A discussion of the usefulness of computer-assisted instruction in the second language classroom focuses on the value of teacher involvement in material development. It outlines an approach for the teacher to use in becoming familiar with existing courseware, describes the concept of authoring systems, defines commonly-used strategies for computer-assisted language learning (CALL), and gives suggestions for developing CALL materials using the communicative approach, with illustrations. (MSE)
NEW PROSPECTS IN CALL

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Computer Assisted Language Learning (CALL) is a reality for a limited number of people only, but it is becoming an object of interest for an increasing number of teachers, also due to a rapid diffusion of this technological medium in the field of education.

As a matter of fact, knowledge of the possibilities and limitations of CALL will certainly prove useful both for those teachers who intend to implement their lessons with the use of specific courseware to appear on the market, and for those teachers who wish to become authors of their own programmes. Such a possibility should not be ignored, as it is becoming less and less remote.

Since the first use of computers in language teaching it has been shown that the best results are obtained if the teacher himself becomes the author of the courseware, while various problems arise if the work is entrusted to a technical expert under the guidance of a teacher.

But how does a language teacher become an author of courseware? A good approach is outlined below:

a) First of all, he should familiarize himself with a text giving useful criteria for the evaluation of courseware (1);

b) He should also spend time revising existing programmes on various languages;

c) Then he should follow, at a specialized centre, a design course ranging from 1 to 3 weeks of intensive theoretical and practical study, depending
upon the difficulty of the computer language to be learnt. It must not
be forgotten that generally the language teacher has no technical
background: he is not an expert, nor should he wish to become one. He
only needs the more adequate means that will enable him to create on a
computer those activities specifically connected to his own teaching
subject. The difficulty is in finding a system that is sufficiently
flexible and capable of adapting itself to the teacher's creativity and
that, at the same time, will make programming as easy as possible.

For these reasons, authoring systems have been created, providing
environments in which the author can programme in the simplest and
quickest way as compared to other systems, though with less freedom of
choice. In fact he should limit himself to working with what the system
offers. Among existing authoring systems there are those which are more
flexible (and complex) and those less flexible (but easier to use). The
former are called "authoring systems with computer language" (2), the
latter are called "authoring systems without computer language" (3).

d) After having acquired the necessary skills for editing the programme
in an authoring system, according to the logic of the computer (connection
of displays, possibility or difficulty of applying certain commands, etc.),
he will first conceive the various displays of his lesson and write them
on paper ("script"). After that he will edit them on the computer.

Call strategies.

The "script" is probably the most delicate phase of the whole programming
process, as it is the moment when the synthesis between the author's
teaching approach and the characteristics of the computer takes place.

There are certain teaching strategies which can be used in CALL. Each of them can be more or less suitable to attain particular learning objectives. Such strategies are:

- **Drill**: synthetic rules followed by texts, examples, questions and different explanatory feedbacks, according to the student's answer;

- **Test**: various questions (open, true/false, multiple choice, matching, fill-in-the-blanks, etc.) followed by a numeric evaluation of the student's performance (score);

- **Inquiry**: choice of options offered through a series of menus that will enable the student to have access to lists of useful information (words, texts, rules, data, etc.);

- **Simulation**: a real situation reproduced on computer can be varied according to new instructions, choices or different parameters introduced by the student through the keyboard;

- **Tutorial**: all the previous strategies are used to guide the student step by step till he is able to master the subject completely.

The majority of programmes produced for CALL use drill, test and enquiry strategies, whilst tutorial and simulation are applied less often. Tutorial is less frequently used, due to the impossibility of developing all the various language skills by means of a computer programme, though complex and exhaustive (4), and simulation because of difficulties in programming. As a matter of fact, simulation is probably the strategy that offers the most interesting prospects for CALL.
Computer and communicative approach.

Both the first applications of computer for CALL and the description of the general characteristics of the machine given by technicians, might give the idea of a tool mainly suitable for mechanical exercises, rather than for activities related to real language use.

The teacher who wants to create a computer programme based on the principles of a communicative approach should consider the following suggestions:

- refer to a context: the manipulative exercises offered by drill strategies will be less mechanical if they refer to contexts, themes and whole sentences already presented in the class through written texts, audio or video-programmes. The same principle applies to more detailed explanations (tutorial) and to lists of data (inquiry) to which the student might have access in case of need.

- realistic use of computer: according to the various functions of computers in real life, the students should be asked to use it in class for similar tasks, like:
  
a) language games to be done in pairs, in order to favour competition, motivation and active engagement of the students;
  
b) problem solving activities, suitable also for groups, so that the common task will prompt oral interaction (which is very useful in multilingual classes);
  
c) data to be found: the student will be asked to find out certain information among a series of data or to consult a memorized text.

- simulation activities: the possibility of giving an immediate feedback to
The student's input, allows one to reproduce on computer certain real life situations, whose development will vary according to the choices made by the student through the keyboard. Simulations are commonly used in mathematics, physics or other subjects that use numeric parameters and simple graphics, but the same principles could be valid also for language teaching. Given a situation (e.g. the beginning of a dialogue between two persons) the student will be asked to answer each cue according to the context. This would develop the student's ability of "negotiating", which means making choices that are adequate to the verbal stimulus in the foreign language. This ability, which is typical of native speakers, contains all the various aspects of communicative competence, and is therefore one of the main learning objectives.

There are some operational difficulties, but it is not impossible to reproduce a simulation activity on computer, even using a very easy-to-use authoring system. The author might reproduce on the screen a kind of "animated cartoon", more or less realistic, according to the graphic editor at his disposal. The main problem is that it is impossible to foresee step by step all the different answers to a verbal stimulus presented to the student. In real life, the student's question: "What are you doing tonight?" might be answered differently: a) "Nothing special"; b) "There is a good film on the TV ..."; c) "Why do you ask?", etc., and in each case the student should find an adequate feedback. On computer, such structure would branch as follows:

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What are you doing tonight?

S1
S2
S3
...
A1 A2 A3 ...
A1 A2 A3 ...
A1 A2 A3 ...
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A possible simplification could be the introduction of a limited number of feedbacks (6). For example, each cue could lead to two alternative answers: one is wrong and causes a negative reaction of the interlocutor; the other is correct and allows the conversation to continue. This structure would be as follows (7):

![Diagram]

After having introduced the situation, the roles of the two speakers and the speech acts to be used (8), the cue of the first speaker will be presented with a choice of two possible answers (fig. 1). If the student keys in the wrong answer, this will appear on the following display together with an explanation of the mistake and the reaction of the first speaker, that will end the conversation (fig. 2). At this point, through the term BACK pressed on the keyboard, the student will automatically go back to the previous cue (fig. 1). When the student chooses the correct answer, he will branch to a display where the conversation continues with a further cue and a new choice of answers (fig. 3). The dialogue will go on for about ten or more cues, through the various phases of negotiation, till the final agreement (fig. 4).
Good morning.

I heard that you have a flat to rent.

Type in the letter relating to the phrase that you would use to continue the dialogue: 

a) I heard that you have a flat to rent.
b) I heard that you have a flat to lend.

Figure 1

You have chosen the wrong phrase: lend means that you give something for free, whilst rent involves the payment of money, as is usually the case for an apartment.

You have been misinformed: it's for rent.

Figure 2

I heard that you have a flat to lend.

Yes. Are you interested?

Type in the letter relating to the phrase that you would use to continue the dialogue: 

a) Yes, I should like to see it.
b) Yes, I want it.

Figure 3

I'll do my best. Here are the keys. I wish you a nice stay.

Figure 4

WELL! The first part of the dialogue is over.
NOTES

1) E.g. G. Leech / C.N. Candlin (eds) "Computers in English Language Teaching and research", Longman 1986.

2) E.g. PLATO (with TUTOR language), created at the University of Delaware (USA).

3) E.g. OMNISIM, created in 1981 at the University of Alberta (Canada).

4) Tutorial can be used to deepen certain themes in the field of grammar, civilization etc.

5) $S^1, S^2, S^3$ are the possible verbal stimula of the interlocutor; $A^1, A^2, A^5$ are the possible answers of the student.

6) The simplified simulation introduced in this paper is adapted from a similar one which is part of a courseware in production at the "Scuola di Lingua e Cultura Italiana per Stranieri" of Siena. The courseware, on which I am working with my colleagues P. Cappelli, P. Micheli and S. Radicchi, has been designed for a multimedial syllabus for Italian as a foreign language and will be ready in 1987.

7) $S =$ verbal stimulus; $CA =$ correct answer; $WA =$ wrong answer; $E =$ sentence that ends the dialogue.

8) Here the situation referred to is the following: "Klaus, a German student, is looking for accommodation. After long searching, he found an address in an advertisement and decided to have a look at the flat. Imagine that you are Klaus and choose the words you would use with the owner in order to get the flat at the lowest rate".