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CONDITIONALS THROUGH CALL

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ABSTRACT. *This paper is entirely devoted to examine the efficiency of the new technologies applied to the foreign language classroom, namely CALL. After a few considerations on the role of the teacher as a researcher and curriculum developer, the attention is focused on an experience carried out in a State-run Secondary School of Granada (Spain). It deals with an approach to ELT through computers. The subject chosen is Conditional Sentences. Several groups of teenage students took part in the experiment: some of them were taught with traditional methods, while the others used a specifically designed computer program to learn Conditionals. The results were most revealing: students with CALL learnt much better and employed less time and effort than the students that followed normal classes. Statistics and graphics help to show and assess this fact. The paper ends with some reflections on the need to use CALL as a powerful helping tool in the teaching and learning processes.*

RESUMEN. *Este artículo se dedica por entero a reflexionar sobre la eficacia de la aplicación de las nuevas tecnologías aplicadas a la clase de lengua extranjera; esto es lo que se denomina CALL. Tras unas consideraciones sobre el papel del profesor como investigador y diseñador del curriculum, se centra la atención de una experiencia llevada a cabo en el IES Alhambra de Granada. Consiste en una aproximación a la enseñanza del inglés (ELT) por medio de ordenadores. El tema escogido es las Oraciones Condicionales. Tomaron parte en el experimento varios grupos de alumnos de nuestro Instituto, jóvenes entre 14 y 18 años: a algunos se les instruyó mediante métodos tradicionales, mientras que otros utilizaron un programa informático diseñado específicamente para el aprendizaje de condicionales. Los resultados fueron sumamente reveladores: los estudiantes de CALL aprendieron mucho mejor y emplearon menos tiempo y esfuerzo que los que siguieron las clases normales. Las estadísticas y los gráficos nos ayudan a demostrar y evaluar este hecho. El artículo acaba con algunas reflexiones sobre la necesidad de utilizar CALL como una potente herramienta de ayuda para los procesos de enseñanza y aprendizaje.*

1. THE TEACHER AS A RESEARCHER

"...Curriculum research and development ought to belong to the teacher and there are prospects of making this good in practice" (L. Stenhouse 1975).

Educational ideas expressed in books are not easily taken into possession by teachers. Our idea is that of an educational science in which each classroom is a laboratory, each teacher a member of the scientific community.

A curriculum is a particular form of specification about the practice of teaching. It is a way of translating any educational concept into a hypothesis testable in practice. It also implies a means of studying the problems and effects of implementing any defined line of teaching.

The uniqueness of each classroom setting implies that any proposal - even at school level - needs to be tested, verified and adapted by each teacher in his classroom. The ideal is that curricular specification should feed a teacher's personal research and development program through which he is progressively increasing his understanding of his own work and hence bettering his teaching.

All well found curriculum research and development, whether the work of an individual teacher or a group of teachers, is based on the study of a classroom. It thus rests on the work of the teachers. It is not enough that teachers' work should be studied; they need to study it themselves.

Effective curriculum development of the highest quality depends upon the capacity of teachers to take a research stance to their own teaching. We mean a disposition to examine one's own practice critically and systematically.

That is what we try to show the reader of this paper, by making yet but a few previous considerations on the role of the teacher as a researcher.

a) Learn how to learn

"The only man who is educated is the man who has learnt how to learn; the man who has learnt to adapt the change, the man who has learnt that no knowledge is secure, that the process of seeking knowledge gives a basis for security" (C. Rogers 1969). Our approach is based on linguistic values, in this case on Conditional Sentences, but mainly on the educational value that learning a foreign language may mean for learners to take charge of their own responsibility, and developing the ability to learn how to learn. In this sense, we gave the research group instructions about what they were expected to do, how they could solve their difficulties, this is to say, how they could learn on their own. We grounded our project on a cognitive way of learning. It was automatically assumed that what really mattered was to organise the contents in such a way that they were appealing to our students, nearing them as close as possible to their intellective processes. This we tried to accomplish through making a clear lay-out and careful grading of the said contents.

b) Remedial courses

This project could well also have taken the form of a remedial work, i.e., it is designed for this kind of learner too. A remedial course is different in that the learning of the language has taken place previously, but the resulting competence is inadequate as a consequence either of forgetting or of unsatisfactory teaching or learning. The possible remedial learner is characterised by the fact that his knowledge of the language is uneven and relatively unpredictable. With a grammatical syllabus the strategy adopted is to cover again the ground that was covered in the learner's previous courses and, when the gaps have been filled, to continue to higher levels with the same synthetic mode of teaching. As a matter of fact, we are at present considering the opportunity of stretching the use of the CALL material here tested to these kinds of teaching situations.

c) Teaching and learning

It is clear for most of us in the teaching profession the different needs, interests, rhythms, styles, etc. of the learners. This has led us to centre the focus on learning and not so much on teaching. As students's interests became a central part, their motivation was likely to increase. This has been checked intensively in this our experience.

d) Self-confidence

In L. Dickinson's words (1987), "autonomy is achieved slowly, through struggling towards it, through careful training and careful preparation on the teacher's part as well as on the learner's. The first stage in this process is the liberisation of the classroom to allow the development of learner's independence and learner's responsibility". Due to the work outside their own classroom, our students changed to the computers classroom, accordingly reaching quite a good degree of independence and responsibility. On the other hand, as said before, the authors of the computer program were very cautious in grading the difficulty of the sentences chosen. All these factors contributed to improve our learners' self-confidence, which was what we mainly sought for with this approach. This self-confidence was completely achieved throughout the experiment. At the end, we realized that the atmosphere in the classroom had changed, and this allowed our students to tackle other tasks. The experience again proved to be positive in this regard.

2. DESCRIPTION OF THE EXPERIMENT

The experiment was carried out directly by the authors with a total of 158 preintermediate students. Their level of language competence was not very high, although most of them had a reasonable passive knowledge of English. They were able to use a number of linguistic functions, but their grammar and vocabulary were

fairly limited. All of them were in their fourth year of English at a State-run Secondary School (what is known as COU in Spain, i.e., their pre-university year) called I.B. "Alhambra", in Granada (Spain). Their ages ranged from 16 to 20.

They were enroled in five groups for academic reasons. For our specific purposes, we decided to divide them into two main groups:

A) A group which would be taught "Conditional Sentences" through CALL ("Condit.exe", program specially designed and implemented for the occasion, a brief description of which is provided in Chapter V): 90 students. For operational reasons, this set of students will be henceforth labelled "Group A".

B) Another group (the remaining 68 students) which would follow traditional lessons in their classrooms. We will name it "Group B" from now on.

Group A was again subdivided into five subgroups, so that they could use the computers available in the most efficient possible way (see Chapter II). A maximum of three students per computer was allowed in each session. Two complete sessions of 50 minutes were fulfilled.

Group B, on their part, attended six classes of 55 minutes each, with intensive use of blackboard, photocopies, hand-outs, etc., as is usual in traditional, non-CALL classes.

Before starting with the experiment thus outlined, we administered both groups a Test on their previous knowledge of the subject, Conditional Sentences. These were classified into four main groups, according to what most grammarians propose:

Type 1 = Real Conditionals
Type 2 = Improbable Conditionals
Type 3 = Unreal or Hypothetical Conditionals
Type 4 = Special Conditionals, including inversion, subjunctives, "unless", "whether", "as long as", "provided/ providing (that)", "in case", etc.

Two model sentences were chosen for each type, which were inserted in the above-said test. The exact test that was passed on to all students is reproduced in Appendix I, and Appendix III shows its corresponding graphics and diagrams (Figs. 1 and 2 for an overall view of results in Groups A and B respectively; Figs. 3 and 4 for a detailed exam of classes of mistakes made). Obviously, the aim of this test was to check their prior knowledge of Conditionals and thus be able to make valid conclusions on their progress.

Finally, the last step of the experiment was again to pass them all another Test after their different teaching sessions. This way we could measure with a great deal of accuracy whether the progress of both groups differed, and if so, to what extent it was dissimilar, both in quality and quantity. This final test was designed with exactly the same format as the one mentioned above, and is included in Appendix II. Its corresponding results are also reproduced in Appendix III (Figs. 5 and 7 for Group A; Figs. 6 and 8 for Group B).

These two tests that we have just described and the direct observation of the authors throughout the experience were the main basis for the evaluation of the results, discussed in Chapter IV below, apart from other considerations which will be dealt with in the Conclusions at the end of this paper.

As far as the hardware available is concerned, we had five PC "Inves Turbo" plus two other "Olivetti". Of course, it is not the ideal hardware to use, but was the only one available. and it was good enough for our purposes. They have a memory of 540 K, and double floppy disk drives of 5.25". Two of them have colour monitor, while the rest are monochrome.

3. EVALUATION AND DISCUSSION OF RESULTS

According to the plan previewed in the preceding chapter, we constructed two tests. Test one (Appendix I) was applied before teaching, so that we could assess with the maximum reliability our students' previous knowledge on Conditionals; test two (Appendix II) followed the same frame, as we believed this would allow us to compare results with test one and thus evaluate the progress achieved at the end. Both tests may seem certainly simple. They were intended to be exactly like that, since it would permit us to mark them quickly and have a complete image of the differences between the two groups (see Chapter III above), avoiding any further possible complexities.

Let's now move on to the analysis of the results. If we look at Figs. 1 and 2, we can see that both groups had a similar previous knowledge of Conditional Sentences. The global results of this test are as follows:

GROUP A: 90 students.

	Correct	*Incorrect*
Sentence no. 1:	57	33
Sentence no. 2:	56	34
Sentence no. 3:	51	39
Sentence no. 4:	51	39
Sentence no. 5:	53	37
Sentence no. 6:	49	41
Sentence no. 7:	26	64
Sentence no. 8:	30	60

GROUP B: 68 students.

S1:	40	28
S2:	43	25
S3:	33	35

S4:	39	29
S5:	35	33
S6:	34	34
S7:	15	53
S8:	20	48

If we consider the types of mistakes made (Fig. 3 for Group B and Fig. 4 for Group A), we find that the main errors are to be found in Type 4 of Conditionals. For example, most of them had never heard of "unless" of "provided/ providing (that)". This was not very serious, though. What we pondered as rather worrying was their incapability to form tenses correctly in some instances, and their wavering and confusion when using the simple conditional, present perfect or even the present simple. In some other cases, the problem detected was the lack of meaning in the sentence. Having all these factors in mind, we set to the actual experiment. We would closely comply with the aforesaid plan (Chapters III and IV) and see the results at the end.

After 2 sessions for Group A and 6 sessions for Group B, these were the figures:

GROUP A: (fig. 5)

	Correct	*Incorrect*
Sentence no. 1:	75	15
Sentence no. 2:	79	11
Sentence no. 3:	77	13
Sentence no. 4:	80	10
Sentence no. 5:	71	19
Sentence no. 6:	79	11
Sentence no. 7:	65	25
Sentence no. 8:	55	35

GROUP B: (fig. 6)

S1:	42	26
S2:	55	13
S3:	51	15
S4:	48	20
S5:	52	16
S6:	49	19
S7:	46	22
S8:	40	28

We consider the numbers to be sufficiently illustrating by themselves; they don't need, we presume, of any further explanation on our part. The progress reached by Group A is overwhelmingly higher. This just confirmed our hypothesis: unfortunately (?), computers are much more appealing to teenagers than teachers and blackboards. Motivation is always decisive in the learning process; that is undisputed.

On the other hand, if we examine the types of mistakes made by students of both groups in test two (Fig. 7 for Group A and Fig. 8 for Group B), we can perceive a significant reduction in Group A of ill-tense formation, meaningless sentences and confusions or hesitations with the use of the simple present, past, simple conditional, etc. Anyway, we must confess that in Sentences number 8 and 9 still the figures are far too high for our liking... Perhaps we should have allowed the students to work yet another session on that particular point that they did find so troublesome. The sessions, let me insist on it, were just two.

As for Group B, they received the final results with great interest. We must say that they complained about the selection of students realised at the beginning; and they did it so bitterly that we had no other chance but to take them into the computer room for a further two-session reinforcement of what they had learned in the traditional classroom...

4. THE SOFTWARE USED: A BRIEF OUTLINE OF THE PROGRAM

The program, "Condit.Exe", was specifically designed and developed for the experiment by M. A. Pérez Abad (author) and A. Fernández Molina (software engineer). The basic idea underlying the program was to offer something that does not exist in the market of software for TEFL: a series of drills orientated to the handling, mastering and command of the linguistic structures of the English languages that need to be internalized and automatized as a necessarily previous step before moving on to the stage in which students can express themselves freely, creatively and fluently in the target language. The program, then, is definitely based on Structuralism, linguistic theory that proved highly efficient in this process of learning the basic structures of any foreign language through intensive practice. Taking advantage of the tremendous motivating power of CALL, we can avoid the boredom and toughness often attached to drills (Khurshid Ahmad *et al.* 1985; D. M. Morrison 1984; M. J. Kenning *et al.* 1983; G. Leech and C. Candlin 1986; J. Higgins 1985)...

Summing up, we do believe that this program fully suits the concrete needs of the teacher in the classroom, and the results seem to confirm this assumption, as we have seen above (cfr. Chapter IV) and will see below (cfr. Chapter VI).

What follows is a brief extract of the Instructions Booklet that is provided with the program.

The first four screens are about credits, the program beginning with the fifth, in which the name of the user is asked, in order to individualize his/ her work. In the next screen, a general, optative introduction is offered.

The working screen or main menu follows, and here you are presented with several options. Schematically, they are:

MODE:

Game (Competition): you can play against another player/ team or against the computer. Each correct answer gets 1 point. If the computer gives it, the point is for the machine. There is no Help available, and only 1 try is allowed for each sentence. Players take turns. In any case, the correct answer is shown after every mistake. All of it has got various music tones to "accompany" the game. This part of the program proved to be extremely successful, as we had thought when designing and implementing it, bearing in mind the potential users (teenagers mainly) during the experimental sessions.

Print Exercises: it gives the chance to print the number of sentences of the level that you wish, thus avoiding the need of finding and selecting teaching material on the part of the teacher. This was not used in our experience, due to the fact that printers were not available.

Student Module: it connects with "Levels", and thus with the main working frame.

Teacher Module: to enter, you need a password. The aim is to avoid the destruction or manipulation of text files by unauthorised users. The above-said password was "con". It gives the opportunity to edit sentences, solutions and predictable mistakes, this way changing the text files. We had to use it a couple of times to correct minor mistakes in the sentences that appeared on screen.

LEVELS:

They go from little to big complexity and difficulty, being the maximum one the last level ("mix-up"). This classification is strictly based on linguistic and pedagogic criteria.

They can be used on their own, independently of the mode chosen; even if no mode has been previously selected, they can be used (by default).

Once they have been selected, a screen appears in which random model sentences are shown, asking for their answers (multiple a-f choice for "Condit.exe"). Each and every mistake has its answer by the computer, orientated in each particular case to the solution. F1 is here available for specific help in each sentence. Up to three mistakes are allowed in each sentence. We feel this is the adequate number of guesses, against the opinion held by Huang Jun (1987), since it gives the students the chance to make mistakes in a controlled way without the fear of being penalised, thus obviating possible inhibitions. After the third mistake, the right answer is given, and the whole process starts again; all of it goes with different music tones, to make it more attractive.

SCORE:

It is closely connected and linked to "Levels". It allows you to check the results of the work just made and the progress achieved. The following data are included:

Sentences shown: no. of randomized sentences.
Sentences answered
Correct answers
Incorrect answers
Helps needed
Types of mistakes: type e) are the unpredictable ones.
Guesses made
Time elapsed
Final Score
Percentage score

HELP: general overview of the structuring of "Levels".
EXIT: possibility of quitting the program from the main menu.

Apart from "EXIT", you can escape from the program at any point of it, just by pressing "ESC", thus avoiding an unnecessary and possible feeling of anguish or frustration.

Finally, just a few considerations. The program has been designed not only for work in organised classes (public or private teaching) but also for individual work at home, no matter the age or level of studies. Its possible use goes from the typical remedial work, etc., to the reinforcement of what has been learnt, always stressing the enjoyment component that every kind of learning must bring about, no matter how tough and boring it may at first sight appear to be... Apart from that, you don't need any previous knowledge on computers, as can easily be seen; all you have to do is to follow the instructions of the program.

N.B. This is a "Beta Test" Version of the program, and is being experienced in several Teaching Centres at present. We hope to be able to implement graphics in further and successive versions.

5. CONCLUSIONS

In presenting this paper we are convinced that the integration of new technologies in the EFL classroom is not just convenient, but absolutely necessary in the 90's. We have got the feeling that, contrary to the opinion held by V. J. Cook (1985), the connection between CALL and Language Teaching is revealing itself as a very strong one indeed. Moreover, again contradicting V. J. Cook (1988), we believe that, at present, the role of CALL is exactly that of supplying intensive and extensive practice in specific grammatical points, and providing stimulation and motivation (cfr. Krashen *et al.* 1983) through the 'ludic' component which is inherent to it. This kind

of incentive yielded by CALL has been widely evidenced by M. A. Pérez Abad (1992) in a recent research on this particular area; and so has done R. Schank (1984).

On the other hand, it is affirmed by R. R. Nyns (1987) that "the computer is an appropriate medium to teach reading skills". This is, in our view, far too poor and not very demanding. CALL can perfectly handle both reading and writing, as has been verified in our experiment; not to mention the processing of speech input and output, certainly coming in a very near future. We agree on this last assert with M. Ott *et al.* (1988), and completely disagree with K. Ahmad *et al.* (1985). Changes in this field of technology are taking place in such a swift way that we will soon be using micro-computers with "talking" and "listening" abilities...!

With our experiment we hope to have demonstrated that if learners are allowed to exercise some initiative in the teaching process, this helps language acquisition. The tasks in which they are involved, whether receptive or productive, must be challenging. We felt that our students were enjoying themselves while they were taking an active role performing this activity. Actually, most of them considered it an uninhibited practice. This positive attitude towards the activity assigned to them by their teachers is related to higher achievement, what is clearly noticed when comparing the results of Group A and Group B.

So far, so good. But... what is the role of the teacher? We strongly think that he cannot be substituted by the machine at all. On the contrary, he must become a guide who provides students with information about the learning process and who helps them to take responsibility for their own progress and to develop their own learning strategies. Summing up, by using the computer to teach such an arid subject as Conditionals we felt that we had made the most of our classes in several respects:

a) Experimenting and assessing progress.
b) Helping others to learn ("caring and sharing").
c) Revising efficiently.
d) Asking for help (negotiating and communicating).
e) Selecting language for productive and receptive use.
f) Memorising (the value of cognitive processing).
g) Acquiring the feeling of the correct use of the different elements and when to use them.
h) Working at their own pace.
Etcétera.

To end up this paper, we must conclude that the experienced carried out and which is presented here has proved to be extremely successful and satisfactory for both students and teachers. The difficulties in the use of computers in our schools is gradually disappearing, as more and more teachers get rid of their fears and prejudices against computers, and as the authorities are making an effort to equip our public education centres with them. With this work of ours, we just intend to contribute to a

better knowledge of the power of CALL in the classroom, and to encourage all our colleagues to also make use of this new aid in their everyday work. All of it will no doubt result in the improvement and enjoyment of Teaching and Learning, which is our only aim.

APPENDIX I. Test administered before teaching

NAME COU group .....
(Assessment Test Before Teaching DATE Conditionals)

FINISH THE FOLLOWING SENTENCES IN A COMPREHENSIBLE WAY:

TYPE I:
If you don't feel all right,...
We won't go skiing if...

TYPE II:
Nobody would know the truth if...
If you got there in time ...

TYPE III:
I would have passed the exam if...
If she had been there,...

TYPE IV (Special Condit.) :
You can park here, provided that...
I will not let you leave the building unless...

APPENDIX II. Test administered after teaching

NAME COU group .....
(Test After Teaching DATE Conditionals)

FINISH THE FOLLOWING SENTENCES IN A COMPREHENSIBLE WAY:

TYPE I:
Go to the doctor if...
If it's raining,...

TYPE II:
If you didn't talk so much,...
We would see the show if...

TYPE III:
If I had studied harder,...
She would have known what to do if ...

TYPE IV (Special Condit.):
You can do anything you like as long as...
You aren't allowed to come in unless...

APPENDIX III. Graphics used (Figs. 1 to 8).-

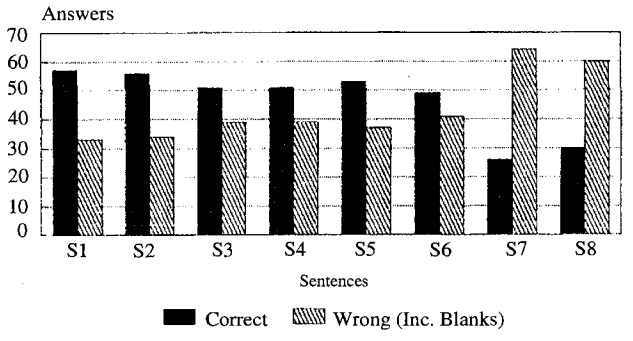

Fig. 1. *The starting knowledge is similar in both groups (Compare with Fig. 2).*

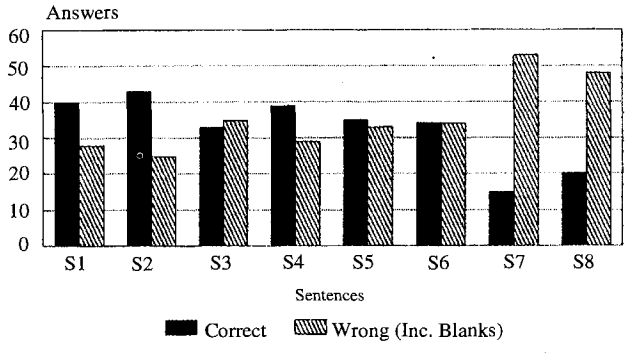

Fig. 2. *Similar knowledge in both groupe (see Fig. 1).*

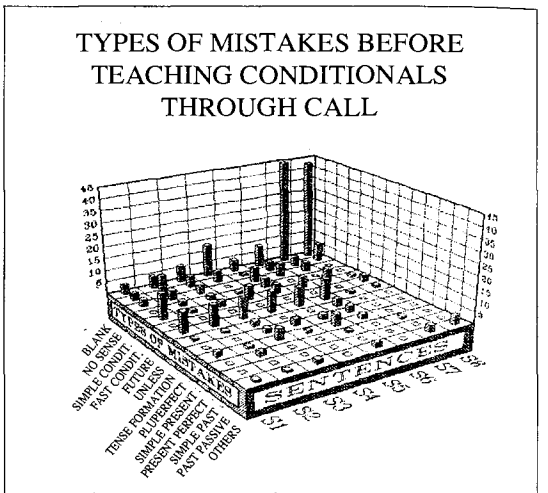

Fig. 3. *(Data related to Fig. 1)*

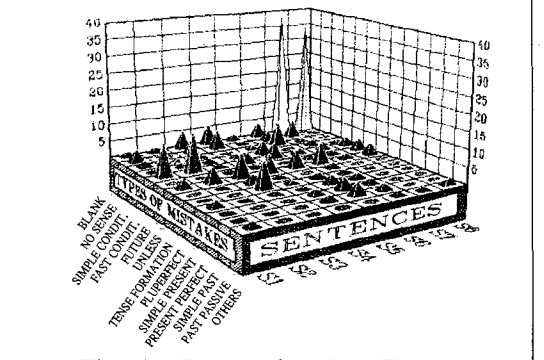

Fig. 4. *(Data related to Fig. 2)*

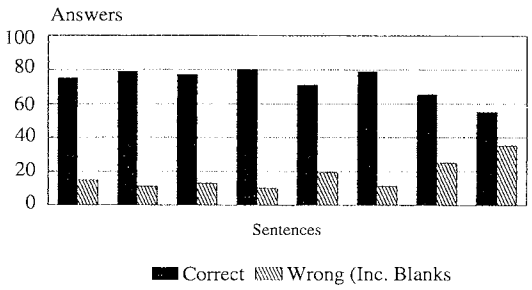

Fig. 5. *The final knowledge differs widely, being much better in CALL group (Compare with Fig. 6).*

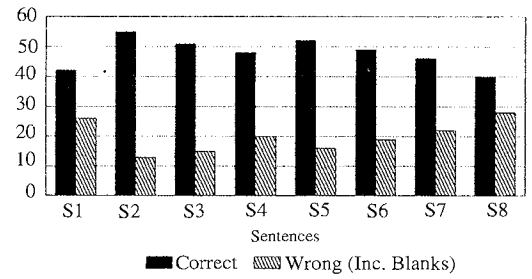

Fig. 6. *Much worse results than in CALL group (Compare it with Fig. 5).*

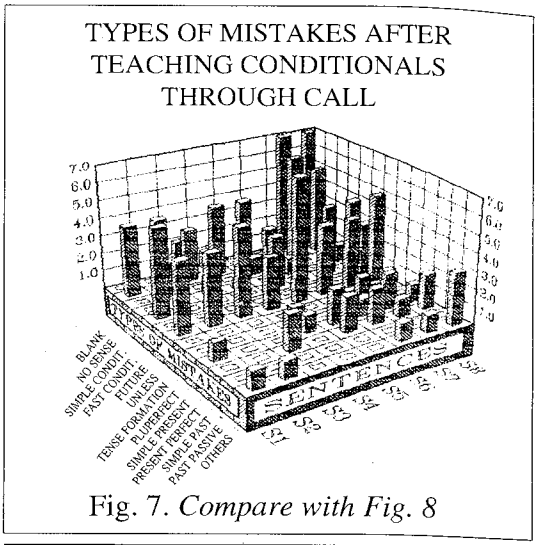

Fig. 7. *Compare with Fig. 8*

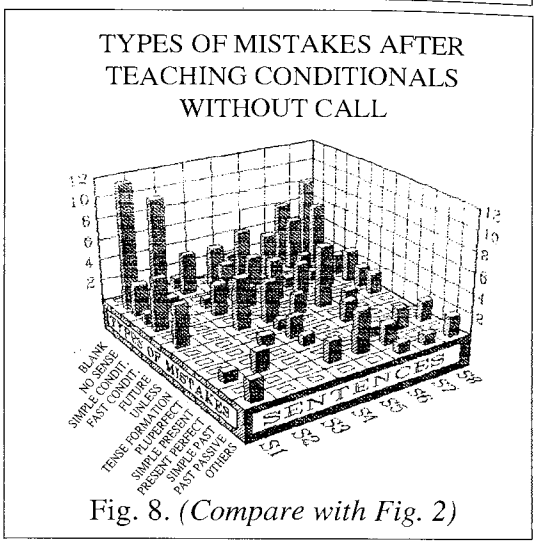

Fig. 8. *(Compare with Fig. 2)*

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