

## The Role of Formal Schemata in Reading Comprehension in an EFL Classroom

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### **Abstract:**

*The aim of this paper is to shed some light on the role of formal schemata in comprehension of expository texts in EFL classrooms. It has been proved through many observational sessions in the department of Commercial Sciences in an Algerian university that the students are not aware of the role of formal schemata in making sense of English expository texts. The reading literature reveals that making use of formal schemata facilitates, but fosters reading comprehension due to many empirical studies conducted by many researchers such as Carrell (1985). The conclusion drawn from those studies is that recognising formal schemata is essential in reading comprehension.*

**Key Words:** *formal schemata, reading comprehension, EFL, rhetorical patterns of organisation, graphic organisers.*

### **1.Introduction**

Reading is the most important skill in teaching/learning institutions because through it one can get information. For this reason, EFL readers mainly the ones studying English at the university are supposed to read a lot if they want to improve and progress in their studies. It has been noticed that the majority of those students do not have that thrust for reading although it is of great importance. And because the ultimate goal of the reading process is comprehension, they are supposed to follow some steps to attain it so that they can do some tasks such as summarising a book or a chapter, or critiquing viewpoints, etc. A great body of research has tackled the issue of reading comprehension from many angles. Comprehending a text from a cognitive approach implies the role of schemata or background knowledge. These are of two types: content and formal schemata. The aim of this paper is to stress the importance of the latter, i.e., formal schemata. Many empirical studies have addressed the latter topic. Actually, the term formal schemata has taken many labels such as rhetorical structures (Aebersold & Field, 1997), text structure (Carrell, 1985; Hudson, 2007), discourse structure (Grabe, 2009), etc.

### **2.Literature Review**

#### **2.1.The importance of reading in academic settings**

A great number of researchers stress the importance of reading in teaching/learning institutions mainly in academic contexts. Saville-Troike (2006) argues that reading is the main skill in academic settings. This is due to the fact that students need to gain insights in their content areas either in their

native language or in foreign languages such as French or English. And since the best references in the majority of sciences are in English, Algerian students are required to read in English to enrich their knowledge in their specialities and to get in touch with original works and studies directly. To do that, they should, first, have a linguistic threshold as claimed by Alderson (1984 in Alderson, 2000). Besides, they should be raised awareness of the effectiveness of formal schemata in reading comprehension. If readers are to gain insights in their specialities in English, then, they should comprehend what they read.

## **2.2. Reading comprehension**

Algerian students after the educational reforms begin studying English from first year middle school until the last year in the secondary school, which makes seven years of tuition in English. When they join the scientific streams at the university, they will be obliged to have a module related to their specialities in English. This means that they are supposed to enter the university with a linguistic threshold that allows them to read in English. Nonetheless, they are seen struggling with reading in English and not appreciating reading in English, for they cannot get the main idea, i.e., they do not comprehend what they read. A number of researchers in the field of reading comprehension have linked this deficiency to a lack of knowledge of English rhetorical patterns of organisation which may be different to that of Arabic. These patterns are part of formal schemata that, in turn, are part of the general background knowledge.

## **2.3. Formal schemata**

Background knowledge has been tackled in the schema theory (Bartlett, 1932 ; Rumelhart, 1980 as cited in Carrell & Eisterhold, 1983). The core of this theory is that a reader cannot find the meaning of a text ready as s/he reads. Rather, there is another element that contributes to the process of making sense of what s/he reads: the reader's background knowledge or in Carrell and Eisterhold's (1983) words the 'previously acquired knowledge'. Reading in this theory is interactive in nature. That is, comprehending a text requires the interaction of top-down and bottom-up processing. This is clearly stated by her when she says that,

The process of comprehending a text is an interactive one between the listener or reader's background knowledge of content and structure, and the text itself. The text alone does not carry meaning. Rather, a text only provides guidance for listeners or readers as to how they should construct the intended meaning from their own previously acquired knowledge (p. 82).

The structures of this previously acquired knowledge are called schemata. Formal schemata refer to the background knowledge about the rhetorical, organisational structures of different types of texts. Algerian students in scientific streams contexts are exposed to expository texts. So, what is the definition of expository text and what are the different rhetorical patterns of organisation the students

should recognise? Moreover, what is the importance of rhetorical patterns of organisation and how do teachers help readers in reading expository texts easily?

### 2.3.1. Expository text

Expository texts are informational texts whose main objective is to bring insights and new information to the reader. For Jennings et al (2006), expository text ‘conveys information, explains ideas, or presents a point of view’ (p. 294). However, these texts are difficult and require that readers should be equipped with a number of reading strategies to be used in combination. McNamara et al (2007) argue that

Expository text differs from narrative text in many ways. Perhaps the most salient way is that the vocabulary tends to be less familiar and the concepts more challenging. Expository structure also differs from that of narrative structure in that expository texts typically consist of a variety of abstract and logical relations (e.g., division of information into main headings and sub-sections) organized around a variety of discourse structures... In addition, many key concepts in informational textbooks are highlighted in boldface or italic text, which means they are important to understanding a particular topic area. Understanding the organizational structure and features of expository texts is critical for processing contents (p. 481-482).

From above, unlike narrative texts, expository texts are difficult; in that, they have a variety of organisational patterns which should be recognised to facilitate the text content.

### 2.3.2. Rhetorical patterns of English expository texts

Expository, also called informational, texts are organised in a varied number of patterns. These patterns are also referred to as *text structures*. According to Meyer and Wijekumar (2007), these structures are to be taught. The authors state six types of expository (informational) text: description, sequence, listing, compare/contrast, cause-effect and problem-solution. Grabe (2009) suggests: description, definition, sequence, procedure, problem-solution, cause-effect, and compare-contrast. Aebersold and Field (1997) mention eight patterns as follows: description, classification, comparison, comparison, contrast, cause and effect, process, argument, and persuasion. They claim that these rhetorical structures are conventional.

### 2.3.3. The importance of Rhetorical Patterns of Organisation (Text Structures)

A great body of research has called for raising the readers’ awareness of rhetorical patterns of organisation (text structures) and this cannot be only by drawing their attention to the different types of text structure, but also by exposing them to a number of tasks that raise their awareness. In other words, readers should recognise that text has structure and be familiarised with the cues that exist in text, and be provided with enough practice for the purpose of being able to respond to those cues while reading (Williams, 2007). Researchers such as Koda (2004) argue that ‘*knowledge of text structure should enhance text-meaning construction in measurable ways*’ (p. 154). Carrell (1985) argues that

teaching text structure facilitates ESL/EFL reading. Grabe (2009) points out that being aware of how discourse is structured assists readers in comprehending texts.

#### 2.3.4. Difficulties with expository/informational texts

Though expository/informational texts are important, they are difficult to approach. This difficulty stems, according to Jennings et al (2006), from a number of factors such as:

- Recognizing and using the author's organizational patterns is a complex task. Such patterns are not always explicitly signaled.
- Informational text is less personal than narrative text.
- In reading informational text, students are often required to demonstrate their understanding by taking tests, which can be very stressful for any student.
- Informational text usually contains more difficult vocabulary and technical terms than narrative text.
- Informational text tends to be extremely concept dense. Four to five new ideas may be included in a single paragraph. For example, a sixth-grade paragraph on weather includes the following concepts: humidity, water vapor, evaporation, relative humidity, condensation, and dew point.
- Reading informational text often requires extensive background information. If that background is lacking, comprehension becomes more difficult.
- Informational text tends to be longer than narrative text. This length may simply overwhelm students with reading problems.
- The reading level of school textbooks is often well above the frustration level of students with reading problems (p. 295).

So, from above, expository texts need a certain effort to be comprehended, and it is through much practice that readers will understand them. Besides, it is of great importance to begin with the simplest rhetorical patterns of organisation such as *definition* and *description* since not all of students have a strong linguistic threshold, which makes an opportunity to recycle any lack in the linguistic knowledge. Another reason is that many textbooks such as '*New Headway English for Banking and Finance*' include many types of texts with *definition* and *descriptive* patterns of organisation, which makes this reference appropriate to EFL learners in general and Algerian students in particular.

#### 2.3.5. Examples of English Rhetorical patterns

As mentioned above, texts are recognised according to their patterns of organisation. For example, a writer who wants to define a concept and gives examples is going to use verbs such as "to be" (is/are), to "mean" as in the example that follows:

*Investment* means using money to buy something (an asset) with the aim of making a profit by selling that asset at a higher price sometime in the future. There are many different types of

investments. Some people put their money in art, stamps, or collectibles. Other people invest in shares and become part owners of a company (Richey, 2011, p. 36).

The first sentence includes the definition of “investment”. The second sentence cites the types of “investment”. The third and fourth sentences give examples of “investment”.

The author who wants to talk about something, a bank, for example, is going to choose a descriptive organisational pattern as in the following example:

UBCS International is a leading international bank. We provide an excellent range of products and services, including current accounts, savings accounts, mortgages, insurance, loans, foreign exchange services and investment advice. We have 2,000 employees in our head office in Frankfurt and 38,000 in our 320 branches in Europe, the Middle East and Asia (Richey, 2011, p. 13).

So, it is clear that the main structure of this piece of writing is the descriptive one. The first sentence is just for telling the reader what “UBCS International” is. The following sentences describe this bank: the services it provides, the number of employees and branches it has, and the like.

When an author wants to talk about a problem and its solution, then, s/he uses a problem-solution pattern of organisation.

Water is essential to life and we depend on it, yet many people take water for granted. As the population of the world increases, and with it the demand for water, there is growing concern that our water supplies will not prove adequate. In areas near the coast, an obvious solution to this problem is to find ways of utilizing the abundant supply of water from the sea (Philpot & Curnick, 2007, p. 28).

So, it is clear that the author begins with mentioning the importance of water (Water is essential for life...), then, states the problem (As the population of the world increases, and with it the demand for water, there is growing concern that our water supplies will not prove adequate). Right after, the solution comes (...an obvious solution to this problem is to find ways of utilising the abundant supply of water from the sea).

When comparing two or more things, the author is going to choose the compare and contrast organisational pattern:

Compared to the national central banks, the ECB will be relatively small. While the bank of France and the Bundesbank each employ more than 10,000 staff, the ECB will have to do with only 500 employees. The comparison is not entirely fair because the ECB’s staff will be primarily engaged in research, security and payments systems, while most of the staff at NCBs are involved in areas such as logistics and administration (Johnson, 2000, p. 29).

It is clear, from above, that there is a comparison between the ECB and the national central banks. In the second and third sentences, there is the use of “while” for pointing to a difference between the aforementioned banks.

It is also crucial to teachers to tell the students that it is possible to find more than one rhetorical pattern of organisation within a single text or paragraph.

### 2.3.6. Fostering Rhetorical Knowledge Using Graphic Organisers

Rhetorical patterns of organisation can be learnt and fostered through the use of graphic organisers. According to McShane (2005), graphic organisers are ‘*diagrams or charts that visually represent the relationship of ideas and information. Most often they are used to illustrate the organization and structure of a text*’ (p. 83), such as concept maps, tree diagrams, anticipation guides, semantic maps, and discourse-based graphic organisers (Grabe, 2009). Research conducted by Alvermann (1986), Armbruster, Anderson, and Meyer (1991), Berkowitz (1986), Guri-Rosenblit (1989), Jiang and Grabe(2007, 2009), Tang (1992), Taylor (1992), Taylor and Beach (1984), Trabasso and Bouchard, (2002), Vacca (2002), Vacca and Vacca (1999) (cited in Grabe, *ibid*) shows that when students see the way information in a text is organised along with the cues that signal it, they comprehend it better (*ibid*). This is clearly stated by McShane (*ibid*) when she says that ‘*Graphic organizers may help readers to become familiar with these common text structures and to understand the flow of information and ideas within a particular structure*’ (p. *ibid*). She adds that ‘*Organizers are most often used with nonfiction, especially content-area texts like science and social studies, and adult learners may find graphic organizers most useful for analyzing and summarizing content they need to learn*’ (p. *ibid*). Nonetheless, these graphic organisers are to be used depending on language proficiency and level of maturity (*ibid*).

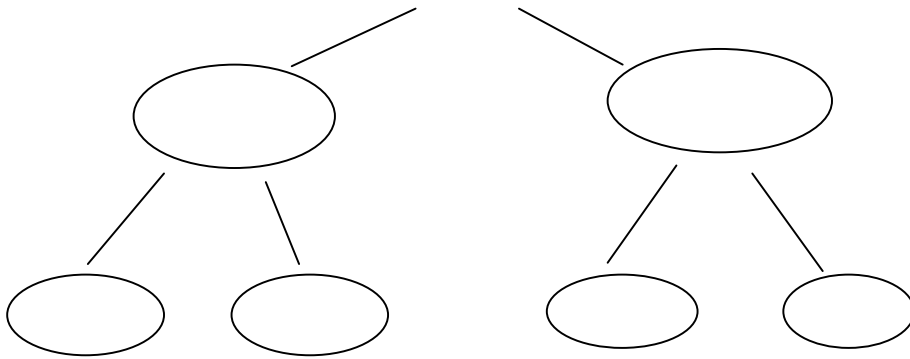
According to the reading literature, there are many kinds of graphic organisers. Grabe (2009) illustrates nine graphic organisers as follows:

#### Definitions

a  that

#### Description / classification





**or**


**Compare-contrast**

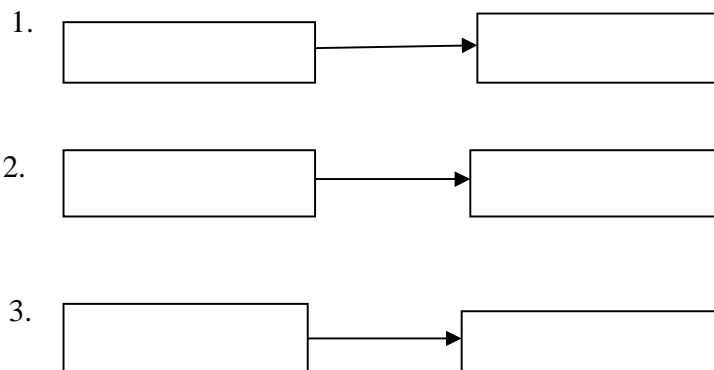
comparison

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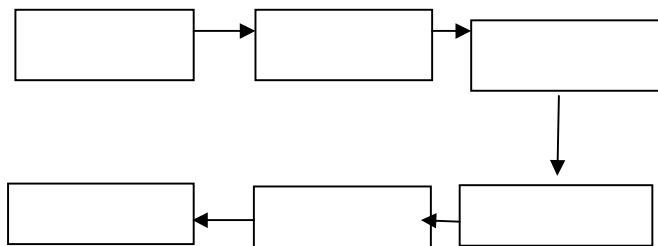
contrast

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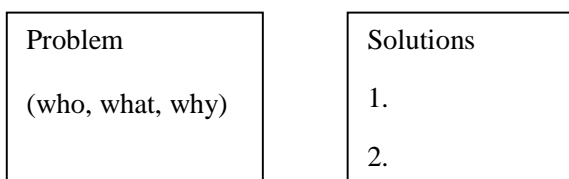
**Cause-effect**



**Process / sequence**

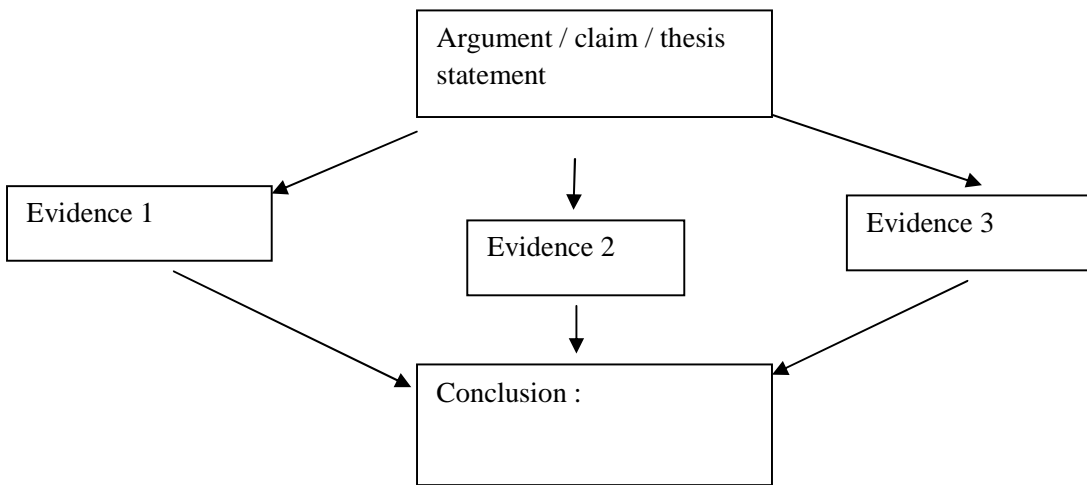


**Problem-solution**



**Argument**

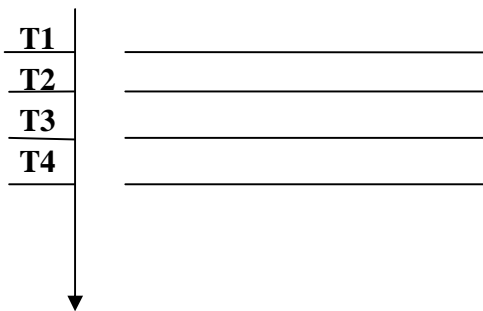




**For / against**

<b>for</b>	<b>against</b>

**Timeline**



**3.Conclusion**

All in all, comprehending a text is an interactive process that combines both types of processing: top-down and bottom-up. The reader's background knowledge is central in the reading process. Thus, making use of formal schemata not only facilitates reading comprehension, but fosters it as well. By involving students in studying texts and identifying rhetorical patterns of organisation, they will be able to recognise how texts are structured and how ideas are related logically, and consequently they will get the main idea and comprehend the text easily. One way to help EFL learners and Algerian students specifically comprehend expository texts is the use of graphic organisers.

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