SIGNPOSTS TO COMPREHENSION
DO READERS USE DISCOURSE MARKERS   TO
HELP THEM UNDERSTAND A TEXT?

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RESUMO

O presente artigo relata pesquisa a respeito do papel do reconhecimento dos marcadores textuais na compreensão de textos científicos. Depois da definição de "marcadores", "compreensão detalhada" e "texto científico", no contexto desta pesquisa, são apresentadas a metodologia utilizada (protocolo verbal e elaboração de resumo do texto), a descrição do experimento e a análise dos resultados. Apesar de ser uma pesquisa de abrangência limitada, a análise dos resultados aponta os marcadores como elementos relevantes na busca da compreensão detalhada do texto pelo leitor. Na conclusão do trabalho tal relevância é analisada dentro do contexto de um curso de inglês instrumental para a leitura de textos científicos.

INTRODUCTION

The purpose of this paper is to describe and to reflect on the results of a research project which tried to investigate the two following questions:
1) Do ESP students - supposedly already familiar with the use of reading strategies at a general level of comprehension - recognize markers and their function in the text, in this case a scientific text?
2) Does the recognition of markers and their function

help ESP students to understand the text in detail?

Before examining the details of the methodology
used in trying to find answers to the questions above,
it is necessary to consider what we really mean by
A) markers,
B) understanding a text in detail;
C) "scientific text".

A) Markers

Arnaudet & Barrett (1984-28) refer to markers as
relationship signal-words and phrases by which the
writer shows the reader, in an explicit way that there
are different relationships between the sentences of a
text.

Nuttal (1985-96) starts her definition of markers
on similar lines to Arnaudet & Barret, but adding that
if one can understand one part of the text, the
discourse marker serves as a possible key to the other
part. This way, she continues, in the majority of cases,
the marker signals the function of the sentence(s) with
which it occurs.

Besides, Nuttal classifies the relationships
signalled by markers from the point of view of the
reader into three main classes, those which signal:
1) The sequence in which reported events occurred;
2) The writer's manner of organization of the discourse;
3) The writer's point of view of facts.

Nuttall's classification was preferred here to
Arnaudet & Barrett's due to its greater scope and
clarity.

Therefore, a chart based on Nuttall's classification
was drawn up here. Such a chart is intended to show not
only the markers previously referred to, but also their
function in a given text.

As to the text used in this research, it must be
indicated that it is part of the introduction of a much
longer text, in which the only markers that were found
related to the third collumn of the chart, i.e., all

markers in the text used for this research were signals
of the writer's point of view, according to Nuttall's
Classification.

SIGNALS OF SEQUENCE OF EVENTS	SIGNALS OF DISCOURSE ORGANIZATION	SIGNALS OF THE WRITER'S POINT OF VIEW
Then, At, Once, Next, The following day, Etc.....	SEQUENCING: Next, First of all,....	ADDITIVE:Moreover, furthermore, and, in addition....
	RE-EXPRESSING:That's to say, or rather...	ADVERSATIVE: But, yet, though, in contrast, however..
	SPECIFYING: viz.. Namely, to wit ...	CAUSAL: so, hence, therefore, since, in consequence, consequently.....
	REFERRING: In this respect, as we said, apart from this...	
	RESUMING: to resume, getting back to the argument,......	
	EXEMPLIFYING: thus, to illustrate this...	
	SUMMARIZING: in short, to sum up,........	
	FOCUSING: let us consider, I shall begin by,.....	

B) Understanding the text in detail

In "Some thoughts on testing reading comprehension in English for academic purposes" - Working Papers 1, Mike Scott says:

"Comprehension can be seen as a scale, with 100% comprehension at one end and no comprehension at all at the other. If for the sake of argument we divide this scale into three, we end up with three levels of comprehension:

1) General comprehension - Knowing what the topic of the text is and having a rough idea of what the author says about that topic.

2) Main points comprehension - General comprehension + understanding the main ideas,

3) Detailed comprehension - Main points comprehension + understanding all or most of the lesser details."

That is, therefore, what is meant here by detailed comprehension of the text.

In other words, the detailed comprehension referred to here is the one in which the subject should be able to comprehend the meaning of each sentence in relation to the others in the same paragraph in relation to the others in the same text. Thus, the subject should comprehend the text as a meaningful whole composed of meaningful related parts (words, clause, sentences, paragraphs) to be able to understand the text in detail.

C) "Scientific Text"

The intention here is not so much to define the scientific text as to make some considerations on the topic in order to determine the limits of what is being considered.

Therefore, perhaps a good beginning for this is the reproduction of part of a chart found in Deyes (1983) in which he presents types of discourse and their respective phases.
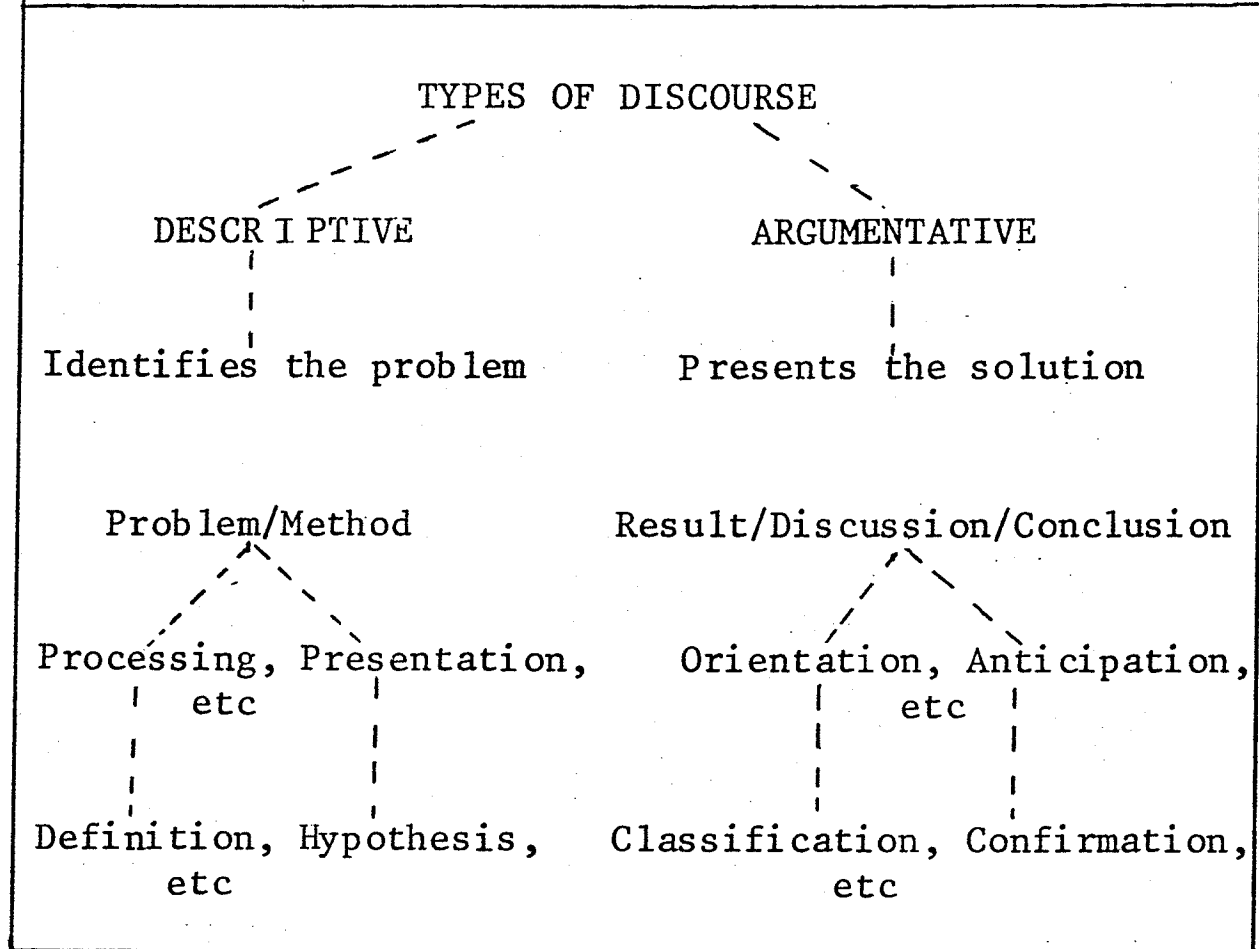
OBJECTIVES OF SCIENCE: to describe (and dominate) the
environment: the almost-universal of the authors of
scientific papers.

TYPES OF DISCOURSE

DESCRIPTIVE   ARGUMENTATIVE

Identifies the problem   Presents the solution

Problem/Method   Result/Discussion/Conclusion

Processing, Presentation,   Orientation, Anticipation,
     etc   etc

Definition, Hypothesis,   Classification, Confirmation,
     etc   etc

Adapted from Deyes (1983)

     In spite of having used part of the introduction of
a text for the purpose of this research, as already
mentioned, it may be useful to say that the complete
text (Smolicz & Secombe, 1984) from which that small
part was taken would be classified, according to Deyes,
as an argumentative text.
     Deyes also claims that the description of an
environment can be found as the motivation for a
scientific text in any country of the world.

Therefore, he says, the same will occur in France, Brazil, England or any other place and of course in French, Portuguese or English. To sum up, he adds that in these cases in which the structure of discourse is marked by sub-titles for different sections, it becomes clearer, as expected, that scientific discourse in Portuguese reflects the methodology of science almost identically to scientific discourse in English.

Of course the question, "What are the limits of a scientific text?" is not aswered definitively in these brief considerations. However, Deyes' paper was chosen to illustrate the subject here exactly because instead of trying to make the scientific text fit a rigid model, he observes what is already produced under the label and draws some objective and reasonable conclusions about it, without assuming they are definitive.

After these preliminary considerations, therefore, the research and its results will be treated in detail in the sections: METHOD, RESULTS AND DISCUSSION and CONCLUSION.

METHOD

Subjects: Five students, all native speakers of Portuguese, who had taken the course "English for the reading of academid texts in all areas", given in the second semester 1986 and taught by the researcher. All of them had already been taught "markers and their function" during the course.

Subject	Area of study	Education
1	course for executive secre taries	undergraduate
2	physics	undergraduate
3	nursing	undergraduate
4	social work	graduate
5	economics	undergraduate

Concerning their level of English, none of them, according to what they declared, had attended English classes before except for high school courses. In spite of this, it is necessary to observe that subject 1 and 2 declared having had previous contact with texts in English (maganzines and newspapers) which seemed not to have happened with subjects 3, 4 and 5. It seems interesting to point out also subject 4 being a doctorate student in Social Work was more used to the reading of academic texts than the others and therefore, more accustomed to the organization of such texts.

Taking into consideration observations made during classes and axamining the work the produced, their abilities could be classified as follows:

Subject 1 and 2 - Good (able to handle target texts competently)

Subject 3 and 4 - Fairly Good (generally capable of comprehending texts, but with occasional problems)

Subject 5   - Fair (could grasp general meanings of texts with considerable difficulties in identifying detailed information)

Data collections procedures: The procedure used to reach the objectives of the research was based on Cohen (1984 and 1984b) and Hosenfeld (1976). In other words, the technique used for the elicitation of information was a protocol analysis which combined features of the procedures used by Cohen and Hosenfeld.

Therefore, the task was divided into three stages as follows:
1. The subject was asked read the text, paragraph, by paragraph at his own pace, and trying to say what he thought about while he was reading. After reading each

paragraph, he would tell the researcher what he had understood.

2) Then, he read the whole text again and wrote a summary of each of the paragraphs.

3) He had to take the text once more, reviewing it, paragraph by paragraph in order to tell the researcher which words or parts of the text had served as aids or difficulties for his understanding.

The subjects were allowed to ask the researcher the meaning of words they did not know or even use an English-Portuguese dictionary which was freely available. Nevertheless, none of them used the dictionary or asked the meaning of any unknown word to the researcher.

In tasks 1 and 2 researcher interference was minimal. The subjects were informed of the task and given the opportunity of asking for further clarification. This was done because during the performance of these two tasks the researcher would be able to observe two outcomes, whether or not the subjects had perceived the markers as elements of the organization of the text, and secondly the way they dealt with a text of this kind without having had any other kind of clues except the teacher's guidance to help them. The researcher would observe this by taking notes of what the subject said or of his behaviour during the performance of the task. Of course, the whole session was recorded for later analysis in detail.

In task 3, the researcher interferred so as to elicit the information wanted – any kind of implicit or explicit hint would show that the subject had perceived the markers and used them as aids for the comprehension of the text.

Therefore, when the subject did not say anything specific about the markers or their function, they would be asked how they had arrived at their answers.

In this way, the subjects were encouraged to think
whether those words had played an important role in
the performance of the task or not.

Data analysis procedures. Considering that the
objectives of the research were:
1. To verify whether the subjects were able to
recognize markers and their function in the text,
2. To verify whether such recognition of the markers
helped the students to understand the text in
detail.

In connection with objective 1, a chart was drawn
up as shown below:

THE ORGANIZATION

PARAGRAPH	FUNCTION	MARKER
1	Situation - Reason	Since
	Consequence	In consequence
2	Contrast with other countries	In contrast
3	Specific characteristics of the consequence in paragraph 1	However
	Further details (concrete data) about Australian Multilingualism	In addition

In accordance with the table, to complete the task
of marker recognition and identification of their
functions satisfactorily, the subject should produce
the same or approximately the same items as shown in
the chart. The subject would also be given a grade
according to his performance. There are 5 markers and

consequently five functions indicated in the chart. The subject would be given 2 points for each marker and function recognized. In the case of merely recognizing the marker, he would not obtain the 2 points since we understand the marker as the conveyor of the function it represents. Therefore, if the recognition of the marker does not yield recognition of the function, it has little value in terms of the objectives of the present research.

In relation to objective 2, it was decided first to establish criteria for what would be considered 110% comprehension of the text. Thus, the subject who demonstrated, during the interview and through the summary, to have understood the main points + all or most of the less important details of the text would score 10.

The scoring chart would follow the model:

Comprehension (%)	Correspondent mark
100	10
90	9
85	8,5
70	7
...	...

However, if the intention in objective 2 was to verify whether the recognition of the markers helped the subject to understand the text in detail, the data obtained in relation to objective 1 should be compared with the data obtained in relation to objective 2.

Therefore, the analysis of the data was based on the comparison of the results in a chart as shown below:

Subject (nr.)	Recognition of the markers and their functions (points)	Comprehension (points)

The next section, RESULTS AND DISCUSSION   will present the model of the table above, already completed with the scoring obtained by each subject and will describe and discuss the outcomes of the research according to the objectives presented in the beginning of this section.

RESULTS AND DISCUSSION

The performance of each subject concerning recognition of the markers and their functions and comprehension of the text was analysed according to the criteria already described in data analysis procedures. The results of such analysis is presented in the chart below:

Subject	Recognition of the markers and their functions	Comprehension
1	10	9
2	10	9
3	5	7
4	10	5
5	2	3

In order to comment on the results obtained by the subjects, we could consider two groups as follows:
Group A - Subjects 1, 2 and 4 - Those whose perception of the markers reached 100%.
Group B - Subjects 3 and 5 - Those whose perception of the markers varied from 20 to 50%.

However, inside the two groups named above, each subject behaved in a specific way. In group A, for example, subjects 1 and 2 performed the task substantially differently from subject 4. While subjects 1 and 2 were not only able to perceive the organization of the text, but also to uderstand the meaning of each paragraph, subject 4 was only able to

notice the text organization and not the meaning conveyed by the text. Thus, subject 4 could only reach a general level of comprehension of the text, not achieving an understanding of the details of the text.

The protocol and summary produced by subject 1 showed that her only problem in reaching detailed comprehension of the text was that she did not know the meaning on the word "even", which came after "however" in the third paragraph. The fact that subject 1 did not know the meaning of the word "even" mader her interpret the sentence in a wrong way, i.e., she interpreted the sentence "However, even the largest of these groups, the Italian, numbered less than half a million (444,672) regular speakers, and the next largest, the Greek, amounted to 262,177", as "Todavia o maior desses grupos é o de italianos, seguido do grego, com 262.177 pessoas, que regularmente se expressam nesses idiomas." (1)

Subject 2, also appeared to find difficulties in interpreting the third paragraph for the same reason as subject 1. He appeared not to know the meaning of the word "even" and he read the sentence as if that word were absent and consequently, he misinterpreted part of the paragraph. The other paragraphs were interpreted very well by subject 2, i.e., he understood the other paragraphs in detail.

In the case of subject 4, however, the results, in terms of a detailed comprehension of the text were very different from the ones obtained by subjects 1 and 2. While subjects 1 and 2 obtained 10 in comprehension, she obtained 5.

Subject 4 could notice that "in consequence", "in contrast" and "however" were words which signalled functions of the sentences or paragraphs. She stopped every time she fould one of these markers to translate them and to say: "Ah, aqui está um marcador que identifica o texto como sendo lógico." (2) In spite of her awareness in relation to the markers, she was not able

to interpret the sentences or paragraphs introduced by
such markers. She noticed the function of the markers
but she did not evolve a detailed comprehension of
the text. She read each paragraph of the text, word
by word and after that she could only produce a
confusing summary for each paragraph. After having
read paragraph one, for instance, she said, "Desde
1947 mais de três terços da população da Austrália tem
um background de língua não inglesa embora tenham nas-
cido na Austrália e conseqüentemente há mais de um mi-
lhão de Australianos que apesar de saberem outras lín-
guas usam inglês em ocasiões sociais íntimas."(3) which
shows her misinterpretation of the paragraph.

What could be noticed from the analysis of the
results obtained by subject 4 was that she simply did
not activate strategies such as skimming, use of
cognates, reading and thinking about the coherence of
what she was interpreting from the text. She recognized
markers and inferred an overall meaning for each
paragraph. However, this interpretation was wide of
the mark. On one hand, the protocol recording showed
that subjects 1 and 2 took some time thinking over what
they had understood, deciding about the coherence of
the text. On the other hand, subject 4 was worried
about producing a meaning for the text that corresponded
approximately 50% in meaning to the real one.

Therefore, it seemns that the recognition of
markers helped subject 4 to reach 50% of the
comprehension of the text but there were other
strategies she could have used to reach the other 50%
and which she failed to use.

The subjects in Group B, subjects 3 and 5, also
presented a different performance in relation to the
task of reading and interpreting the given text.

In the case of subject 3, for instance, it can be
noticed, through the observation of the protocol and
summary of the text, that she reached beyond a level

of general comprehension of the text. She could understand the main points presented in the text in spite of her mentioning the markers at first. However, after having accomplished the first and the second part of the task (see Method), when asked about the function of the markers in the text she admitted that in the second paragraph she had focused on the marker "in contrast" in order to interpret the sentence. In the written summary, again, there is evidence that she had used other markers as support for her understanding of the text. The evidence is clear when she wrote in the summary. "Mais de um quinto da Austrália utiliza o inglês como língua corrente, ou seja, em conversa com amigos, familiares, na religião ou ocasiões sociais, isto porque esta parte da população é composta por pessoas que nasceram em países que falam inglês e por filhos destes." (4) The phrase "in consequence" from the text was interpreted as "isto porque" in spite of providing a wrong interpretation for the first paragraph. In the third paragraph she wrote, "Para acrescentar", corresponding to "In addition". In the protocol or the summary subject 3 did not seem to have given much importance to the markers and their function in the text. She would seek support from them almost without being aware of it as it can be noticed in the examples above. On the other hand, her performance in comprehension was better than that obtained by subject 4. in Group A:

Subject 3 Recognition of markers - 5 Comprehension - 7
       4   10   5

It seems that, in spite of just having shown very little use of the markers to comprehend the text in detail, subject 3 coped with the task by activating other strategies to understand the text. As with subject 1 and 2, she would think over what she had understood, skim the text, and infer the meaning of certain words which were cognates.

Our observation of subjects 1 and 2's performance
in terms of comprehension, however, leads one to
believe that total recognition of markers and their
function was if not the most, a very important
factor

Group B

Subject 1,2   Recognition of markers - 10 Comprehension-9
         3   5   7

Subject 5, in turn, could neither notice the
markers spontaneously, nor interpret the text in a
detailed way. He showed he could understand what the
text was about but that was all he was able to do. The
only marker that he was able to recognize was "In
consequence" in the first paragraph. This is shown by
his interpretation of the sentence: "In consequence,
today there are more than a million bilingual
Australians who regularly use a language other   than
English when talking with friends and families   or on
religious or social occasions." When subject 5 says,
"Esses fatos levam a Austrália a ser um país bilíngue.",
(5) he shows that the causal meaning of "In consequence"
was understood. However, as already mentioned, this was
the only marker he was found to have recognized and
thus, he was not able to notice the organization of the
text. Moreover, it can be noticed, through the
observation of his protocol and summary that   he
understood very little of what the text presented. In
his protocol, for instance, he gives the following
interpretation for the second paragraph, "Na Austrália
é comum o uso de duas ou três línguas poderem se agru-
par, conforme o censo de 1976: os árabes, franceses,
alemães, gregos, italianos, espanhóis e ultimamente chi
neses, e ainda outras minorias não descritas aqui." (6),
i.e., he does not mention the contrast of the situation
in Australia compared to other countries, pointed out
in the first sentence of the second paragraph. When

asked about the markers and their function in the text,
subject 5 said he had noticed those words in the same
way that he had noticed other unknown lexical items.

   Therefore, subject 5 had noticed words such as
"however" at the beginning of the third paragraph, but
thought of it as similar to other unknown words in the
text, i.e., he did relate "however" or any other marker
to the organization of the text or to his actual
interpretation of the paragraph. However, even taking
into consideration all the facts described above
concerning the performance of subject 5, he demonstrated
a slight difference in points between recognition of
markers and function and comprehension.
Recognition of marker - 2 Comprehension - 3
i.e. comprehension was evaluated as being better than
marker recognition.

   This fact may be an indication that in commom with
subjects 1, 2 and 3, subject 5 activated other
strategies for the comprehension of the text as have
been already mentioned. However, he was a subject who
presented a relatively poor performance and it is
difficult to extrapolate from what were clearly
extremely limited comprehension strategies.

   It seems that now, when the performance of each
subject has already been discussed both in isolation
and in comparison to the performance of others we could
try to answer the questions raised in this research,
which were:
1) Do ESP students - supposedly already familiar with
the use of reading strategies for a general level of
comprehension - recognize markers and their function
in the text?

   Considering that the sample of subjects we worked
with consisted of 5 elements and that 3 of them - 60%
of the total number - recognized 100% of the markers
and that none of them obtained less than 2 as a mark
for the task, the answer to this question is Yes,

they appear to.

The research did not go into further details to discover why 2 of the subjects did not recognize the markers satisfactorily. As their teacher, the researcher can say that the results obtained by subject 5 were expected since he was one of the weaker students (see Method) and whilst subject 3 showed unexpected results because she had demonstrated a fairly good performance during the course (see Method). 2) Does the recognition of markers and their function help the ESP student to understand the text in detail?

Here, the answer is not so readily elicited from the results. The table shows that two of the three candidates who obtained the best mark for comprehension had obtained 10 for recognition of the markers.

Subject 1 Recognition of markers – 10 Comprehension – 9
        2   10   9
        3   5   7

Also, even among the subjects who obtained low marks for comprehension (subject 4 and 5) the one who obtained the better mark in comprehension was the one who scored 10 for recognition of the markers.

Subject 4 Recognition of markers – 10 Comprehension – 5
        5   2   3

Thus, the results presented here seem to convey the fact that the answer to question 2, as it was for the first one, is, Yes, it apperas to. The research did not investigate the extent of such help and that would certainly be an important question because it would help us understand the case of subject 4, for instance, who obtained 10 in recognition and only 5 in comprehension or subject 3 who obtained a reasonable mark for comprehension,7,while scoring 5 for recognition.

CONCLUSION

First of all, it is necessary to point out that what was presented in the previous sections (RESULTS AND DISCUSSION) and will be evaluated here does not intend to be a final answer to the questions presented in the introduction of this paper.

One of the reasons for this is the number   of subjects in this research. 5 subjects is certainly far from being the ideal number recommended in order to arrive at a more definitive conclusion.

The other reason is a factor which all researchers have to face: individuals have idiosyncratic ways of performing tasks to achieve satisfactory results.

Therefore, the two reasons above do not permit us to extrapolate the results in a too generalized way.

In spite of it, the results of this research have shown that the recognition of markers as elements of text organization appears to be an important item in helping students attain a detailed comprehension of the text. Despite this, as far as an ESP course is concerned (7), detailed comprehension of a text involves other factors such as,
- intensive training of reading strategies for a general level of comprehension;
- teaching and learning of language items as recognition and interpretation of noun phrases, order of the elements of the sentence, affixes, contextual reference, etc.

It is for the student himself to go further into a detailed comprehension of a particular sentence or paragraph introduced by certain markers.

Clearly, to achieve detailed comprehension of the text, the student, according to our interpretation, should be taught not only the recognition and the meaning of the markers, but also how to deal with

the text in the sense of identifying the subject treated and after that, the details of the text. Such a process seems to involve "conscientização", further practice and familiarization with scientific texts.

The student should be made aware that he can predict from the title and from the context, recognize cognates, that he can use typographic clues given by the text, make inference, etc. In other words, the students should be familiar with all the aspects which will help them to achieve a general comprehension of the text as well as a comprehension of the main points treated in the text.

Practice is closely related to learning in this context. The student will develop and structure his learning by practice, i.e., by doing exercises on all those items mentioned above among others. Furthermore, it is very important to point out that what seemns to be sufficient training for one student is not necessarily sufficient for another. In the case of the students in this research, for instance, all had undergone the same experience, i.e., had gone through the same number of course material in the same length of time. However, some demonstrated the acquisition and use of what had been practised in class, in reading the text used in the research and some did not achieve this goal. Of course, the research did not go into further study to investigate the real cause for this fact. Nevertheless, considering the performance of the students during the course, a possible conclusion is that subject 3, 4 and 5 (the ones who did not show a fully satisfactory performance in reading the text) were not sufficiently trained for the task. At least, this is according to their differences in their ways of learning and their ability to use what had been previously learned, in a new but similar situation.

Familiarization with a scientific text will occur

naturally if practice takes place with texts of this
kind, especially if the texts are brought to class by
the student himself and consequently, are of
immediate interest. Thus, if students follow the above
mentioned learning path in the classrom situation,
they will obviously feel motivated to read more
outside the classroom, to practise spontaneously and
to develop their reading abilities.

This contact with the language will help them to
recognize and use items of the language such as
noun-phrases, affixes and others. The combination of
such recognition and use, the employment of strategies
for general comprehension and the comprehension of
the main points of a text (including the recognition
and use of markers) and, familiarization with the
structure of academic texts will lead students to
achieve detailed comprehension of the text.

The best proportions of each of the ingredients
to make the cake more delicious may serve as a very
interesting topic for investigation in another piece
of research by those interested in the subject. For
them, this research intends to function as a starting
point which brings together many queries to be
answered, and at the same time may motivate researchers
to investigate these questions in greater depth.

NOTES

1) "Yet, the largest of these groups is of the Italian,
followed by the Greek, with 262,177 people, who usually
express themselves in these languages".
2) "Ah, here there is a marker that identifies the text
as being a logical one".
3) "Since 1947 more than three third of the population
of Australia have got a non-English language back-
ground although having been born in Australia and that
consequently there are more than a million of

Australians who, despite knowing other languages, use
the English language in private social occasions."
4) "More than a fifth part of Australia makes use of
the English language as the current language, that's
to say, in conversation with friends and family, in
their religious rituals or in social occasions. This
happens due to part of the population be constituted
by people who were born in countries where the
English language is currently spoken."
5) "These facts make of Australia a bilingual
country."
6) "In Australia the use of two or three languages
is a common fact, as shown by the census of 1976:
the Arab, French, German, Greek, Italian, Spanish
and lately the Chinese and also other minorities
which were not mentioned here,"
7) Of course there would be other items which
could have been considered among the important
elements for detailed comprehension of a text as:
reading habit in the native language, for instance.
However, as this kind of thing is more probable to
be brought to class by the student than to be
developed in class with the help of the ESP course,
this element and others of the same type were not
considered in this research.

REFERENCES

ARNAUDET, M.L. & BARRET, M.E. (1984) "Approaches to
Academic Reading and Writing". New Jersey, Prentice
-Hall.
COHEN, A.D. (1984a) "Studying Second-Language
Learning Strategies: How do we get the information?"
In: *Applied Linguistics 5* (2).
_____.(1984b) "The Use of Mentalistic Measures
in Determining LSP Reading Problems" in Pugh, A.K. and

Ulijn, J.M. (eds.) *Reading for Professional Purposes*.
London. Heinemman Educational Books Ltd.
DEYES, A.F. (1981) "Applications of Discourse
Analysis (towards a minimum discourse analysis)"
Working Papers 3, Projeto Nacional Ensino de Inglês
Instrumental em Universidades Brasileiras, PUC-SP.
_____. (1982) "Discourse, Science, and Scientific
Discourse (The raw material of comprehension in EST)
Working Papers 6, Projeto Nacional Ensino de Inglês
Instrumental em Universidades Brasileiras, PUC-SP.
_____. (1983) "Saber ensinar e aprender: "Inputs"
para um curso de leitura" In: *Cadernos PUC 16 Linguis
tica* - EDUC, PUC-SP.
GRELLET, F. (1981) *Developing reading skills - a
pratical guide to reading comprehension exercices*,
Cambridge, Cambridge University Press.
HOLMES, J.L. (1983) "The teaching of language items in
ESP" *Working Papers 8*, Projeto Nacional Ensino de In-
glês Instrumental em Universidades Brasileiras, PUC-SP.
_____. (1983) "Text analysis and the teaching of
language items" *the ESPecialist 7*, Projeto Nacional
Ensino de Inglês Instrumental em Universidades Brasi-
leiras,PUC-SP.
HOSENFELD, C. (1976) "Learning about learning
discovering our students' strategies: In: *Foreign
Language Annals 9*.
NUTTALL, C. (1985) *"Teaching readings skills in a
foreign language*. London, Heinemann Educational Books.
SCOTT, M. (1981) "Some thoughts on testing reading
comprehension in English for academic purposes" In:
Working Papes 1, Projeto Nacional Ensino de Inglês
Instrumental em Universidades Brasileiras, PUC-SP.
SMOLICZ, J.J. & SECOMBE, M.J. (1984) "Multicultural
television for all Australians" In: *Int J.J. Lang 48*,
pp. 43. Mouton Publishers, Amsterdam.