MAKING SENSE OF A TEXT THROUGH PREDICTION

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We consider prediction a difficult skill to deal with in the teaching of reading comprehension. Prediction is also viewed as a useful and important skill. It is useful because it ensures the learners'active involvement, and it is important because it is part of the learners' strategies. Graduate students from our ESP courses, in general, are able to choose their reading matter on the basis of their own predictions. In fact, they choose what is most interesting and most useful. They can predict what will happen or come next, or how a writer develops his argument, or what methods will be used to test a hypothesis or to make a generalization. At this point of view, prediction is a very personal process in which the background knowledge of textual and linguistic information helps the readers to form their own expectations before, and during the reading process.

Our main concern from now on will be centered, however, on our undergraduate ESP classrooms, we mean, the " Básico", where learners have no background in their field of study.

John Holmes has pointed out in the Working Paper nº 5 about "The Importance of Prediction" that

> 'prediction is an integral part of
> comprehension, and if the reader
> is unable to predict during his
> reading he is reading blinding.'

On the kind of readers mentioned by Holmes there, arises a question: How can the reader formulate their prediction? We know that they are not conscious of predicting their way through a text. Our role as teachers is to create expectations of the text and also 'sensitize' them

to the importance of using prediction strategies since we are very aware that they use their initial prediction in a very passive way, i.e., they are forced to read what is given and not what they choose. They are not free to decide at what level of comprehension to read the text. Furthermore they don't have contextual and linguistic levels of information to work with and to permeate their own experience. Their knowledge of the world is very restricted.

Since prediction occurs in several reading strategies the earlier stage of materials preparation should include prediction, which could be best focused upon by the teacher.

There are many ways to present prediction through exercises based on these aspects:

1. From the title of the text students can predict the TOPIC.
2. From the beginning of a sentence students can predict how the sentence will end.
3. From the words students can predict the right meaning.
4. The readers' sense and experience help them to predict what the writer is likely to say next or what will happen next.

In all kinds of exercises developed on the basis of the aspects mentioned, our main objective, however, is to encourage the students to think about the text. If we formulate the students' predictions as questions which we think the text may answer, we are preparing them to read for a purpose, that is, to see which of our questions are in fact dealt with and what answers are offered to our students. If their reading is more purposeful, they are likely to understand better. Naturally, their predictions will not always be correct. This does not matter at all as long as the students recognize when they are wrong, and why.

Our next task in this paper is a very practical one. The content we developed to our ESP course in Computer Science (Básico) at the ' universidade Federal de Pernam-

buco has a sequence of subject matters. The content is
divided into units and each unit contains a series of texts
which are interrelated with each other in some aspect
matching the information of the text or kinds of strategies
used as well. Two texts from Unit I were dedicated to
prediction and the subject matter links one text to another.

<div align="center">CURSO DE INFORMÁTICA</div>

TEXT nº1

<div align="center">THE COMPUTER AND THE HUMAN BRAIN</div>

The term " giant brain" has been applied in efforts to
provide a picturesque image of computers for popular con-
sumption. The other term "biological computer" has crept
into the vocabulary of computer science as synonymous with
the human or animal brain. This sort of linking of the
words COMPUTER and BRAIN amounts to recognition that there
are certain similarities between the two. On the other
hand, machines follow directions and are accused of having
no originality, no creativity or talent for abstraction.
In this case the critics are eager to point out the diffe-
rences between computers and brains to minimize the simi-
larities.

_____(SUB-TITLE)

More than one hundred years ago George Boole was studying
the "Laws of Thought" and laying the foundations of Boolean
Algebra. This mathematical structure, inspired in part by
his interest in human brain activity to be central in the
design of computer circuits. Many circuits imitate closely
the way humans perform in same function. The similarities
between computers and the brain are intentional, since the
human brain has designed the computer somewhat after its
own image, and again it is intentional because machines
have been created to solve problems formerly done by human
beings. Thus the brain

  1. receives information

2. remembers it

3. operates on it

4. outputs information

and so does the computer. In fact, this amounts to a compact description of the principal purpose of each. The use of the word MEMORY for the storage unit of a computer is almost universal and amounts to general recognition that this particular machine capability is " brain-like".

_____(SUB-TITLE)

To begin, the nature of the materials from which the two are constructed is different. A computer is largely metallic, its simplest components being the OR, AND, NOT boxes. The brain, however, is made of biological material; its basic building block is the nerve cell or neuron which resembles the black-box machine counterpart.

There is a big difference in the way that information is stored in the memory. While the memory register of a computer are arranged in geometrical units, each having a number by which it may be designated, those of the brain seem quite disorderly, perhaps because they are at the moment so little understood. The brain's method of storing information is associative; ideas which are related to which other in some way are linked together. The computer method does not include this capability and it is performed through numerical systems. There is evidence that the brain is not entirely "pre-wired" but that only the major organization featuresare built in, considering the number of neurons involved. The brain is in part a self-organizing device, creating connections between component units on the basis of information received.

TEXT 1

All instructions are presented in Portuguese, but for the purposes of this paper, they are written in English.

Instructions:

There is one strategy that will help you read more fluently. This strategy is to PREDICT as much as you can about what you are reading. The title of the text tells you the TOPIC of what you will read. Use your own knowledge of the topic to predict as much as you can about the content.

STEP 1- With the objective of practicing PREDICTION, what information would you expect to find in a text with this title?

| THE COMPUTER AND THE HUMAN BRAIN |

STEP 2- What would you expect to find in the text accompanying these pictures?

Similarities
Differences

Advantages
Disadvantages
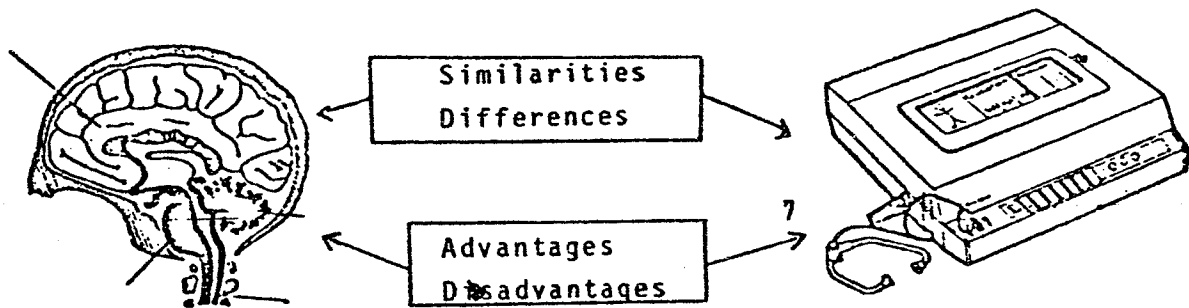
STEP 3- Use your knowledge of the context to make your predictions. What kind of subtitles will fit better according to the context of this text.

Now we can summarize that you have made PREDICTIONS about the content of this text based on:

1. Title, subtitles and your knowledge of the topic
2. Non-linguistic context:pictures
3.Linguistic context.

STEP 4- Read the text again and answer the exercises especially prepared for it.

Text 2

The main objective of this text is:

- to give students practice in using the prediction strategy to complete a diagram in note-taking form to find out the main points of the text.

PROCEDURES:

The teacher leads the students throughout the whole text by asking questions and constructing a diagram according to the students' answers.(see diagram after text 2)

STEP 1- This text is presented in a lecture form. Its title is COMPUTER, but the lecturer shifts to another title at the beginning of his lecture. Can you find it in the first paragraph?

Answer: COMPUTER USES

STEP 2- Does the author present the title as a statement or as a question?

Answer: QUESTION

STEP 3- In our last text the author mentioned that computers have received some terms such as " GIANT BRAIN", " BIOLOGICAL COMPUTER", to compare or contrast them with the human brain. What other term does the author use in this text to show the difference between computers and the human brain?

Answer: 'ELECTRONIC BRAINS'

STEP 4- In how many areas of application can we use the computer?

Answer: COMMERCE AND INDUSTRY

STEP 5- List three main areas of application of the computers to commerce and industry.

Answer: CLERICAL WORK, INFORMATION SYSTEMS,DESIGN
PLAN

STEP 6- Are computers good for a repetitive clerical work?

Answer: YES, THEY ARE

STEP 7 - Find two examples of efficient application of computers in clerical work.

Answer: PAY-ROLLS, BANKS.

STEP 8 - Give examples of a successful use of computers in
information systems.

Answer: AIRLINES.

STEP 9- Mention two ways in which airlines use the computers.

Answer:SEAT RESERVATIONS and INFORMATION ABOUT
FLIGHTS:

STEP 10- What is the name of a British Airways System?

Answer:BOADICEA

STEP 11- Give examples of the use of the computers as an
aid to design planning.

Answer: PREDICTING COST and PREDICTING FAULTS IN
A DESIGN.

STEP 12- Read the whole text now and complete the next
diagram. (see second diagram)

STEP 13- From the information of the two diagrams complete
the outline below.

1._____ ✈ _____

2._____

a._____, especially repetitive work.

  i.payrolls

  ii._____

    e.g._____

b._____

  i._____

  ii._____

    e.g.BOADICEA

c._____

  i._____

  ii._____

    e.g._____

COMPUTERS

We have been discussing how a computer works. Now let us turn to another topic: WHAT ARE THE USES OF THE COMPUTER?. Many laymen have an exaggerated picture of what computers are capable of. Sometimes computers are called 'electronic brains' and this is confusing, because no computer so far built can compete with the human brain in all respects.

Let us take a look at the application of computers in commerce and industry. Today, I shall discuss three of the main areas, and I shall give some examples of each. I think you should note the examples, but don't bother too much about the details of each example.

Firstly, clerical work. Computers are very good for handling repetitive clerical work efficiently. We can take two examples of this. The first is the widespread use of computers in handling PAYROLLS, that is, paying employees. Details about each employee(his salary, his tax code etc.) are fed into the computer. The computer makes the necessary calculation and prints out a pay slip.

Another example of the same sort of process has been the use of computers by banks to provide up-to-date records of clients'accounts.

Secondly, we have the use of computers in information systems. The most successful use of these is perhaps the use of computers by airlines to control seat reservation and provide information about flights. British Airways BOADICEA system has 200 terminals in 70 different countries. The main computer store for BOADICEA has a constant record of the details of every flight, including the number of seats available and the names of passengers who have already booked.

Thirdly the computer as an aid to design planning.

My first example has to do with predicting <u>the cost</u> of a design if one were planning to build a road. One could take a series of photographs of the area; from these, the amount of rise and fall of the landscape can be analysed to within a few inches. This information can be fed into a computer, along with details about what different areas would cost to buy etc. From all this, the computer can be programmed to work out the cheapest route between two points.

My second example has to do with predicting <u>faults in a design</u>. It is possible to produce by computer methods pictures of what the road will look like at one metre intervals. It is possible to film each of these as a separate frame, and film them in sequence. In this way, one can spot design faults before the actual construction of the road ever begins.

(From The Computer Revolution, Nigel Hawkes- Thames & Hudson 1971)

<u>NOTE-TAKING DIAGRAM</u>   .8.

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                    ┌─────────────┐
                    │ HUMAN BRAIN │
                    └─────────────┘

                  ┌─────────────┐
                  │  COMPUTERS  │
┌────────────┐   ╱ APPLICATIONS ╲   ┌────────────┐
│  INDUSTRY  │◄──       ──►       │  COMMERCE  │
└────────────┘                     └────────────┘

              ┌─────────────┐      ┌──────────────┐
              │  CLERICAL   │─────►│   PAYROLLS   │
              │    WORK     │      └──────────────┘
              └─────────────┘─────►┌──────────────┐
                                   │    BANKS     │
                                   └──────────────┘
                                          │ e.g.
                                          ▼
                                   ┌──────────────┐
                                   │   CLIENTS'   │
                                   │   ACCOUNTS   │
                                   └──────────────┘
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┌──────────────────┐
│   INFORMATION   │
│   SYSTEMS   │
└──────────────────┘

┌────────────────────┐
│   CONTROL SEAT   │
│   RESERVATION   │
├────────────────────┤
│   FLIGHT   │
│   INFORMATION   │
└────────────────────┘
        │ e.g.
        ▼
┌────────────────────┐
│   BOADICEA   │
└────────────────────┘

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              ┌─────────────┐
              │   DESIGN    │
              │  PLANNING   │
              └─────────────┘
             ╱               ╲
┌──────────────┐          ┌──────────────┐
│  PREDICTING  │          │  PREDICTING  │
│     THE      │          │   FAULTS     │
│    COST      │          └──────────────┘
└──────────────┘
         ╲                 ╱
   e.g.    ╲             ╱
          ┌─────────────────────┐
          │  BUILDING A ROAD     │
          └─────────────────────┘
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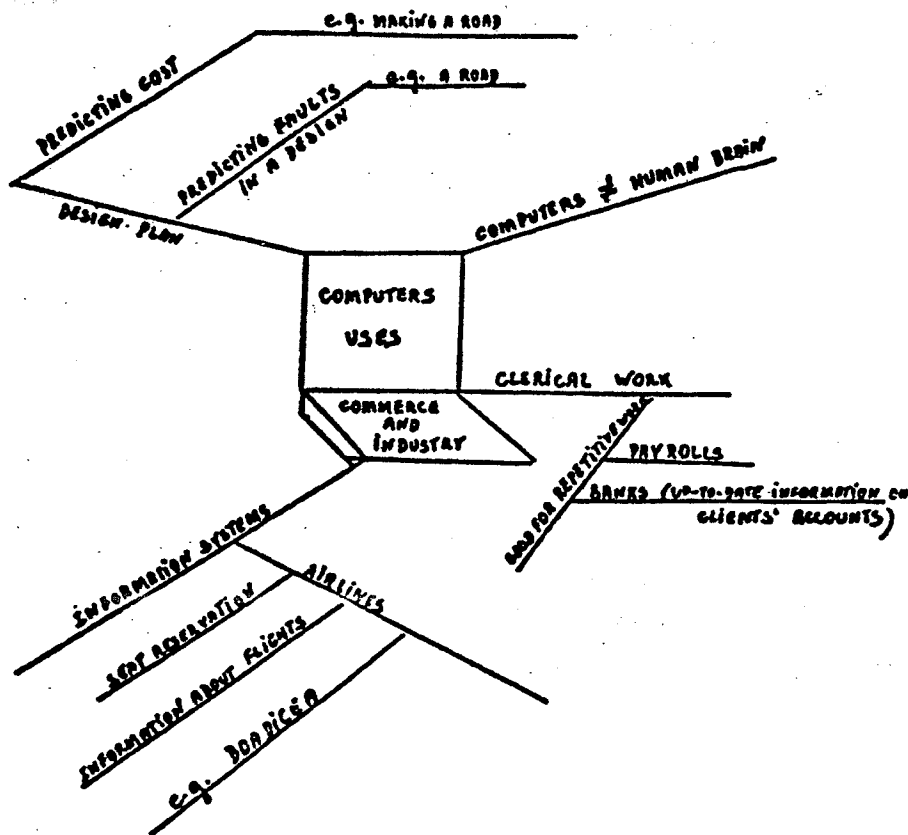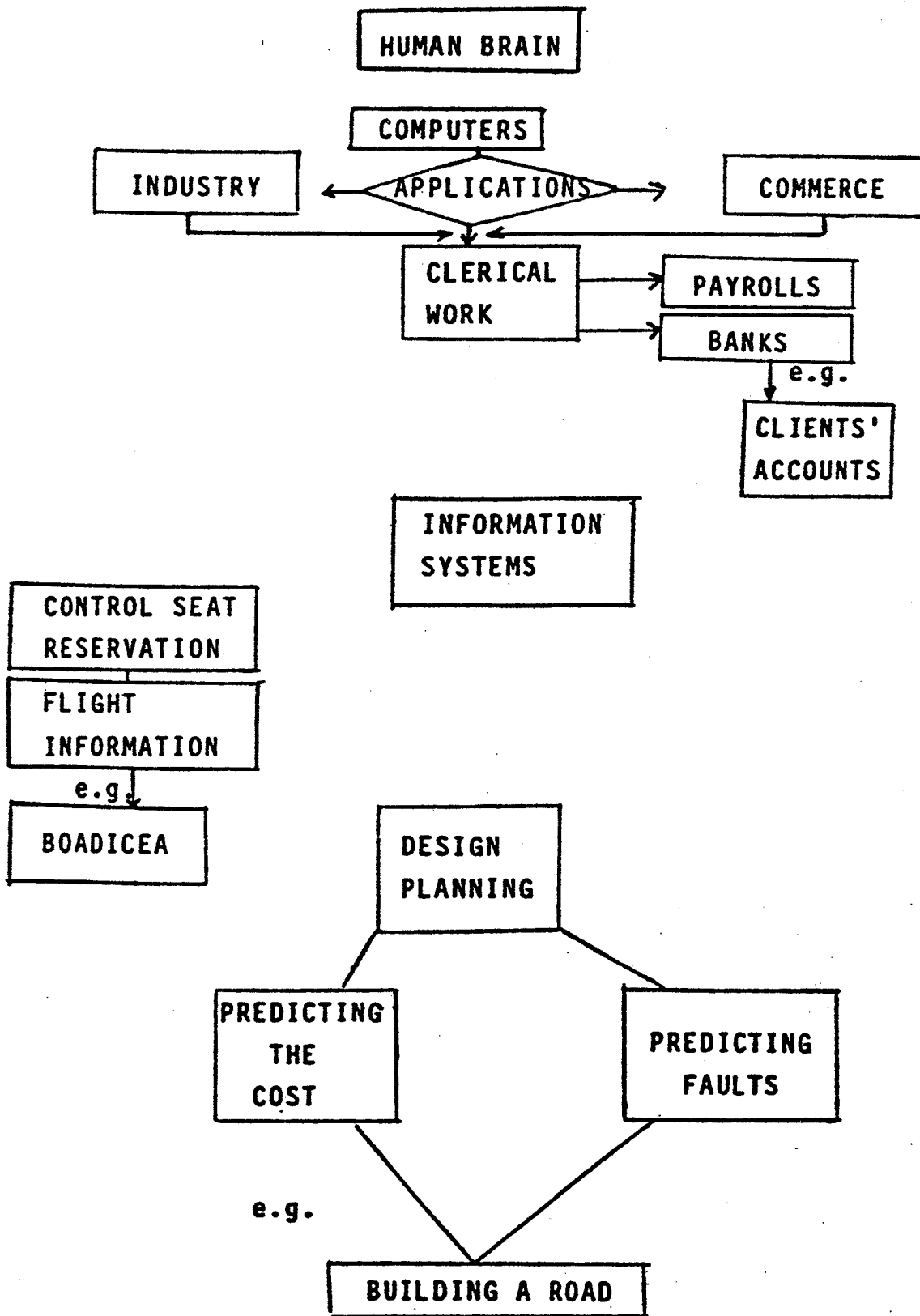
Note- This diagram has no indication. Students have to
     fill in it completely.

CONCLUSION:

What sorts of prediction should we make while reading?.The answer to this question will depend on a number of factors. The students'background, interest, and motivation; their linguistic and contextual knowledge, the text itself, the teacher's performance in the classroom will determine the successful use of this strategy. We do not really know how far it is possible to use it, but as far as we can see, prediction is more easily assimilated if it can be fitted into an existing framework of ideas in the students'mind. If prediction ensures the students'active involvement, we may agree that it is worth training learners in the use of this strategy.

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