listening and video compo-nents to the course, as well as grammar and vocabulary modules. Although specialist program-ming knowledge is not a prerequisite, it took several weeks for the "programmers" to begin to master the software package and a total of per-haps 1000 hours (a very rough estimate) to prepare 80 hours worth of material. Eventually, using two computer laboratories each containing 90 computers, we had the 1000 students study-ing for thirteen weeks, three hours per week.

Part of the classroom-taught reading course, used prior to the advent of CALL to SUT, was a speed reading component. At the beginning of every classroom session the teacher would give out a reading. Students (30 in a class) read the passage, keeping a record of the time they took. The teacher then collected the readings and stu-dents worked on a set of questions. After a while the teacher would give out the answers, then ask students about their reading speed (which they calculated according to a given formula) and accuracy (i.e. number of correct answers). This whole process would normally take from 10 to 15 minutes.

When we moved to the computers, the same exercise required none of the "administrative" work. No giving out, no time recording, no col-lecting, no calculations, no giving out answers, no questioning the students about speed and accu-racy. In other words, all students did was the *actual task required — doing what was pedagogi-cally useful rather than administratively necessary.* The computer did all the rest, for 180 students (instead of 30). In the 15 minutes allot-ted, students did three readings instead of, as previously, one. What we gained, therefore, could be described as an eighteenfold increase in effi-ciency — six times as many students doing three times as much reading. As a result of this type of gain — and it was repeated over and over throughout the programme — the School of Eng-lish was able to substantially reduce the need for teachers in reading classes, and in turn reduce class sizes where the emphasis was on speaking and writing. Teachers no longer had to carry books, tapes and tape recorders around and staff no longer had to deliver VCRs to classrooms. It is very difficult to argue with this increase in effi-ciency.

Greater efficiency was manifested in data gathering as well. We were able to record re-sponses to every task and get a true reflection of individual students' performance, which enabled us to both identify individual problem areas and to give fairer, more accurate assessments based on a full term's work

We were also pleased to be able to computer-mark the tests for the programme without being restricted to a multiple-choice format. This is be-

cause the computer is able to judge any type of response — be it a letter, phrase, or sentence that the student has to type in or a particular word or phrase that the student has to click on. This means, of course, that each question has to be written carefully so that there is a strictly limited number of correct answers. For example, the computer cannot mark a question like "Write a summary of the above passage" because the range of correct answers cannot be predicted. But it might well be able to mark a question like "Type in the names of the three types of virus that the writer discusses — use THREE WORDS ONLY from the passage" because the test writer can predict the full range of correct answers and programme the computer accordingly; anything that does not match is marked wrong.

In connection with data gathering, we have not yet had time to explore the possibilities for SLA research but they are clearly enormous in number.

The above are some of the benefits that the teacher saw from computerising the programme. There are also many aspects that are more motivating for the student. Of course modern scanning technology allows far better picture quality than bulk photocopying, thus enabling the production of visually more attractive materials. And the new authoring technology offers a wider range of presentation and response options than was previously available (Authorware students can be asked to enter text of any length, to click on certain lines or parts of the screen, to "drag" words or sentences to different locations, or to choose from pull-down menus.) But over and above this, compare sitting at your individual monitor watching a video at a volume that suits you, to sitting in a large classroom watching a perhaps distant screen; or listening with your own headphones to a perhaps distant tape recorder. This kind of increased individualisation allows a number of other benefits. Students are able to watch or listen as many times as they like, with the result that they can learn at their own pace; they are not forced, as they are in a normal classroom, to understand task instructions or complete tasks at a speed dictated by the teacher. Lecturers frequently begin lectures by posing a question to the class, as a way of "priming" learners, of activating schemas; only in an individualised setting

does each learner really get the chance to try and answer the question. Finally, students can try tasks as many times as they want and they can study the feedback from the programme at their own pace. In sum, computers take account of the fact that skills development is an individual process.

We have also found that some learners, who cannot be persuaded by the benefits of the programme to take any trouble over it, are alarmed to discover that in contrast to their previous positions hidden at the back of the class, they are now subject to constant surveillance. The "lecturer" by standing at the back of the laboratory can see at a glance whether everyone is engaged in actually studying what they are supposed to be studying and it is a simple matter to record numbers of correct and wrong responses for each and every task, each and every student. And those whose reaction to such surveillance is to copy answers from their classmates find they cannot — for the order of tasks, and questions within tasks, has been randomised by the programme.

This brings me to two general points about computerisation: first, whether it be through the carrot or the stick, the result of computerisation has been a jump in overall attention by the learners to the material. We are not yet in a position to prove this but it is based on observation of hundreds of students over three months. And attention, surely, is established as a *sine qua non* of second language acquisition. Secondly, a large part of our job at SUT involves *training* students to *do* new things; this suggests the need for repetition, doing the same thing over and over until the learner has mastered it — and for the student to repeat actions, the programme has to repeat presentation of materials, giving feedback, providing models, etc. Such repetitive tasks are what the computer is designed for.

Easy access to reference material (most obviously dictionaries, on CD-ROM) will be an obvious boon to any teacher who has wanted to do dictionary work in a class, and had to worry about transporting bulky books, making sure they are not damaged or stolen, and finding storage space. Having the dictionary on computer also makes the writing of certain types of task very simple — i.e. tasks which necessitate explaining the meanings of words; such work can be left to

the machine. (The dictionary will of course also tell the learner how to pronounce words.) This is the most obvious use of reference material; when we have bought and loaded CD-ROM materials like encyclopedias or any other source of information, the possibilities for exploitation increase greatly.

In brief, then, I would claim that through the use of Authorware teachers are able to:

- *Identify* and *help* students who have difficulties but who might be unwilling to voice those difficulties;

- *Give more realistic grades* which reflect classwork over the year (rather than the "one-off" exam) and which discriminate more finely between individuals;

- *Do more effective research*;

- *Waste less time* on repetitive, administrative tasks;

and students tend to:

- *Learn more effectively* through working at their own pace;

- *Be more interested* in the material they are exposed to;

- *Take a more active part* in the instructional process, through being able to answer questions and test their own hypotheses;

- *Try harder* because they see what is happening to their grades.

Of course it would be idle to pretend that the project has been unattended by problems — often related to the fact that SUT is a state organisation. The obvious one, that of expense, is the first that has to be surmounted, through a hard look at the relative costs of hiring (permanent? pensionable?) staff and computer hardware. Others are mostly connected with the management and administration of the programme. The bureau-

cratic systems for budgeting and purchasing lack flexibility for a field which is developing so fast; machinery and software purchases have to be specified far, far in advance and the quotation systems can lead to long delays especially when ordering from abroad. Maintenance of the machines requires a skilled, proactive technical staff and state organisations may not be able to offer competitive salaries to such personnel. Management of computer networks is, in the West, put in the hands of people professionally qualified by experience to do the job, who are, again, rare in the Thai academic world. But these are problems that a modern university is going to have to face up to quite apart from whether they decide to go for CALL in their English programmes. It will be interesting to see whether English programmes in Thailand can help to show how, or whether, the problems can be solved.

There was little student resistance, although a good proportion said after the course that they would have learned more with a teacher. At a post-term evaluation meeting here (open to all ajarns) several instances were raised of students complaining about the CALL programme. Some students seemed to describe a sort of alienation when confronted with a machine instead of a teacher. Others, not having been given a hard copy of the materials (this we had thought pedagogically undesirable), had been reduced to copying down screen contents (a highly laborious process) and, in desperation, bringing these copies into the final examination taped to the back of pencil cases. All the complainers had received F grades.

Teacher resistance to computer-assisted instruction will provide a fascinating research topic soon. As a technophobic ex-doubter myself, I hope that comment on this topic is based on a commitment to learning (rather than teaching) and to seeking ways to exploit (rather than avoid) new technologies.

REFERENCES

Higgins, J. 1988. *Language, Learners and Computers.* London: Longman.

Pankhurst, T. 1988. In Bongaerts T., De Haan, P., Lobbe, S., and Wekker, H. (Eds.), *Computer Applications in Language Learning.* Dordrecht: Foris Publications.

Windeatt, S. 1988. In Bongaerts T., De Haan, P., Lobbe, S., and Wekker, H. (Eds.), *Computer Applications in Language Learning.* Dordrecht: Foris Publications.

Wyatt, D. 1984. *Computer Assisted Language Instruction.* Pergamon