Signal Effects on the Recall and Understanding of Expository Texts in Expert and Novice Readers

José A. León & Mario Carretero

Autonoma University of Madrid, Spain

Abstract: A primary goal of reading is to understand the writer's message correctly. To accomplish this goal, a reader must identify the information in the text that is most relevant to the author's message. A writer can facilitate the reader's task by using a variety of devices to signal relevant information. In the present study, we investigated the effects of signals on text comprehension and recall in different groups. Subjects were 48 Experts (post-graduate students) and 96 Novices (48 good readers and 48 poor readers, junior high school students). All subjects read two expository texts at different levels of difficulty. There were two versions for each text: with signals and without signals. Two recall tests were run: immediate free recall and delayed free recall. The results demonstrated that signals directed attention to the macrostructure they marked and led to a better encoding of the organization of target information in all groups. This effect increased with the difficulty of the text and the skill of the reader.

1. Introduction

One of the main objectives of reading is to understand the writer's message exactly. To achieve this aim, the reader should identify and assimilate the relevant information of the text. This task may be made easier for the reader by the text itself. The writer may use a variety of resources with the objective of "indicating" this important information to the reader. One of most frequent and mostly analysed aids in various studies has been the denominative "signals" [4-6,18].

A signal is a syntactical mark defined by a word or sentence from the text which, although it does not add any new information to the content of the text, it underlines the dominant logical relationships and the ideas which determine the macrostructure of the passage. This allows the reader to clearly identify the principal aspects of the text. Following Meyer [18], at least four kinds of signals can be established:

a) Those which give previous introduction to the content, summarised in a sentence in which the key information which will be more profoundly treated later on is expressed, using sentences like "The main causes of the discovery of America were..." or "The most important ideas of this article are...". Sentences like these help the reader to discover the relevant ideas of the passage.

b) Those which, also summarised, are given at the end of the text, in the form of a conclusion.
c) Signals, called ordinal or numeral by some authors [14,15], are usually employed when a plot of various points of view or several parts is introduced. In this case, each one is preceded by a number, letter or word (e.g. "firstly" or "finally").

d) Words expressing the author's point of view, like "Unfortunately" or "Suffice to say...".

A large part of the investigations carried out by specialists on the subject have been aimed at evaluating the effect these aids have on remembering and understanding and includes processes of selection and reconstruction of information [1,11,24]. Although a large number and great many kinds of signals have been studied, the results, however, have been different. While some authors have not found significant differences in memory between the use of signalled and unsignalled texts [2,9,18], others, however, have come to the conclusion that signaling makes it easier to remember the information it marks, although this, in some cases, inhibits the memory of the information which is not signalled. The selective effect of the information remembered has been shown as much in the use of isolated signaling, numerical signaling [14,15] or logical connectives [10], as in the combination of various signaling, such as titles, introductory sentences, across-chapter signals and other resources [7,8,13,16,20,22,23].

For this investigation we chose a combination of these signals: besides the title, introductory sentences in the form of summary and numerical signalings were used. We choose such markers for a number of reasons. Firstly, we were interested in those aids which gave general indications to the reader so as to facilitate the activation of the basic organizational schemes whereby the subjects organises the fundamental information of the passage. Thus, the title and the introductory sentences which contain relevant summarised information were chosen. As before, numerical signalings may affect the reader and the memory, but this time more specifically than before. In this case, ordinal numbers or words are explicit markers of the organisation of the information contained in the text on the diverse aspects or points of view which are treated. Together they give a wider and clearer panorama of the macrostructure of the written material.

The purpose of this investigation has been to analyse experimentally how these signals affect the memory of subjects with different levels of reading competence and previous levels of knowledge in expository texts of different understanding difficulty. The hypotheses of the study were stated with regard to how these signals could affect the memory of different kinds of readers and in several passages of different understanding difficulty. They were as following:

1) How would signaling affect recall of texts which differed in lexical and semantic complexity, thus making their understanding more difficulty?

As we have already seen, there are some works which have not found any significant differences in the recall of subjects in signalled or non-signalled texts [2,18]. It might be the case that the absence of this significant is due to the fact that the actual simplicity of the text or the reader’s ability render those signals irrelevant in order to understand, retain and recollect the essential information of the passage.

However, the signalled version puts up with an additional burden in reading, as it normally has a greater number of words which demand an additional effort from the reader as he/she has to read a larger number of words, which in form can reduce the effect of signals on memory. However, if we increase the understanding difficulty of the text, through lexical and semantic means, it is possible that with such increased difficulty, the signalled aid acquires meaning. This involves checking to see if there is some direct relationship between complexity and the effect of signaling on memory. And if this is the case, the signalled version will be more successful in recall than the non-signalled one.