Juliana do Amaral

NOTE TAKING, HIGHLIGHTING, REREADING: COMPARING THE EFFECTIVENESS OF STUDY STRATEGIES ON COMPREHENSION, RETENTION, AND LEARNING FROM EFL TEXTS

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Orientadora: Prof[oa] Dra. Lêda Maria Braga Tomitch

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Juliana do Amaral

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Esta Dissertação foi julgada adequada para obtenção do Título de "Mestre em Letras", e aprovada em sua forma final pelo Programa de Pós-Graduação em Inglês: Estudos Linguísticos e Literários.

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To my mother,

with all my love.

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The sounds of the mind must be simply thesounding of emptiness.
What we call the sounding of mind is actually the sounding of a bell.
If the windbell does not sound, the mind does not sound.
How can we call this the mind's sounds?

Eihei Dogen (1200-1253), extracted from Eihei Koroku

ABSTRACT

Study strategies are the goal-driven actions that readers employ in the task of learning from text (Ferstl & Kintsch, 1999). Like any reading strategy, they are high-level cognitive processes related to comprehension monitoring (Gagné, Yekovich & Yekovich,1993). Nonetheless, studying a text isan active processthat calls for the use of study strategies in order to organize new information in memory in a manner that facilitates later access (Just & Carpenter, 1987). Having in mind the importance of strategic reading in learning situations, especially in the case of EFL reading, this study aimed at checking the effectiveness of the study strategies rereading, highlighting, and note taking, on comprehension, retention, and learning from EFL texts. Another goal was to investigate whether and how often participants used study strategies when reading academic material in English. Nineteen intermediate EFL students participated in this study. They studied three expository texts in English, eachwith the support of a different strategy. After reading, participants answered a comprehension test consisting of an immediate recall and a set of true or false statements. Retention tests took place a week after reading and comprised one delayed recall of each of the three texts and a Critical writing task, aimed at investigating learning. Additionally, a Survey of Reading Strategies (Mokhtari & Sheorey, 2002) was applied to trace participants' strategic behavior. Prior to data collection, participants received instruction on study strategies. Results of immediate recalls pointed to rereading as an effective strategy to comprehension. In the retention test, good performance in the delayed recalls was associated to the highlighting and note taking conditions. Thus, the effects of rereading did not endure delayed tests, showing that this strategy is not effective in learning circumstances. Results from the Critical Writing Task indicate a possible link between highlighting and learning. Mentions to ideas from the texts were not numerous, indicating the complexity of using what was learned from text in novel contexts. The Survey of reading strategies and retrospective questionnaires demonstrated that participants perceived themselves as highly strategic readers when studying materials in English.

Key words: reading; study strategies; comprehension; retention; learning.**Number of pages:** 128 **Number of words:**31.332

RESUMO

Estratégias de estudo são as ações pautadas em objetivos que os leitores empregam na tarefa de aprender a partir da leitura de um texto (Ferstl & Kintsch, 1999). Elas são processos de alto nível cognitivo, relacionados ao monitoramento da compreensão (Gagné, Yekovich & Yekovich,1993). Não obstante, estudar um texto é um processo ativo que requer o uso de estratégias de estudo para organizar a informação nova na memória de uma maneira que facilite acesso posterior (Just& Carpenter, 1987). Este estudo objetivou verificar a eficiência das estratégias de estudo tomar notas, realçar texto e reler na compreensão, retenção e aprendizado a partir da leitura de textos em inglês. Outro objetivo foi investigar se e com que freqüência os participantes utilizavam estratégias de estudo ao ler materiais acadêmicos em inglês. Dezenove alunos de inglês intermediário participaram desta pesquisa. Eles estudaram três textos expositivos em inglês, cada um com o apoio de uma estratégia diferente, e fizeram um exame de compreensão que consistiu em escrever tudo o que se lembravam do texto lido (*free recall*)e julgar sentenças verdadeiro/falso. Os exames de retenção ocorreram uma semana depois e abrangeram escrever o que se lembravam de cada um dos textos e responder uma tarefa de escrita crítica para verificar o aprendizado. Além disso, foi aplicado um levantamento de estratégias de leitura (Mokhtari & Sheorey, 2002) para traçar o comportamento estratégico dos alunos. Previamente à coleta de dados, os participantes participaram de oficinas de estratégias. Os resultados dos *immediate recalls* apontaram para a releitura como eficiente em nível de compreensão. Nos exames de retenção, boa performance nos *delayed recalls* esteve associada a realçar o texto, seguida de tomar notas. Logo, os efeitos da releitura não persistiram nos exames de retenção, mostrando que esta estratégia é pouco eficiente para aprendizado. Os resultados da Tarefa de escrita crítica indicaram uma possível relação entremarcar o texto e aprendizagem.Menções às ideias lidas nos textos não foram numerosas,mostrando a complexidade de se usar o que foi aprendido em contextos novos. O levantamento de estratégias de leitura e os questionários demonstraram que os participantes se perceberam como leitores estratégicos ao estudar materiais em Inglês.

Palavras-chave: leitura; estratégias de estudo; compreensão; retenção; aprendizado.**Número de páginas:** 128 **Número de palavras:**31.332

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LIST OF ABREVIATIONS, ACRONYMS AND SYMBOLS

PPG1 – Programa de pós-graduação em Inglês
UFSC – Universidade Federal de Santa Catarina
EFL – English as a foreign language
STM – Short-term memory
WM – Working memory
LTM – Long-term memory
L1 – First/native language
L2 – Second language
CEPSH – Comitê de ética em Pesquisa com Seres Humanos
SORS – Survey of Reading Strategies

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1 INTRODUCTION

1.1 PRELIMINARIES

What types of learning behavior favor second language acquisition? Do learners employ different strategies according to the context and the task demands? Can instruction foster learners' awareness on their use of strategies? Researchers have been trying to answer these questions since the late 1970s (Rubin, 1975, 1987; Anderson, 1991; O´Malley & Chamot, 1990; Oxford, 1990, 2001; Chamot, 2005). Findings from these studies have demonstrated that learners select a particular strategy or a set of strategies depending on the learning context, the task proposed and his/her goals and preferences. That is, there is not a unique type of behavior considered optimal to language learning (Chamot, 2005). Although instruction has been regarded as an important aspect of learning strategies, research on this aspect has been less recurrent.

Notwithstanding, language learning strategies remain an important niche of research. Strategies are tools that can be used to optimize learning. Observing the behavior of expert individuals enables us to check which attitudes would be related to successful learning. Thus, by tracing the profile of the "good language learner" (Rubin, 1975; Spring, 1985), it is possible to teach effective strategies to less successful students, helping them improve performance.

Strategies, then, are at the heart of the discussion of successful learning behavior – which calls for a working definition of the term. Put simply, strategies are the actions students consciously take in order to control and regulate their language learning process towards their reading goal (Afflerbach, Pearson & Paris, 2008; Manoli & Papadopolou, 2012; Grabe, 2009).

Although the terms strategy and skill have been commonly used to refer to similar processes, the perspective adopted in this work presupposes a degree of intention between the two: skills are subconscious, while strategies are consciously activated [1]. The distinction between strategy and skill has been analyzed in textbooks of English as a foreign language (EFL)[2] (Zaccaron, Dall'Igna & Tomitch, 2017), which often use the terms interchangeably, although a higher occurrence of the term "strategies"was found. But why is awareness

[1]This discussion will be deepened in Chapter two – Review of the Literature.
[2]Throughout this thesis, the terms EFL and ESL will be used to refer to the same construct.

such an important component? Because, as deliberate actions, strategies differ from skilled behavior or mere luck (Paris, Lipson, and Wixson, 1983). They are *metacognitive* processes that aid reading comprehension and can be controlled by the learner (Baker & Brown, 1984; Paris & Winograd, 1990).

Anderson (2005) points to five important developments in the L2 learning strategy research: (1) the identification, classification, and measurement of language learning strategies, (2) the distinction between *language use strategies* and *language learning strategies* (the former encompassing the learner's current interlanguage and the latter, strategies used to improve knowledge in the target language), (3) the relationship between strategies and L2 proficiency, (4) the transferability of strategies from first language (L1) tasks to L2 tasks, and (5) the explicit instruction of language learning strategies. The present study is situated in the first and last realms, as it aims at measuring the effectiveness of study strategies and also having instruction as a component.

Within the first realm, in order to understand the types of language learning strategies students engage on, researchers have attempted to classify language learning strategies through instruments such as the *Strategy Inventory for Language Learning* - SILL (Oxford, 1990). Seven categories have arisen from these initial categorizations: *cognitive strategies* (identifying, retention, and storage of content as well as retrieval, rehearsal, and comprehension), *metacognitive strategies* (preparing and planning, identifying, monitoring, orchestrating, and evaluating strategy use), *memorization strategies*, *compensatory strategies* (e.g., using words you know to describe the meaning of a word you do not know), *affective strategies* (strategies for reducing anxiety), *social strategies* (strategies for interacting with others) and *self-motivating strategies* (e.g., self-encouragement, relaxation, and meditation). Affective strategies and self-motivation strategies seem to cover similar aspects (Oxford, 1990, 2001). Other studies have not identified self-motivating strategies (Hsiao and Oxford, 2002).

Strategies play a crucial role in reading; they are part of the reader's comprehension monitoring, being considered a high-level cognitive process (Gagné et al, 1993). Successful readers often engage actively in comprehension, setting goals, considering the context and demonstrating willingness to overcome difficulties through the use of strategies (Davies, 1995; Grabe, 2009). Strategic reading has been researched both in L1 (Paris et al, 1983; Paris, Wasik & Turner, 1991,

Afflerbach et al, 2008) and L2 (Weinstein and Mayer, 1986; Anderson, 1991; Chamot & El-Dinary, 1999). Reading strategies have been identified and categorized with instruments such as the *Survey ofReading Strategies* - SORS (Sheorey & Mokhtari, 2001; Mokhtari & Sheorey, 2002), which focuses on the metacognitive use of strategies.[3]

Strategy use varies according to many aspects such as the reading situation, the reader's purpose and the task demands (Pauk, 1984; Lorch et al, 1993, 1995; Ferstl & Kintsch, 1999; Narvaez et al, 1999). A common distinction is made regarding the reader's purpose, differentiating between reading for pleasure and reading to learn: the former would be related to a relaxing activity, while the latter would require more effort and attention. For instance, when we study a text, holding a pencil while reading is a "reminder that you must do something with it" (Pauk, 1984, p.190). In other words, the active nature of learning is evidenced in the student's physical engagement. This study is concerned with these active reading strategies that are used in learning situations, which will be henceforth addressed as *study strategies.*

Study strategies encompass actions like underlining, annotating on the margins or taking notes separately on the main ideas, facts, and concepts that arise from the text (Tomitch, 2012). These strategies are said to enhance concentration, although they may pose a higher cognitive effort as the reader has to (re)organize the information obtained from the text.

Rereading, highlighting and note taking were the study strategies chosen to be dealt with in the present study. This selection was based on the assumption that there is a greater depth of processing involved in highlighting and note taking as compared to rereading. Craik and Lockhart (1972) explain that this greater depth "implies a greater degree of semantic or cognitive analysis" through *enrichment* or *elaboration.* Thus, comparing the effectiveness of these actions may provide data on the value of more "laborious" strategies. In the categorization proposed by Mokhtari and Reichard (2002), rereading is understood as a *problem-solving strategy*, meaning that it is done in a focused manner "when text becomes difficult to read." (p.252). On the other hand, underlining/circling information (which is similar to highlighting) and taking notes are categorized as support strategies, which are related to the "use of reference materials, taking notes, and other practical strategies that might be described as functional or support strategies"

[3]These studies will be scrutinized in chapter 2.

(p.252-253). Therefore, it is also hypothesized that note taking and highlighting will not only lead to better reading comprehension, but also to more significant retention and learning outcomes.

1.2 SIGNIFICANCE OF THE STUDY

Strategic reading is further developed in academic settings, where the students are more often required to study texts in EFL; not only are they assessed for their comprehension and retention of the content read, but also they are required to learn from these texts. This task involves building a situation model by integrating newly read text to prior knowledge (Kintsch & van Dijk, 1978). The present research is carried out in the context of an English Language course at a federal university in the South of Brazil, assuming that the students are going to profit from the research process and the insights derived from it.

Broadly speaking, research on reading strategies has focused on the effects of strategy use at the comprehension level (Paris et al, 1983; Spring, 1985; Baker, 1989; Magliano, Trabasso & Graesser, 1999; Jafari, 2012). Nonetheless, to the knowledge of this researcher, little has been researched on the effectiveness of reading strategies on higher cognitive levels, i.e., retention and learning. Previous studies have also surveyed which reading strategies are used in study situations (Lorch et al, 1993, 1995; Magliano, Trabasso and Graesser, 1999). Nonetheless, these studies were carried out with native speakers of English. Therefore, there seems to be plenty of room in the Brazilian context to investigate the effect of study strategies across cognitive levels in EFL reading and studying.

It is important to mention that the goal here is not to make any judgments of value, rating strategies as “better” or “worse”. Rather, by focusing on a limited set of strategies and the impact of their use on learning situations, this study is an attempt to help students develop metacognitive awareness on their strategic behavior while studying texts in English. As an outcome, they might become more conscious readers, deciding more accurately which strategies are suitable to their learning goals.

1.3 OBJECTIVES

Based on the discussion that was previously introduced, the objective of this study was to analyze the use of the study strategies highlighting, note taking and rereading, as a tool for promoting EFL

reading comprehension, retention and learning among a group of students of English as a Second Language at the extracurricular course at UFSC. The data was collected through immediate and delayed procedures as well as a critical writing task. Additionally, the participants' reading behavior was investigated in relation to their self-perceived use of study strategies when reading academic material in EFL.

1.4 RESEARCH QUESTIONS

In order to achieve the aforementioned objectives, the present investigation attempts to answer the following questions:

RQ1 Which study strategies, among highlighting, note taking and rereading, promote better comprehension, as measured by a test containing an immediate recall and true or false statements?

RQ2 Which study strategies, among highlighting, note taking and rereading, promote better retention, as measured by a delayed recall a week after reading each of the texts?

RQ3 Which study strategies, among highlighting, note taking and rereading, promote better learning, as measured by a critical writing task?

RQ4 What is the students' perception in relation to the use of study strategies in their academic life?

1.5 ORGANIZATION OF THE THESIS

This report is divided into five chapters: Chapter one presents the context of investigation and where this study stands. Chapter two brings relevant literature on the theoretical constructs supporting the thesis: reading, levels of processing (comprehension, retention, and learning), and reading strategies, narrowing down to study strategies. Chapter three describes the method developed for this study, including a description of the participants, instruments and procedures involved in data collection and analysis. Chapter four presents the results obtained and the discussion of the findings, attempting to answer the research questions posed. Last, in Chapter 5, the main findings of the study are retaken, followed by its limitations, suggestions for further research and pedagogical implications.

2 REVIEW OF LITERATURE

The main objective of chapter two is to present the theoretical background that gives support to this study. It is divided into three sections: section 1 brings a definition of reading; section 2 presents the levels of reading processing underlying this work, namely: comprehension, retention and learning. Section 3 conceptualizes reading strategies, discussing the distinction between strategies and skills, emphasizing their metacognitive nature, and making the case for study strategies.

2.1. READING COMPREHENSION

The act of reading can be defined as an interaction between the reader and the text, in which the reader assigns meaning to the written symbols that are being decoded (Aebersold & Field, 1997). If successful, this interaction results in the production of meaning. Research in reading has been trying to unfold the processes involved in constructing meaning from text through the creation of models (Davies, 1995). Some models segment reading in units according to varying degrees of complexity; they are called componential models (Urquart & Weir, 1998). Others attempt to describe the procedures involved in processing; they are named processing models (Bilikozen & Akyel, 2014). The former comprise bottom-up, top-down and interactive processing, and will be described in the next lines.

2.1.1 Reading models

One of the first reading models conceived in reading research described reading as a sequential decoding from its smallest units of meaning: identifying letters, recognizing words, phrases, sentence parsing, and discourse processing. This model, known as bottom-up (Gough, 1972), tends to become automatized as the reader becomes more skilled. Nonetheless, it does not tell us the whole story. Reading is not a static process of extracting meaning from the text based on the textual features; it encompasses the reader's previous knowledge or experiences (Baretta & Pereira, 2018). Nor is it a unidirectional movement towards increasingly complex structures, but rather an interaction between memory and text features (Scliar-Cabral, 1991).

Goodman (1976) refuted the notion of reading as sequential processing, arguing that its main aspects were "partial use of available

minimal language cues selected from perceptual input on the basis of the reader's expectation" (p.2). His model, named top-down model, prioritized the reader's ability to make predictions and confirm or refute these predictions as they read, trying to fit the information read into their knowledge. This process was referred by Goodman as a "psycholinguistic guessing game": syntactic and semantic rules would fill in the gaps in meaning, enabling comprehension.

Rumelhart's interactive model (1985) is currently endorsed by most reading researchers. It advocates that both bottom-up and top-down processing might occur during reading. The process starts with the visual identification of the graphemic input and its extraction into the pattern synthesizer, in which the input is associated with orthographic, lexical, syntactical, and semantic knowledge. Put simply, an interactive view of reading implies that the reader can draw from different sources of information (visual, orthographic, lexical, semantic, syntactic and schematic) simultaneously, in a dynamic manner.

Under a more descriptive perspective of the reading process, Gagné, Yekovich and Yekovich (1993) proposed a componential model for reading comprehension. It is depicted in this thesis for its detailed explanation of the elements of the reading process.

Figure 1 -Diagram of Gagné et al's model of reading comprehension

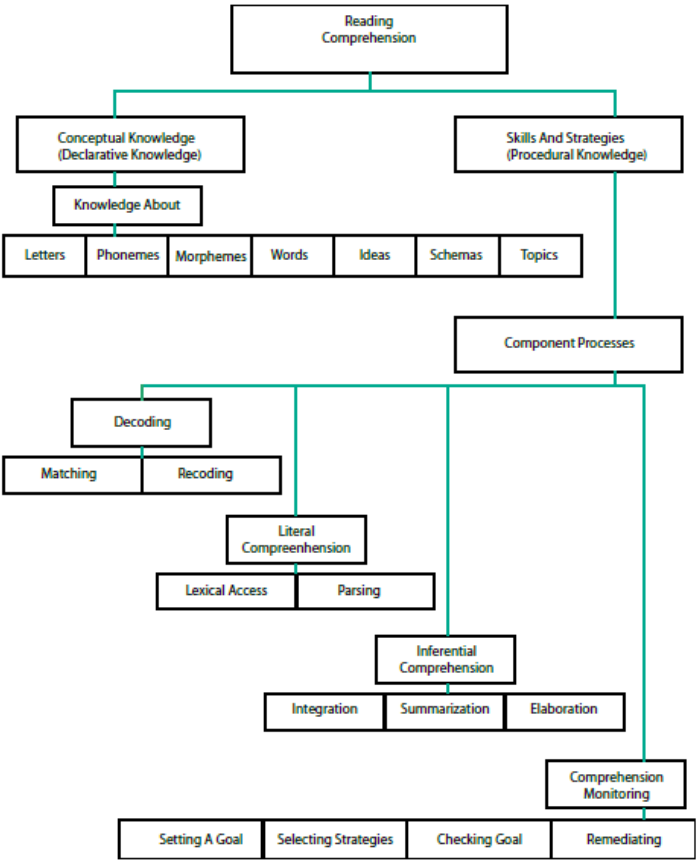


Figure 1 – Diagram of the Reading Comprehension model from Gagné et al. (1993). Originally published in Portuguese in Tomitch, L.M.B. Pesquisas sobre os aspectos cognitivos da leitura: 40 anos de PPGI. In S.B. Funck (2011), História e memória; 40 anos do PPGI da UFSC. Florianópolis, SC: UFSC-CCE-PPGIand translated by Tomitch (2011). Based on Gagné, E.D., Yekovich, C.W. & Yekovich, F.R. (1993). The cognitive psychology of school learning. Ch.. 12: Reading. pp. 267-312. New York: Harper Collins College Publishers.

The model is divided into two realms: declarative knowledge and procedural knowledge. Declarative knowledge consists of our knowledge about letters, phonemes, morphemes, words, ideas, schemas, and topics. Procedural knowledge involves our skills and strategies, i.e., what we do as readers. It comprises four levels: *decoding, literal comprehension* (considered low-level processes), *inferential comprehension* and *comprehension monitoring* (high-level processes). Decoding comprises *matching* (accessing meaning inn memory) and *recoding* (pronouncing the word); literal comprehension involves *lexical access* (choosing the meaning that fits the context) and *parsing* (processing the sentence using syntactic and grammatical rules). The level of inferential comprehension consists of *integrating* meaning across sentences, *summarizing* the main ideas across sentences and paragraphs, and *elaborating* for later recall. The comprehension monitoring level, object of the present study, involves *setting a goal* for reading, *selecting strategies* to be used considering the situation and the purpose, *checking* the achievement of the goals and if necessary, *remediating*, changing the strategy(ies) used, in order to accomplish the task.

Next, I move to the discussion on how the structure of the text influences the construction of meaning.

2.1.2 Reading comprehension and textual organization

The structure of a text tells a lot about the path the reader has to go through in order to construct a coherent mental representation. Van Dijk and Kintsch (1978) propose that the semantic structure of a text is divided in two levels: microstructure and macrostructure. The microstructure is situated at the local level and consists of the text base: individual propositions and their relations. Each proposition is a concept in the text which can be expanded or modified; the set of propositions constitutes the text base. The macrostructure of the text is situated at the global level and connects all the text propositions over the same topic. Being able to form the macrostructure of a text means reducing the information presented to its main ideas, i.e., its “gist”.

Nonetheless, textual information does not suffice in the task to achieve discourse comprehension. The objects, people and places described in a text are not entirely new to us and can be related to similar prior experiences; these prior experiences help us construct a model to understand that new episode. Thus, in order to understand a text, the reader has to build a situation model by integrating the events and

persons described in the text and to his/her previous experiences and textbases (van Dijk & Kintsch, 1983).
Sometimes, the text does not give the reader all the information necessary to build a situation model of the text; thus, it is necessary to make inferences. Inference generation enables the reader to complete gaps in meaning by bringing information about events, relations and so on, to the text (van den Broek, Risden & Husebye-Hartmann, 1995). As Caldart (2012, p.20) exemplifies,

> When reading the sentence 'John fell on the floor. He stayed a whole week at home' (Caldart, 2012), most readers are able to infer that John had to stay home because he got hurt when falling on the floor, and even that his accident was relatively serious, due to the period he had to stay home in order to get better.

Kintsch and van Dijk (1978) made a distinction between bridging and elaborative inferences. The former are necessary for comprehension because they connect ideas that seem unrelated at a shallow level of processing (Singer, 1996). Elaborative inferences, on the other hand, are described as optional for understanding a text; nonetheless, they are involved in the construction of the situation model and contribute to the formation of the global semantic coherence, enabling the reader to go beyond what is explicitly stated (Koda, 2004). Elaborative influences might be related to higher cognitive processes of retention and learning, important constructs to the present study.
Drawing from the ideas of Kintsch and van Dijk (1978) on macrorules, Lacroix (1999) developed a model to encompass complex expository passages. Macroprocessing was then subdivided into two levels: Macrostructure Construction (selecting and memorizing important text units) and Macrostructure Organization (connecting these units into a coherent whole). In one of the experiments proposed by Lacroix, subjects read the passages on a computer screen and underwent three between-subject factors: 1) read to write a summary or a report; 2) read passages with the important sentences underlined and 3) read in different presentation order. Results suggest that the task requirements might affect macrostructure construction and organization and thus need to be carefully designed in order to constitute a reliable method for data collection.

I now proceed to conceptualize retention, a critical issue related to learning.

2.2. RETENTION AND LEARNING

Comprehension, retention and learning are interrelated processes of increasing complexity. In order to keep textual information in memory, this information needs first to be comprehended; this gradual process will, if successful, result in learning. Just and Carpenter(1987) underscore that, since reading comprehension is a component of studying, influential factors such as prior knowledge, the text, the reader's objectives, and strategies are crucial to learning.

Retention refers to the cognitive processes of encoding information into long-term memory, thus being a critical aspect of learning. In order to explain how retention takes place, some models of memory have been conceived. Atkinson and Shiffrin (1968) defend that the human memory is divided in 2 levels according to how long information remains available: short-term memory (STM) or working memory (WM) and long-term memory (LTM). Short-term memory (or working memory) is our cognitive capacity to process and store information temporarily during the performance of tasks that require learning, reasoning and comprehending, while long-term memory refers to information stored permanently.

Shifting focus from storage to coding and processing capacity, Craik and Lockhart (1972) questioned the notion of a multistore model comprising a flow of information from the sensory store, through the short-term store, into long-term memory. Their theory of levels of processing asserts that incoming stimuli can be processed in different manners namely Type 1, shallow processing, and Type 2, deep processing. As a consequence, type of processing will determine the strength of the memory trace. In Type 1, primary stages would deal with sensory features; retention in primary memory would be related to the information in the focus of attention, not leading to the formation of a permanent memory trace. Type 2 would occur at later stages: input would be matched with long-term memory items (recognition), with depth of processing involving more elaborated semantic reasoning.

Such elaborated processing may happen through the word associations, images, or previous experiences that are attached to the incoming stimulus. As a result, deeper levels of processing are linked to more complex, durable, and stronger memory traces. Thus, in this model, retention is strongly associated to depth of processing, which

will also depend on “the amount of attention devoted to a stimulus, its compatibility with the analyzing structures, and the processing time available” (Craik and Lockhart, 1972, p.676).

Consistent with Craik and Lockhart’s theory, Ericsson (1988, as cited by Baddeley, 1990) asserts that remembering involves 1) encoding the material carefully, relating it to pre-existing knowledge; 2) attaching retrieval cues related to existing knowledge and 3) optimizing the process through practice. In this sense, remembering can be seen as a process of searching for the best way to map new learning onto pre-existing memory.

Forgetting seems to be a major concern when it comes to learning. As put by Searlman and Herrmann (1994), forgetting is influenced by 1) the type of information to be retained; 2) the length of time employed to acquire this information and 3) its personal significance. In the case of a second language acquired long ago and over a considerable period of time, research showed a significant decrease in retention in the first three years after learning, followed by little or no decline even after longer time spans such as 50 years (Bahrick, 1984). This data served as evidence for the existence of a *permastore*: knowledge which is permanently stored in memory, especially if learned repeatedly and incrementally over time. In short-term memory, forgetting seems to result from *decay* (increasing forgetting with time), while in long-term memory, it results from *interference* (Baddeley, 1990). According to the interference theory, the events that happen between learning and retrieval determine what is forgotten. There are two types of interference: *proactive interference*, when previous habits influence new learning; and *retroactive interference*, when new learning disrupts old habits.

Having described the processes relative to retention, I now approach a more reading-related aspect: learning from text.

2.2.3 Learning from text

When a student approaches a text with the goal of learning, both low and high levels of processing come into play. Depending on the nature of the learning and on the need for verbatim memorization, the reader will engage in *rote association*, which often consists of repeatingor rehearsing the concepts to be connected (Just & Carpenter, 1987), for instance, word-meaning relations.

Nonetheless, most learning situations call for a higher level of cognitive involvement, in which the text is processed actively and with

conscious attention(Just & Carpenter, 1987). Organizational learning involves “developing an organization, based on the structure and content of the text itself, that the reader can use to relate the new information to what she already knows” (Just & Carpenter, 1987, p.404). That means, in order to learn, the reader has to work on how to fit new knowledge into existing schema so that this information can be easily retrieved later. Furthermore, organizing optimizes learning time, improves recognition and delayed recall, and increases the chances that the content will be applied in novel contexts (Just & Carpenter, 1987).

In the terms of Ferstl and Kintsch (1999), the task of learning from textrequires reorganizing text information, through its application in novel contexts. In their study, participants first performed a cued association task in which they first read a list of key words and were asked to provide, for each word, 1-3 words that first came to their mind. After, they read a text from which this vocabulary was taken and, after reading, repeated the cued association task. Results from this task reflected both background knowledge and text information. A second experiment examined the effects of repeated exposure to the word list and the effects of text information separately by adding a control condition in which participants read an unrelated text. Results indicated that the subjects in the experimental condition provided more text associations than subjects in the control condition. The delayed test showed that text information was retained and used in the Cued association task even after a week, although the influence of the text was not as strong as immediately after reading. Importantly, Ferstl and Kintsch used a narrative as the instrument of data collection; in a different manner, the present study applies the concept of learning from text to expository texts.

In addition, reading with the objective of learning also involves employing a distinct set of strategies that require “to synthesize, interpret, evaluate, and selectively use information from texts” (Grabe, 2007, p.5). This process is associated with reorganizing text information through the use of strategies such as deciding to reread for clarification, highlighting what is considered important, taking notes, paraphrasing, summarizing the text to grasp its main ideas, constructing charts or tables. By doing so, the reader is not simply understanding what is read but going further, paving the way towards becoming an informed writer (Bazerman, 2010). Reading strategies are object of the following section.

2.3 STRATEGIC READING BEHAVIOR

Prior to the discussion on reading strategies, it is important to shed light on the distinction between strategy and skill in reading, since they are often confused or used interchangeably. This will be done in the next lines.

2.3.1 Reading strategy x reading skill

In education and psychology research, skills have been commonly referred to as cognitive abilities (Urquhart & Weir, 1998). They can be practiced through repetition in order to become more automatic and faster, thus liberating cognitive systems (Anderson, 1995). Manoli and Papadopoulou (2012) emphasize the tendency of skills to become automatized, describing them as "highly routinized, almost automatic behaviors that can be unconsciously selected through practice and repetition and applied across different kinds of texts" (p.818).

If on the one hand skills are inherent cognitive characteristics that can be practiced, on the other hand, they are unconsciously developed. Differently, strategies are actions that can be learned and enhanced through instruction, demanding active engagement on the part of the reader. The word strategy comes from the Greek word *strategia*, which means generalship or the art of war and implies planning, conscious manipulation and movement toward a goal (Oxford, 1990). More specifically, reading strategies are deliberate, conscious actions that can be adapted according to the reader's purpose, the situation, and the difficulties that might arise during reading (Paris, Lipson & Wixson, 1983; Dole, Duffy, Roehler & Pearson, 1991; Urquhart & Weir, 1998). The term will be defined in greater depth in a specific subsection.

Therefore, some major differences can be pointed out, as summarized by Manoli and Papadopoulou (2012) and reproduced in figure 2; the first regarding intentionality: while skills are subconscious and automatic, strategies are planned and controlled by the learner (Manoli & Papadopoulou, 2012; Anderson, 1991). Another aspect concerns awareness: when applying a strategy, readers are consciously monitoring their comprehension and the effectiveness of the strategies used. A further distinction is that strategies are learner-centered: they can be taught to less-skilled readers, making them more autonomous learners.

Figure 2 Differences between strategies and skills

Table 1. Differences between strategies and skills

Strategies	Skills
Deliberate	Automatic
Conscious	Unconscious
Mindful/Effortful	Effortless
Goal/Problem-Oriented	Goal/Problem free
Reader-oriented	Text-oriented
Teach, explain, model through think aloud, guided application-gradual release of responsibility-independent practice	Teach, practice to mastery, assess, reteach, if necessary

Figure 2. Manoli, P.; Papadopoulou, M. (2012). Reading strategies versus reading skills: Two faces of the same coin. *Procedia - Social and Behavioral Sciences*, 46, 817–821.

The same procedure can either be seen as a skill if it is already automatized, or a strategy, if consciously evoked (Grabe, 2009). Other researchers go further, saying that the goal of strategy instruction is transforming strategies into skills through automatization (Paris et al, 1983; Anderson, 2009; Manoli & Papadopoulou, 2012; Afflerbach et al, 2008). Nonetheless, the success of study strategies relies exactly on the issue of conscious monitoring, i.e., its metacognitive nature, which will be approached in the next section.

2.3.2 Reading and metacognition: the case for strategies

In simple terms, metacognition can be divided between knowledge about cognition and regulation of cognition. The former comprises the learner's awareness on his/her own cognitive resources and limitations, and whether the task proposed is attainable. The latter consists of self-regulatory mechanisms such as checking the result of the repairing actions, planning, monitoring the effectiveness of every action, and evaluating the strategies used (Baker & Brown, 1984)

The need for metacognitive knowledge becomes evident when we realize that knowing about strategies may not ensure textual comprehension. Paris, Lipson and Wixson (1983) coined the term *conditional knowledge*, expanding on the concepts of declarative knowledge (content) and procedural knowledge (strategies).They claim that it is not enough to know about strategies and how to execute them; the reader must analyze the context and be able to evaluate which strategy is more appropriate to that situation and monitor its efficiency,

checking if the goal is being achieved and, if not, making the necessary adjustments.

The study conducted by Anderson (1991) may illustrate this notion of conditional knowledge: twenty-eight participants were submitted to two reading tasks: a standardized reading comprehension test and reading passages taken from academic texts. The academic texts differed from the reading comprehension task in aspects such as length, classroom-related content, and questions that aimed at synthesizing information. No time limits were posed for the textbook reading task, while in the reading test condition participants were told they had 30 minutes to finish the test. After reading, participants were asked to verbalize the reading and testing strategies used. Results pointed to a relationship between the number of strategies reported and higher scores in each of the reading tasks. Interestingly, the strategies employed by readers with high and low scores did not differ, which sustains the claim that "strategic reading is not only a matter of what strategy to use, but also (…) how to use a strategy successfully and orchestrate its use with other strategies." (pp.468-469). In other words, readers often hold knowledge about which strategies to employ, but fail in monitoring their application.

According to Grabe (2009), there is no difference between cognitive and metacognitive strategy: strategies are naturally metacognitive processes. Some examples of such metacognitive processes are: setting goals, making inferences, recognizing when losing coherence of interpretation, summarizing main ideas etc. Notwithstanding, the author points out the natural automatization resulting from the repeated use of successful strategies over time.

Drawing from the insights brought by the distinction between strategies and skills and the importance of metacognition to reading, I now attempt to build a definition of reading strategy. Prior to that, I conceptualize the broader term, language learning strategies.

Language learning strategies can be defined as a set of operations and techniques that students consciously engage on in order to enhance language learning and use (Rubin, 1987; O'Malley & Chamot, 1990; Anderson, 1991; Oxford, 2003). The use of strategies has a positive impact on learning both in L1 and in L2 (Anderson, 2005; Afflerbach et al, 2008).

More specifically, reading strategies are characterized for being deliberate, goal-oriented and reader-initiated and controlled actions (Koda, 2004; Manoli & Papadopoulou, 2012; Afflerbach et al, 2008). A strategic reader is someone who consciously implements strategies

considering factors such as his/her objectives, analyzing the level of difficulty imposed by the text, the task required and his/her own capacity. Perceiving text difficulty is prominently a catalyst for strategy use, as it motivates the reader to make adjustments in order to retain text information and/or be able to perform the required tasks (Grabe, 2009).

One of the common goals of the strategic reader, especially in academic contexts and learning situations, is to identify the main ideas in the text. This process will be described in the subsection below.

2.3.2.1 Main idea identification

Constructing the main idea(s) of a text entails understanding its *macrostructure,* i.e., the global coherence of discourse (Kintsch & van Djik, 1978; van Dijk & Kintsch, 1983). The macrostructure of a text consists of high level *macropropositions.* In this process of reducing text information to its *gist,* the reader applies *macrorules* to determine the global meaning of a text by relating sequences of propositions. Macrorules have been described by Kintsch and van Djik (1978) as following three rules: selection, generalization and construction. Selection constitutes of the deletion of propositions that are not essential to the interpretation of another proposition; generalization is the substitution of a proposition by a more general one, and construction is the replacement of a proposition by another that establishes global relations of condition, component, or consequence with the micropropositions it entails.

According to van Dijk and Kintsch (1983), the macrostructure of a text is defined by using macrostrategies. They are divided in four categories: contextual strategies, textual strategies, semantic strategies and schematic strategies. Contextual macrostrategies are constituted of knowledge of the world or knowledge of discourse types. Textual macrostrategies focus on the properties of the text: topical expressions, titles and subtitles, graphic signals, syntactic strategies such as cleft sentence, topicalization and passive structure, and topic change markers such as connectives. Semantic strategies and schematic strategies are related to the canonical order of sentences. Contextual and textual macrostrategies are interdependent: contextually important information is considered important to the reader for reasons such as personal interest and background knowledge, while textually important information reflects the ideas assigned as important to the author. In other words, a well-written text is organized so as to communicate to the reader what the author considers important (Torres, 2003).

Although the construction of the main idea has been described as an automated process (van Dijk & Kintsch, 1983; Brown & Day, 1983), Johnston and Afflerbach (1985) and Afflerbach (1990) investigated the extent to which the reader can use strategies to conceive the main idea of a text. The purpose of the study conducted by Afflerbach (1990) was to examine the influence of prior knowledge on expert reader's use of strategies in the task of main idea construction. Four anthropology doctoral students and four chemistry doctoral students were asked to read two excerpts of journal articles on the domains of chemistry and anthropology. After reading, participants verbalized the strategies used to construct the main idea of each paragraph. Results showed that experts construct the main idea automatically, while subjects with less prior knowledge tended to use more cognitive strategies.

Besides the reader's goals, other factors such as the reading situation and the type of text also influence learning from text and the strategies chosen to accomplish this task. Before proceeding to a definition of study strategy, let us investigate further why the aforementioned factors are relevant and how they influence strategic behavior.

2.3.3 Reading to learn

Reading with the objective of acquiring knowledge differs from reading for entertainment (Just & Carpenter, 1987). As highlighted by these authors, when a reader studies, s/he aims at learning the content. Nonetheless, intentionality does not enhance learning; its role is "to recruit the appropriate process to accomplish the learning, but it is the recruited processes and not the intentionality that do the job." (Just & Carpenter, 1987, p.401).

Previous studies have analyzed the impact of purpose on reading comprehension in English as a native language: for instance, Lorch, Lorch, and Klusewitz (1993) analyzed the distinctions college students made among reading situations. Participants were students from introductory psychology classes in Kentucky; participation in the experiments was a course requirement. In phase 1, fifty-eight participants were asked to list all the reading situations, considering all the types of materials they read and the purpose for reading (e.g., "read a history book for a research paper"; "read a bridal magazine to plan a wedding"). Then, in phase 2, the generated situations were given to another sample of ninety-nine participants who sorted them according to how they believed they read in each context. The major distinction was

between school-related purposes (e.g.: reading to prepare for exams, for classes, to research) and reading for personal choice (reading to self-inform, for stimulation, light reading).

Two years later, the study was replicated among a similar population to seek for finer distinctions (Lorch, Klusewitz & Lorch, 1995). Two experiments were conducted: in experiment 1, eighty-eight students from introductory psychology classes were asked to sort out only school-related reading situations. Seven types of school-related reading situations were found, expanding the previous study, which encompassed four types. The situations related to the school setting were divided in four clusters: reading to prepare for exams, reading to write papers, reading to prepare for class, and selective reading (e.g., read a psychology text in order to apply the information to a problem).

In experiment 2, twenty-three participants sorted out situations related to the reader's personal choice. Similarly to Lorch et al (1993), six types of situations were found: reading to apply [the knowledge acquired], search, intellectually challenging reading, light reading, read to kill time, reading for [emotional] stimulation. The typology proposed provides evidence on the influence of reading goals and text type on strategic behavior. The authors point to four important dimensions that seem to influence reading type: text segmentation, evaluative situation, relationship between reading goals and text content and standards for coherence. Study strategies such as memorization and rereading were interpreted in their study as a preparation for test situations.

Narvaez, van den Broek and Ruiz (1999) conducted a similar study to check the influence of purpose (for study or entertainment) on inference generation. Twenty undergraduate students, all native speakers of English, who were enrolled in psychology courses, participated in the study, having received course credit for their participation. They were divided in two conditions: entertainment and study, and each group was asked to imagine the situation they were assigned to. Participants read four texts (two narratives and two expository texts). One text of each type was used for think-aloud protocols. The other two texts (one of each type) were read silently, followed by comprehension questions. Participants also answered a *Questionnaire of metacognitive strategies* to check whether awareness of strategies was affected by reading goal. Results showed that reading purpose did not influence comprehension but did influence on-line reading behavior (think-aloud). Readers with a study purpose, especially when reading the expository text, produced more questions in the think-aloud protocol, repetitions (rereading), knowledge-based coherence breaks and evaluations. The researchers

concluded that reading purpose and text type affect the type of inferences readers make. Inference generation is also influenced by the reader's strategic behavior, although the responses to the reading strategies questionnaire did not differ significantly between readers in the study and entertainment conditions - but researchers highlight the small sample size and hypothesize that readers do not use the best strategies when studying and may need instruction on these strategies.

In the Brazillian context, Almeida (2010) conducted a study with 53 undergraduate students from the English Language and Literature course at Universidade Federal de Santa Catarina (UFSC) on their perceived reading behavior in Portuguese and in EFL across academic and entertainment situations. Broadly speaking, they seemed to be aware of the adaptations they made as a function of purpose and type of material. Specifically concerning strategies, participants were asked to rate the ones they used more frequently when having difficulty understanding a text in English. The strategies most reported by the participants were rereading and highlighting the main ideas, while the least used were making summaries and continuing reading in spite of comprehension problems. These results demonstrate the readers' engagement in comprehending what is read as well as their highly skilled reading behavior: they seemed to carefully select the most appropriate strategy according to the situation.

Therefore, when reading to study, the reader generates more inferences and uses a distinct set of strategies – which in this study are referred to as *study strategies*.

2.3.4 Study strategies

Tomitch (2012) defines study strategies actions that go beyond text comprehension – although understanding a text is crucial for learning – and provide the student with a content framework that facilitates retrieval. Just and Carpenter (1987) observe some characteristics of study strategies: first, they are more consciously applied; second, they require more time spent on the text, compared to reading for comprehension; finally, they involve creating representations of the content such as written outlines and graphs. This process of meaning reconstruction is believed to lead to more durable learning.

Study strategy awareness is also important among adult learners (Simpson, 1984). A survey conducted with 395 college freshmen (Simpson, 1983) demonstrated that these students used a limited range of study strategies; lacked awareness on the importance of their use, and

could not self-assess their learning. Among the explanations provided by the researcher, students lack efficient strategic behavior because (1) they have not received instruction on study strategies; (2) they cannot self regulate their study strategies, i.e., plan, regulate and control their use, and (3) they do not know which strategy is more suitable for texts from different content areas and tend to adopt a generic approach. In the author's view, these reasons have pedagogical implications: "students need to be taught the process of independent learning in more realistic contexts where they will be told why the target strategy is significant and how to use it" (Spring, 1984, p.139).

What distinguishes study strategies from reading comprehension strategies? Davies (1995) made an attempt to classify strategies involving higher processing, naming them *active reading tasks:* highlighting, diagram completion/construction and prediction were among those. Such tasks demand that the reader responds to the text, taking a critical stand or reconstructing the author's ideas. In her view, active tasks are an alternative to traditional reading comprehension exercises, seen as weak instruments for comprehension measurement and also having "extremely limited potential as learning activities" (p.144). Although they can provide an accurate frame of the readers' comprehension, being therefore widely used by reading educators, exercises do not challenge the reader to act upon what is being read – a feature necessarily involved in valuable learning.

Similarly, Rawson and Kintsch (2005) refer to rereading as a passive study strategy, as opposed to active study strategies such as reader-generated questions, explanatory-based answers, reciprocal teaching, elaborations, and visual organization of main ideas into concept maps or networks (Nist & Simpson, 2000). Although rereading is a commonly used strategy, active study strategies require training to be assimilated to the student's reading habits; "active study strategies may lead to more pronounced learning gains, but they usually require extended time and effort with training instruction and supervision for students to use it effectively." (Rawson & Kintsch, 2005, p.79).

A distinction between comprehension and study strategies was made in the study by Spring (1985) by limiting comprehension strategies to the ones employed in the beginning of text understanding, while study strategies would be the actions "initiated by students with the purpose of remembering text material *after* initial comprehension of that material" (p.158), such as generating questions as a manner to preview an evaluative situation or outlining text material. In Spring's study, which aimed at investigating the perceived use of strategies by

good and poor readers while learning from text, 46 freshmen students at the University of California – all native speakers of English - answered a questionnaire reporting their frequency of use of comprehension and study strategies. The distinction between good and bad readers was made through their scores in the SAT-Verbal score. Besides, poor readers were admitted under a special-action program and were enrolled in a remedial reading score. In the reading strategy questionnaire, subjects were asked to report the frequency with which they employed fifteen strategies while learning textbook material. The strategies were divided into five factors: 1) *Critical Reading* (e.g., relate the material to my own beliefs and attitudes), 2) *Verbal Rehearsal* (e.g., underline or highlight the main ideas), 3) *Understanding* (e.g., relate the material to what I already know), 4) *Written Rehearsal* (e.g., take notes) and 5) *Figural Rehearsal* (e.g., draw diagrams). The study strategies found were related to factors 2, 4, and 5. Within Factor 2, the study strategies were underlining, rereading, generating text questions, and paraphrasing text material. Factor 4 was defined by the study strategies taking notes, underlining and summarizing. Factor 5 was constituted by the strategy of drawing diagrams or pictures related to the text material. Underlining and highlighting were later included as study strategies. The comprehension strategies encompassed factors 1 and 3. The results of this study revealed that good readers employed comprehension strategies most frequently while poor readers reported using more study strategies, even before having fully comprehended the material.

The present piece of research investigates the effectiveness of study strategies. The issue has already been previously discussed; previous studies showed that the comparison among different study strategies had no effect on immediate and delayed tests. In addition, when compared to rereading, more active strategies did not result in enhanced performance (Just & Carpenter, 1987). Nonetheless, these authors underscore that the effectiveness of a strategy will depend on how the strategy is employed – a rather poorly investigated aspect, in their view.The strategies to be analyzed in this study, namely note-taking, highlighting and rereading, will be briefly discussed in the next lines.

Rereading is one of the techniques most reported by students (Dunlosky, Rawson, Marsh, Nathan & Willingham, 2013). The question underlying studies on rereading was whether this strategywould support a richer representation of the text, improving the situation model (Callender& McDaniel, 2009). The studies reviewed by Callender and colleagues supported the view that rereading does not demand higher-

level processing, since the reader processes the text in a similar manner to the first reading. Thus, rereading has limited effect on learning.

Under a similar vein, Krug and colleagues (1990) contrasted massed versus distributed rereading (i.e. rereading twice or more times in sequence versus rereading in spaced encounters), and found more effects on recall in the latter condition. They argue for a *deactivation hypothesis*, explaining that more complete encoding processes are activated in distributed rereading, while in massed rereading conditions (which was the case for the present study), material is more superficially encoded since "full encoding operations are required only on the first encounter with the text" (p.370). In other words, the set of encoding operations decreases in second and third consecutive readings.

Other pieces of research have advocated that rereading improves learning; its effects are explained by two contrasting theories (Mayer, 1983; Bromage & Mayer, 1986): the *quantitative hypothesis* defends that reading increases the amount of information encoded. On the other hand, the *qualitative hypothesis* assumes that rereading "affects the processing of higher-level and lower-level information within a text, with particular emphasis placed on the conceptual organization and processing of main ideas during rereading." (Dunlosky et al, 2013, p.27). These hypotheses have been tested in several studies using free recall protocols[4] and the results seem to favor the qualitative hypothesis, since recall of main ideas was enhanced after rereading. However, compared to other learning techniques, rereading appears to be less effective in promoting learning (Just & Carpenter, 1987; Tomitch, 2012); Dunlosky suggests that rereading should be replaced by other techniques such as practice testing and summarization.

Dunlosky et al (2013) state that highlighting seems to have a positive effect on cognitive processing, which might be explained by the *isolation effect.* The term is usually employed in the case of better retention of a semantically different item in a list of related words, but also helps explain what happens to highlighted words.Active highlighting (when participants are free to highlight as much of the text as they want) is more beneficial to retention than reading marked text; a higher cognitive effort is needed when the reader has to decide what is important. Additionally, researchers emphasize the quality of

[4] Free recalls are offline data collection procedures used in reading research in which the reader writes down everything s/he remembers from the text read immediately after reading (Tomitch, 2008).

highlighting to learning, since large quantities of highlighted text are often a constraint to comprehension. Thus, although students are familiar with this technique, they fail in using it effectively – a problem that might be remediated with strategy training.

The effects of note taking were investigated by Dyer, Riley and Yekovich (1979). In their study, college students read a text with or without taking notes. Afterwards, half of the participants wrote summaries without looking back at the text while the others completed a spatial relations task. Then, subjects either reread the passage or engaged in placebo work. All subjects took both immediate and delayed tests. Results indicated a relationship between the note taking and rereading activities and improved recall; rereading was associated with factual recall (verbatim), although ideas are more important than facts in college studying. Researchers emphasized the importance of contact with the passage while applying any strategy.

It seems important to clarify the difference between annotating in the margins and note-taking. According to Tomitch (2012), when we annotate on the margins, the objective is to stress the author's important ideas. Differently, taking notes is usually done on a separate sheet of paper or on a file in digital media and aims at reacting to reading. This difference may be justified by individual preferences: some students may prefer to take notes separately in the case of a material that they do not own or because they prefer not to mark their book; note taking also allows more freedom to reorganize the text information. Other students think it is more organized to maintain all the notes within the text and feel that taking separate notes interrupts reading (Pauk, 1984).

As strongly emphasized in the relevant literature, the efficiency of a strategy will depend on practice (Rawson & Kintsch, 2005; Tomitch, 2012). Training and instruction on active study strategies might help students incorporate these more effective actions to their reading behavior instead of relying mainly on passive strategies such as rereading. Still, Rawson and Kintsch emphasize that there is no single right strategy; "students should optimally be supplied with a toolbox of strategies that have varying levels of effectiveness in different task contexts, content domains, and in various combinations" (p.79).

Having worked with the theoretical bases that underlie this research, I now proceed to chapter 3 – Method, in which I intend to describe the instruments used and the procedures adopted for data collection and analysis of this study.

3 METHOD

This chapter is organized in six sections and describes in detail the method developed to conduct the present study. Section 3.1 presents the profile of the participants of the study and describes the setting in which it takes place. Section 3.2 explains the design of the study, shedding light on the distinction between within-subject and between-subject design. Section 3.3 describes the ethical procedures for conducting the study. Section 3.4 provides details on the instruments used: the selected texts, the procedures employed to measure comprehension (a test consisting of true or false statements and an immediate recall), retention (a delayed recall), and learning from text (a critical writing task), a retrospective questionnaire, and the Survey of Reading Strategies. Section 3.5 describes the procedures for data collection and section 3.6 presents how data will be analyzed.

3.1 PARTICIPANTS

The present research was designed to be applied with a sample of adult intermediate English students (between 18 and 60 years old) enrolled in the Extracurricular English Language Course in the department of Foreign Languages at the Federal University of Santa Catarina – UFSC[5]. The university is located in the city of Florianópolis, in the south of Brazil. This environment was chosen because it was assumed that, at the academic level, students deal more often with reading texts in English for learning purposes. Because the participants' proficiency was not controlled, and in order to ensure that they held a minimum linguistic knowledge necessary to perform the tasks devised in this study, all participants, including in those in the pilot study, were enrolled in the same level: *Inglês 6* (English 6).

The coordination of the Extracurricular Courses wasinformed of this study and allowed its execution (appendix B). The Extracurricular courses are second language courses offered by the university to its students, the university staff and the community. Besides English, Spanish, French, German, Italian, Japanese and Portuguese for foreigners are also offered. The classes take place in the university campus in the morning, afternoon and evening during the week and also on Saturday mornings. Students have three hours of class a week either

[5]Cursos Extracurriculares de idiomas (Inglês) - Departamento de Língua e Literaturas Estrangeiras - UFSC

divided in two 90-minutes meetings or altogether, totalizing a course load of 60 hours per semester. The teachers are undergraduate and graduate students in the area of languages at the same institution. At the end of each level, the student who successfully completes the course receives a 60-hour certificate. There are 5 types of English courses: one introductory level for beginners called “zero”; eight graded levels from basic to upper intermediate students, two advanced levels, one conversation course and one course on reading and translation, divided into two levels.

The sample of participants was initially composed by 31 Brazilian intermediate students. Data collection was done with the two groups of *Inglês 6* this researcher taught at; nonetheless, there were absences on either Phase 1 or 2 or both; additionally, some participants did not follow the instructions properly (e.g. did not highlight or take notes as requested) and were excluded from the sample. A student with dyslexia and three underage students were also excluded. Valid participants from these first groups totalized twelve students. Thus, in order to increase the number of participants, students from another group within the same level were invited. This group also participated in the workshops, offered during their class time with the consent of the teacher. Data collection with the seven participants from this group happened in meetings scheduled with each participant out of class time. The participants of this second group, who underwent data collection individually or in small groups, seemed more willing to participate compared to my students, who took part in this study as part of a classroom activity. It might be that the similarity of the tasks proposed to an evaluative situation led to nervousness. Additionally, students were told their participation, albeit very important, was not mandatory and would not affect their performance in the course, which might have caused lack of engagement.

The total sample analyzed was constituted by 19 intermediate ESL students enrolled in the UFSC extracurricular courses. The participants were divided into three groups aimed at randomizing the order of the texts read and the strategies they were required to apply. The distribution of participants across groups is represented in table 1:

Table 1Participants divided per group

G1	P11 P12 P13 P15 P18 P19
G2	P2 P4 P5 P8 P9 P16
G3	P1 P3 P6 P7 P10 P14 P17

3.2 WITHIN-SUBJECT DESIGN

In experimental studies, the participants' behavior is traditionally analyzed in two types of design: *within-subject* and *between-subject*. This study follows the *within-subject* design. In this type of experiment, each individual is exposed to all the different conditions. As a consequence, the multiple exposures are treated independently, considering "how individual behavior changed when the circumstances of the experiment changed" (Charness et al, 2012, p. 1). A within-subject design has positive as well as problematic aspects. For instance, respondents may try to meet the researcher's expectations in their answers (also known as *demand effect*). Additionally, order of exposure might interfere in the results; having that in mind, participants were divided into three groups aiming at mixing the order of the texts and tasks to be performed. This process will be described in detail further in this chapter.

3.3 ETHICS REVIEW BOARD

Previously to the data collection phase, this project was submitted to the Ethics Review Board (Comitê de Ética em Pesquisa com Seres Humanos – CEPSH) at the Federal University of Santa Catarina (UFSC), which has been properly informed about this research and allowed its execution (Appendix A). A pilot study was conducted with a small sample of three participants in order to test the instruments and the time to be allowed for performing the reading tasks. All participants, including the ones in the pilot study, were asked to sign a consent form (Appendices C and D), as required by the Brazilian ethical research norms, developed in accordance with their guidelines.

3.4 INSTRUMENTS

The instruments used to collect data in the present study were: 1) three reading comprehension tests, each comprising one expository text followed by an immediate recall and a set of five true or false statements; 2) a retrospective questionnaire; 3) a retention test consisting of a delayed recall of each of the texts; 4) a learning test consisting of a critical writing task and 5) a Survey of Reading Strategies which aimed at unveiling participants' perception on their use of study strategies. Each of these instruments is going to be described in more detail in the next sections. Except for the texts, all instruments were administered in Portuguese in order to minimize proficiency constraints, as participants were required not only to understand the texts, but also to write – which is a highly demanding task.

3.4.1 Selected texts

In order to account for the objectives of this study, the three texts chosen for data collection were selected according to the following criteria: first, they were all expository texts; second, they conveyed general information, not requiring specific domain knowledge for the reader to understand the text; third, the texts were related to "Fake news and fact checking", since this topic was believed to be of interest for the participants, who would then engage in more significant learning.

Weaver and Kintsch (1996) state that the main purpose of expository texts is to "communicate information so that the reader might learn something." (p. 230), while narratives usually aim at entertaining the reader. Narratives permeate human life in society since early childhood; as a consequence, they are relatively easier to read compared to expository texts, since the inferences made to comprehend narratives comprise world knowledge (Graesser, 1981; Grasser, Singer & Trabasso, 1994). Expository texts, on the other hand, are academic genres; contact with this type of text begins only after entering school. Also, the grammatical structures and lexical items of expository texts may impose more comprehension problems at the local coherence level.

Three texts were selected for this study: two texts on fake news and one text on fact checking. Text 1, entitled "After 2017 Kenyan Election, US Officials Ready to Fight 'Fake' News" was retrieved from https://learningenglish.voanews.com on March 21st 2018 (appendix I). Text 2, entitled "Google pledges $300m to support journalism and fight fake news" was retrieved from http://www.bbc.com on March 21st 2018

(appendix K). Text 3, entitled "Fact-checking Facebok CEO Mark Zuckerberg's congressional testimony" was retrieved from http://www.politifact.com on April 13th 2018 (appendix M). As regards the length of each text, Text 1 has 558 words; Text 2 has 375 words, and Text 3 has 581 words. Each text was meant to approach the topic from different and complementary perspectives. Suppressions and adaptations were made by this researcher in order to control for complexity and length. Additionally, a glossary was included in each text containing the less common words so as to aid comprehension.

3.4.2 Measuring comprehension

In this study, comprehension was assessed through a written test answered immediately after reading each text (appendices J, L and N). These tests comprised A) animmediate recall and B) a set of True of False statements.

Recall protocols are long-established instruments in reading research. The propositions recalled after reading "make explicit those aspects of the meaning of a text that are considered most directly relevant to how people understand a text" (Kintsch, 1998, p.49). Furthermore, free (or uncued) recalls and summarization protocols go beyond what the subject remembers from the text, including "reconstructively added details, explanations, and various features that are the result of output constraints characterizing production in general" (Kintsch and van Dijk, 1978, p.374-375).

In the present study, after reading the text, participants were instructed to write down everything they remember without looking back at the text. Similarly to what was observed in Kintsch and van Dijk (1978), it was expected that recall protocols showed some evidence of the macro-operations, considering that high-level propositions are said to be better recalled. Additionally, the participants had received instruction on main idea identification prior to the data collection phase, which is believed to enhance their awareness on this structure.

The second comprehension measure used in this study was a true or false task. True or false statements have been extensively used in reading research to evaluate textual comprehension. According to the taxonomy of questions proposed by Pearson and Johnson (1974), there are three types of question-answer relations: textually explicit, textually implicit, and scriptally implicit. Textually explicit information is stated in the text and can be easily found because the question is elaborated using the same words. Textually implicit information is present in the

text, but it is less evident and requires that the reader makes inferences. Scriptally implicit information requires inference-making and background knowledge to be identified. Judging statements true of false may involve any of the three types aforementioned, depending on the evaluator's purpose. In this study there were 5 true/false statements for each text (appendices D2, E2 and F2). All the statements brought implicit relations, as the text information was not reproduced verbatim, but was reconstructed through the use of paraphrases. The "implicitness" of the statements was assessed and confirmed by three raters.

3.4.3 Measuring retention

As a way to measure retention, participants were asked to perform a delayed recall one week after having read the texts (appendix R). In a similar manner to the immediate recalls, they were asked to write down everything they remembered about each of the three texts, one at a time, on a worksheet. In this worksheet, the title of each text was provided; they were handed in to the participants in the same order of the texts read seven days before.

Free recalls are not common in reading comprehension tests; they are difficult and do not provide any cue to the reader. At the same time (and conversely), they are very reliable reports of what the reader understood. Furthermore, difficulty is said to improve retention compared to other comprehension measures such as cued recall or recognition task (Carpenter & DeLosh, 2006; Ulman & Lovelett, 2016).

Another positive aspect of free recalls is the possibility of using them as a study strategy. Studying by testing (retrieval practice) has a positive effect on learning compared to simply restudying by rereading. Retrieval practice is believed to have significant effects after a delay, promoting long-term retention (Ullman & Lovelett, 2016). Albeit very effective, studying by testing oneself is little employed by students (Karpicke, 2009), perhaps due to lack of expertise with this tool. Immediately after participants finished writing their delayed recalls, they were required to perform the Critical Writing task to check learning from the texts read. This instrument is described below.

3.4.4 Measuring learning

Written genres such as summaries and essays have been used in the last few years as an index of comprehension (Kintsch & van Dijk,

1978) and deep processing (Lehman & Schraw, 2002). These tasks aim at engaging the reader actively in some sort of production that requires the use of the information learned in novel environments. As Bazerman (2010) defends, writing is deeply associated to what was previously read, thus being the product of a "conversation" among texts. By proposing a writing task on the topic learned, it is expected that this conversation becomes somehow evident in the discourse of the students.

The Critical writing task devised in this study required that students answered the following question, elaborated so as to raise a controversial aspect of the topic discussed in the three previously read texts:*Que medidas devem ser tomadas pelo governo e pelos usuários para identificar fake news e reduzir sua propagação?* (What actions must be taken by the government and the users to identify fake news and reduce its spreading?) The participants were instructed to answer the question in Portuguese, in the lines provided below the question (appendix S).

3.4.5 Retrospective questionnaires

After participants finished each of the reading comprehension tasks, they were asked to answer a retrospective questionnaire adapted from Tomitch (2003). Its main goal was to survey perceived text difficulty. A second part of the questionnaire was done after participants had undergone all conditions to get participants to evaluate the strategies used.

In retrospective questionnaire part 1 (appendix P), the following questions were asked: (1) *Você conseguiu entender o texto? Justifique;* (Were you able to understand the text? Justify your answer) (2) *Em uma escala de 1 a 5, como você classificaria o grau de dificuldade do texto?*(In a 1-5 point scale, how would you classify the degree of difficulty of the text?) Part 2 of the retrospective questionnaire comprised three yes/no questions: (1) *Você acha que a estratégia de reler ajudou a entender os textos estudados?*; (Do you think the strategy of rereading helped you understand the texts that were studied?) (2) *Você acha que a estratégia de marcar o texto ajudou a entender os textos estudados?*(Do you think the strategy of highlighting the text helped you understand the texts that were studied?)*;* (3) *Você acha que a estratégia de tomar notas ajudou a entender os textos estudados?*(Do you think the strategy of taking notes helped you understand the texts that were studied?) (appendix Q). Participants were asked to justify their answers. By approaching self-perceived strategy use in a specific

learning situation, immediately after the task, the researcher gets more accurate descriptions of strategy effectiveness (Cohen, 1998).

Responses from the retrospective questionnaire part 1 were contrasted with results from the comprehension tests, while part 2 was analyzed together with the survey of reading strategies, aiming at tracing participants' strategic behavior in relation to the use of study strategies in their academic life.

3.4.6 Survey of Reading Strategies

The Survey of Reading Strategies – SORS (Mokhtari & Sheorey, 2002) was used in this study in order to identify general patterns of behavior in the context of reading academic material in English as an L2. The SORS was translated into Portuguese by this researcher (appendix T). It was believed that tracing the participants' reading profile could provide answers to RQ4 (What is the students' perception in relation to the use of study strategies in their academic life?). At the same time, it was expected that the survey would trigger the students' self-assessment on their strategic reading behavior.

The SORS was inspired by the Metacognitive Awareness of Reading Strategies Inventory - MARSI (Mokhtari and Reichard, 2002), which was created to identify the techniques students reported using while reading academic or school-related texts. Later in the same year, the SORS was developed to encompass the L2 context, providing a tool for teachers to survey the students' strategic behavior, to foster metacognitive strategy awareness in ESL reading.

The purpose of the SORS was to check the perceived use of strategies when reading in English as an L2 for academic purposes. The frequency of use was originally measured through a Likert scale which consisted of 5 topics. In the present study, the scale was modified to 4 topics in order to avoid answers in the middle column, which could deliver inconsistent data.

As devised by Mokhtari and Reichard (2002), the SORS encompasses 3 categories: *global reading strategies, problem-solving strategies and support strategies.* G*lobal reading strategies* are the reader's planning actions such as having a purpose, previewing content, confirming or rejecting predictions). *Problem-solving strategies* are used when comprehension problems arise and involve adjusting reading rate, rereading, focusing when concentration is lost, using context to guess unfamiliar words. *Support strategies* such as taking notes while

reading, highlighting important ideas in the text are used as tools by the readers to process information.

3.5 PROCEDURES FOR DATA COLLECTION

Prior to data collection, two 90-minutes workshops on study strategies were conducted by this researcher during class time for each of the three groups who participated in this study. The workshops were taught to my two groups in the third week of August and to the third group in the first week of October, 2018. The first workshop focused on highlighting and main idea identification (appendices E and F), while the second focused on note taking (appendices G and H). This moment of instruction was conceived in order to ensure participants have had contact with the strategies to be worked with and were aware of their characteristics and use. Nonetheless, participation in the workshops was not a requirement – two of the participants included in the sample had not attended (either of) them.

Data collection started in the second week of September until the last week of October. All the participants' written consent was requested (appendix D). This procedure was formalized in a consent letter containing a detailed explanation of the study which was read and signed by the participants. The researcher was at their disposal to clarify any doubts that could appear. The researcher also gave oral instructions on the phases of the study. Because the context of the data collection was a classroom and the researcher was their teacher, students were informed that this would be a regular class activity. Thus all students could participate, and the ones who did not want their data to be used in the study were instructed not to sign the form.

In phase 1, participants were divided into three groups, aiming at mixing the order of the texts and the strategies to be applied with each text, as shown in table 2.

Table 2 Design of the grouping

Group 1	**Group 2**	**Group 3**
Text 1 + Note taking	Text2 + Highlighting	Text3 + Rereading
Text2 + Rereading	Text3 + Note taking	Text 1+ Highlighting
Text3 + Highlighting	Text 1+ Rereading	Text2 + Note taking

Participants were given the text and instructed to study its content. Each text had a different instruction on strategy use that was stapled to the text and read aloud by the researcher. Instructions were the following:

1) *Estude atentamente o texto abaixo. Você pode ler e reler quantas vezes quiser dentro do tempo estabelecido. Há um glossário ao final para ajudá-lo.*(Read carefully the text below. You can read and reread as many times as you want within the time set. There is a glossary at the end of the text to help you).
2) *Estude atentamente o texto abaixo. Você pode ler e realçar o texto usando marca-texto dentro do tempo estabelecido. Há um glossário ao final para ajudá-lo.*(Read carefully the text below. You can read and highlight the text using a highlighter within the time set. There is a glossary at the end of the text to help you).
3) *Estude atentamente o texto abaixo. Você pode ler e tomar notas livremente na folha apropriada dentro do tempo estabelecido. Há um glossário ao final do texto para ajudá-lo.*(Read carefully the text below. You can take notes freely on a separate sheet of paper within the time set. There is a glossary at the end of the text to help you).

When time was over, they underwent a reading comprehension test consisting of an immediate written recall and five true or false statements (appendices D2, E2 and F2). Next, they were asked to answer Retrospective questionnaire 1 and report perceived text difficulty. This procedure was repeated in each of the three texts read. At the end of phase 1, participants answered retrospective questionnaire 2 in order to evaluate the study strategies used.

Phase two happened one week after phase one. It aimed at measuring the students' retention through a delayed recall. Students were asked to write down as much as they could remember from each the three texts they had read, one at a time. Immediately after the delayed recalls, students were given the Critical writing task as a means of measuring learning from the texts read. They were instructed to write in Portuguese and to use all the information they could remember from the readings as well as their background knowledge in order to give

support to their arguments, stating an informed opinion on the topic. Last, participants received the Survey of Reading Strategies. This questionnaire aimed at identifying strategies they used when reading academic materials in English and their frequency of use.

3.6 DATA ANALYSIS

Four anonymous raters who were researchers in reading were asked to categorize all the statements from each of the texts in main idea (M), supporting idea (S) and detail (D) (appendix V). The statements lacking inter-rater reliability were then analyzed by the forth rater. The number of main ideas, supporting ideas, details, and the total ideas of each text is described in the table below.

Table 3Number of ideas of each text divided per category

	Main ideas	**Supporting ideas**	**Details**	**TOTAL**
TEXT 1	6	13	12	31
TEXT 2	3	6	9	18
TEXT 3	5	10	18	33

Additionally, the raters analyzed the true of false statements (appendix U) in order to check whether they carried Explicit or Implicit relations with the textual information, following the framework proposed by Pearson and Johnson (1974). According to the taxonomy of questions proposed by Pearson and Johnson (1974), when the information required is textually implicit it is present in the text in a less evident manner, using paraphrases, for instance. This requires that the reader makes inferences and uses prior knowledge to answer the question – or judge the statement as true/false. The work done by the raters in the True or false pointed to the need for a review in the "implicitness" of the statements devised for this study. Thus, after the pilot study (to be described in the following section), the true or false statements were revised – and some were rewritten - in order to ensure all items were implicit.

The results of the ratings were organized in a table which was used as a guide in order to analyze the immediate and delayed recall protocols generated by the participants, enabling the identification of the main ideas, supporting ideas and details from the texts. This process was

done by comparing each sentence written by the participant to the text so as to identify similarities either literally or in paraphrases.

As regards the critical writing task, a first step of analysis comprised checking whether the propositions encoded from the three previously read texts are present in the students' writing. All levels of inference were taken into account as indexes of reconstructive use of the knowledge acquired. At a second step, the researcher included the participant's elaborations beyond the textbase, so as to check which connections were made among the readings and their background knowledge in the topic.

3.7 THE PILOT STUDY

A pilot study was done with three participants aging 18-24 years old enrolled at *Inglês 6* (English 6). This group was invited to participate in the pilot study out of class time. The researcher scheduled the participation of the volunteers according to their possibilities. This pilot was conducted in order to check the time needed to perform the tasks, the level of difficulty of the texts read, and the accuracy of the instruments developed. Each participant read the texts in a different order, although the order of the strategies used to study the texts was the same across all conditions. Reports of their performance can be found on appendix W1. After the pilot, the variables text x strategy x group were randomized in a more effective manner, as shown in table 2. The Survey of Reading Strategies (Mokhtari & Sheorey, 2002) was the only instrument not to be piloted, since it was widely known for its effectiveness in previous studies.

Table 4 Design of the grouping – pilot study

	Notetaking	**Highlighting**	**Rereading**
Text 1 Kenya	P2	P1	P3
Text 2 Google	P3	P2	P1
Text 3 Facebook	P1	P3	P2

Participants performed all the tasks under no time constraints neither in phase 1 nor in phase 2 in order to measure reading and testing time and thus obtain the mean time necessary to complete each of them. The mean time across participants for each phase is given below (table 5). Nonetheless, in order to ensure plenty of time for *studying* the texts

and performing each exam, in the study all participants were given between 12 and 15 minutes to perform each task.

Table 5 Mean reading time for performing each of the tasks (pilot study)

Phase	**Mean time**
Reading Text 1	9,5 min
Exame de Compreensão Leitora 1	12 min
Reading Text 2	8,6 min
Exame de Compreensão Leitora 2	12 min
Reading Text 3	11 min
Exame de Compreensão Leitora 3	11 min

Furthermore, all participants in the pilot perceived the texts as "fácil/muito fácil", providing evidence that the readability was within the language proficiency for their level. In addition, the CWT depicted which pieces of information the participant, in the role of author, decided to include so as to support his/her stance in the topic – and the criteria would not be what is important in the text, but what corroborates to his/her opinion. Importantly, all participants wrote a full-page answer demonstrating engagement and motivation to fulfill the task.

4 RESULTS AND DISCUSSION

This chapter aims at describing and analyzing the results obtained in this study. Due to the small sample of participants, it was not possible to run statistical tests. The results are then presented in the format of percentages and organized in tables corresponding to the different categories of analysis. Data analysis is divided into four sections corresponding to each of the RQs devised: first, the immediate recalls and true or false tasks are analyzed to seek for possible correspondences between the comprehension results and the conditions. Second, the delayed recalls are scrutinized to check for any effect of the strategies on retention. Third, the Critical Writing Task is scrutinized to seek for any evidence of learning from the texts read. Finally, the Survey of Reading Strategies (SORS) and the retrospective questionnaire are contrasted to trace students' strategic behavior when reading academic material in English. Additionally, participants' individual performance across conditions was gathered in tables (appendix W2).

4.1 EFFECTS OF STUDY STRATEGIES ON COMPREHENSION

This section is concerned with the effectiveness of each study strategy (rereading, highlighting, and note taking) on reading comprehension. As previously stated in chapter 2, reading comprehension is the construction of meaning derived from the interaction between a text and its reader (Aebersold & Field, 1997).

In order to check the effect of study strategies on comprehension, first, the average results from immediate recalls are compared across conditions. Second, individual performance is analyzed. Third, the results are grouped by text to compare the effect of each strategy on comprehension; these results are then contrasted with participants' perceptions as reported in the first part of the Retrospective Questionnaire. Fourth, a contrast between the participant's highlights/notes and immediate recalls is done to check whether information considered important while reading was in fact recalled. Last, the scores from the True or False test are analyzed.

4.1.1 Immediate recalls – results per condition

The average number of main ideas, supporting ideas and details each participant reported in the immediate recalls of all three texts was gathered in three tables, one for each condition: rereading (table 6),

highlighting (table 7), and note taking (table 8). The percentage of ideas is presented separately (in relation to the total ideas per category) and also altogether (the percentage of ideas recalled in relation to the total ideas in each text). In general, a higher percentage of main ideas was reported compared to supporting ideas and details, which corroborates the understanding that main ideas are important constructs, being strongly present in recalls (Kintsch & van Dijk, 1978; van Dijk & Kintsch, 1983; Tomitch, 2000).

Table 6Results of immediate recalls in the rereading condition

Group/participant	**Main ideas**	**Supporting ideas**	**Details**	**Total**
G1P11	33%	50%	0%	22%
G1P12	66%	33%	33%	38%
G1P13	33%	50%	11%	27%
G1P15	66%	50%	33%	44%
G1P18	66%	66%	22%	44%
G1P19	66%	16%	0%	16%
G2P2	33%	53%	25%	38%
G2P4	50%	23%	16%	25%
G2P5	33%	23%	8%	19%
G2P8	50%	23%	8%	22%
G2P9	16%	30%	25%	25%
G2P16	0%	46%	8%	22%
G3P1	40%	10%	11%	15%
G3P3	40%	40%	16%	27%
G3P6	80%	40%	11%	30%
G3P7	20%	10%	5%	9%
G3P10	40%	20%	5%	15%
G3P14	60%	10%	11%	18%
G3P17	80%	40%	11%	22%
AVERAGE	**45,7%**	**33,3%**	**13,6%**	**24,6%**

Table 7 Results of immediate recalls in the highlighting condition

Group/participant	**Main ideas**	**Supporting ideas**	**Details**	**Total**
G1P11	60%	10%	0%	12%
G1P12	60%	20%	16%	22%
G1P13	60%	20%	11%	21%
G1P15	60%	40%	16%	30%
G1P18	40%	30%	16%	24%

G1P19	40%	0%	5%	9%
G2P2	66%	50%	11%	33%
G2P4	33%	33%	11%	22%
G2P5	100%	33%	0%	27%
G2P8	33%	16%	33%	27%
G2P9	33%	66%	0%	27%
G2P16	66%	50%	22%	38%
G3P1	16%	15%	0%	9%
G3P3	16%	15%	25%	19%
G3P6	50%	30%	33%	35%
G3P7	16%	30%	0%	16%
G3P10	50%	15%	0%	16%
G3P14	33%	15%	8%	16%
G3P17	16%	23%	16%	19%
AVERAGE	**44,6%**	**26,8%**	**11,7%**	**22%**

Table 8. Results of immediate recalls in the note taking condition

Group/ participant	**Main ideas**	**Supporting ideas**	**Details**	**Total**
G1P11	33%	23%	0%	16%
G1P12	16%	30%	8%	19%
G1P13	16%	7%	8%	16%
G1P15	33%	53%	8%	32%
G1P18	50%	23%	25%	29%
G1P19	16%	38%	8%	22%
G2P2	40%	30%	5%	18%
G2P4	60%	10%	5%	15%
G2P5	60%	20%	11%	21%
G2P8	40%	10%	16%	18%
G2P9	40%	20%	16%	21%
G2P16	40%	20%	11%	18%
G3P1	33%	0%	11%	11%
G3P3	0%	0%	11%	5%
G3P6	33%	66%	11%	33%
G3P7	0%	33%	0%	11%
G3P10	0%	33%	0%	11%
G3P14	33%	33%	0%	16%
G3P17	33%	16%	11%	16%
AVERAGE	**30,3%**	**24,4%**	**9,8%**	**18,3%**

The data presented above shows that, in general, more ideas were immediately recalled in the rereading condition (24,6%), in relation to

the total ideas of each text. After highlighting, 22% of the ideas were recalled, and 18% of the ideas were recalled after taking notes. The effect of rereading in immediate recall holds true for each of the levels of ideas: more main ideas (45,7%), supporting ideas (33,3%) and details (13,6%) were recalled in this condition. Highlighting had a similarly positive effect in the immediate recall of main ideas (44,6%). From these results, it is possible to say that, in what concerns immediate recall, rereading has favored comprehension of all levels of ideas.

4.1.2 Immediate recalls – individual performance

In order to check individual performance across conditions, the results of immediate recalls were also grouped per participant (table 9). The percentage of total ideas immediately recalled (i.e, the number of main ideas, supporting ideas and details recalled in relation to the number of ideas in the text) was higher in the rereading condition for ten participants (G1P11, G1P12, G1P13, G1P15, G1P18, G2P2, G2P4, G3P1, G3P3, G3P14). Eight participants recalled more ideas in the highlighting condition (G2P5, G2P8, G2P9, G2P16, G3P6, G3P7, G3P10, G3P17). Only G1P19 had better immediate recall in the note taking condition. From this data, it can be said that concerning immediate recall, more participants benefited from rereading the texts.

Table 9 Immediate recalls – results per participant

G1P11	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	33%	**50%**	0%	**22%**
Highlighting	**60%**	10%	0%	12%
Note taking	33%	23%	0%	16%
G1P12	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**66%**	33%	**33%**	**38%**
Highlighting	60%	20%	16%	22%
Note taking	16%	30%	8%	19%
G1P13	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	33%	**50%**	11%	**27%**
Highlighting	**60%**	20%	**11%**	21%
Note taking	16%	7%	8%	16%
G1P15	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**66%**	50%	**33%**	**44%**

Highlighting	60%	40%	16%	30%
Note taking	33%	**53%**	8%	32%
G1P18	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**66%**	**66%**	22%	**44%**
Highlighting	40%	30%	16%	24%
Note taking	50%	23%	**25%**	29%
G1P19	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**66%**	16%	0%	16%
Highlighting	40%	0%	5%	9%
Note taking	16%	**38%**	**8%**	**22%**
G2P2	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	33%	**53%**	**25%**	**38%**
Highlighting	**66%**	50%	11%	33%
Note taking	40%	30%	5%	18%
G2P4	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	50%	23%	**16%**	**25%**
Highlighting	33%	**33%**	11%	22%
Note taking	**60%**	10%	5%	15%
G2P5	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	33%	23%	8%	19%
Highlighting	**100%**	**33%**	0%	**27%**
Note taking	60%	20%	**11%**	21%
G2P8	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**50%**	**23%**	8%	22%
Highlighting	33%	16%	**33%**	**27%**
Note taking	40%	10%	16%	18%
G2P9	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	16%	30%	**25%**	25%
Highlighting	33%	**66%**	0%	**27%**
Note taking	**40%**	20%	16%	21%
G2P16	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	0%	46%	8%	22%
Highlighting	**66%**	**50%**	**22%**	**38%**
Note taking	40%	20%	11%	18%
G3P1	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**40%**	10%	11%	**15%**

Highlighting	16%	**15%**	0%	9%
Note taking	33%	0%	11%	11%
G3P3	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**40%**	**40%**	16%	**27%**
Highlighting	16%	15%	**25%**	19%
Note taking	0%	0%	11%	5%
G3P6	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**80%**	40%	11%	30%
Highlighting	50%	30%	**33%**	**35%**
Note taking	33%	**66%**	11%	33%
G3P7	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**20%**	10%	**5%**	9%
Highlighting	16%	30%	0%	**16%**
Note taking	0%	**33%**	0%	11%
G3P10	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	40%	20%	**5%**	15%
Highlighting	**50%**	15%	0%	**16%**
Note taking	0%	**33%**	0%	11%
G3P14	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**60%**	10%	**11%**	**18%**
Highlighting	33%	15%	8%	16%
Note taking	33%	**33%**	0%	16%
G3P17	**Main ideas**	**Sup ideas**	**Details**	**Total recall**
Rereading	**80%**	**40%**	11%	12%
Highlighting	16%	23%	16%	**19%**
Note taking	33%	16%	**33%**	16%

Individual results will now be separated intermediate recall of main ideas, supporting ideas and details. Twelve participants (G1P11, G1P12, G1P15, G1P18, G1P19, G2P8, G3P1, G3P3, G3P6, G3P7, G3P14, G3P17) recalled more main ideas in the rereading condition, followed by five participants (G11P13, G2P2, G2P5, G2P16, G3P10) in the highlighting condition and two participants (G2P4, G2P9) in the note taking condition.

Supporting ideas were also better recalled when rereading, as showed by seven participants (G1P12, G1P13, G1P18, G2P2, G2P8, G3P3, G3P17); five participants (G2P4, G2P5, G2P9, G2P16, G3P1)

recalled more supporting ideas when highlighting, and when taking notes, four participants recalled more supporting ideas (G1P15, G1P19, G3P10, G3P14).

Rereading also enhanced immediate recall of details for nine participants (G1P12, G1P15, G2P2, G2P4, G2P9, G3P1, G3P7, G3P10; G3P14); six had better performance in the recall of details when taking notes (G1P18, G1P19, G2P5, G3P6, G3P7, G3P17), and four participants recalled more details when highlighting (G2P8, G2P16, G3P3, G3P6). Thus, analysis of individual performance across levels of ideas unveils participants' enhanced immediate recall of main ideas, supporting ideas and details after reading and rereading a text, compared to reading and highlighting and reading and taking notes.

4.1.3 Immediate recalls – results per text

The results from immediate recalls will now be analyzed per text (tables 10, 11 and 12 below) and contrasted with participants' perception on text difficulty, as reported in the first part of the retrospective questionnaire, answered after each comprehension test. Answers for retrospective questionnaire part 1 were also gathered by text (appendix X).

Broadly speaking, regarding Text 1, in the rereading condition, 25% of all ideas were immediately recalled; there was a general recall of 22% in the note taking condition, and 18,5% of ideas recalled in the highlighting condition. Thus, differences in immediate recall of text 1 between the rereading and note taking condition were not significant. In particular, main idea recall for Text 1 was also enhanced in the rereading condition. In the Retrospective questionnaires of Text 1, eighteen participants (94,8%) reported having understood the text. Text difficulty was rated as intermediate (3) by eleven participants (57,8%); four participants (21%) rated the text as easy, and three (15%) as very easy. Two participants (G1P11, G3P1) reported having had little time to read (12-15 minutes). Problems with vocabulary were mentioned by three readers (G1P13, G1P15, G1P18); nonetheless, they reported that these difficulties at the local level did not influence the global comprehension of the text.

In the case of Text 2, 31,8% of the ideas were immediately recalled in the rereading condition; 29% of the ideas were recalled in the highlighting condition, and 14,7% of the ideas were recalled in the note taking condition. It can be seen that results of immediate recalls of Text 2 were similar in the rereading and highlighting conditions. In the

Retrospective questionnaires of Text 2, all participants reported having understood what was read. Text difficulty was rated as intermediate by eleven participants (57,8%); six participants (31,5%) rated the text as easy, one participant rated it as very easy (5,2%), and one as difficult (5,2%). Four participants (G1P13, G1P16, G2P2, G2P8) reported having understood the text albeit they had problems with vocabulary. Two participants (G1P13, G3P14) thought this text was of easy comprehension; language was perceived as more current. Main idea comprehension was mentioned by G1P15 and G1P19.

As for Text 3, the difference in general immediate recall across conditions was not relevant. Immediate recall for this text was enhanced in the highlighting condition (19,6%), while in the note taking condition there was 18,5% of recall, and in the rereading condition, 18% of the ideas were recalled. Having highlighted the text also favored immediate recall of main ideas. In the Retrospective questionnaires of Text 3, out of the seventeen respondents, sixteen participants (94%) reported having understood the text; one (6%) reported having not understood the text very well. Text difficulty was perceived as intermediate by ten participants; four participants rated the text as difficult, and three rated it as easy. Difficulties at the lexical level were mentioned by seven participants (G1P16, G2P2, G3P1, G3P3, G3P7, G3P10, G3P14). Three participants reported having achieved main idea comprehension (G1P15, G3P1, G3P7). Cohesive devices and contextual features were identified as beneficial to comprehension by three participants (G2P5, G3P10, G3P14); additionally, two participants (G2P16, G3P17) referred to the glossary as helpful.

The positive effect of rereading on immediate recall stood out even across different texts, although the differences were small. Factors such as length and complexity in texts 1 and 2 might have boosted the effectiveness of rereading, convergent with the ideas of Callender and McDaniel (2009), who stated that text features influence the effect of rereading. Highlighting was the second most effective strategy, associated to greater immediate recall for Text 3 - a longer and more complex text. This particular text might have called for a more conscious strategic behavior on the part of readers when highlighting and thus lead to better results.

Considering that in the retrospective questionnaire participants mentioned terms such as “important” or “main ideas”, concepts dealt with in the workshops, it might be hypothesized that instruction on main idea identification helped them strategically prioritize what was

important in the text, being able to get over vocabulary problems at the local level of comprehension towards a global understanding.

Furthermore, the difficulty of all three texts was perceived as intermediate by most participants. Explanation for this pattern is twofold. One is the effect of the 5-point Likert scale, in which respondents tend to check the middle column. The other is that all three texts were indeed of similar difficulty – which might be a result of the control of length and lexical complexity (glossary) that was done.

Table 10 Results of immediate recalls for Text 1

T1+R (G2)	**T1+H (G3)**	**T1+NT (G1)**
G2P2	**G3P1**	**G1P11**
2M (33%) 7S (53%) 3D (25%)Total = 38%	1 M (16%)2 S (15%) Total = 9%	2M (33%)3S (23%) Total = 16%
G2P4	**G3P3**	**G1P12**
3 M (50%)3S(23%) 2 D (16%)Total = 25%	1 M (16%)2 S (15%) 3 D (25%)Total = 19%	1M (16%)4 S (30%) 1 D (8%)Total = 19%
G2P5	**G3P6**	**G1P13**
2 M (33%)3 S (23%) 1 D (8%) Total = 19%	3 M (50%)4 S (30%) 4 D (33%)Total = 35%	1M (16%)1 S (7%) 1 D (8%)Total = 16%
G2P8	**G3P7**	**G1P15**
3 M (50%) 3 S (23%) 1 D (8%)Total = 22%	1 M (16%)4 S (30%) Total = 16%	2M (33%)7 S (53%) 1 D (8%)Total = 32%
G2P9	**G3P10**	**G1P18**
1 M (16%)4 S (30%) 3 D (25%)Total = 25%	3 M (50%)2 S (15%) Total = 16%	3M (50%)3 S (23%) 3 D (25%)Total = 29%
G2P16	**G3P14**	**G1P19**
6 S (46%)1 D (8%) Total =22%	2 M (33%)2 S (15%) 1 D (8%)Total = 16%	1M (16%)5 S (38%) 1 D (8%)Total = 22%
	G3P17	
	1 M (16%)3 S	

	(23%) 2 D (16%)Total = 19%	
TOTAL **M 30,3%** **S 33%** **D 15%** **Total = 25%**	**TOTAL** **M 28,1%** **S 20,4%** **D 11,7%** **Total = 18,5%**	**TOTAL** **M 27,3%** **S 29%** **D 9,5%** **Total = 22%**

T=text; NT=note taking; H=highlighting; R=rereading; G=group; M=main idea; S=supporting idea; D=detail

Table 11Results of immediate recalls T2

T2+R (G1)	T2+H (G2)	T2+NT (G3)
G1P11	**G2P2**	**G3P1**
1M (33%)	2M(66%)	1M (33%)
3S (50%)	3S (50%)	
	1D (11%)	1D (11%)
Total = 22%	Total = 33%	Total = 11%
G1P12	**G2P4**	**G3P3**
2M (66%)	1M(33%)	
2S (33%)	2S(33%)	
3D(33%)	1D (11%)	1D (11%)
Total = 38%	Total = 22%	Total = 5%
G1P13	**G2P5**	**G3P6**
1M (33%)	3M (100%)	1M (33%)
3S (50%)	2S (33%)	4S (66%)
1D (11%)	Total = 27%	1D (11%)
Total = 27%		Total = 33%
G1P15	**G2P8**	**G3P7**
2M (66%)	1M (33%)	2S (33%)
3S (50%)	1S (16%)	
3D (33%)	3D (33%)	
Total = 44%	Total = 27%	Total = 11%
G1P18	**G2P9**	**G3P10**
2M (66%)	1M (33%)	2S (33%)
4S (66%)	4S (66%)	
2D (22%)		
Total = 44%	Total = 27%	Total = 11%

G1P19	**G2P16**	**G3P14**
2 M (66%)	2M (66%)	1M (33%)
1S (16%)	3S (50%)	2S (33%)
	2D (22%)	
Total = 16%	Total = 38%	Total = 16%
		G3P17
		1M (33%)
		1S (16%)
		1D (11%)
		Total = 16%
TOTAL	**TOTAL**	**TOTAL**
M – 54,5%	**M - 55,1%**	**M - 18,8%**
S – 44,1%	**S - 41,3%**	**S - 25,8%**
D – 16,5%	**D – 12,8%**	**D – 6,2%**
Total = 31,8%	**Total = 29%**	**Total = 14,7%**

T=text; NT=note taking; H=highlighting; R=rereading; G=group; M=main idea; S=supporting idea; D=detail

Table 12 Results of immediate recalls for Text 3

T3+R (G3)	T3+H (G1)	T3+NT (G2)
G3P1	**G1P11**	**G2P2**
2M (40%)	3M (60%)	2M (40%)
1S (10%)	1S (10%)	3S (30%)
2D (11%)		1D (5%)
Total = 15%	Total =12%	Total = 18%
G3P3	**G1P12**	**G2P4**
2M (40%)	3M (60%)	3M (60%)
4S (40%)	2S (20%)	1S (10%)
3D (16%)	3D (16%)	1D (5%)
Total = 27%	Total = 22%	Total = 15%
G3P6	**G1P13**	**G2P5**
4M (80%)	3M (60%)	3M (60%)
4S (40%)	2S (20%)	2S (20%)
2D (11%)	2D (11%)	2D (11%)
Total = 30%	Total = 21%	Total = 21%
G3P7	**G1P15**	**G2P8**
1M (20%)	3M (60%)	2M (40%)
1S (10%)	4S (40%)	1S (10%)
1D (5%)	3D (16%)	3D (16%)
Total = 9%	Total = 30%	Total = 18%
G3P10	**G1P18**	**G2P9**
2M (40%)	2 M (40%)3 S (30%)	2M (40%)
2S (20%)	3 D (16%)Total = 24%	2S (20%)

1D (5%) Total = 15%		3D (16%) Total = 21%
G3P14 3M (60%) 1S (10%) 2D (11%) Total = 18%	**G1P19** 2 M (40%)1 D (5%) Total = 9%	**G2P16** 2M (40%) 2S (20%) 2D (11%) Total = 18%
G3P17 2M (40%) 1S (10%) 1D (5%) Total = 12%		
TOTAL	**TOTAL**	**TOTAL**
M – 45,7%	**M – 53,3%**	**M – 46,6%**
S – 20%	**S – 20%**	**S – 18,3%**
D – 9,1%	**D – 10,6%**	**D – 10,6%**
Total = 18%	**Total = 19,6%**	**Total = 18,5%**

T=text; NT=note taking; H=highlighting; R=rereading; G=group; M=main idea; S=supporting idea; D=detail

4.1.4 Contrast between immediate recalls and highlights and notes

The participants' highlights and notes will now be contrasted to the immediate recalls to seek for any effect of the ideas that were attended to during reading and the comprehension results (tables 13 and 14). The procedure consisted of looking at each of the levels of ideas recalled and, among them, check the ones that had been previously highlighted or annotated. In general, 71% of the total ideas present in the immediate recalls of texts read under the highlighting condition had in fact been highlighted, while 66,7% of the ideas immediately recalled from texts read in the note taking condition had been annotated (table 13). These significant figures show the impact of study strategies on comprehension, since the ideas recalled coincide with what was attended to during reading.

More specifically, thirteen participants (68,4%) recalled main ideas that were highlighted during reading; among the main ideas recalled, an average number of 54,3% had been highlighted. Fourteen participants (73,6%) recalled supporting ideas that were highlighted beforehand; the average number of recalled supporting ideas that had been highlighted was 67,1%. Ten participants (52,6%) also recalled details that had already been highlighted – an average of 44,2%. This

data demonstrates that highlighting had a positive impact on immediate recall, especially for main and supporting ideas.

As regards note taking (table 14), twelve participants (63,1%) immediately recalled main ideas that were present in the notes they took while reading; 53,4% of the main ideas recalled were in the notes. Thirteen participants (68,4%) recalled supporting ideas they had written on their notes while reading; recalled supporting ideas that were also present in the notes was around 49,4%. Additionally, eleven participants (57,8%) recalled details they had registered in their notes; on average, 53,4% of the details had been previously attended during note taking. Thus, the notes participants took while reading helped them remember the ideas of the texts.

All in all, the majority of participants recalled ideas that had either been previously highlighted or annotated, which shows a positive effect of these study strategies on comprehension in all three levels of ideas. There was no significant difference between the average number of main ideas recalled that have been highlighted (54,3%) and the ones that were annotated (53,4%). Notwithstanding, more supporting ideas were recalled when previously highlighted; as for details, the ones which had been annotated were more accurately recalled.

Table 13 presents the contrast between the ideas each participant highlighted and the ideas immediately recalled. The second column comprises the highlighted ideas (HI); the third column lists the ideas present in immediate recalls (IR); and columns 4, 5, and 6 shows the contrast (C) divided in levels of ideas (M – main idea, S – supporting idea, D – detail). The last column provides a general comparison.

Table 13 Contrast highlights x immediate recalls

Group/ participant	Highlighted ideas	Immediate recalls	Contrast(M)	Contrast(S)	Contrast(D)	Total
G1P11	M1, D1, M3, S3, S4, D5, M4, S7, D9, D10, S9, S17, M5	M1, M2, S17, M5	2/3 (66%)	1/1	-	3/4 (75%)
G1P12	M2, S1, D2, D3, D4, M3, S3, D6, M4, D9, S8, D14, M5	M2, D2, S1, M4 (partly), S8, D12, D14, M3	3/3 (100%)	2/2	2/3	7/8 (87,5%)
G1P13	M2, M3, S4, D6, D7, M4, S9, D14	M2, M3, S2, D15, S9, M4, D7	3/3 (100%)	1/2	1/2	5/7 (71,4%)
G1P15	M2, S1, D2, M3, S3, S6, D6, D9, D10, S8, S9, D15, S17, M5	M2, D2, S1, D9, D10, S8, M5, S17, S9, M3	3/3 (100%)	3/3	3/3	10/10
G1P18	S1, D4, M3, S4, S6, D8, M4, D10, S8, S17, M5	M2, D2, S5, D5, S7, D10, M5, S9	1/2 (50%)	-	1/3	2/8 (25%)
G1P19	M2, M3, S6, M4, S17	M1, M2, D6	1/2 (50%)	-	-	2/3 (66,6%)
G3P17	M2, S1, M3, S5, D6, M4, S9, D12, S17, M5	M2, M3, D12, S17	2/2 (100%)	1/1	1/1	4/4

G2P2	M1, M3, D1, S2, S3, S4, S5, D5, D9	M1, S5, M3, D5, S2, S4	2/2 (100%)	3/3	1/1	6/6
G2P4	M2, D1, S3, S4, S5, D3, D5, S6, D6, D7	M1, S5, S3, D7	-	2/2	1/1	3/4 (75%)
G2P5	M1, M2, M3, S4, S5, D3, S6, D6, D7	M1, M2, M3, S2	3/3 (100%)	-	-	3/4 (75%)
G2P8	M2, S2, S4, S5, D4, D5, S6	M1, S5, D4, D5, D7	-	1/1	2/3	3/5 (60%)
G2P9	M2, S2, S4, S5, D5, S6, D7, D9	M1, S2, S4 S5,S6	-	4/4	-	4/5 (80%)
G2P16	M3, S2, S3, S5, D3, D5, S6, D6, D9	M1, S2, S5, S6, D9, M2, D5	-	3/3	2/2	5/7 (71,4%)
G3P1	S1, M3, S4, S5, D2, D6, D8, S7, M5, S9, S12, D12, S13	S1, M2, S9	-	2/2	-	2/3 (66,6%)
G3P3	S1, M2, M3, S3, S4, M4, S5, D4, D5, D6, D7, D8, M5, S13	S4, S2, D5, D7, M5, D4	1/1 (100%)	1/2	3/3	5/6 (83,3%)
G3P6	S1, S2, M2, M3, S5, D8, S11, D12, S13	M1, S1, S2, M2, D5, D8, S11, S8, M6, D12, D4	1/3 (33%)	3/4	2/4	6/11 (54,5%)

G3P7	S1, S2, S3, S5, D4, D5, S6, D7, D8, S7, S13	S1, M2, S2, S5, S6	-	4/4	-	5/5
G3P10	M2, M4, D2, D8, M5, M6	M1, S5, M2, M3, S9	1/3 (33%)	-	-	1/5 (20%)
G3P14	M2, M3, M4, S5, D3, D5, D6	S4, S1, M2, D8, M4	2/2 (100%)	-	-	2/5 (40%)
AVERAGE			**54,3%**	**67,1%**	**52,6%**	**71%**

T=text; NT=note taking; H=highlighting; R=rereading; G=group; P=participant; M=main idea; S=supporting idea; D=detail

Table 14 Contrast between notes and immediate recalls

Group/ Participant	**Notes**	**Immediate recall**	**Contrast M**	**Contrast S**	**Contrast D**	**Total**
G1P11	S1, M2, S4, M4, M1	S1, M3, S5, M5, S8	-	1/3	-	1/5 (20%)
G1P12	S1, M2, S4, S5, D5, D4, D6, S6, D8, M5, S8, S9, S10, S13	S5, S4, M2, D5, S8, S6	1/1 (100%)	4/4	1/1	6/6
G1P13	M2, D8	M2, D7, S13	1/1 (100%)	-	-	1/3 (33%)

G1P15	S1, D1, M2, S4 (partly), M4, S5, D6, M5, D2, D8, M6	S1, S2, M1, S4, S5, S7, S9, M6, S13,D7	1/2 (50%)	3/7 (42,8%)	-	4/10 (40%)
G1P18	S1, S3, S4, D3, D4, D7, S6, D8, S8, S11, M6, S13	M1, M2, M4, D3, S5, D7, D5, S6, S7, S12, S8	0%	2/5	2/3	4/11 (36%)
G1P19	M3, S5, S6, S8	M1, S4, S5, D7, S7, S9, S8	0%	2/5	-	2/7 (28,5%)
G2P2	M3, S5, D5, S6, D7, D8, D14, M4	S17, M4, M3, D14, S5, S8	2/2 (100%)	1/3	1/1	4/6 (66,6%)
G2P4	M2, M3, S4, D7, M5	M2, M3, D7, S7, M5	3/3 (100%)	-	1/1	4/5 (80%)
G2P5	M1, S1, M3, D2, S7, D10, D3, S8, D17, S17, S3, D8, M5	M1, M2, D2, D10, S8, S17, M5	2/3 (66%)	2/2	2/2	6/7 (85,7%)
G2P8	M2, D2, D3, M3, D15	M2, M3, D2, D3, D15, S17	2/2 (100%)	-	3/3	5/6 (83,3%)
G2P9	M4, M3, D12	M4, S4, D10, M5, D12, D16, S17	1/2 (50%)	-	½	2/7 (28,5%)
G2P16	M1, S1, M3, S4, D9, D10, S17, D14, M5	M2, S17, S1, D9, D10, M5	1/2 (50%)	2/2	2/2	5/6 (83,3%)
G3P1	M1, M3, D1, D9, D3	M1, D4	1/1 (100%)	-	-	1/2

G3P3	M2, S1, S2, S3, S4 (partly), D4, D5	D4	-	-	1/1	1/1
G3P4	M1, S2, S3, S4, S5, D5, S6, D9	M1, S2, S3, S5, S6 D9	1/1 (100%)	4/4	1/1	6/6
G3P7	M1, M3, S2, S3, S5	S3, S2	-	2/2	-	2/2
G3P10	M1, S3, S5, D6	S5, S3	-	2/2	-	2/2
G3P14	M1, S4, S5, S6, D9	M1, S3, S6	1/1 (100%)	1/2	-	2/3 (66,6%)
G3P17	M2, S2, S3, S4, S5, D3, D5, D7	M1, S3, D5	-	1/1	1/1	2/3
AVERAGE			**53,4%**	**49,4%**	**53,4%**	**66,7%**

T=text; NT=note taking; H=highlighting; R=rereading; G=group; P=participant; M=main idea; S=supporting idea; D=detail

4.1.5 The True or False Task

Besides recalls, the exam of reading comprehension also comprised a true or false task consisting of five statements for each text. Below, the average scores of the true or false were grouped per text and compared across conditions to seek for any effect of strategy use in performance (Table 15).

Table 15 Average scores from the true or false text

T1+ rereading	**4,75**
T1+ highlighting	3,5
T1 + note taking	4,4
T2+ rereading	2,8
T2 + highlighting	**4**
T2 + note taking	3,7
T3 + rereading	3,8
T3 + highlighting	**4,2**
T3 + note taking	3,75

Scores in Text 1 were higher in the rereading condition; in the true or false of Text 2, answers were more accurate in the highlighting condition; performance in the true or false of Text 3 was also better after readers had highlighted the text. Seen from this perspective, there seems to be a relationship between the study of texts in the highlighting condition and high average scores in the True or False Task of Texts 2 and 3.

4.1.6 Conclusions on the effects of study strategies on comprehension

In a nutshell, findings from the analyses of immediate recalls and true or false tasks indicate that rereading and highlighting (to a lesser degree) were linked with better immediate recall of main ideas, supporting ideas and details compared to the other two conditions. The relationship betweenmassed rereading (i.e. rereading twice or more times in sequence) and enhanced immediate recall is coherent with previous studies (Dunlosky et al, 2013; Krug, Davis, & Glover, 1990; Amlund, Kardash, & Kulhavy, 1986), especially regarding the immediate recall of main ideas after rereading.In addition, reading purpose might have affected the results, since the condition simulated a

study situation. In the study of Freund, Kopak, and O'Brien (2016), less-skilled readers spent more time reading to prepare for post-reading tests, while better readers may resort to highlighting and reviewing.

Although readers seem to heavily rely on rereading, its impact on immediate recall can be interpreted as a lack of engagement in more efficient processes such as taking notes; as Dunlosky and colleagues argue, "most readers may adopt a 'lazy' approach to constructing a representation, avoiding processing that is not straightforwardly afforded by the text itself." (2013, p.32). Furthermore, the efficiency of rereading has been questioned compared to other study methods. In Callender and McDaniel's words, "rereading is not an especially effective use of a students' study time" (p.39), since it does not lead to consistent long-term learning results.

In addition, when rereading, processing remains at the text base and little effort is made to construct a situation model (Callender & McDaniel, 2009).In other words, rereading does not stimulate further processing; the mental representation created is similar each time a text is reread. In the present study, results from immediate recalls and students' reports pointed to rereading as a helpful tool to understand the text, but noevidence was found ofelaboration. Processing will only intensify at the demand for higher cognitive engagement, i.e., in study situations. Although this study aimed at simulating a study condition, participants' motivation and engagement are probably lowercompared to real contexts.

Also, there was a positive connection between highlighting and immediate recall of supporting ideas and with higher scores in the true or false task, across the three texts read. While immediate recall of texts 1 and 2 was positively influenced by rereading, recall of text 3 seemed to be benefited by the highlighting condition. Interestingly, note taking was not associated with better performance in any of the immediate comprehension tests. Notwithstanding, it is possible to assert that highlighting and note taking influenced comprehension: 71% of the ideas present in the recalls of texts read under the highlighting condition had been highlighted, and among the ideas recalled from the texts read under the note taking condition, 66,7% had been annotated.

I now turn to the analysis of the delayed recalls.

4.2 EFFECTS OF STUDY STRATEGIES ON RETENTION

This section intends to check for any effect of condition on retention of the information from the texts read. Retention, as defined in

the review of literature, is the cognitive process of encoding information into long-term memory (Atkinson & Shiffrin, 1968). The duration of the memory trace will be determined by the depth of processing, i.e., by associating the incoming stimuli to features of the long-term memory through word associations and elaborate reasoning, for instance.

The effect of study strategies on retention will be investigatedfirst by comparing the average results from the delayed recalls across conditions; second, individual performance is analyzed; and third, the results are grouped per text.

4.2.1 Delayed recalls – results per condition

Results on strategy effectiveness were different for the delayed recalls compared to immediate recalls. First, general results will be presented; then, results will be divided according the each idea level (main idea, supporting idea and detail).

After a week-delay, results indicated a connection between highlighting and enhanced delayed recall: in general, 15% of the total ideas were recalled after a delay when texts were read in this condition (table 16). Delayed recall of texts that were read and reread comprised 13,8% of the total ideas (table 17), and 13% of the total ideas were recalled from texts that had been read in the note taking condition (table 18).

Looking at each level of idea separately allows us to see that a higher percentage of main ideas was recalled after a delay across all texts when noteswere taken (32,4%), followed closely by highlighting (32,1%). In the rereading condition, only 17,6% of the main ideas were recalled. Highlighting significantly enhanced delayed recall of supporting ideas (23,9%), while rereading led to 17,6% of recall of supporting ideas; 14,3% of supporting ideas were recalled after taking notes. The percentage of details recalled after a one-week delay is not significant and will not be approached. Thus, there was more retention of main ideas from texts that had been read in the note taking condition; supporting ideas were better recalled after a delay among the texts that had been highlighted.

Table 16 Results of delayed recalls in the highlighting condition

Group/ participant	**Main ideas**	**Supporting ideas**	**Details**	**Total recall**
G1P11	60%	10%	0%	12%

G1P12	20%	33%	0%	9%
G1P13	20%	30%	11%	18%
G1P15	60%	30%	5%	21%
G1P18	60%	10%	5%	15%
G1P19	20%	10%	0%	6%
G2P2	33%	50%	0%	22%
G2P4	33%	33%	11%	22%
G2P5	66%	33%	0%	22%
G2P8	0%	33%	0%	11%
G2P9	33%	50%	0%	22%
G2P16	33%	33%	0%	16%
G3P1	0%	15%	0%	6%
G3P3	0%	15%	0%	6%
G3P6	50%	7%	33%	26%
G3P7	16%	15%	0%	9%
G3P10	33%	15%	0%	13%
G3P14	33%	15%	0%	13%
G3P17	33%	23%	8%	19%
Average	**32,1%**	**23,9%**	**0,4%**	**15%**

Table 17Results of delayed recalls in the rereading condition

Group/ participant	**Main ideas**	**Supporting ideas**	**Details**	**Total recall**
G1P11	33%	0%	0%	5%
G1P12	33%	33%	0%	16%
G1P13	33%	16%	0%	11%
G1P15	0%	66%	11%	28%
G1P18	66%	66%	11%	39%
G1P19	66%	16%	0%	16%
G2P2	33%	30%	16%	26%
G2P4	33%	7%	0%	9%
G2P5	16%	0%	0%	3%
G2P8	33%	15%	0%	13%
G2P9	16%	30%	8%	19%
G2P16	16%	15%	0%	9%
G3P1	20%	0%	0%	3%
G3P3	20%	10%	5%	9%
G3P6	60%	10%	11%	18%
G3P7	0%	10%	5%	6%
G3P10	40%	0%	5%	9%
G3P14	60%	0%	0%	9%
G3P17	40%	10%	11%	15%
AVERAGE	**17,6%**	**17,6%**	**0,4%**	**13,8%**

Table 18 Results of delayed recalls in the note taking condition

Group/ participant	Main ideas	Supporting ideas	Details	Total recall
G1P11	50%	7%	0%	12%
G1P12	33%	7%	8%	13%
G1P13	16%	7%	0%	6%
G1P15	33%	46%	0%	26%
G1P18	50%	23%	16%	26%
G1P19	16%	30%	0%	16%
G2P2	20%	10%	5%	9%
G2P4	60%	0%	5%	12%
G2P5	60%	20%	11%	21%
G2P8	40%	0%	0%	6%
G2P9	20%	10%	11%	12%
G2P16	20%	30%	5%	15%
G3P1	33%	16%	0%	11%
G3P3	33%	0%	0%	5%
G3P6	33%	33%	11%	28%
G3P7	0%	33%	0%	11%
G3P10	33%	0%	0%	5%
G3P14	33%	0%	0%	5%
G3P17	33%	0%	11%	11%
AVERAGE	**32,4%**	**14,3%**	**0,4%**	**13%**

4.2.2 Delayed recalls – individual performance

The performance of each participant in the delayed recall was compared across conditions (table 19). Before describing the results of this analysis, it is important to mention that, in the delayed recalls, many ideas were forgotten, especially details, as strongly corroborated by the relevant literature (Kintsch & van Dijk, 1978; van Dijk & Kintsch, 1983). That means, the effectiveness of each condition is not so evident when measured in number of participants. In general (main ideas, supporting ideas and details altogether), highlighting the text favored delayed recall for eight participants (G1P13, G2P4, G2P5, G2P9, G2P16, G3P10, G3P14, G3P17); six participants benefited from prior rereading (G1P12, G1P15, G1P18, G2P2, G2P8, G3P3) and three participants (G3P1, G3P6, G3P7) performed better in the delay recall of the previously annotated texts. Two participants were not included in this analysis because their results were similar across conditions (G1P11 and G1P19).

Seen separately, each level of textual hierarchy was influenced by one condition. Retention of main ideas was better in the rereading condition for seven participants (G1P13, G1P18, G1P19, G3P6, G3P10, G3P14, G3P17); the highlighting condition favored delayed recall of main ideas for five participants (G1P11, G1P15, G2P5, G2P9, G2P16, G3P7) and delayed recall of details was better in the note taking condition for four participants (G2P4, G2P8, G3P1, G3P3).

Supporting ideas appeared more in the delayed recalls of texts read under the highlighting condition for ten participants (G1P11, G1P13, G2P2, G2P4, G2P5, G2P9, G2P16, G3P3, G3P10, G3P17); note taking was related to good delayed recall of supporting ideas for four participants (G1P19, G3P1, G3P6, G3P7) and rereading enhanced delayed recall of supporting ideas for two participants (G1P15 and G1P18).

Details were better recalled after a week-delay in the note taking condition by four participants (G1P12, G1P18, G2P5, G2P9); in the highlighting condition by three participants (G1P13, G2P4, G3P6), and in the rereading condition by two participants (G1P15, G2P2). Five participants did not recall any detail in any condition. Thus, results from cross-condition individual comparisons are very mixed: main ideas were recalled by more participants in the rereading condition; supporting ideas were recalled by more participants in the highlighting condition; and details were recalled by more participants in the note taking condition. Since the difference among number of participants per level of idea is little, results of this contrastive analysis did not allow any assertive conclusions.

Table 19 Delayed recalls – results per participant

G1P11	**M**	**S**	**D**	**Total**
Rereading	33%			5%
Highlighting	**60%**	**10%**		12%
Note taking	50%	7%		12%
G1P12	**M**	**S**	**D**	**Total**
Rereading	33%	33%		**16%**
Highlighting	30%	33%		9%
Note taking	33%	7%	**8%**	13%
G1P13	**M**	**S**	**D**	**Total**
Rereading	**30%**	16%		11%
Highlighting	20%	**30%**	**11%**	**18%**
Note taking	16%	7%		6%
G1P15	**M**	**S**	**D**	**Total**

Rereading		**66%**	**11%**	**28%**
Highlighting	**60%**	30%	5%	21%
Note taking	33%	46%		26%
G1P18	**M**	**S**	**D**	**Total**
Rereading	**66%**	**66%**	11%	**39%**
Highlighting	60%	10%	5%	15%
Note taking	50%	23%	**16%**	26%
G1P19	**M**	**S**	**D**	**Total**
Rereading	**66%**	16%		16%
Highlighting	20%	10%		6%
Note taking	16%	**30%**		16%
G2P2	**M**	**S**	**D**	**Total**
Rereading	33%	30%	**16%**	**26%**
Highlighting	**33%**	**50%**		22%
Note taking	20%	10%	5%	9%
G2P4	**M**	**S**	**D**	**Total**
Rereading	33%	7%		9%
Highlighting	33%	**33%**	11%	**22%**
Note taking	**60%**		5%	12%
G2P5	**M**	**S**	**D**	**Total**
Rereading	16%			3%
Highlighting	**66%**	**33%**		**22%**
Note taking	60%	20%	**11%**	21%
G2P8	**M**	**S**	**D**	**Total**
Rereading	33%	15%		**13%**
Highlighting		**33%**		11%
Note taking	**40%**			6%
G2P9	**M**	**S**	**D**	**Total**
Rereading	16%	30%	8%	19%
Highlighting	**33%**	**50%**		**22%**
Note taking	20%	10%	**11%**	12%
G2P16	**M**	**S**	**D**	**T**
Rereading	16%	15%		9%
Highlighting	**33%**	**33%**		**16%**
Note taking	20%	30%	5%	15%
G3P1	**M**	**S**	**D**	**Total**
Rereading	20%			3%
Highlighting		**15%**		6%
Note taking	**33%**	**16%**		**11%**
G3P3	**M**	**S**	**D**	**Total**
Rereading	20%	10%	5%	**9%**
Highlighting		**15%**		6%
Note taking	**33%**			5%
G3P6	**M**	**S**	**D**	**Total**
Rereading	**60%**	10%	11%	18%

Highlighting	50%	7%	**33%**	26%
Note taking	33%	**33%**	11%	**28%**
G3P7	**M**	**S**	**D**	**Total**
Rereading		10%	**5%**	6%
Highlighting	**16%**	15%		9%
Note taking		**33%**		**11%**
G3P10	**M**	**S**	**D**	**Total**
Rereading	**40%**		**5%**	9%
Highlighting	33%	**15%**		**13%**
Note taking	33%			5%
G3P14	**M**	**S**	**D**	**Total**
Rereading	**60%**			9%
Highlighting	33%	15%		**13%**
Note taking	33%			5%
G3P17	**M**	**S**	**D**	**Total**
Rereading	**40%**	10%	11%	15%
Highlighting	33%	**23%**	8%	**19%**
Note taking	33%		11%	11%

4.2.3 Delayed recalls – results per text

Which condition has favored retention of information from each of the texts? In order to answer this question, results from delayed recalls were grouped per text. More main and supporting ideas of Text 1 were recalled in the note taking condition; details were better recalled when the text had been highlighted (table 20). As for Text 2, main ideas and details were better recalled in the rereading condition; highlighting seemed to favor delayed recall of supporting ideas (table 21). Delayed recalls of Text 3 showed better retention of main and supporting ideas in the highlighting condition, although details were better recalled when notes were taken (table 22). These contrastive analyses, albeit very mixed, are in consonance with the general retention results, indicating that highlighting, followed by note taking, seemed to favor retention of relevant information from the texts read.

Table 20 Results of delayed recalls for Text 1

T1+R	T1+H	T1+NT
G2P2	**G3P1**	**G1P11**
M 33%S 30%D 16%	S 15%	M 50%S 7%

G2P4 M 33%S 7%	**G3P3** S 15%	**G1P12** M 16%S 30%D 8%
G2P5 M 16%	**G3P6** M 50%S 7%D 33%	**G1P13** M 16%S 7%
G2P8 M 33% S 15%	**G3P7** M 16%S 15%	**G1P15** M 33%S 46%
G2P9 M 16%S 30%D 8%	**G3P10** M 33%S 15%	**G1P18** M 50%S 23%D 16%
G2P16 M 16%S 15%	**G3P14** M 33%S 15%	**G1P19** M 16%S 30%
	G3P17 M 33%S 23%D 8%	
TOTAL **M 24,5%** **S 16,1%** **D 4%**	**TOTAL** **M 23,5%** **S 15%** **D 5,8%**	**TOTAL** **M 30,1%** **S 23,8%** **D 5,1%**

Table 21 Results of delayed recalls for Text 2

T2+R (G1)	T2+H (G2)	T2+NT (G3)
G1P11 M 33%	**G2P2** M 33%S 50%	**G3P1** M 33%S 16%
G1P12 M 33%S 33%	**G2P4** M 33%S 33%D 11%	**G3P3** M 33%
1P13 M 33%S 16%	**G2P5** M 66%S 33%	**G3P6** M 33%S 33%D 11%
G1P15 S 66%D 11%	**G2P8** S 33%	**G3P7** S 33%
G1P18 M 66%S 66%D 11%	**G2P9** M 33%S 50%	**G3P10** M 33%
G1P19 M 66%S 16%	**G2P16** M 33%S 33%	**G3P14** M 33%
		G3P17 M 33%D 11%
TOTAL **M – 38,5%** **S – 32,8%** **D – 3,6%**	**TOTAL** **M – 33%** **S – 38,6%** **D – 1,8%**	**TOTAL** **M – 28,2%** **S – 11,7%** **D – 3,1%**

Table 22 Results of delayed recalls for Text 3

T3+R (G3)	T3+H (G1)	T3+NT (G2)
G3P1 M 20%	**G1P11** M 60%S 10%	**G2P2** M 20%S 10%D 5%
G3P3 M 20%S 10%D 5%	**G1P12** M 30%S 30%	**G2P4** M 60%
G3P6 M 60%S 10%D 11%	**G1P13** M 20%S 30%D 11%	**G2P5** M 60%S 20%D 11%
G3P7 S 10%	**G1P15** M 60%S 30%D 5%	**G2P8** M 40%
G3P10 M 40%	**G1P18** M 60%S 10%D 5%	**G2P9** M 20%S 10%D 11%
G3P14 M 60%	**G1P19** M 20%S 10%	**G2P16** M 20%S 30%D 5%
G3P17 M 40%S 10%D 11%		
TOTAL	**TOTAL**	**TOTAL**
M – 34,2% **S – 5,7%** **D – 3,8%**	**M – 41,6%** **S – 20%** **D – 3,5%**	**M – 36,6%** **S – 11,6%** **D – 5,3%**

4.2.4 Conclusions on the effects of study strategies on retention

After a gap of seven days, highlighting was associated with enhanced recall. More specifically, delayed recall of main ideas was better in the note taking condition, although highlighting had a similar effect. Analysis of cross-condition individual performance also revealed that more participants recalled better the texts read in the highlighting condition. Indeed, study strategies such as highlighting and note taking, which demand active engagement from the reader, have been extensively referred to in reading research as more effective for retention and learning (Nist & Simpson, 2000; Rawson & Kintsch, 2005).

Comparing the results from comprehension and retention exams allows us to affirm that, although rereading had a major impact on immediate comprehension, after a one-week delay its effect did not last, or has visibly weakened. Furthermore, rereading did not enhance delayed recall of main ideas. These findings are in accordance with previous studies (Amlund et al, 1986; Tomitch, 2003; Rawson & Kintsch, 2005; Callender& McDaniel, 2009) which demonstrated that rereading improved performance in immediate tests, but it did not improve performance in delayed tests.

This preponderance of note taking and highlighting over rereading in delayed recalls is not surprising. As discussed in the analysis of phase 1, rereading is closely linked with comprehension processes; in the terms of Gagné et al (1993), it can be seen as a comprehension monitoring process, i.e., a strategy to ensure comprehension and remediate miscomprehension in order to achieve global coherence. Torres (2003) also found that readers used local strategies such as rereading and translation to manage task difficulty and construct the main idea of the text. Thus, it might be the case that readers reread to understand the text, not to memorize its content.

In order to incorporate the use of these active study strategies in reading behavior, Nist and Simpson (2000) point to the need of extensive practice over time, with focus on specific contexts and content domains. In this sense, highlighting and note taking differ from rereading, which requires minimal or no training. As the authors emphasize, the reward of such training is positive, since "active study strategies may lead to more pronounced learning gains" (p.79).

Next, find the results from the Critical Writing Tasks and related discussion.

4.3 EFFECTS OF STUDY STRATEGIES ON LEARNING

In this section, the Critical writing task (henceforth CWT) is analyzed so as to check whether the strategies used when reading the texts had an impact in learning. Learning from text, as aforesaid, involves mainly re-organizing textual information by 1) connecting new material to prior knowledge (Just & Carpenter, 1987) and 2) applying new material in different contexts (Ferstl & Kintsch, 1999).

A great number of participants (eleven from a total of nineteen, to be precise) wrote a full-page answer to the CWT, demonstrating willingness to elaborate on the topic proposed. This result could have been an effect of task type: the fact that no genre nor length (such as an

argumentative paragraph or a minimum number of words) was required probably had a positive effect, as participants felt free to organize their answer in whatever format they preferred. Additionally, they were allowed to write in their native language, Portuguese.

The answers were organized according to the question posed, "What actions must be taken by the government and the users to identify fake news and reduce its spreading?"[6] That is, most texts were divided in actions to be done 1) by the government and 2) by users. This pattern illustrates another impact of task design on writing performance, since the instruction was used as a guide to textual organization.

Participants mentioned information from the texts in their answers, either directly or indirectly. Although some references were not explicit, they were included in the analysis since it is believed that the previous readings might have influenced the construction of an informed opinion on the topic. There were four explicit references to any of the texts (or events described in the texts) read a week before; the implicit mentions totalized thirty-one references (table 23). Noteworthy, the mentions comprised main ideas, supporting ideas and details, demonstrating that what was mindfully attended by the reader was retained and used regardless of level of hierarchy within the text.

Table 23 Critical writing task – mentions to the texts

Direct mentions
G1P15
"Outra medida a ser adotada pelo governo é a de auxiliar a checagem de informações para as mídias informativas, assim como feito no Kenya" (text 1 S7)
G2P2
"Medidas como a da Google vêm como um grande avanço nesse quesito" (text 2)
G2P16
"O grupo de jovens que receberão o curso da Google de como identificar fake news é um ótimo começo, contando (sic) que se expanda" (text 2 S5)
G3P7
"Contudo, conforme um dos textos traz, não fazer de todas as informações confidenciais auxilia bastante" (text 1 S7)
Indirect mentions
G1P11
"Acredito que por ter acesso a todos os dados dos usuário (sic),

[6]The question was originally written in Portuguese: "Que medidas devem ser tomadas pelo governo e pelos usuários para identificar fake news e reduzir sua propagação?"

todas estas empresas de mídias sociais tem (sic) aprimorar e atualizar constantemente ferramentas e programas de computação (..)" (text 2 S2)
"para garantir uma melhor proteção dos usuários aumentando cada vez mais a confiabilidade dessas informações" (text 3 M3)
"E por outro lado os usuários tem (sic) que cada vez mais saber lhe dar (sic) com toda essa rede de informações (text 2 S5)
"(...) e procurar ter mais cuidado com o que recebe e repassa (text 1 S6, S13)

G1P12

"Devem ser realizadas pesquisas e programas de computador por instituições idôneas (text 2 S2)
"Os dados do usuário não devem ser compartilhados" (text 3 M3)
"As redes sociais tem (sic) que garantir o financiamento de estudos e a criação de programas p/ proteção das redes e do usuário" (text 2 S2, text 2 S4)
"O usuário precisa autorizar se podem usar os dados e ter o direito de mantê-los sobre (sic) sigilo se assim desejar (text 3 M3)

G1P13

"Acredito que a principal motivo da propagação de fake news advém da falta de cuidado dos usuários de redes sociais que na maioria das vezes não checam a veracidade das notícias que compartilham" (text 1 S6, S13)
"Já o governo, junto dos profissionais de comunicação, deveria usufruir da tecnologia e criar um sistema de proteção para identificar mensagens falsas que são compartilhadas" (text 2 S2, S4)

G1P15

"as medidas que os usuários deveriam tomar são: refletir criticamente sobre as informações recebidas, buscando as mesmas informações em outras fontes, para se ter certeza de que a notícia é verdadeira, repassar as informações só após ter certeza de sua veracidade" (text 1 S6)

G1P18

"As mídias responsáveis pela sua veiculação deveriam criar sistemas de verificação de dados antes de permitir que uma publicação qualquer seja feita" (text 2 S2)
"Às pessoas cabe uma investigação melhor da notícia antes de compartilhá-la nas redes sociais.(...) Mais importante ainda seria evitar de (sic) passar mensagens e vídeos de 'whatsapp' para todos antes da verificação" (text 1 S6)
"Ao governo, caberia a realização de cursos para melhor discernimento da população em relação às notícias falsas" (text 2 S5)

G1P19

"cabe às pessoas se conscientizarem para não replicarem notícias falsas. Antes de compartilhar informações cada indivíduo deve se certificar de que aquilo é verdadeiro, acompanhar se veículos de credibilidade já deram a mesma informação" (text 1 S6)

G2P2

"Os usuários não devem ser punidos de algum modo, mas talvez alertados sobre as graves conseqüências da propagação da inverdade" (text 1 S13)

G2P4

“é importante que sejamos críticos das fontes e possibilidades de usos da notícia” (text 1 S6)
“As medidas de curto prazo que devem ser tomadas são: a utilização de tecnologias para validar a veracidade e a fonte de notícias (...)” (text 2 S2)
G2P8
“Os usuários devem conferir se a notícia lida é real, e caso não tenham certeza, não devem compartilhar a notícia” (text 1 S6)
G2P9
“Já as medias que deveriam ser tomadas pelos usuários seria sempre conferir a fonte da notícia e pesquisar mais sobre o assunto mencionado na notícia” (text 1 S6)
G2P16
“Se houvesse um governo mais transparente e acessível, as fake news não seriam tão críveis” (text 1 S7)
“Por último, se cada usuário tirasse alguns minutos para verificar as fontes da informação, muitas fake news seriam logo evitadas” (text 1 S6)
G3P1
“Acredito que a maneira mais eficiente para se combater esse problema seja a busca pela fonte de informação” (text 1 S6)
G3P3
“Uma das principais medidas é o combate da (sic) disseminação de fake news por meio de boots. O investimento em tecnologia da informação é crucial no combate da (sic) propagação de notícias falsas” (text 2 S2)
G3P6
“Primeiramente, é preciso que o leitor tenha uma visão crítica e questionadora a respeito das notícias que lê” (text 1 S6, S13)
“Esse fato é bem observado em épocas eleitorais, onde a grande maioria das fake news busca prejudicar ou auxiliar os candidatos” (text 1 S4, S8, S9; text 3 M3)
“Também seria interessante que o governo realizasse campanhas alertando o perigo das fake news e como identificá-las” (text 1 D8)
G3P7
“Por parte dos usuários, basicamente: checar fontes e procurar ter mais de uma fonte a fim de corroborar (sic) as informações” (text 1 S6)
G3P10
“As ferramentas tecnológicas ajudam a investigar com facilidade e agilidade a procedência das fake news” (text 2 S2)
G3P14
“Os usuários devem utilizar mais sites confiáveis, de grande nome, pois são estes sites que irão produzir notícias mais corretas” (text 1 S6)
G3P17
“O governo deveria implantar e oferecer sistemas eletrônicos e ferramentas para favorecer o controle das informações que circulam nos meios de comunicação. (...) As empresas também deveriam usar ferramentas de análise” (text 2 S2)

A positive impact of the CWT was its likely role in fostering the reader's elaborative inferencing process. As aforementioned in chapter 2, elaborative inferences comprise the associations made by the reader between textual information and his/her knowledge on the topic. They "do not necessarily occur during comprehension, but when they are made (e.g., because subjects were instructed to elaborate) they may have quite beneficial effects on text memory" (van Dijk and Kintsch, 1983, p.51). Therefore, this task might have led to improved learning results by demanding from the reader integration between newly acquired knowledge and long-term memory traces. On the other hand, because thetask designed allowed participants to use their background knowledge – which is significantly stronger in memory – the information from the texts, which was learned more recently, was used to a lesser extent. This is a reasonable outcome, since it is easier to write about what you already know.

With regard to the effect of the strategies on learning, the relationship between reading condition and use of learned information in the critical writing tasks was not a straightforward one. Nevertheless, as can be seen in table 24, among the 35 ideas that had been cited by participants in the CWTs, 15 had been read and reread, and 12 have been studied under the highlighting condition, and 8 had been read when taking notes. Since the effects of rereading were not evident in the delayed recalls, this data may indicate a connection between highlighting and learning results.

Table 24 Presence of the ideas mentioned in the recalls

Group/Text/Idea	**Strategy condition**
G1P15 T1 S7	NT
G2P2 T2	H
G2P16 T2 S5	H
G3P7 T1 S7	H
G1P11 T3 M3	H
G1P11 T2 S2	R
G1P11 T2 S5	R
G1P11 T1 S6, S13	R
G1P12 T2 S2	R
G1P12 T3 M3	H
G1P12 T2 S2, S4	R
G1P13 T1 S6, S13	NT
G1P13 T2 S2, S4	R
G1P15 T1 S6	NT

G1P18 T2 S2	R
G1P18 T1 S6	NT
G1P18 T2 S5	R
G1P19 T1 S6	NT
G2P2 T1 S13	R
G2P4 T1 S6	R
G2P4 T2 S2	H
G2P8 T1 S6	R
G2P9 T1 S6	R
G2P16 T1 S7	R
G2P16 T1 S6	R
G3P1 T1 S6	H
G3P3 T2 S2	NT
G3P6 T1 S6, S13	H
G3P6 T1 S4, S8, S9	H
G3P6 T3 M3	R
G3P6 T1 D8	H
G3P7 T1 S6	H
G3P10 T2 S2	NT
G3P14 T1 S6	H
G3P17 T2 S2	NT

4.3.1 Conclusions on the effects of study strategies on learning

The results obtained by the Critical Writing task pointed to the participants' high motivation to write on the topic to be learned: the majority wrote a consistent text, using the task instructions to organize their writing. There were four direct mentions and 31 indirect mentions to the texts read for this study. The effect of strategy use on learning was not very clear, since participants did not make numerous explicit mentions to the texts. Nonetheless, out of the 35 ideas mentioned, 12 had been previously highlighted, pointing to a possible linkbetween highlighting and long-term learning.

Notwithstanding, the relationship between learning and prior knowledge is an intricate one. Learning involves conceptual change and update of previously learned information. Dole (2000) describes the reader's existing conceptions and how they interact with acquisition of new content:

> There are three aspects of existing conceptions that will affect whether learners will consider new and conflicting information. These aspects are: *strength* of the existing conceptions, *coherence* or

> interrelatedness and consistency of conceptions, and learner's *commitment* to their existing conceptions (p.109).

Thus, depending on the reader's beliefs and degree of commitment to his prior conceptions, conceptual change might be impaired. One can hypothesize that this was the case of participants in the present study: since the topic was a very controversial one (fake news and fact checking), the strength of their prior knowledge and/or commitment with their conceptions might have interfered (not necessarily conflicted) with the update of the concepts.

In addition, some factors seem to have hindered learning results. One is task design, which might not have clearly demonstrated students' learning from the texts studied a week before. Since a significant number of participants did not explicitly mention the ideas present in the text, learning assessment was problematic. Another possible explanation is that the students may lack expertise in stating an opinion on a topic by citing sources of information that give credibility to the text, although some of them were undergraduate students. This perspective brings pedagogical implications, as it points to the need for more practice in informed writing.

Next, see the participants' self-reported reading behavior regarding the use of study strategies.

4.4 PARTICIPANTS' PERCEPTIONS ON THE USE OF STUDY STRATEGIES

In this section, the answers from the Survey of Reading Strategies as well as the retrospective questionnaires are analyzed to trace students' strategic behavior when reading and studying academic material in English.

4.4.1 The Survey of reading Strategies

The Survey of Reading Strategies(henceforth SORS), created by Mokhtari and Sheorey (2002) – and reproduced in appendix T – were used to trace participants' reading behavior when reading academic material in EFL; the version used in this study was translated to Portuguese(appendix U).In general, the strategies covered were rated as frequently used.

Across the 30 strategies listed in the survey, there were 68 occurrences of "1" (never), 142 occurrences of "2" (almost never), 186 occurrences of "3" (almost always) and 172 occurences of "4" (always), as represented in figure 3. Thus, more answers referred to high-frequency strategy use; putting together the 3-4 points in the Likert scale, there were 358 mentions, as opposed to 210 mentions to low-frequency (1-2 points) use of these strategies. These results demonstrate that the participants are very strategic when reading academic material in English, using a wide range of strategies to construct meaning and cope with difficulty.

Figure 3Frequency of strategy use – results from the SORS

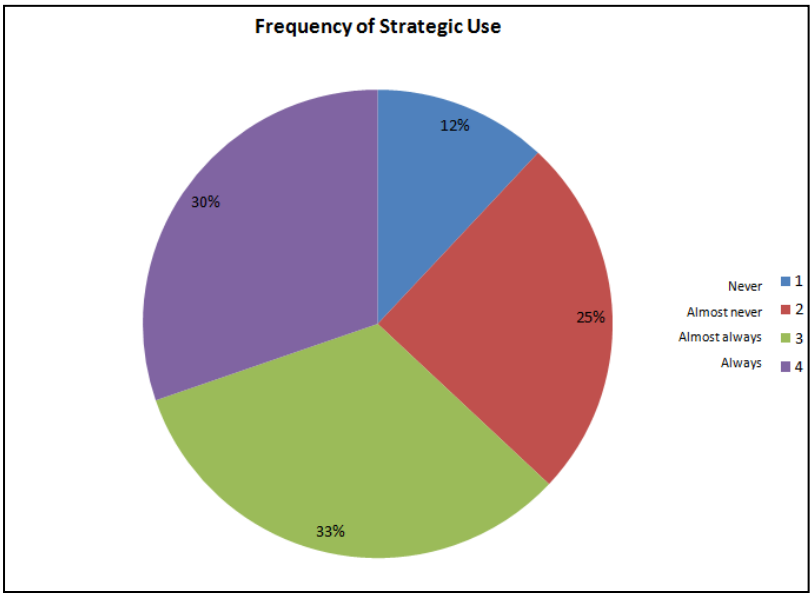


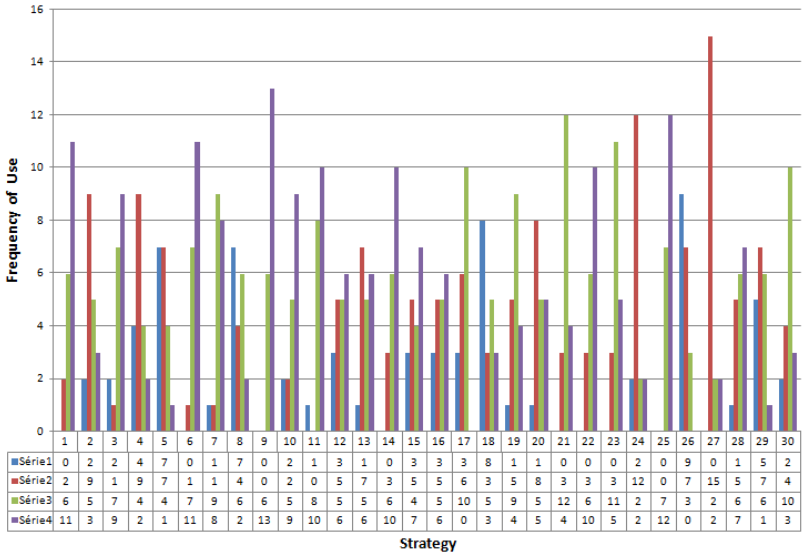
Table 25 Low and high-frequency strategies as reported in the SORS

	LOW FREQUENCY STRATEGIES
	Strategies rated as frequency 1
SUP	5. Quando o texto se torna difícil, eu leio em voz alta para me ajudar a entender o que eu leio.
GLOB	8. Eu analiso o texto notando suas características como tamanho e organização.
SUP	18. Eu faço paráfrase (reformular as ideias nas minhas próprias palavras) para entender melhor o que eu leio.
SUP	26. Eu me faço perguntas que gostaria que fossem respondidas no texto.
	Strategies rated as frequency 2
SUP	**2. Eu tomo notas enquanto leio para me ajudar a entender o que estou lendo.**
GLOB	4. Antes de ler o texto, faço uma leitura de reconhecimento para identificar seu tema.
SUP	5. Quando o texto se torna difícil, eu leio em voz alta para me ajudar a entender o que eu leio.
SUP	13. Eu uso materiais de consulta (ex.: dicionários, aplicativos) para me ajudar a entender o que leio.
GLOB	20. Eu uso características tipográficas como negrito e itálico para identificar informações importantes.
GLOB	24. Eu tento fazer suposições sobre o conteúdo do texto quando leio.
GLOB	27. Eu verifico se minhas suposições sobre o texto estão certas ou erradas.
SUP	29. Quando estou lendo, eu traduzo do inglês para minha língua materna.
	HIGH FREQUENCY STRATEGIES
	Strategies rated as frequency 3
GLOB	1. Eu penso no que sei para me ajudar a entender o que eu leio.
PROB	7. Eu leio devagar e com cuidado para me certificar de que entendo o que estou lendo.
GLOB	17. Eu uso evidências contextuais (quem, quando, onde etc) para me ajudar a entender melhor o que estou lendo.
PROB	19. Eu tento imaginar ou visualizar a informação para me ajudar a lembrar o que eu leio.
GLOB	21. Eu analiso criticamente e avalio a informação apresentada no texto.
GLOB	23. Eu verifico minha compreensão quando me deparo com informação nova.

SUP	30. Quando estou lendo, eu penso em informações em ambas as línguas, inglês e minha língua materna.
	Strategies rated as frequency 4
GLOB	1. Eu tenho um objetivo em mente quando leio.
GLOB	6. Eu verifico se o conteúdo do texto corresponde aos objetivos da minha leitura.
PROB	9. Eu tento retomar a leitura atenta quando perco a concentração.
SUP	**10. Eu sublinho ou circulo informação no texto para me ajudar a lembrar.**
PROB	11. Eu ajusto minha velocidade de leitura de acordo com o que estou lendo.
GLOB	12. Quando estou lendo, eu decido o que ler mais atentamente e o que ignorar.
PROB	14. Quando o texto se torna difícil, eu presto mais atenção no que estou lendo.
GLOB	15. Eu uso tabelas, figuras e imagens no texto para aumentar meu entendimento.
PROB	16. Eu paro de tempos em tempos para pensar no que estou lendo.
SUP	22. Eu retrocedo e avanço no texto para encontrar relações entre as ideias.
PROB	**25. Quando o texto se torna difícil, eu o releio para aumentar minha compreensão.**
PROB	28. Quando leio, eu faço suposições sobre o significado de palavras ou frases desconhecidas.

The frequency of use ofthe strategies surveyed is described in table 25 and represented in figure 4. The graph in figure 4 represents participants' reported frequency of use. Each bar color corresponding to one type of answer: blue (never), red (almost never), green (almost always), and purple (always); each number corresponds to a strategy surveyed. The number of answers per type is given in the bottom. Underlining/circling (a process analogous to highlighting) and rereading were reported to be always used. Noteworthy, note taking was rated as low frequency, as already reported in the retrospective questionnaires. It seems readers acknowledge the efficiency of this strategy, but have not yet incorporated it into their study habits.

Figure 4 Frequency of use per strategy



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Série1	0	2	2	4	7	0	1	7	0	2	1	3	1	0	3	3	3	8	1	1	0	0	0	2	0	9	0	1	5	2
Série2	2	9	1	9	7	1	1	4	0	2	0	5	7	3	5	5	6	3	5	8	3	3	3	12	0	7	15	5	7	4
Série3	6	5	7	4	4	7	9	6	6	5	8	5	5	6	4	5	10	5	9	5	12	6	11	2	7	3	2	6	6	10
Série4	11	3	9	2	1	11	8	2	13	9	10	6	6	10	7	6	0	3	4	5	4	10	5	2	12	0	2	7	1	3

As regards the type of strategy used (according to the categorization proposed by Sheorey & Mokhtari, 2002), and in consonance with these author's findings, support strategies were the least frequent: seven of them were among the ones labeled under low use. This might indicate that readers are not familiar with this type of strategy (perhaps because they have not been taught so) or because they are not willing to engage in more active processing.

Global and problem-solving strategies were the most frequently used strategies. This data is in consonance with the results of the present study, since rereading (the strategy associated to more immediate recall of the text's ideas) is a problem-solving strategy. This type of strategy is commonly used when comprehension problems arise during reading – which is very often the case in ESL reading. Global strategies involve preparing to read – and such metacognitive awareness isusually present when reading in a foreign language, especially for study purposes and considering that the participants in the present study were intermediate EFL students. Thus, it can be hypothesized that, because of the aforementioned factors, they engaged in more shallow processing to construct a mental representation of what they read (Craik & Lockhart, 1972; Just & Carpenter, 1987).

Importantly, Mokhtari and Sheorey (2002) emphasize that the value of the survey, more than offering a categorization of the types of strategies that readers use when reading academic material, is bringing awareness on their reading behavior, developing readers' metacognitive thinking.

4.4.2 Retrospective questionnaires

I now turn to the second part of the retrospective questionnaires, applied in phase 1, in which participants were asked about their perceptions on the usefulness of each strategy used. I shall describe participants' perceptions on each of the strategies used in this study, contrasting their answers to the results from immediate and delayed recalls and the SORS. A full account of participants' answers can be found on appendix Y.

Note taking was seen as helpful by fifteen participants. Seven of them pointed out the importance of this strategy to memorization (G1P12, G1P13, G1P18, G1P19, G2P2, G3P6, G3P14). Notes were also referred to as an effective manner to organize/classify the ideas of the text (G1P19, G2P5, G2P16). Four participants reacted negatively about note taking, providing reasons related to lack of time (G3P7, G3P17), pointing this strategy as more time consuming or having over relied on the notes, failing to recall the ideas immediately after reading. This strategy was the second most effective to retention of information, as shown by the results of delayed recalls; it was also rated as low frequency in the SORS. Thus, it can be said that, although note taking is acknowledged by its effectiveness, it lacks efficiency; the fact that it demands more time and effort seems to discourage its use.

Sixteen participants evaluated highlighting as supportive to comprehension. Seven of them said it was a helpful tool to identify the main ideas in a text (G1P13, G1P15, G2P9, G1P18, G3P3, G3P6, G2P16) and also to guide further consultation, as pointed out by G2P16 and G3P10. Three participants reported having experience with this strategy (G2P8, G3P10, G3P17). Interestingly, three participants perceived highlighting as inappropriate for a first contact with a text; they related the strategy to other processes like memorization, later reading and summarization. These testimonies unveil the participants' metacognitive awareness, since they were able to recognize that different levels of processing require distinct types of strategies. They are also congruent with the results from delayed recalls, which revealed that highlighting was the most effective strategy to retention of

information. In the SORS, highlighting was rated as “always used”, in consonance with participants’ reported acquaintance with the strategy in the retrospective questionnaire.

All participants perceived rereading as an effective tool to help understand the text. Five participants (G2P14, G3P17, G3P6, G1P13, G3P3) related rereading to enhanced comprehension. Three participants (G2P8, G3P3, G2P16) reported having grasped more details after rereading. Two participants (G1P12, G2P5) emphasized the role of rereading in helping identify important ideas. Other two participants (G1P19, G3P7) pondered time as an important factor to make the most of this strategy. These answers are congruent with the results from immediate recalls, which pointed to rereading as an effective strategy to immediate recall. Nonetheless,rereading did not lead to significant retention and learning results; thus, when the objective of the reader is to learn from text, rereading should not be regarded as an effective study strategy.

Three participants pointed out the effectiveness of using combined strategies (G2P2, G2P4, G3P10). Indeed, as said in Chapter 2, metacognitive awareness may not be simply a matter of knowing which strategies to use, but how to use them effectively, orchestrating different strategies in the task of monitoring comprehension (Paris et al, 1983; Anderson, 1991).

4.4.3 Conclusions on participants’ perceptions on the use of study strategies

All things considered, participants’ perceptions on their EFL reading behavior,as seen by their answers to the SORS and the retrospective questionnaires, were coherent with the results of the comprehension and retention tests. Participants reported being very strategic when studying academic texts in English, using a variety of actions to monitor their learning.

The strategies rereading and highlighting were reported to be frequently used. Indeed, previous aforementioned studies have already pointed to the readers’ familiarity with rereading (Goetz, 1991; Callender & MacDaniel, 2009; Dunlosky et al, 2013). Note taking, on the other hand, was rated as low frequency, which is also in consonance with literature in the field, since this is a strategy that requires more effort and time to be applied (Tomitch, 2012).Interestingly, and congruent with the findings of the present study, Goetz (1991) found

that study strategies that are perceived as successful were rated as low frequency, evidencing a gap between strategies considered efficient and their actual use.

The apparent contradiction between students' perceived strategy effectiveness and actual use of them is not surprising. Although taking notes was acknowledged by participants as an efficient study strategy, it consumes more time and cognitive resources. As already approached in chapter 2, study strategies are highly demanding and time consuming actions (Just & Carpenter, 1987; Tomitch, 2012). That means, even though students know about its efficiency, they often make use of more "simple" strategies, demonstrating low engagement. Notwithstanding, even though note taking is a complex strategy, its effects in long-term retention and learning are worth the effort.

With regard to the type of strategy preferred by the participants, global and problem-solving strategies were reported as more often used. This makes sense, since in study situations, they engage in learning the content and often need to achieve a global understanding of what they read. Additionally, intermediate EFL readers tend to have more comprehension problems; luckily, since they are (at least reportedly) strategic readers, they know about the array of strategies at their disposal to cope with these situations.

In closing this chapter, I would like to reiterate the complexity of learning strategy effectiveness and its relation with the context and the task demands. McDaniel and Einstein (1989) argue for a *material-appropriate view of processing*, in which "the materials, the kind of criteria test used to assess memory, and the learner's knowledge base all influence the patterns of memory performance observed and the effects of different variables on learning and memory" (p.142). As stated in the introduction, the objective of this work was not merely labeling strategies under "better" or "worse", but raising readers' awareness on the wide range of aspects to be considered when selecting a strategy, especially when reading to learn.

5 FINAL REMARKS, LIMITATIONS OF THE STUDY, SUGGESTIONS FOR FURTHER RESEARCH, AND PEDAGOGICAL IMPLICATIONS

This Chapter readdresses the main findings of this study, retaking the procedures adopted, and pointing out some of its limitations and suggestions for further research. Finally, a few pedagogical implications are presented.

5.1 FINAL REMARKS

Reading a text with the objective of learning its content involves a different degree of cognitive involvement compared to other reading situations (Lorch et al 1993, 1995; Ferstl & Kintsch, 1999), and thus calls for the application of a different set of strategies, which were approached in this thesis as study strategies (Simpson, 1984; Spring, 1985; Just & Carpenter, 1987; Tomitch, 2012). This study had as its main goal to investigate, among a group of intermediate EFL learners, the effectiveness of study strategies, in particular note taking, highlighting, and rereading, in the cognitive levels of comprehension, retention, and learning from EFL texts.

The method developed to pursuit this goal was divided into two phases. Phase one comprised reading three expository texts, under different conditions, i.e., rereading, highlighting, and note taking, and answering a comprehension exam. This exam consisted of an immediate recall and a set o five true or false statements. Additionally, participants answered retrospective questionnaires to report their perceptions on 1) text difficulty and 2) strategy efficiency. Seven days later, in phase two, they performed a delayed recall of each of the texts. The Critical writing task followed the delayed recalls and consisted of answering a question on the topic approached by the three texts. Finally, participants answered the Survey or reading Strategies so as to trace their strategic behavior when reading academic material. In order to ensure that the participants had some knowledge on the strategies that were focused in this study, prior to data collection, they were offered two study strategy workshops during class time, although participation in this part was not mandatory.

In sum, the results pointed to a relationship between strategic behavior and performance in the comprehension, retention, and learning

measures utilized, as summarized in the answers to the research questions, revisited below:

RQ1 Which study strategies, among highlighting, note taking and rereading, promote better comprehension and immediate retention, as measured by a test containing true or false statements and an immediate recall?

Rereading was the strategy that was associated withbettergeneral results in immediate recalls and also with immediate recall of main ideas; out of the three texts read by participants, two (Texts 1 and 2) were better immediately recalled after rereading. These results are coherent with literature in the area, which points to this strategy as helpful at thelevel of comprehension (Amlud et al, 1986; Krug et al, 1990; Dunlosky et al, 2013). A possible explanation for these findings is lack of engagement in more efficient processing (Dunlosky et al, 2013), since rereading is referred in the relevant literature as a lower-level processing strategy (Craik & Lockhart, 1972; Callender & McDaniel, 2009).Highlighting was the second most effective strategy, linked with high scores in the true or false task of texts 2 and 3. Furthermore, the ideas that had been highlighted and annotated were strongly present in the participants' immediate recalls, demonstrating a positive impact on the use of these strategies on immediate retention.

RQ2 Which study strategies, among highlighting, note taking and rereading, promote better delayed retention, as measured by a free recall a week after reading each of the texts?

After a one-week delay, more ideas were recalled among the texts that had been highlighted; additionally, more participants had better performance in this condition. More main ideas were recalled after a delay from texts that had been read in the note taking condition, and more supporting ideas were recalled when the text had been highlighted. Note taking enhanced delayed recall of main and supporting ideas for Text 1, while highlighting improved delayed recall of supporting ideas for Text 2 and of main ideas for Text 3. The effects of rereading have not endured delayed tests, demonstrating that this strategy was not very effective to retention of content – a crucial aspect when reading a text in order to learn.

RQ3 Which study strategies, among highlighting, note taking and rereading, promote better learning, as measured by a critical writing task?

Participants wrote consistent answers, demonstrating engagement with the writing task and interest in the topic. Task design also had a positive effect on the organization of the answers. In addition, writing about the topic studied fostered the generation of elaborative inferences – a process that positively impacts learning (van Dijk & Kintsch, 1983). There were few direct mentions to the texts previously read, making it difficult to establish a connection between the strategies used when studying the texts and their effect on learning. Nonetheless, we hypothesize a relationship between highlighting and long-term learning, since many of the ideas mentioned either directly or indirectly were read in this condition. The fact that participants made fewdirect mentions might be associated to difficulty in encoding new information due to the strength of their existing conceptions and the learner' commitment to them (Dole, 2000). As a consequence, participants seemed to rely more on their prior knowledge than to articulate recently acquired information learned from the texts. On the one hand, we ponder the effectiveness of the critical writing task in apprehending the learning results; on the other hand, participants' lack of academic writing expertise is also considered.

RQ4 What is the students' perception in relation to the use of study strategies in their academic life?

Participants' answers pointed to high frequency of use of the strategies listed in the survey, meaning that they are very strategic when reading academic material in English. More specifically, note taking was rated as low frequency, while underlining/circling (a process similar to highlighting) and rereading were reported to be always used. This data is consistent with previous studies, which point out to rereading as a highly used strategy, albeit less efficient (Dunlosky et al, 2013; Callender & McDaniel, 2009). Note taking, on the other hand, involves active processing and thus leads to more consistent learning results; still, because it demands more time and effort, readers do not make use of this valuable tool. In relation to the categories of strategies proposed by Mokhtari and Sheorey (2002), global and problem-solving strategies were rated as often used, which can be explained by the fact that the participants were intermediate EFL students in a study condition. Support strategies were least frequent, probably due to unfamiliarity or

unwillingness to use this more cognitively demanding tool; if these assertions hold true, they point to the need for development of metacognitive awareness and the importance of instruction on strategies.

All in all, in the comparison between immediate and delayed recalls, rereading has had a pronounced effect immediately after studying the texts; nonetheless, these results have not resulted in long-term learning. After a delay of seven days, the texts that had been studied under the highlighting and note taking conditions were better recalled.That said, it is important to emphasize that the students' strategic behavior is developed continuously through practice and instruction. Thus, it requires time and effort on the part of the learner. This study was an attempt to foster the readers' metacognitive awareness when studying EFL texts.

5.2 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH

Although this study was conceived on the basis of informed literature and all its methodological procedures were carefully planned, I am aware that it has its own limitations. The first of them concerns proficiency; participants were selected taking into account the level they were enrolled at in the extracurricular English course. They were not formally assessed for their proficiency in English, through the application of a standardized test. This procedure would have made the sample of participants more linguistically homogeneous and thus, enhanced the reliability of the results.

There is one limitation concerning the lack of evidence on the effect of strategy instruction on participants' performance in the study. The two workshops on highlighting and note taking offered to the participants prior to data collection were not requirements to participation; they were given to ensure participants'knowledge on the study strategies to be worked with in the study. Notwithstanding, reports in the Retrospective questionnaire pointed to an assimilation of the concepts approached in the workshops, in terms such as *main idea* and *important ideas*. Additionally, the participants informally verbalized about the usefulness of the workshops to the researcher, making positive comments about the intervention. The point is that it was unclear to this researcher the extent to which the participants' metacognitive learning behavior was influenced by the previously received instruction on strategies. Thus, further studies on study strategies could also attend to

the effect of instruction, as already extensively discussed in previous research (Baker & Brown, 1984; Simpson, 1984; Block, 1986; Baker, 1989; Chamot, 2005; Dunlosky et al, 2013).

The control of the three conditions participants underwent in this study can me mentioned as another limitation. Although they received oral and written instructions on which strategy to use in each condition, rereading might have permeated the other two conditions (highlighting and note taking). Future studies could tackle this issue more accurately through experiments such as eye tracking.

Another issue is that the comprehension and retention measures used in this study were free recalls – a rather uncommon type of reading assessment in classrooms. As a result, although free recalls are long-established methods in reading research, students are not familiar with this type of evaluation. Interestingly, even in more traditional types of assessment (multiple-choice, short-answer questions, and summarization), the rereading strategy had not showed significant benefits (Callender & McDaniel, 2009).

Another limitation of this study refers to the design of the critical writing task. This instrument consisted of a question, designed to have participants reflect on the topic learned based on the three texts previously read and on their domain knowledge. It was believed that this short writing task would motivate the participants to use the ideas that had just been recalled after a delay. Nonetheless, this instrument might not have offered a consistent account of participants' learning outcomes, since they made few explicit mentions to the ideas that were in the texts. As aforementioned in Chapter 4, measuring learning from text is a great challenge, and finding out accurate correlations between the use of study strategies and their impact on learning is an even greater matter.

Another limitation concerns the sample size. Nineteen participants participated in the present study. This number can be considered a limitation in the sense that it did not enable a quantitative analysis. Therefore, a replication of this study with a larger sample of participants is suggested, as it would bring quantitative data to the discussions on study strategy efficiency, giving more credibility to the analyses.

5.3 PEDAGOGICAL IMPLICATIONS

This study has several pedagogical implications. The first is the importance of fostering students' metacognitive awareness when reading in L2 (Baker & Brown, 1984; Baker, 1989; Paris, Wasik &

Turner, 1991; Nist & Simpson, 2000) and, in specific, awareness on study strategies (Spring, 1985). The achievement of conditional knowledge (Paris et al, 1991), discussed in chapter 2, is closely linked to strategy training with authentic texts and tasks so as to enable students to evaluate which strategy is appropriate to each context. Especially in study situations, when readers have the goal to learn from text, simply reading does not suffice. Learners need to be aware of the tools at their disposal as well as to reflect on how they use study strategies, selecting the ones that are suitable to their goals, evaluating and monitoring the efficiency of these strategies, and making changes when necessary in order to optimize their learning.

In order to help students become more metacognitive readers, formal instruction on reading and study strategies is of paramount importance; researchers point out to the need for more studies on strategy instruction in classroom settings (Nist & Simpson, 2000; Chamot, 2005).In a broad review of the literature on college studying, Nist and Simpson (2000)describe four components of effective learning-to-learn programs. According to them, programs should: 1) prepare students for their academic tasks; 2) motivate students to work on academic tasks and take into account the professors' learning goals; 3) emphasize a variety of validated strategies; and 4) encourage strategy transfer and modification.Furthermore, the learning tasks should foster students' reasoning and complex thinking; this might trigger the use of more complex strategies and inhibit the use of lower level processing strategies (e.g. rereading) that they are more used to and are easier to be employed (Nist & Simpson, 2000).

The two workshops taught to students had the initial objective of simply getting them acquainted with the strategies approached in this study. Nevertheless, in this researcher's evaluation, the intervention went further. Not only did it provide an opportunity for students to think of their own strategic reading behavior in the discussions posed; it also offered practical ideas on how to use strategies more effectively, as well as varied moments of practice individually, in pairs and in open group. Students left the classroom making comments like "I used to highlight everything!" or "it was really helpful, thank you". This feedback was rewarding, since it showed the positive impact the study had on participants.

Since learning from text is a step towards becoming an informed writer (Bazerman, 2010), this study has in a way contributed to the development of participants' critical thinking. The critical writing task attempted at encouraging their role as active readers who are able to

respond to texts and write a consistent opinion on the issue. Participants felt very motivated to write on the topic, acknowledging its importance. Even though the texts have not been explicitly cited by all participants, it is believed that they benefited from the opportunity of practicing critical writing in English.

At last, it is expected that the results obtained in this study have somehow contributed to the discussions on metacognition and study strategies by providing evidence on the need for a more active role of the student when reading a text with the objective of learning its content. In order to develop students' strategy awareness, EFL teachers can provide overt instruction on aspects such as the task at hand, the study strategies that can be applied, and the characteristics of the text. Learning from text is an amazing cognitive ability, and being aware of its influential factors might optimize this process of one'simprovement and, as a consequence benefit others.

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APENDICES

APPENDIX A – Parecer consubstanciado do CEP

UNIVERSIDADE FEDERAL DE SANTA CATARINA - UFSC

PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês

Pesquisador: Lêda Maria Braga Tomitch

Área Temática:

Versão: 2

CAAE: 89260218.5.0000.0121

Instituição Proponente: Centro de comunicação e expressão

Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 2.725.613

Situação do Parecer:
Aprovado

Necessita Apreciação da CONEP:
Não

FLORIANOPOLIS, 20 de Junho de 2018

Assinado por:
Maria Luiza Bazzo
(Coordenador)

APPENDIX B – Informed Consent Form Institution

DECLARAÇÃO

(responsável pela instituição da coleta de dados)

Declaro para os devidos fins e efeitos legais que, objetivando atender as exigências para a obtenção de parecer do Comitê de Ética em Pesquisa com Seres Humanos, e como representante legal da Instituição Cursos Extracurrculares UFSC , tomei conhecimento do projeto de pesquisa: "*Highlighting, note taking, rereading: comparing the effectiveness of study strategies on comprehension, retention and learning from ESL texts*", e cumprirei os termos da Resolução CNS 510/16 e suas complementares, e como esta instituição tem condição para o desenvolvimento deste projeto, autorizo a sua execução nos termos propostos.

Florianópolis, …...../...../.....

ASSINATURA: .....

NOME: .....

CARGO: ….....

CARIMBO DO/A RESPONSÁVEL

APPENDIX C – TCLE (Pilot study)

UNIVERSIDADE FEDERAL DE SANTA CATARINA
Centro de Comunicação e Expressão
Departamento de Língua e Literatura estrangeiras
Programa de Pós-graduação em Inglês: Estudos lingüísticos e Literários

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

ESTUDO PILOTO

Caro participante,

Me chamo Juliana do Amaral e sou estudante de mestrado em Língua Inglesa na Universidade Federal de Santa Catarina (PPGI/UFSC). Convido você a participar do projeto de pesquisa intitulado **Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em Inglês** (*Highlighting, note taking and rereading: comparing the effectiveness of study strategies on comprehension, retention and learning from ESL texts)*, orientado pela profª Dra. Lêda Maria Braga Tomitch.Você foi selecionado(a) porque é aluno de Língua Inglesa no curso extracurricular da UFSC.

Objetivo da pesquisa:

O objetivo desta pesquisa é entender o que os alunos fazem quando precisam aprender a partir da leitura de um texto em inglês e, em especial, verificar se o uso das estratégias de leitura realçar texto, tomar notas e reler promove maior compreensão, retenção a aprendizado de textos em inglês.

Procedimentos:

Na primeira fase deste piloto, será solicitada a leitura de três textos em inglês; em cada texto, você será instruído a usar uma estratégia diferente. Após ler cada texto, você irá fazer um teste de compreensão. A fase seguinte ocorrerá uma semana depois e visa

verificar sua retenção: será solicitado que você escreva em português o que se lembra de cada um dos textos lidos. A última etapa será a escrita de um texto em português sobre o tema abordado nos três textos.

A participação na presente pesquisa não envolve riscos de alto nível, mas há a possibilidade do surgimento de ansiedade e nervosismo, inerentes a qualquer situação de teste. Para ajudá-lo, serão dadas instruções escritas e orais prévias à coleta de dados em cada fase. Ao final da pesquisa, a pesquisadora irá lhe mostrar as conclusões tiradas a partir dos resultados das atividades, o que poderá lhe trazer uma melhor percepção sobre sua leitura em Inglês e como as estratégias que você usou influenciaram seu aprendizado.

Não há compensação financeira pela sua participação na pesquisa, mas os pesquisadores se comprometem a garantir o ressarcimento de eventuais despesas em relação a transporte e alimentação. Apesar de os riscos da pesquisa serem mínimos, também nos comprometemos a garantir indenização diante de eventuais danos decorrentes desta pesquisa.

Confidencialidade:

Os resultados serão publicados, porém, nenhuma informação pessoal sua constará nos resultados, mantendo-se assim a confidencialidade da pesquisa. Apenas a pesquisadora e a orientadora terão acesso aos dados coletados antes de os mesmos serem preparados para publicação. A participação ou não participação nessa pesquisa não afetará sua relação com a UFSC e essa escolha deve ser feita livremente por você. Além disso, você pode desistir da pesquisa a qualquer momento, desde que informe a pesquisadora. Quaisquer dúvidas podem ser tiradas através do e-mail profjulianadoamaral@gmail.com.

Declaro para os devidos fins e efeitos legais que cumprirei os termos da Resolução CNS 510/16 e suas complementares, que são os documentos que normatizam a realização de pesquisa com seres humanos no Brasil.

Esse documento deverá ser assinado em duas vias, todas as páginas rubricadas, ficando uma via com você e outra com o pesquisador. Assinando o Consentimento Pós-Informação abaixo, você estará consentindo com o uso dos dados coletados para a pesquisa. Muito obrigada!

Florianópolis, _____ de _____ de 2018.

_____ _____

Juliana do Amaral
Pesquisadora

Lêda Maria Braga Tomitch
Orientadora

Consentimento Pós-Informação

Eu, _____ (nome completo), fui esclarecido sobre a pesquisa **Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em Inglês** e concordo que meus dados sejam utilizados para a realização da mesma.

Assinatura: _____
RG: _____

Contatos

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APPENDIX D – TCLE

UNIVERSIDADE FEDERAL DE SANTA CATARINA
Centro de Comunicação e Expressão
Departamento de Língua e Literatura estrangeiras
Programa de Pós-graduação em Inglês: Estudos lingüísticos e Literários

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

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Objetivo da pesquisa:

O objetivo desta pesquisa é entender o que os alunos fazem quando precisam aprender a partir da leitura de um texto em inglês e, em especial, verificar se o uso das estratégias de leitura realçar texto, tomar notas e reler promove maior compreensão, retenção a aprendizado de textos em inglês.

Procedimentos:

Na primeira fase desse projeto, você será convidado a participar de um workshop em estratégias de leitura e responderá a um questionário a fim de traçar seu perfil leitor. Na segunda fase, será solicitada a leitura de três textos acadêmicos em inglês; em cada texto, você será instruído a usar uma estratégia diferente. Após ler cada texto,

você irá fazer um teste de compreensão. A terceira fase ocorrerá uma semana depois e visa verificar sua retenção: será solicitado que você escreva em português o que se lembra do texto lido. A última etapa será a escrita de um texto em português sobre o tema.

A participação na presente pesquisa não envolve riscos de alto nível, mas há a possibilidade do surgimento de ansiedade e nervosismo, inerentes a qualquer situação de teste. Para ajudá-lo, será oferecido um workshop em estratégias de leitura, bem como instruções escritas e orais prévias à coleta de dados em cada fase. Ao final da pesquisa, a pesquisadora irá lhe mostrar as conclusões tiradas a partir dos resultados das atividades, o que poderá lhe trazer uma melhor percepção sobre sua leitura em Inglês e como as estratégias que você usou influenciaram seu aprendizado.

Não há compensação financeira pela sua participação na pesquisa, mas os pesquisadores se comprometem a garantir o ressarcimento de eventuais despesas em relação a transporte e alimentação. Apesar de os riscos da pesquisa serem mínimos, também nos comprometemos a garantir indenização diante de eventuais danos decorrentes desta pesquisa.

Confidencialidade:

Os resultados serão publicados, porém, nenhuma informação pessoal sua constará nos resultados, mantendo-se assim a confidencialidade da pesquisa. Apenas a pesquisadora e a orientadora terão acesso aos dados coletados antes de os mesmos serem preparados para publicação. A participação ou não participação nessa pesquisa não afetará sua relação com a UFSC e essa escolha deve ser feita livremente por você. Além disso, você pode desistir da pesquisa a qualquer momento, desde que informe a pesquisadora. Quaisquer dúvidas podem ser tiradas através do e-mail profjulianadoamaral@gmail.com.

Declaro para os devidos fins e efeitos legais que cumprirei os termos da Resolução CNS 510/16 e suas complementares, que são os documentos que normatizam a realização de pesquisa com seres humanos no Brasil.

Esse documento deverá ser assinado em duas vias, todas as páginas rubricadas, ficando uma via com você e outra com o pesquisador. Assinando o Consentimento Pós-Informação abaixo, você

estará consentindo com o uso dos dados coletados para a pesquisa. Muito obrigada!

Florianópolis, _____ de _____ de 2018.

_____

Juliana do Amaral Lêda Maria Braga TomitchPesquisadora Orientadora

Consentimento Pós-Informação

Eu, _____ (nome completo), fui esclarecido sobre a pesquisa *Highlighting, note taking and rereading: comparing the effectiveness of study strategies on comprehension, retention and learning from ESL texts* e concordo que meus dados sejam utilizados para a realização da mesma.

Assinatura: _____
RG: _____

Contatos

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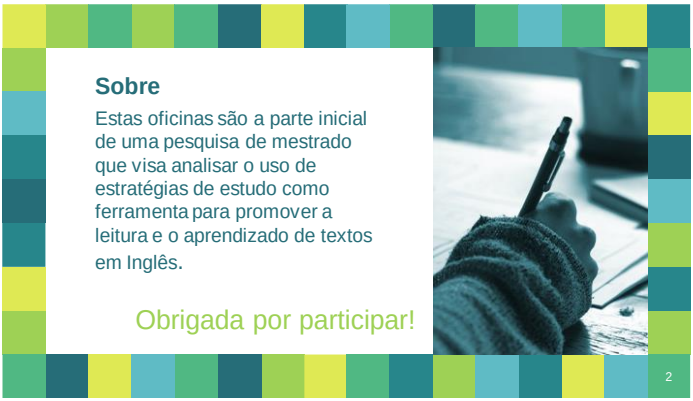
APPENDIX E – Slides of the study strategies workshops



Quais estratégias você utiliza quando precisa **compreender** um texto em Inglês?

- Eu penso na origem do texto, se veio de uma revista/livro/site
- Eu levo em consideração o público a que o texto se destina e imagino os objetivos do escritor
- Eu examino o título, subtítulos e imagens para identificar o tema
- Eu analiso palavras que não conheço, tentando entendê-las pelo contexto ou usando um dicionário para compreender
- Eu releio quando não entendo alguma ideia
- Eu procuro identificar as ideias principais
- Eu procuro estabelecer relações entre o que já sei sobre o tema e o que estou lendo

Adaptado de Tomitch (2012)

4

Quais estratégias você utiliza quando precisa **estudar** um texto?

- Eu releio para assimilar melhor
- Eu realço informações importantes com marca-texto
- Eu tomo notas de informações importantes
- Eu faço diagramas para organizar a informação lida
- Eu parafraseio
- Eu faço resumos do conteúdo

Adaptado de Tomitch (2012)

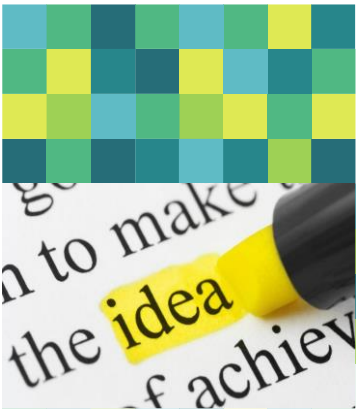
5

Nestas oficinas, iremos trabalhar com as estratégias de estudo **realçar texto**, **tomar notas** e **reler**

6

Highlighting

Realçar textos como estratégia de estudo



Overview

- Por que realçar textos acadêmicos?
- O que realçar em um texto?
- Como realçar?
- Ideias principais

  Identificando as ideias principais do parágrafo

  identificando a ideia central do texto

  Construindo as ideias principais – Macrorregras

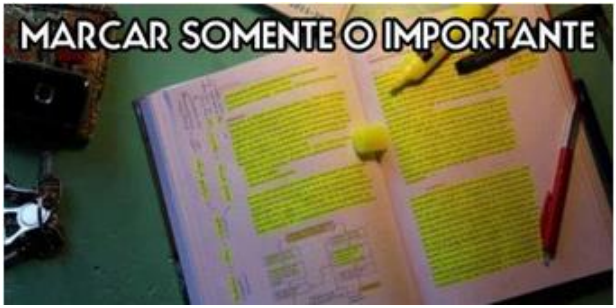
Por que realçar textos acadêmic

- Para encontrar as **ideias principais**
- Para fazer um **resumo**
- Para **facilitar uma consulta posterior** (estudar para uma prova, escrever um ensaio)
- Para **aprender** um conteúdo

O que realçar em um texto?

- **Palavras-chave**: **nomes** de pessoas, instituições e eventos; **números** (dados estatísticos e datas, por exemplo)
- **Conceitos** e suas definições
- **Ideias principais** de cada parágrafo

10



11

Como realçar?

(Pauk, 1984)

Fica a Dica!

- Estabeleça **objetivos** para sua leitura. Isso pode envolver elaborar algumas **perguntas** ou **hipóteses** a respeito do conteúdo do texto
- **Termine o parágrafo antes de começar a marcar** para não terminar com grande parte do texto grifado.
- Seja seletivo – marque apenas o necessário
- Realce frases curtas, mas que façam sentido
- Diferencie **ideias principais** de **secundárias** por meio de cores diferentes ou realce/sublinhado

12

Exemplo

Analise o trecho do artigo “Assessing students’ metacognitive awareness of reading strategies”

- Que tipos de informação foram realçadas?
- A que tipo de informação corresponde cada cor?
- Há algo realçado que você considere de menor relevância?
- Há algo que não foi realçado e na sua opinião deveria ter sido? Justifique sua resposta.

13

Ideias principais

Estrutura textual

Um texto geralmente é constituído por **parágrafos**. Cada parágrafo tem uma **ideia dominante** que é desenvolvida e suportada pelas sentenças que se seguem.

As ideias em um texto seguem a seguinte **hierarquia**:

- **tema**
- **ideias principais**
- **ideias secundárias**
- **detalhes**

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Identificando as ideias principais

Uma ideia é **importante** quando:

(Kintsch, 1998; van Dijk & Kintsch, 1983)

- Está no **título**
- Está marcada com sinais gráficos como tamanho da fonte, **cor**, **negrito**, *itálico*
- É acompanhada por sinais lexicais como ***"importante" "relevante", "para concluir…", "o principal…"***
- É reiterada por meio de paráfrases e expressões como ***"em outras palavras", "ou seja"***
- É **explicada**, desenvolvida em detalhe ao longo do parágrafo (*isso quer dizer...)*
- Está mais saliente em comparação às outras ideias do texto – ***hierarquia*** (Kintsch & van Dijk, 1978)
- Estabelece relações de **causa/consequência** com outras ideias do texto (Trabasso & Suh, 1993)

18

- *A importância de uma ideia também vai depender do quanto ela responde às suas perguntas, ou seja, de seus objetivos de leitura*

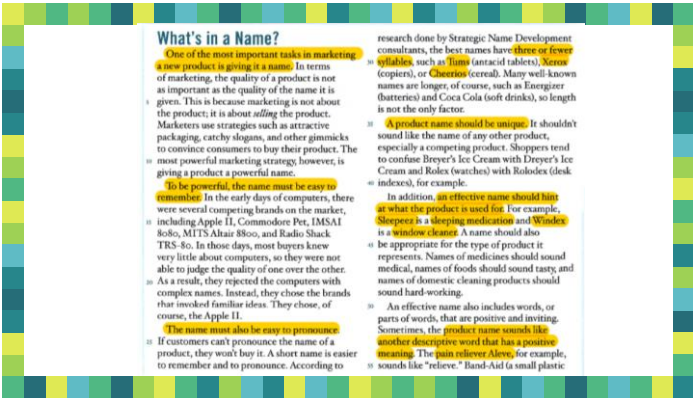
Pauk & Owens, 2010

19

Ideia dominante do parágrafo Exemplo

- Cada **parágrafo** geralmente apresenta uma ideia principal, que geralmente é apresentada na **primeira ou segunda sentenças de cada parágrafo**

20



What's in a Name?

One of the most important tasks in marketing a new product is giving it a name. In terms of marketing, the quality of a product is not as important as the quality of the name it is given. This is because marketing is not about the product; it is about *selling* the product. Marketers use strategies such as attractive packaging, catchy slogans, and other gimmicks to convince consumers to buy their product. The most powerful marketing strategy, however, is giving a product a powerful name.

To be powerful, the name must be easy to remember. In the early days of computers, there were several competing brands on the market, including Apple II, Commodore Pet, IMSAI 8080, MITS Altair 8800, and Radio Shack TRS-80. In those days, most buyers knew very little about computers, so they were not able to judge the quality of one over the other. As a result, they rejected the computers with complex names. Instead, they chose the brands that invoked familiar ideas. They chose, of course, the Apple II.

The name must also be easy to pronounce. If customers can't pronounce the name of a product, they won't buy it. A short name is easier to remember and to pronounce. According to research done by Strategic Name Development consultants, the best names have three or fewer syllables, such as Tums (antacid tablets), Xerox (copiers), or Cheerios (cereal). Many well-known names are longer, of course, such as Energizer (batteries) and Coca Cola (soft drinks), so length is not the only factor.

A product name should be unique. It shouldn't sound like the name of any other product, especially a competing product. Shoppers tend to confuse Breyer's Ice Cream with Dreyer's Ice Cream and Rolex (watches) with Rolodex (desk indexes), for example.

In addition, an effective name should hint at what the product is used for. For example, Sleepeez is a sleeping medication and Windex is a window cleaner. A name should also be appropriate for the type of product it represents. Names of medicines should sound medical, names of foods should sound tasty, and names of domestic cleaning products should sound hard-working.

An effective name also includes words, or parts of words, that are positive and inviting. Sometimes, the product name sounds like another descriptive word that has a positive meaning. The pain reliever Aleve, for example, sounds like "relieve." Band-Aid (a small plastic

Ideia dominante do parágrafo
Na prática

- Com base nas orientações de Kintsch (1998) e van Dijk e Kintsch (1983), leia o texto "**The battle against Malaria**" e, usando um marca texto, realce a ideia principal de cada parágrafo.
- Compare seus grifos com os de um colega. Discuta as possíveis semelhanças/diferenças

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Ideia principal do texto
Exemplo

- A **ideia central do texto** muitas vezes está contida no **título** e/ou em uma sentença no **início do texto.** Observe:

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What Your Clothes Say About You

People wear clothes to protect their bodies from the cold or the burning sun, from insect bites and injuries, and from the unwelcome eyes of strangers. However, what people wear can also convey a message about who they are and their role in society.

For example, visit nearly any country in the world and you will notice that young people everywhere are wearing fashionable blue jeans, not for work, but for social occasions such as parties and concerts. The jeans are **somewhat** of an **index** of how these young people view themselves: *I'm modern and stylish. I'm relaxed and confident. I'm different from the traditional older generation. I'm sexy.* Jeans make such an important statement that, in some groups, a person might be judged by the brand of jeans he or she is wearing. As a result, some young people feel pressured into spending hundreds of dollars to **acquire** a single pair of designer jeans just to be in fashion.

An even more direct means **whereby** people make statements about themselves is **via** messages printed on T-shirts. One says *Oxford University*. Another reads *Italy 2006 World Cup*. There are many kinds of T-shirt messages. They can convey allegiance to schools and sports teams, advertise places or products, make political statements, serve as wearable travel souvenirs, and commemorate important occasions. These wearable messages are seldom **ambiguous**. They clearly tell others, *This is what I want you to know about me.*

Clothes mark people as part of a group.

Just as blue jeans and T-shirts say a great deal about the people who are wearing them, so does the Western business suit. It says that the person wants to impress others with his or her professional status. A fitted jacket and matching trousers **constitute** a man's suit, while a fitted jacket and matching skirt constitute a woman's suit. A collared shirt and a necktie are **integral** parts of the man's outfit, while stockings and high-heeled shoes complete the woman's. Often this attire is not what the person chooses to wear, but it is what a company requires its top-level employees to wear. The business suit is so conventional that it is **analogous** to a uniform in other occupations.

A uniform identifies the occupation of many people. **Military** personnel are easy to identify by their uniforms. The same is true for **civil**

24

Ideia principal do texto
Na prática

- No texto "**The battle against Malaria**", a ideia principal está explícita. Releia os dois primeiros parágrafos e identifique-a.

25

Construindo as ideias principais – Macrorregras

Quando a ideia principal não está colocada de forma explícita, é necessário construi-la

26

Construindo as ideias principais – Macrorregras

Quadro desenvolvido por Brown e Day (1983), resumido por Tomitch (2012)

1. **Deletar informação trivial** como detalhes e pormenores sobre o tema
2. **Deletar informação redundante** como repetições e reformulações das frases principais
3. **Superordenação de listas:** use termos mais abrangentes para substituir listas palavras da mesma categoria (frutas para substituir pêra, laranja, banana)

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Construindo as ideias principais – Macrorregras

Quadro desenvolvido por Brown e Day (1983), resumido por Tomitch (2012)

4. **Superordenação de ações –** use uma ação mais abrangente para uma lista de subcomponentes dessa ação
5. **Selecione a frase que contém o tópico principal** (topic sentence), o resumo do aspecto principal do texto (ou parágrafo)
6. **Invente uma frase que resuma o parágrafo**, se ela não estiver claramente colocada.

Exemplo

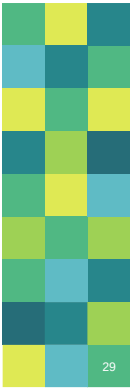
- ***Faça uma leitura de reconhecimento do texto "What is success?" Qual das sentenças melhor descreve a ideia principal do texto?***

a) Como o sucesso é representado pela mídia como uma característica de privilegiados como executivos, jogadores de golfe, estrelas de cinema e políticos

b) Sucesso advém de uma combinação de fatores como ambição, persistência, família e personalidade

c) O papel central da família na criação de um indivíduo ambicioso

d) Dinamismo e sucesso



Exemplo

- ***Faça uma leitura de reconhecimento do texto "What is success?" Qual das sentenças melhor descreve a ideia principal do texto?***

a) Como o sucesso é representado pela mídia como uma característica de privilegiados como executivos, jogadores de golfe, estrelas de cinema e políticos

b) Sucesso advém de uma combinação de fatores como ambição, persistência, família e personalidade

c) O papel central da família na criação de um indivíduo ambicioso

d) Dinamismo e sucesso

Na prática

- Analise a primeira página do texto "**Fat for brains**" e construa a ideia principal do artigo em uma sentença, usando o modelo proposto por Brown e Day. Lembre-se de:

1. Deletar informação trivial
2. Deletar informação redundante
3. Usar termos abrangentes para itens do mesmo grupo
4. Usar termos abrangentes para ações do mesmo grupo
5. Selecionar a frase que contém o tópico principal ou
6. Criar uma frase que resuma o parágrafo

31

Checking

- Compare a sentença que você produziu com a de um colega. O que ficou semelhante? Quais foram as diferenças?

32

"Sublinhar e desenhar caixas ou inserir símbolos e pontos de interrogação podem dar uma falsa ideia de realização se você não está pensando profundamente sobre o que lê."

Pauk, 1984

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Obrigada!

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APPENDIX F – Handouts of the study strategies workshop 1 (Highlighting)

Oficina de estratégias de Estudo Parte 1 - Realçando textos
Mediadora: Juliana do Amaral – PPGI/UFSC

Journal of Educational Psychology
2002, Vol. 94, No. 2, 249–259

0022-0663/02/$5.00 DOI: 10.1037//0022-0663.94.2.249

Assessing Students' Metacognitive Awareness of Reading Strategies

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Oklahoma State University

Recent trends within the domain of reading comprehension have led to an increasing emphasis on the role of metacognitive awareness of one's cognitive and motivational processes while reading (Alexander & Jetton, 2000; Guthrie & Wigfield, 1999; Pressley, 2000; Pressley & Afflerbach, 1995). Indeed, researchers agree that awareness *and* monitoring of one's comprehension processes are critically important aspects of skilled reading. Such awareness and monitoring processes are often referred to in the literature as *metacognition*, which can be thought of as the knowledge of the readers' cognition about reading and the self-control mechanisms they exercise when monitoring and regulating text comprehension.

The construct of metacognition has been richly built through the efforts of several prominent researchers representing diverse research traditions using various data sources. Although it is a challenge to account for all the characterizations of metacognition, we attempt, in our brief review, to reflect the richness of inquiry behind the construct, which provides a foundation for developing a valid and reliable instrument aimed at measuring readers' metacognitive awareness and control of the strategic processes invoked while reading. Researchers generally agree that *metacognition* refers to the "knowledge about cognitive states and abilities that can be shared among individuals while at the same time expanding the construct to include affective and motivational characteristics of thinking" (Paris & Winograd, 1990, p. 15). In his classic article "Metacognition and Cognitive Monitoring," Flavell (1979) described the process of cognitive monitoring as occurring through the actions and interactions of four classes or interrelated phenomena: Metacognitive knowledge, metacognitive experiences, goals (or tasks), and actions (or strategies). Other researchers (e.g., Wade, Trathen, & Schraw, 1990) have used examples of students' reflections about their thinking while reading to illustrate what they do when they read. Readers' reflections show how they plan, monitor, evaluate, and use information available to them as they make sense of what they read. Such reflections unveil judgments about the readers' thinking processes that serve as conventional descriptions of metacognition. Recent conceptions of reading comprehension depict efficient readers as strategic or "constructively responsive" readers who carefully orchestrate cognitive resources when reading (Pressley & Afflerbach, 1995).

Researchers investigating reading comprehension monitoring among skilled and unskilled readers have long recognized the importance of metacognitive awareness in reading comprehension because it distinguishes between skilled and unskilled readers. Paris and Jacobs (1984) provided an illustration of the differences between these two types of readers:

> Skilled readers often engage in deliberate activities that require planful thinking, flexible strategies, and periodic self-monitoring. They think about the topic, look forward and backward in the passage, and check their own understanding as they read. Beginning readers or poor readers do not recruit and use these skills. Indeed, novice readers often seem oblivious to these strategies and the need to use them. (p. 2083)

Skilled readers, according to Snow, Burns, and Griffin (1998), are good comprehenders. They differ from unskilled readers in "their use of general world knowledge to comprehend text literally as well as to draw valid inferences from texts, in their comprehension of words, and in their use of comprehension monitoring and repair strategies" (p. 62). Pressley and Afflerbach (1995) pointed out that skilled readers approach the reading task with some general tendencies. For example, they tend to be aware of what they are reading, they seem to know why they are reading, and they have a set of tentative plans or strategies for handling potential problems and for monitoring their comprehension of textual information.

Unskilled readers (typically young developing readers and some inexperienced adolescents and adults), on the other hand, are quite limited in their metacognitive knowledge about reading (Paris & Winograd, 1990). They do relatively little monitoring of their own memory, comprehension, and other cognitive tasks (Flavell, 1979; Markman, 1979) and tend to focus on reading as a decoding process rather than as a meaning-getting process (Baker & Brown, 1984). In addition, they are less likely than skilled readers to detect contradictions or resolve inconsistencies in understanding text (Snow et al., 1998). Finally, they seem not to realize that they do not understand (Garner & Reis, 1981) and as a result fail to exercise control of their reading processes (Wagner & Sternberg, 1987).

Analise o trecho do artigo "Assessing students' metacognitive awareness of reading strategies"

Que tipos de informação foram realçadas?

A que tipo de informação corresponde cada cor?

Há algo realçado que você considere de menor relevância?

Há algo que não foi realçado e na sua opinião deveria ter sido? Justifique sua resposta.

Referência
Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94,249–259.

Oficina de estratégias de Estudo Parte 1 - Realçando textos
Mediadora: Juliana do Amaral – PPGI/UFSC

TEXTO 1

Com base nas orientações de Kintsch (1998) e van Dijk e Kintsch (1983), leia o texto "The battle against malaria" e, usando um marca texto, realce a ideia principal de cada parágrafo.

This article includes information from the Centers for Disease Control and Prevention (CDC), the principal public health agency in the United States. It was founded in 1946 to help control malaria. Today, the CDC leads public health efforts to prevent and control infectious diseases.

The Battle Against Malaria

Malaria is a serious health problem. It is a leading cause of death in many countries. It **occurs** mostly in tropical and subtropical parts of the world, including parts of Africa, Asia, South America, Central America, and the Middle East. The place most intensely affected by malaria is Africa south of the Sahara Desert. About 60% of the world's malaria cases and 80% of malaria deaths occur there. Even though the causes of malaria in this region are well understood, international health agencies are finding that controlling it is still an enormous and difficult task.

Because malaria is passed from mosquitoes to people and from people to mosquitoes, we can think of the disease as a cycle[1]. The malaria cycle begins with tiny parasites that **reside** in the bodies of *Anopheles* mosquitoes. These deadly parasites cause malaria. When a female mosquito bites a human, the mosquito draws off blood. It also leaves malaria parasites in the human's skin. These parasites quickly multiply inside the human and cause the individual to feel sick.

If a mosquito bites a human who is sick with malaria, parasites from the human enter the body of the mosquito. When that mosquito bites another human, it will leave parasites in the other human's skin. In the malaria cycle, humans get parasites from mosquitoes and they also give parasites to mosquitoes.

Becoming infected with malaria is a medical emergency. The first symptoms of malaria are fever, chills, sweating, **intense** headache, and muscle pains. Nausea and vomiting often **accompany** these symptoms. Immediate **medical** treatment must be a **priority** for people who are infected. They must take medicines that will kill the parasites. If medical treatment is started soon enough, sick individuals can be cured. If they do not, malaria can cause serious illness or even death.

Breaking the malaria cycle in Africa

[1] *cycle*: a series of events that always occur in the same order

Malaria in tropical Africa could be controlled in two ways. First, it could be controlled by killing the parasites that cause the illness. If every infected person quickly took malaria medicine, most would be well in a few days. Mosquitoes could not get malaria parasites from healthy individuals, so malaria would not spread. Unfortunately, many people live in far-away villages without **access** to quick medical care. Another problem is that the ability of quinine (the primary medicine used against malaria) to kill parasites has **declined** over time. There is hope, however, for a new drug combination, called ACT. It is being used successfully to treat people who have malaria.

Malaria could also be controlled by stopping the mosquitoes. One way would be to get rid of the pools of water where they lay their eggs. Also, insecticide[2] could be sprayed in wet areas and around buildings to kill mosquitoes. Finally, people could be told to sleep under bed nets to prevent mosquitoes from biting them at night. Bed nets sprayed with insecticide would both stop and kill mosquitoes.

[2] *insecticide*: a poison that kills insects

It is very difficult, however, to **implement** these plans. People in this region are poor—and made poorer by malaria because they may be too weak to work. They cannot afford to pay for medical care or to buy bed nets. If they are not educated, the people may be unwilling to **cooperate** with government efforts to help them. Their old beliefs about illness may **conflict** with modern attempts to cure or prevent malaria.

There are other problems, too. Health **ministries** do not have the money to build clinics or hire trained medical **practitioners**. They do not have the money to buy insecticide and pay a **labor** force to spray regularly. And the frequent rainfall would make it impossible to get rid of pools of water where mosquitoes lay eggs.

Helping African nations control malaria is now a top priority of many relief organizations. The World Health Organization and Doctors Without Borders are just two of many organizations offering help—and hope—to the people of sub-Saharan Africa.

Referência:

Burgmeier, A. *Inside reading 1:* the academic word list in context. New York: OUP.

Oficina de estratégias de Estudo Parte 1 - Realçando textos
Mediadora: Juliana do Amaral – PPGI/UFSC

TEXTO 2

What Is Success?

What is success? Is it wealth? Fame? Power? We tend to think of success as something unusual, something that requires special talents to achieve. That's because stories in the **media** about successful business executives, **professional** golfers, glamorous movie stars, best-selling authors, and powerful politicians lead us to believe that only a few special people are successful. We may not hear about them, but ordinary people can be successful, too. Success is about reaching for something—and getting it. It is about having something you didn't have before. It is about **attaining** something that is valued by others.

Success begins with a clear goal, and attaining that goal requires ambition. Ambition is the energy that drives people to work hard, to learn more, and to seek opportunities to advance themselves. Some people have a clear goal, but they lack the ambition to make their dream come true. Other people have great ambition but no clear goal to work toward. They start one scheme after another but never seem to find success.

All children begin life with great ambition. Consider the ambition that babies **demonstrate** as they try to sit up, crawl, and walk. Despite repeated failures, they keep trying until they succeed. What makes them keep trying? Persistence. This is the ability to focus on a task despite interruptions, obstacles, and setbacks. Persistence is strong throughout childhood. During the teen years, however, a fear of failure or a fear of being laughed at by others for trying to "be somebody" **may inhibit**, or stop, their persistence. As a result, many teens seem to just quit trying.

If parents are **aware** that a lack of ambition is common in teenagers, they may be able to minimize it by providing **positive** learning experiences in the early years. For example, parents can encourage their young children to take on challenges, praise them for trying, and comfort them if they fail. One of the strongest influences on a person's ambition is the family. It is not a **coincidence** that successful parents tend to raise successful children. However, is this due to heredity or upbringing? Evidence suggests that both play a **role** in determining ambition.

The economic status of a family also influences a person's level of ambition. Young adults who grew up in poor families may be more focused on meeting the needs of today rather than reaching for the dreams of tomorrow. Or they may have great ambition but lack the means to reach their goals. In contrast, ambition may be unnecessary for those who grew up in rich families because, at least financially, they are already successful. Not surprisingly, ambition seems to coincide most often with middle-class status. Although financially secure, middle-class families may not feel socially secure. This status anxiety fuels the ambition needed to reach for success.

Despite their backgrounds, it is people with **dynamic** personalities who are most likely to succeed. These are people who don't wait for things to happen; these are people who take effective action to make things happen. With their eyes on the future, their goals **dominate** the choices they make. They learn the skills they will need through education or training. They **exploit**, that is, take advantage of, opportunities to broaden their knowledge through experience and observation. They seek assistance from anyone who might further their chances to succeed, including family members, friends, coaches, and **colleagues**.

And finally—with perhaps a bit of luck—success will come for these dynamic people. For each person it will be different, though, because individuals **generate** their own definitions of success. So he or she will **get** the job, win the race, earn the diploma, start the business, or climb the mountain—and the goal will be a reality.

Qual das sentenças melhor descreve a ideia principal do texto?

a) Como o sucesso é representado pela mídia como uma característica de privilegiados como executivos, jogadores de golfe, estrelas de cinema e políticos

b) Sucesso advém de uma combinação de fatores como ambição, persistência, família e personalidade

c) O papel central da família na criação de um indivíduo ambicioso

d) Dinamismo e sucesso

Referência:

Burgmeier, A. *Inside reading 1:* the academic word list in context. New York: OUP.

Oficina de estratégias de Estudo Parte 1 - Realçando textos
Mediadora: Juliana do Amaral – PPGI/UFSC

TEXTO 3

Analise o texto "Fat for brains" e construa a ideia principal do artigo, usando o modelo proposto por Brown e Day.

_____
_____
_____
_____
_____

Fat for Brains

As the old saying goes, you are what you eat. The foods you eat obviously **affect** your body's performance. They may also influence how your brain handles its tasks. If it handles them well, you think more clearly and you are more emotionally stable. The right foods can help you concentrate, keep you motivated, sharpen your memory, speed your **reaction** time, defuse stress, and perhaps even prevent brain aging.

Good and bad fat

Most people associate the term *fat* with poor health. We are encouraged to eat fat-free foods and to drain fat away from fried foods. To understand its psychological benefits, however, we have to change the **paradigm** for how we think about fat.

The first step is gaining a better understanding of fat. Instead of conceiving of it as one thing, we have to recognize it as several **discrete** types of a similar compound. Not every fat is your enemy. Fats, of the right kinds and in the right amounts, are among your best friends. It is smart to **commit** to a balanced-fat diet, not to a no-fat diet.

Fats are broadly classified as either "saturated" or "unsaturated." Most foods that contain fat contain both kinds, in varying proportions. Foods that are high in saturated fats include meat, butter, and other animal products. In general, saturated fats are solid at room temperature. Foods high in unsaturated fats include vegetable oils, nuts, and avocados. Unsaturated fats, if separated out, are usually liquid at room temperature.

Foods high in saturated fats

Foods high in unsaturated fats

The key to health is to **allocate** a percentage of your fat intake to each type of fat. Saturated fat in moderate amounts poses no problem. In general, you will be fine if less than 20 percent of the fats you consume are saturated. Beyond that level, saturated fat may **promote** heart disease and perhaps some types of cancer. A diet high in saturated fat can also make you depressed and antisocial and impair your general **mental** performance. Unsaturated fats should make up the bulk of your fat intake. But beware. Unsaturated fats are especially high in calories and could cause weight problems. The smart approach is to keep your **overall** fat intake low and make sure that most of it is in the form of unsaturated fats.

Fatty acids

Keeping your fat intake too low, on the other hand, could also be dangerous. Fat in food is broken down into chemicals called fatty acids. The body uses them for many purposes. They go into all hormones. They are critical to body metabolism. And they are part of the outer membrane of every cell in the body, including those in the brain. You need these fatty acids in order to stay physically healthy and mentally sharp.

Of the many fatty acids the body uses, two are called "essential fatty acids" (EFAs). Your diet must contain foods that provide them, because the body cannot make them on its own. The most important are omega-3 fatty acids. They are crucial for the proper development of the human brain. All brain-cell membranes need to refresh themselves continually with new supplies of omega-3s.

North Americans are famous for consuming too much saturated fat and too much total fat. They also consume far too little food that provides omega-3s. The vegetable oils most commonly used in cooking—corn, safflower, and sunflower oils—have almost no omega-3s. Using canola (rapeseed), soy, and walnut oils, which have ample omega-3s would be far more healthful. And the old saying about fish being brain food is true. Fish is rich in omega-3s, especially in one, called DHA, that is identical to a material in the membranes of nerve cells. People allergic to or intolerant of fish can get their DHA from several sources, including leafy green vegetables, sesame seeds, or egg yolks.

Omega-3s and the brain

There is evidence that DHA plays a big role in the intellectual performance of humans. In one well-respected study, premature infants were fed either standard American infant formula or breast milk. Results showed that the children given breast milk had significantly higher IQs. The researchers also **compiled** data on the children for eight years after the initial feeding **period**. Through all that time, the children never lost this mental advantage. The research **team** concluded that the IQ superiority resulted exclusively from DHA, a known component of breast milk. Most American baby formulas do not contain any DHA.

In psychology and physiology **journals**, articles routinely confirm the value of omega-3 fatty acids. One published study demonstrated that fish oil reduced the degree of brain damage in cats experiencing stroke. A study by researchers at the University of Pittsburgh showed that adults with low levels of omega-3s in their bodies were far more depressed, pessimistic, and impulsive than those with normal or high levels. This evidence improves the **prospects** for treating depressed patients effectively. Many therapists now say they are determined to **coordinate** psychological therapy with dietary therapy in order to rely less on drugs.

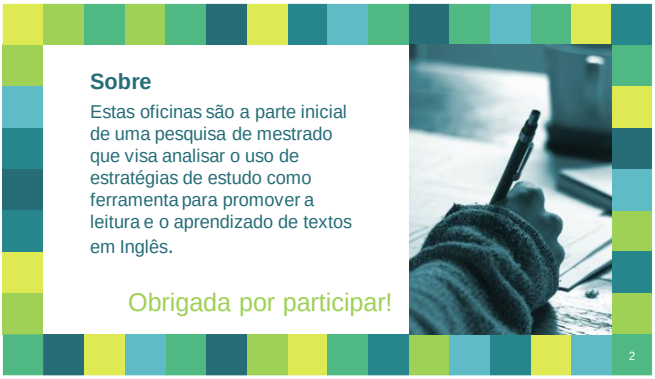
As research continues to show, new ways of thinking about fat can open the door to better physical, mental, and emotional health.

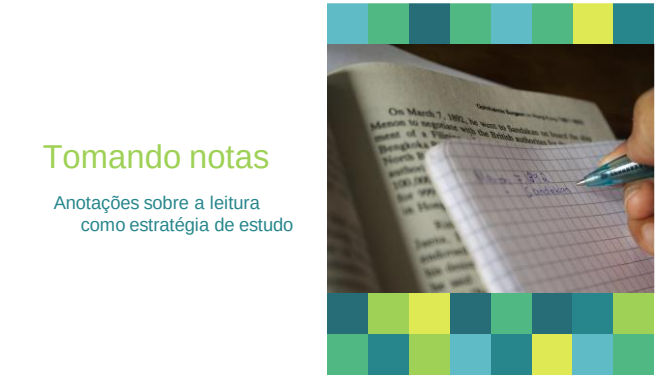
Referência:

Zwier, L. J. (2007). *Inside reading 2*: the academic word list in context. New York: OUP.

APPENDIX G – Slides of the Study strategy workshop part 2 –

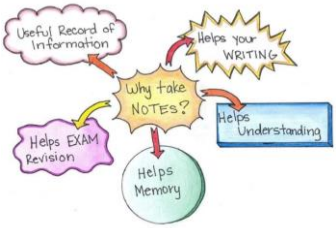
Note taking





Overview

- Tomar notas e anotar
- Por que tomar notas?
- O que anotar
- Como tomar notas
  - O sistema Cornell + tipos
  - O sistema SQ3R
  - O sistema OK5R
- Reler



Tomar notas e anotar

(TOMITCH, 2012, p.40)

- Notas (*note-taking*) são geralmente feitas em uma folha de papel separada. Elas envolvem identificar as ideias principais do texto copiando excertos ou parafraseando as palavras do autor
- Anotar nas margens (annotating) envolve reagir ao texto, respondendo ao posicionamento do autor, fazendo comentários e/ou perguntas

5

Por que tomar notas?

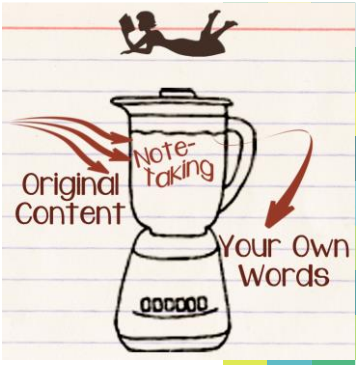
?

- Tomamos notas porque esquecemos; escrever ajuda a relembrar o conteúdo de um texto para estudar posteriormente
- Tomar notas é uma estratégia de estudo que nos ajuda a identificar as ideias principais de um texto

6

O que anotar
(Paulk, 1984)

- Tópicos
- Ideias principais
- Ideias secundárias
- Exemplos
- Definições
- Frases completas



7

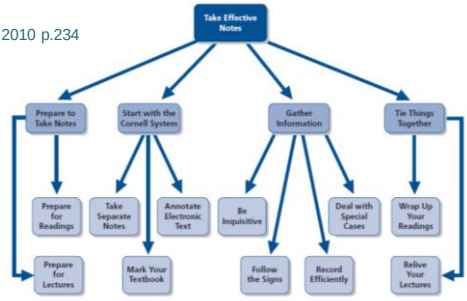
"

"Para melhorar suas as chances de lembrar o que você aprendeu, você deve condensar e resumir. Em termos práticos, isso significa extrair as ideias principais das suas notas e deixar os materiais de apoio e exemplos de lado. Tendo uma vez selecionado os pontos importantes do que leu, você deve ser capaz de memorizá-los em um período de tempo viável."

Pauk & Owens, 2010, p.214

8

Pauk & Owens 2010 p.234



9

Como tomar notas

(Pauk, 1984; 2010)

- Dê um **título** às notas (nome do texto/autor/ano) e registre a data
- Termine de ler **todo** o parágrafo antes de anotar
- Tomar notas envolve **seleção** e condensação de conteúdo. Escreva notas completas - não necessariamente sentenças – que permitam reler e compreender
- **Simplifique** algumas ideias, usando palavras-chave
- Faça **abreviações** (que você entenda)
- Atente à **organização** de suas notas e se a letra está legível

10

Como tomar notas

(Pauk, 1984; 2010)

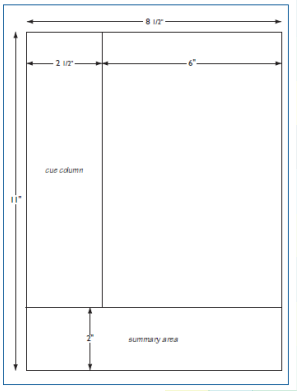
- Use marcas gráficas (**cores**, **MAIÚSCULAS**) para sinalizar aspectos importantes
- Use estrutura de **tópicos** para organizar as notas. Cada tópico pode remeter à página lida; isso facilita citação.
- No caso de textos, **anote a linha** de onde a informação foi retirada para encontrá-la no original
- Separe suas impressões e perguntas das ideias do autor (em balões, por exemplo)
- Você pode tomar notas em forma de **parágrafo**, em **listas**, **definições**, adicionar **desenhos**, ou uma combinação destes formatos

11

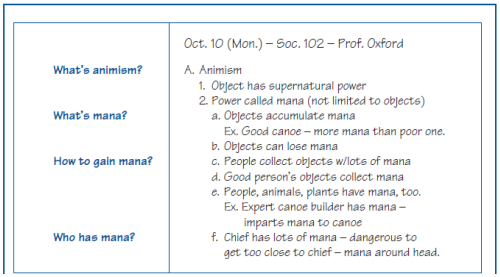
O sistema Cornell

(Pauk & Owens, 2010)

- Este sistema foi desenvolvido na universidade de Cornell há quase 50 anos atrás e tem sido adotado por inúmeros cursos superiores por todo o mundo. Ele pode ser usado para tomar notas separadamente, para se fazer anotações em um livro e até para textos eletrônicos. O sistema é flexível e simples: margens largas dos lados e embaixo são a chave.



Notas em sentenças



Oct. 10 (Mon.) – Soc. 102 – Prof. Oxford

What's animism?

A. Animism
1. Object has supernatural power
2. Power called mana (not limited to objects)

What's mana?

a. Objects accumulate mana
Ex. Good canoe – more mana than poor one.
b. Objects can lose mana

How to gain mana?

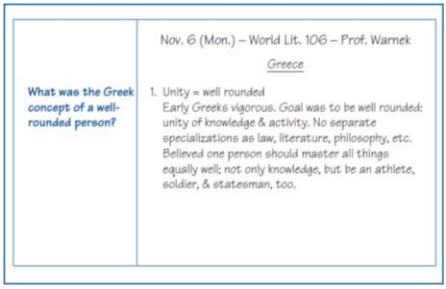
c. People collect objects w/lots of mana
d. Good person's objects collect mana
e. People, animals, plants have mana, too.
Ex. Expert canoe builder has mana – imparts mana to canoe

Who has mana?

f. Chief has lots of mana – dangerous to get too close to chief – mana around head.

13

Notas em parágrafos



Nov. 6 (Mon.) – World Lit. 106 – Prof. Warnek

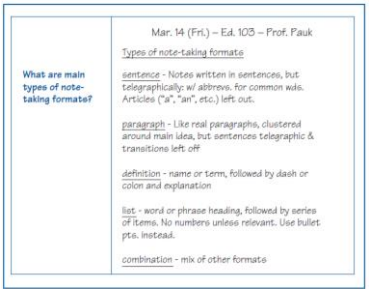
Greece

What was the Greek concept of a well-rounded person?

1. Unity = well rounded
Early Greeks vigorous. Goal was to be well rounded: unity of knowledge & activity. No separate specializations as law, literature, philosophy, etc. Believed one person should master all things equally well; not only knowledge, but be an athlete, soldier, & statesman, too.

14

Notas com definições



Mar. 14 (Fri.) – Ed. 103 – Prof. Pauk

Types of note-taking formats

What are main types of note-taking formats?

sentence - Notes written in sentences, but telegraphically: w/ abbrevs. for common wds. Articles ("a", "an", etc.) left out.

paragraph - Like real paragraphs, clustered around main idea, but sentences telegraphic & transitions left off

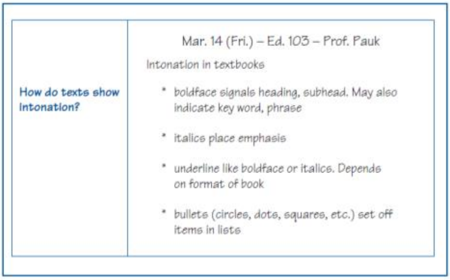
definition - name or term, followed by dash or colon and explanation

list - word or phrase heading, followed by series of items. No numbers unless relevant. Use bullet pts. instead.

combination - mix of other formats

15

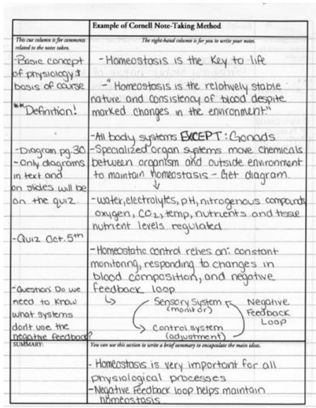
Notas em lista



How do texts show intonation?	Mar. 14 (Fri.) – Ed. 103 – Prof. Pauk Intonation in textbooks • boldface signals heading, subhead. May also indicate key word, phrase • italics place emphasis • underline like boldface or italics. Depends on format of book • bullets (circles, dots, squares, etc.) set off items in lists

16

- Quais tipos de notas foram usadas no exemplo ao lado?



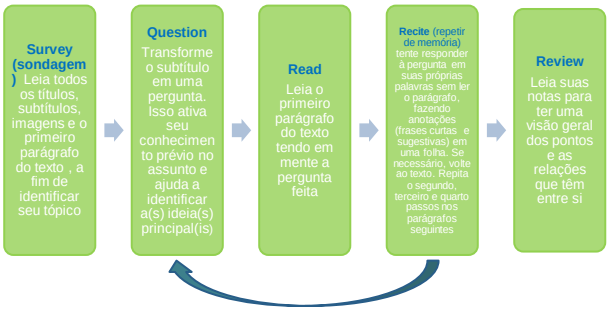
	Example of Cornell Note-Taking Method
This cue column is for comments related to the notes taken.	*The right-hand column is for you to write your notes.*
-Basic concept of physiology & basis of course	-Homeostasis is the Key to life
**Definition!	-" Homeostasis is the relatively stable nature and consistency of blood despite marked changes in the environment"
-Diagram pg. 30 -Only diagrams in text and on slides will be on the quiz.	-All body systems EXCEPT: Gonads -Specialized organ systems move chemicals between organism and outside environment to maintain homeostasis - Get diagram.
	-water, electrolytes, pH, nitrogenous compounds oxygen, CO_2, temp, nutrients and tissue nutrient levels regulated
-Quiz Oct. 5th	-Homeostatic control relies on: constant monitoring, responding to changes in blood composition, and negative feedback loop
-Question: Do we need to know what systems don't use the negative feedback?	Sensory System (monitor) → Control system (adjustment) — Negative Feedback Loop
SUMMARY:	*You can use this section to write a brief summary to encapsulate the main ideas.* - Homeostasis is very important for all physiological processes -Negative feedback loop helps maintain homeostasis

Na prática

- Leia o texto “Saving the oceans” e tome notas de aspectos que você considera importantes. Leve em consideração alguns dos aspectos listados por Pauk

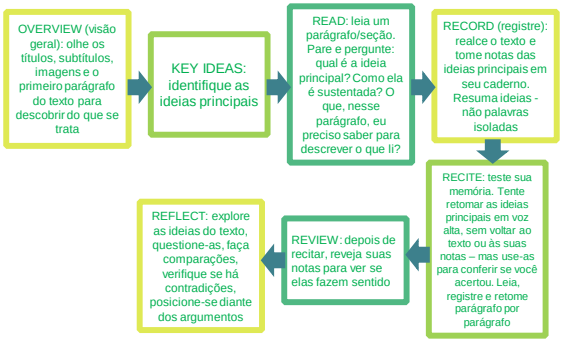
18

O sistema SQ3R (Paulk, 1984)



19

O sistema OK5R



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Na prática

- Você irá receber um parágrafo do texto “The Minesotta starvation experiment”. Leia-o e tome notas da ideia central do parágrafo.
- Publique suas notas no Padlet.
- Com base nas notas dos colegas, foi possível ter-se uma ideia geral do texto e suas ideias principais?

21

Você **releu** o texto ou partes do texto antes de tomar nota de algo? Por que (não)?

23

Reler

- Em que situações você relê um trecho do texto?
- Em que situações você relê todo o texto?
- Para você, reler é uma ação consciente ou automatizada?

24

The origins of fake news

Governments and powerful individuals have used information as a weapon for millennia, to boost their support and quash dissidence.

Octavian famously used a campaign of disinformation to aid his victory over Marc Anthony in the final war of the Roman Republic. In its aftermath, he changed his name to Augustus, and dispatched a flattering and youthful image of himself throughout the Empire, maintaining its use in his old age.

Titcomb, J.; Caron, J. (2018, July 25). Fake News: What exactly is it – and how can you spot it? *The Telegraph.*

25

Agora responda:

- Como os governantes e indivíduos poderosos tem usado a informação?
- Quem foi o famoso imperador que usou uma campanha de desinformação para vencer a guerra?
- Qual foi o efeito de mudança de nome na sua imagem diante do império?

26

Para pensar...

- Como foi responder às perguntas de compreensão sem reler o texto?
- Para você, reler ajuda a compreender e aprender o que se lê?

27

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Obrigada!

Juliana do Amaral

Contato

- profjulianadoamaral@gmail.com

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APPENDIX H – Handouts of the study strategies workshop part 2 – Note taking

Oficina de estratégias de Estudo Parte 2 – Tomando notas
Mediadora: Juliana do Amaral – PPGI/UFSC

TEXTO 1

Suas notas

Saving the Oceans

The oceans of the world **occupy** over 70% of the earth's surface. They provide food for billions of people, serve as places of recreation, and facilitate the transportation of passengers and cargo. For all of human history, people regarded the oceans as an indestructible and **infinite** resource. Until recently, humans had little **impact** on the oceans. However, as the earth's population increases, human activity will **ultimately** destroy the oceans unless immediate steps are taken.

Over-fishing is one major threat. Fish are being taken out of the oceans faster than the remaining fish can reproduce. A big fish—tuna, cod, shark, or swordfish—yields many pounds of delicious seafood when it reaches maturity. However, to meet the increasing demand for these fish, commercial fishermen began catching small, immature fish. In the **process**, they depleted the species. Ocean scientists estimate that 90% of these big fish are now gone from the oceans, and about 30% of all fished species have been destroyed.

Of the earth's 6.5 billion people, over one billion rely on fish as a source of protein. Billions more eat fish frequently because of its health benefits and its good taste. Throughout the world, food from the sea provides between 5% and 10% of the total food supply. But when fish disappear from the oceans, they will also disappear from our dinner plates. The impact on those who rely on fish could be malnutrition or even starvation.

Humans are impacting ocean life not only by what they take out of the oceans, but also by what they put into the oceans. Carelessly discarded cans, bottles, plastic cups, and baby diapers find their way into the stomachs of fish, often killing them. Toxic chemicals and industrial trash are also discarded into the oceans, either accidentally or thoughtlessly. Such **conduct** pollutes the water and kills sea life. Spills from a single oil tanker can **contribute** 200,000 tons of oil to the already polluted oceans. In the United States, an estimated 15,000 tons of automobile oil **annually** washes off roads into rivers and streams and ultimately into the sea.

Along with the harmful oil, however, run-off also carries tons of nutrients in the form of plant matter, fertilizers, animal waste, and garbage that can be **traced** to cities, farms, factories, and forests. These nutrients may seem like a good thing at first, but poisonous algae and bacteria (microscopic plants and animals) in the ocean feed on the nutrients. As the run-off increases, the **aggregation** of algae and bacteria increases, further **eroding** the marine environment. Small fish that feed on the algae and bacteria are sickened or killed by the poisons they contain. When larger fish feed on the smaller ones, they too are sickened by the poisons. Ultimately, humans who eat the flesh of poisoned fish will be sickened, too.

Are healthy oceans **compatible** with an industrialized world? What can be done to **terminate** the steady destruction of the oceans? Among other steps, countries can set limits on the number of fish that fishermen can legally catch. Governments can also create sea reserves, areas where fishing is **temporarily** banned until the fish population increases. Commercial enterprises can develop open-ocean aquaculture to grow fish in underwater cages miles from land. And individuals can refuse to buy fish in restaurants and markets if the species is threatened.

Governments can also protect the sea by enacting strict controls on ocean dumping. They can demand that oil tankers have higher safety standards. They can process run-off water to remove toxic substances. Individuals can properly dispose of leftover household and garden chemicals so they do not add to the toxic run-off into the oceans.

Scientists agree that it's not too late to save the oceans, but we must begin at once to take the necessary steps.

2004 HIGHEST OCEAN HARVESTS
(in millions of tons)

COUNTRY	HARVEST	COUNTRY	HARVEST
Chile	5.9	Peru	10.5
China	16.3	Russia	3.1
India	3.1	South Korea	1.7
Indonesia	5.0	Thailand	2.9
Japan	4.9	United States	5.5
Norway	2.9	**World Total**	81.6

Ideias principais

Oficina de estratégias de Estudo Parte 2 – Tomando notas
Mediadora: Juliana do Amaral – PPGI/UFSC

TEXTO 2

Survey (sondagem) Leia todos os títulos, subtítulos, imagens e o primeiro parágrafo do texto , a fim de identificar seu tópico

Question Transforme o subtítulo em uma pergunta. Isso ativa seu conhecimento prévio no assunto e ajuda a identificar a(s) ideia(s) principal(is)

Read Leia o primeiro parágrafo do texto tendo em mente a pergunta feita

Recite (repetir de memória) tente responder à pergunta em suas próprias palavras sem ler o parágrafo, fazendo anotações (frases curtas e sugestivas) em uma folha. Se necessário, volte ao texto. Repita o segundo, terceiro e quarto passos nos parágrafos seguintes

Review Leia suas notas para ter uma visão geral dos pontos e as relações que têm entre si

Você irá receber um parágrafo do texto "The Minesotta starvation experiment". Leia-o e tome notas da ideia central do parágrafo usando o espaço abaixo:

_____
_____
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The Minnesota Starvation Experiment

On November 19, 1944, 40 healthy young men entered the Laboratory of Physiological Hygiene at the University of Minnesota. They were ready to embark on a grueling medical experiment. The men had responded to a brochure that asked: "Will You Starve That They Be Better Fed?" World War II was coming to a close, and the Allied forces[1] needed to know how to deal with starving people in areas of Europe and Asia ruined by the war.

Basic design

In 1944, the prospect of finding healthy young men to volunteer for such an experiment was dim. Many were overseas serving in the military. However, many conscientious objectors—those who refused to serve in the war for religious or moral reasons—remained in the United States doing various types of community service. The government eventually allowed them to volunteer for medical experiments. About 400 men volunteered for the Minnesota research, of whom 40 were eventually selected.

The study took place in three discrete stages. The first, starting in November 1944, was a "standardization" period of 3 months. So they could be observed under non-stressful conditions, the men received a substantial 3,200 calories of food per day. This was followed by a 6-month semi-starvation period, beginning on February 12, 1945, in which they received only 1,800 calories per day. The semi-starvation diet reflected what was available in the war-torn areas of Europe—potatoes, turnips, rutabagas, dark bread, and macaroni. The final 3 months were a nutritional rehabilitation period.

Throughout the study, participants were given various housekeeping and administrative duties within the laboratory. They were also allowed to participate in university classes and activities. The participants were expected to walk 22 miles (35.4 kilometers) per week and to expend 3,009 calories per day.

The good days

Those selected to participate were a well-educated group. All had completed some college coursework. Many took advantage of the opportunity to take more courses at the University of Minnesota during the experiment. Initially, their blue pants, white shirts, and sturdy walking shoes were all that distinguished them from other people on campus. During the standardization period, the men felt well-fed and full of energy. Many initially volunteered for local charities, participated in music and drama productions, or otherwise contributed to community projects in the area.

Semi-starvation

On the first day of semi-starvation (February 12, 1945), the men sat down to a meal that included a small bowl of hot cereal, two slices of toast, a dish of fried potatoes, a dish of Jello, a small portion of jam, and a small glass of milk. Each was now allocated less than half the calories he was used to consuming. The men ate their meals together in Shevlin Hall on the campus. Participants were supposed to lose 2.5 pounds (1.1 kg) per week to reach the desired 25% weight reduction by the end of the semi-starvation period.

As semi-starvation progressed, the men became irritable and intolerant of one another. Many of them kept journals during the experiment, which recorded their feelings and reactions as they happened. One of the men, Carlyle Frederick, later remembered "noticing what's wrong with everybody else, even your best friend. Little things that wouldn't bother me before or after would really make me upset." Another, Marshall Sutton, noted, "We were impatient waiting in line if we had to, and we'd get disturbed with each other's eating habits at times. We became, in a sense, more introverted[2], and we had less energy." The men reported feeling cold much of the time and asked for extra blankets even in the middle of summer.

APPENDIX I – Text 1

After 2017 Kenyan Election, US Officials Ready to Fight 'Fake' News

Just before Kenya's elections last year, videos from American broadcaster Cable News Network (CNN) started appearing on social media. The videos looked like they were from a CNN broadcast. They claimed that Kenyan President Uhuru Kenyatta was by far the most popular candidate in a study of likely voters. But the CNN broadcast was fake. The Associated Press (AP) says someone combined part of a CNN Philippines report and other videos. The station's famous red logo was added at the bottom of the picture.

The AP said thousands of other false reports and blog posts appeared on the popular messaging app WhatsApp during the Kenyan election campaign. They fueled divisions and unrest in an election that has led to a major political crisis. Now, the United States is preparing to fight fake news — not at home, but in Kenya, where U.S. officials want to help strengthen the country's democratic system of government. "Information is, of course, power, and… fake news is a real danger," U.S. Ambassador to Kenya Robert Godec told the AP. He added that it had destroyed public trust in Kenya's real news media. "It's being weaponized. It's undermining democracy in Kenya," he said.

Earlier this month, the U.S. ambassador sent an email to the 47,000 members of the State Department's Young African Leaders Initiative. Godec asked them to promise to prevent the spread of fake media. He wants them to confirm the source and truthfulness of stories before passing the information along to others through social media. For a time, the hashtag #StopReflectVerify was the No. 2 trending hashtag on Twitter in Kenya, where the U.S. Embassy pushed it to its 256,000 followers. In addition to offering tools to help identify differences between fact and fake, the campaign involves a three-day training program for public affairs officials in Kenyan counties. It urges local governments to be more open and helpful to reporters so that they have an easier time confirming information they hear. The program is expected to expand to an Africa-wide international fact-checking day and a worldwide event on World Press Freedom Day in May.

The decision to fight fake news in Kenya appears to be the opposite of what is happening in the United States. President Donald Trump has used the term to insult media that publish critical stories

about him or his administration. Trump has also downplayed claims that false information from less-than-truthful sources may have had an effect on the 2016 U.S. presidential election.

The campaign also comes as U.S. officials have been warning Kenya's government about restrictions on the news media. The group Human Rights Watch has said Kenyan officials try to stop stories critical of the government by threatening reporters. The United States was very concerned in February when Kenya told major broadcasters to suspend operations after opposition leader Raila Odinga held a make-believe swearing-in ceremony.

Yet there are risks for the U.S. government in appearing to tell people what to believe, say or not say in Kenya, a former British colony. So the embassy is trying to show that the campaign is a local operation. It has partnered with groups like AfricaCheck, a fact-checking website. "We're not asking them to believe any particular thing," Ambassador Godec said. "We're just saying, don't take everything you see on your phone via WhatsApp as the truth because it may not be."

Josh Lederman reported this story for the Associated Press. Susan Shand adapted his report for VOA Learning English. George Grow was the editor.

Este texto foi extraído de https://learningenglish.voanews.com/a/after-2017-kenyan-election-us-officials-ready-to-fight-fake-news/4307121.html em 21 de março de 2018. Algumas passagens foram suprimidas pela pesquisadora.

GLOSSARY

Broadcast: to send out a programme on television or radio
Likely: probable; expected
Fuel (a feeling): stimulate
Strengthen: make stronger
Undermine: weaken; make someone less confident/powerful
Downplay: make something seem less important
Swearing-in ceremony: ceremony in which the someone starting an official job promises to be loyal and honest and to perform their duties well

APPENDIX J1 – Reading Comprehension Test (Text 1)

TESTE DE COMPREENSÃO LEITORA

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

A - Escreva tudo o que você se lembra da leitura do texto, sem consultá-lo.

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B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

1. ( ) Postagens apontando o favoritismo do presidente Uhuru Kenyatta foram publicadas em redes sociais próximo às eleições do Quênia
2. ( ) Facebook foi a mídia social mais afetada pela propagação de *fake news* nas eleições do Quênia
3. ( ) A embaixada americana no Quênia está desenvolvendo uma campanha contra notícias falsas.
4. ( ) O presidente do Quênia iniciou uma campanha para incentivar jovens cidadãos a checar as fontes das informações que são disseminadas online.
5. ( ) Os esforços da embaixada americana no Quênia podem ser interpretados como tendenciosos.

APPENDIX J 2 – True or False Text 1 - Keys

TEXT 1

B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

6. (V) Publicações apontando o favoritismo do presidente Uhuru Kenyatta foram antecederam as eleições do Quênia
   They [the videos] claimed that Kenyan President Uhuru Kenyatta was by far the most popular candidate in a study of likely voters.
7. (F) Facebook foi a mídia social mais afetada pela propagação de *fake news* nas eleições do Quênia
   The AP said thousands of other false reports and blog posts appeared on the popular messaging app WhatsApp during the Kenyan election campaign.
8. (V) A embaixada americana no Quênia está desenvolvendo uma campanha contra notícias falsas.
   Now, the United States is preparing to fight fake news — not at home, but in Kenya, where U.S. officials want to help strengthen the country's democratic system of government.
9. (F) O presidente do Quênia iniciou uma campanha para incentivar jovens cidadãos a checar as fontes das informações que são disseminadas online.
   For a time, the hashtag #StopReflectVerify was the No. 2 trending hashtag on Twitter in Kenya, where the U.S. Embassy pushed it to its 256,000 followers.
10. (V) Os esforços da embaixada americana no Quênia podem ser interpretados como tendenciosos.
    Yet there are risks for the U.S. government in appearing to tell people what to believe, say or not say in Kenya, a former British colony.

APPENDIX K – Text 2

Google pledges $300m to support journalism and fight fake news
20 March 2018

Google has said it will invest $300m in helping news organisations to fight fake news and grow their businesses. The search engine giant will also invest in new technological tools to enhance online news consumption.

The firm, which some argue has taken advertising money away from newspapers, acknowledged journalism was "under pressure" in the digital age. However, it said it had a "shared mission" with the industry and wanted to support its future.

The search giant said it had already tweaked its search algorithms to recognise "misinformation", but would now go further. In the past Google itself has been criticised for promoting fake articles, for example, in 2017 claiming that the shooter who killed more than 50 people in Las Vegas was a Democrat who opposed Donald Trump.

It said will now launch an initiative called Disinfo Lab, which will "use computational tools and journalistic oversight to monitor misinformation during elections". It has also launched a project called MediaWise - in partnership with Stanford University among others- to help young news readers "distinguish fact from fiction online".

A struggling industry

Philipp Schindler, Google's chief business officer, said the firm was working "closely with the news industry to drive sustainable growth". Many print media organisations have been hit hard as journalism has moved online over the last 15 years and print circulation has diminished.

According to research from OC&C last year, by 2020 Google and Facebook are expected to take 71% of all the money spent in the UK on digital advertising. Mr Schindler said Google had launched a new initiative called Subscribe with Google, which will allow readers

sign up for paid subscriptions from partner publishers with a single click. He also promised to do more to help news portals enhance the news reading experience online, for example, with its fast loading mobile web pages.

He flagged another example, in which Google worked with the South China Morning Post to provide immersive VR experiences that showed the evolution of Hong Kong throughout history. "This is just the beginning. We want to continue working closely with publishers to experiment on new ways they can reach audiences and produce impactful storytelling," Mr Schindler said.

Retrieved from http://www.bbc.com/news/business-43473938 on March 21st 2018

GLOSSARY
Pledge: to make a formal promise
Enhance: to improve quality
Tweak (verb): to change; to correct
Oversight: a mistake made because of a failure to notice something
Flag (verb): mark; remark

APPENDIX L1 –Written comprehension test – Text 2

TESTE DE COMPREENSÃO LEITORA

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

A - Escreva tudo o que você se lembra da leitura do texto, sem consultá-lo.

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B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

1. ( ) A Google doou dinheiro para agências de notícias em crise

2. ( ) Notícias falsas já foram vistas na Google, e a empresa tem trabalhado para melhorar seus mecanismos

3. ( ) Jornalistas estão elaborando uma ação que visa checar a veracidade das notícias nas eleições

4. ( ) O crescimento da Google aumentou o faturamento das agências de notícias com anúncios

5. ( ) O objetivo da MediaWise será o de educar para a análise crítica de informações em sites e mídias sociais

APPENDIX L2 – True or False text 2 – Key

TEXT 2

B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

1. (F) A Google comprometeu-se a financiar agências de notícias em crise
   Google has said it will invest $300m in helping news organisations to fight fake news and grow their businesses.
2. (V) Notícias falsas já foram vistas na Google, e a empresa tem trabalhado para melhorar seus mecanismos
   In the past Google itself has been criticised for promoting fake articles, for example, in 2017 claiming that the shooter who killed more than 50 people in Las Vegas was a Democrat who opposed Donald Trump.
3. (F) Jornalistas estão elaborando uma ação que visa checar a veracidade das notícias nas eleições
   It [Google] said will now launch an initiative called Disinfo Lab, which will "use computational tools and journalistic oversight to monitor misinformation during elections".
4. (F) O crescimento da Google aumentou o faturamento das agências de notícias com anúncios
   The firm, which some argue has taken advertising money away from newspapers, acknowledged journalism was "under pressure" in the digital age.
5. (V) O objetivo da MediaWise será o de educar para a análise crítica de informações em sites e mídias sociais
   It has also launched a project called MediaWise - in partnership with Stanford University among others- to help young news readers "distinguish fact from fiction online".

APPENDIX M – Text 3

Fact-checking Facebook CEO Mark Zuckerberg's congressional testimony

By Jon Greenberg on Thursday, April 12th, 2018 at 11:16 a.m.

Mark Zuckerberg, the 33-year-old billionaire founder of Facebook, underwent two days of hearings on Capitol Hill, explaining the company's policies and the role it had in the 2016 election. While Zuckerberg's answers generally expressed the literal truth, they also tended to omit some key details. We spoke with social media investors, academic analysts and privacy advocates to evaluate his testimony.

We have kicked off an investigation of every app that had access to a large amount of people's data before we locked down the platform in 2014. That's under way, I imagine we'll find some things."

Cambridge Analytica, a data mining firm used by the 2016 Trump campaign, had obtained between 50 million and 87 million Facebook user profiles harvested by a Facebook-approved app, most without the users' consent. That privacy breach is what led to Zuckerberg's appearance. Roger McNamee, the co-founder of the private equity group Elevation Partners and an early Facebook investor, said that while people might be focused on Cambridge Analytica, "the scope of the problem is huge." Many developers, McNamee said, were searching in users' friends lists to reach new people, and that fed directly into Facebook's business plan. "It was vital to have access to friend lists. This increased the number of minutes of use per day which made the advertising more valuable for Facebook." Brian Wieser, an analyst at Pivotal Research, said that even with the fully implemented changes, "there is still a lot of personal data that is used in the targeting of ads and delivery of content."

"We have already a ‘download your information’ tool that allows people to see and to take out all of the information that Facebook — that they've put into Facebook or that Facebook knows about them."

Zuckerberg offered versions of this statement to bolster his point that "you control your information." But Zuckerberg skips what users can’t control, said Alex Howard, deputy director of the Sunlight Foundation, an advocacy group that helped craft the Honest Ads Act aimed at online campaign advertising said. "There's a difference between what you are putting into Facebook and what Facebook is collecting about you," Howard said. "You can see your profile. But you only have access to the content you put on the platform. You can take down your photos, but not the record of who reacted to them. Not the metadata, not your search history, or your activity stream." All of that data helps Facebook target ads, which keeps it profitable. Facebook also has information on people who aren’t registered with Facebook. For the first time, Zuckerberg publicly acknowledged that.

"The average American uses eight different apps to communicate with their friends and stay in touch with people."

Sen. Lindsey Graham, R-S.C., pressed Zuckerberg on Facebook’s market power. Zuckerberg said that people have choices and that he doesn’t feel that the company enjoys a monopoly. Research suggests that smartphone users may utilize about nine apps per day. The list includes Twitter, Snapchat and LinkedIn. But some of the most popular apps, such as Whatsapp and Instagram, are owned by Facebook. If Zuckerberg downplayed Facebook’s dominance, researchers did not. "This is not an ordinary company, not a company of a sort we've seen before," said University of Colorado media studies professor Nathan Schneider. "It dominates the markets for news distribution and advertising, and many people have no meaningful choice over whether to use it."

http://www.politifact.com/truth-o-meter/article/2018/apr/12/fact-checking-facebook-ceo-zuckerbergs-testimony/Acesso em 13 de abril. Supressões foram feitas do original por Juliana do Amaral.

GLOSSARY

Hearing: official meeting
Kick off: to begin
Harvest: to collect large quantities of information, especially automatically
Target: to direct
Bolster: to support or make something stronger
Profitable: resulting in financial advantage
Downplay: make something seem less important

APPENDIX N 1 – Written comprehension test – Text 3

TESTE DE COMPREENSÃO LEITORA

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

A – Escreva tudo o que você se lembra da leitura do texto, sem consultá-lo.

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B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

a. ( ) Mark Zuckerberg teve que esclarecer diante da corte regras de privacidade do Facebook
b. ( ) Se você não tem uma conta no Facebook, os servidores não têm acesso aos seus dados
c. ( ) Os usuários do Facebook autorizaram o acesso da Cambridge Analytica aos seus dados
d. ( ) Nathan Schneider defende que o Facebook é a mídia social que mais influencia a formação da opinião pública
e. ( ) Alex Howard defende que mesmo que o usuário retire suas informações do Facebook, há dados que permanecem disponíveis, como o histórico

APPENDIX N2– True or false Text 3 – Key

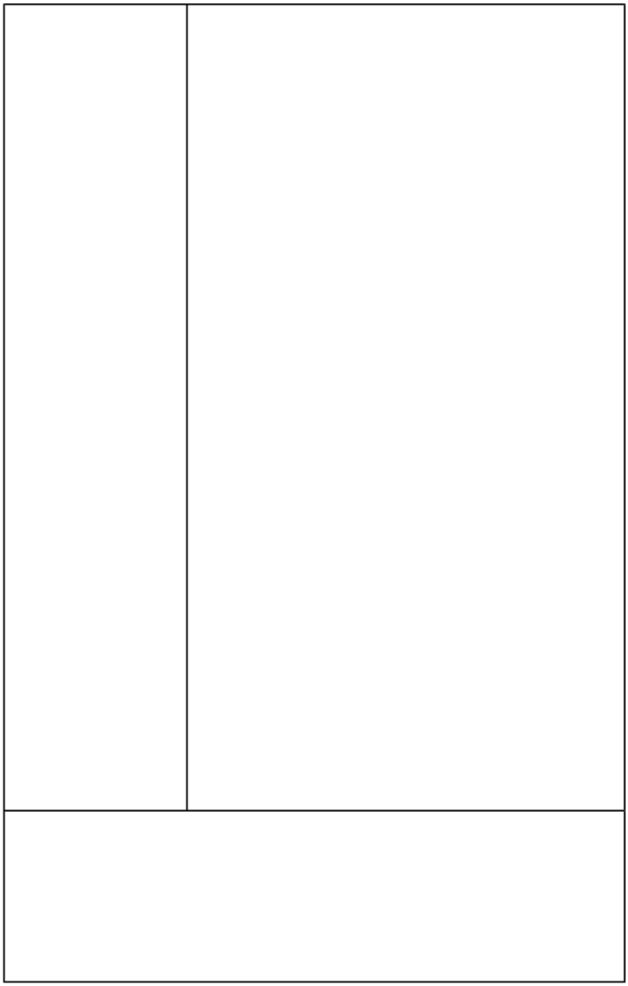
TEXT 3

B - Marque cada sentença como V (verdadeira) ou F (falsa) de acordo com as informações do texto.

a. (V) Mark Zuckerberg teve que esclarecer diante da corte as regras de privacidade do Facebook
   Mark Zuckerberg, the 33-year-old billionaire founder of Facebook, underwent two days of hearings on Capitol Hill, explaining the company's policies and the role it had in the 2016 election.
b. (F) Os usuários do Facebook autorizaram o acesso da Cambridge Analytica aos seus dados
   Cambridge Analytica, a data mining firm used by the 2016 Trump campaign, had obtained between 50 million and 87 million Facebook user profiles harvested by a Facebook-approved app, most without the users' consent.
c. (V) Alex Howard defende que mesmo que o usuário retire suas informações do Facebook, há dados que permanecem disponíveis, como o histórico
   You can take down your photos, but not the record of who reacted to them. Not the metadata, not your search history, or your activity stream."
d. (F) Se você não tem uma conta no Facebook, os servidores não têm acesso aos seus dados
   Facebook also has information on people who aren't registered with Facebook. For the first time, Zuckerberg publicly acknowledged that.
e. (V) Nathan Schneider defende que o Facebook é a mídia social que mais influencia a formação da opinião pública
   "This is not an ordinary company, not a company of a sort we've seen before," said University of Colorado media studies professor Nathan Schneider. "It dominates the markets for news distribution and advertising, and many people have no meaningful choice over whether to use it."

APPENDIX O – Note taking handout

Your notes



APPENDIX P – Retrospective questionnaire part 1

Retrospective questionnaire Part 1

Este questionário é parte da pesquisa intitulada "Realçar textos, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº: ____

Data: ____/____/2018

Responda às perguntas abaixo atenciosamente. Procure dar detalhes e se necessário faça uso de exemplos para expressar-se mais claramente.

1. Você conseguiu entender o texto?
   Sim ( ) Não ( )
   Justifique
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2. Em uma escala de 1 a 5, como você classificaria o grau de dificuldade do texto?
   Muito fácil Muito difícil
   1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

APPENDIX Q – Retrospective questionnaire part 2

Retrospective questionnaire Part 2

3. Você acha que a estratégia de **reler** ajudou a entender os textos estudados?
   Sim ( ) Não ( )
   Justifique:
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4. Você acha que a estratégia de **marcar o texto** ajudou a entender os textos estudados?
   Sim ( ) Não ( )
   Justifique:
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5. Você acha que a estratégia de **tomar notas** ajudou a entender os textos estudados?
   Sim ( ) Não ( )
   Justifique:
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APPENDIX R - Delayed recall

EXAME DE RETENÇÃO PARTE 1

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

Escreva tudo o que você se lembra da leitura do texto "**After 2017 Kenyan Election, US Officials Ready to Fight 'Fake' News**":

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EXAME DE RETENÇÃO PARTE 2

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

Escreva tudo o que você se lembra da leitura do texto "**Google pledges $300m to support journalism and fight fake news**":

EXAME DE RETENÇÃO PARTE 3

Esta atividade é parte da pesquisa intitulada "Realçar texto, tomar notas e reler: comparando a eficiência de estratégias de estudo na compreensão, retenção e aprendizado de textos em inglês". As informações aqui reportadas serão confidenciais.

Participante nº:
Data: ___/___/2018

Escreva tudo o que você se lembra da leitura do texto "**Fact-checking Facebook CEO Mark Zuckerberg's congressional testimony**":

APPENDIX S - Critical writing task

Critical writing task

Com base nas informações dos três textos previamente lidos sobre *Fake news* e em seu conhecimento no assunto, argumente:

Que medidas devem ser tomadas pelo governo e pelos usuários para identificar fake news e reduzir sua propagação?

APPENDIX T – Survey of Reading Strategies – SORS(Sheorey & Mokhtari, 2002)

continued from page 8

Appendix
SURVEY OF READING STRATEGIES
(SORS)

The purpose of this survey is to collect information about the various techniques you use when you read **academic materials in English** (e.g., reading textbooks for homework or examinations, reading journal articles, etc.).

All the items below refer to your reading of **college-related academic** materials (**such as textbooks,** not newspapers or magazines). Each statement is followed by five numbers, 1, 2, 3, 4, and 5, and each number means the following:

'1' means that '**I never or almost never** do this'.
'2' means that '**I do this only occasionally**'.
'3' means that '**I sometimes** do this'. (About 50% of the time.)
'4' means that '**I usually** do this'.
'5' means that '**I always or almost always** do this'.

After reading each statement, ***circle the number*** (1, 2, 3, 4, or 5) which applies to you. Note that there are **no right or wrong responses** to any of the items on this survey.

Category		Statement	Never				Always
GLOB	1.	I have a purpose in mind when I read.	1	2	3	4	5
SUP	2.	I take notes while reading to help me understand what I read.	1	2	3	4	5
GLOB	3.	I think about what I know to help me understand what I read.	1	2	3	4	5
GLOB	4.	I take an overall view of the text to see what it is about before reading it.	1	2	3	4	5
SUP	5.	When text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5
GLOB	6.	I think about whether the content of the text fits my reading purpose.	1	2	3	4	5
PROB	7.	I read slowly and carefully to make sure I understand what I am reading.	1	2	3	4	5
GLOB	8.	I review the text first by noting its characteristics like length and organization.	1	2	3	4	5
PROB	9.	I try to get back on track when I lose concentration.	1	2	3	4	5
SUP	10.	I underline or circle information in the text to help me remember it.	1	2	3	4	5
PROB	11.	I adjust my reading speed according to what I am reading.	1	2	3	4	5
GLOB	12.	When reading, I decide what to read closely and what to ignore.	1	2	3	4	5
SUP	13.	I use reference materials (e.g., a dictionary) to help me understand what I read.	1	2	3	4	5
PROB	14.	When text becomes difficult, I pay closer attention to what I am reading.	1	2	3	4	5
GLOB	15.	I use tables, figures, and pictures in text to increase my understanding.	1	2	3	4	5
PROB	16.	I stop from time to time and think about what I am reading.	1	2	3	4	5
GLOB	17.	I use context clues to help me better understand what I am reading.	1	2	3	4	5
SUP	18.	I paraphrase (restate ideas in my own words) to better understand what I read.	1	2	3	4	5
PROB	19.	I try to picture or visualize information to help remember what I read.	1	2	3	4	5
GLOB	20.	I use typographical features like bold face and italics to identify key information.	1	2	3	4	5
GLOB	21.	I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
SUP	22.	I go back and forth in the text to find relationships among ideas in it.	1	2	3	4	5
GLOB	23.	I check my understanding when I come across new information.	1	2	3	4	5
GLOB	24.	I try to guess what the content of the text is about when I read.	1	2	3	4	5
PROB	25.	When text becomes difficult, I re-read it to increase my understanding.	1	2	3	4	5
SUP	26.	I ask myself questions I like to have answered in the text.	1	2	3	4	5
GLOB	27.	I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
PROB	28.	When I read, I guess the meaning of unknown words or phrases.	1	2	3	4	5
SUP	29.	When reading, I translate from English into my native language.	1	2	3	4	5
SUP	30.	When reading, I think about information in both English and my mother tongue.	1	2	3	4	5

APPENDIX U – Survey of Reading Strategies (translated)

LEVANTAMENTO DE ESTRATÉGIAS DE LEITURA
Traduzido e adaptado da Survey of Reading Strategies – SORS
(MOKHTARI & SHEOREY 2002)

O objetivo deste levantamento é coletar informações sobre as várias técnicas que você usa quando lê **conteúdo acadêmico em Inglês** (ex.: leitura de livro didático para tarefa ou testes, leitura de artigos, etc.).

Todos os itens abaixo se referem à sua leitura de **materiais acadêmicos** (*college-related academic materials*) (tais como **livros didáticos**, *não* jornais ou revistas). Cada oração é seguida de cinco números 1, 2, 3, 4, e 5, sendo que

'1' significa que 'eu **nunca ou quase nunca** ouvi falar disso'
'2' significa que 'eu **só** faço isso **ocasionalmente**'
'3' significa que 'eu **geralmente** faço isso'
'4' significa que 'eu **sempre ou quase sempre** faço isso'

Depois de ler cada oração, ***circule o número***(1, 2, 3, ou 4) que se aplica a você. Note que **não há respostas corretas ou incorretas** a nenhum dos itens desse levantamento.

Categoria		**Oração**	**Nunca**			**Sempre**
GLOB	1.	Eu tenho um objetivo em mente quando leio.	1	2	3	4
SUP	2.	Eu tomo notas enquanto leio para me ajudar a entender o que estou lendo	1	2	3	4
GLOB	3.	Eu penso no que sei para me ajudar a entender o que eu leio.	1	2	3	4
GLOB	4.	Antes de ler o texto, faço uma leitura de reconhecimento para identificar seu tema.	1	2	3	4
SUP	5.	Quando o texto se torna difícil, eu leio em voz alta para me ajudar a entender o que eu leio.	1	2	3	4
GLOB	6.	Eu verifico se o conteúdo do texto corresponde aos objetivos da minha	1	2	3	4

		leitura.				
PROB	7.	Eu leio devagar e com cuidado para me certificar de que entendo o que estou lendo.	1	2	3	4
GLOB	8.	Eu analiso o texto notando suas características como tamanho e organização.	1	2	3	4
PROB	9.	Eu tento retomar a leitura atenta quando perco a concentração.	1	2	3	4
SUP	10.	Eu sublinho ou circulo informação no texto para me ajudar a lembrar.	1	2	3	4
PROB	11.	Eu ajusto minha velocidade de leitura de acordo com o que estou lendo.	1	2	3	4
GLOB	12.	Quando estou lendo, eu decido o que ler mais atentamente e o que ignorar.	1	2	3	4
SUP	13.	Eu uso materiais de consulta (ex.: dicionários, aplicativos) para me ajudar a entender o que leio.	1	2	3	4
PROB	14.	Quando o texto se torna difícil, eu presto mais atenção no que estou lendo.	1	2	3	4
GLOB	15.	Eu uso tabelas, figuras e imagens no texto para aumentar meu entendimento.	1	2	3	4
PROB	16.	Eu paro de tempos em tempos para pensar no que estou lendo.	1	2	3	4
GLOB	17.	Eu uso evidências contextuais (quem, quando, onde etc) para me ajudar a entender melhor o que estou lendo.	1	2	3	4
SUP	18.	Eu faço paráfrase (reformular as ideias nas minhas próprias palavras) para entender melhor o que eu leio.	1	2	3	4
PROB	19.	Eu tento imaginar ou visualizar a informação para me ajudar a lembrar o que eu leio	1	2	3	4
GLOB	20.	Eu uso características tipográficas como negrito e itálico para identificar informações importantes.	1	2	3	4
GLOB	21.	Eu analiso criticamente e avalio a informação apresentada no texto.	1	2	3	4

SUP	2 2.	Eu retrocedo e avanço no texto para encontrar relações entre as ideias.	1	2	3	4
GLOB	2 3.	Eu verifico minha compreensão quando me deparo com informação nova.	1	2	3	4
GLOB	2 4.	Eu tento fazer suposições sobre o conteúdo do texto quando leio.	1	2	3	4
PROB	2 5.	Quando o texto se torna difícil, eu o releio para aumentar minha compreensão.	1	2	3	4
SUP	2 6.	Eu me faço perguntas que gostaria que fossem respondidas no texto.	1	2	3	4
GLOB	2 7.	Eu verifico se minhas suposições sobre o texto estão certas ou erradas.	1	2	3	4
PROB	2 8.	Quando leio, eu faço suposições sobre o significado de palavras ou frases desconhecidas.	1	2	3	4
SUP	2 9	Quando estou lendo, eu traduzo do inglês para minha língua materna.	1	2	3	4
SUP	3 0.	Quando estou lendo, eu penso em informações em ambas as línguas, inglês e minha língua materna.	1	2	3	4

APPENDIX V – Ratings of the True or False statements

Text 1 true or false	Rater 1	Rater 2	Rater 3
Statement 1	I	I	E
Statement 2	I	I	E
Statement 3	I	I	E
Statement 4	I	I	E
Statement 5	I	I	I

Text 2 true or false	Rater 1	Rater 2	Rater 3
Statement 1	I	E	E
Statement 2	I	E	E
Statement 3	I	I	I
Statement 4	I	I	E
Statement 5	I	E	E

Text 3 true or false	Rater 1	Rater 2	Rater 3
Statement 1	I	E	E
Statement 2	I	I	E
Statement 3	I	I	I
Statement 4	I	I	E
Statement 5	I	I	E

APPENDIX W– Ideas categorization

M – Main idea
S – Supporting idea
D – Detail

TEXT 1 **After 2017 Kenyan Election, US Officials Ready to Fight 'Fake' News**

Sentence	**R1**	**R2**	**R3**	**R4**	
After 2017 Kenyan Election, US Officials Ready to Fight 'Fake' News	M	S	M		**M1**
Just before Kenya's elections last year, videos from American broadcaster Cable News Network (CNN) started appearing on social media.	S	M	S		**S1**
The videos looked like they were from a CNN broadcast.	S	S	D		**S2**
They claimed that Kenyan President Uhuru Kenyatta was by far the most popular candidate in a study of likely voters.	M	M	S		**M2**
But the CNN broadcast was fake.	M	M	S		**M3**
The Associated Press (AP) says someone combined part of a CNN Philippines report and other videos.	S	D	S		**S3**
The station's famous red logo was added at the bottom of the picture.	D	D	D		**D1**

The AP said thousands of other false reports and blog posts appeared on the popular messaging app WhatsApp during the Kenyan election campaign.	M	S	D	**S**	**S4**
They fueled divisions and unrest in an election that has led to a major political crisis.	M	D	M		**M4**
Now, the United States is preparing to fight fake news — not at home, but in Kenya, where U.S. officials want to help strengthen the country's democratic system of government.	S	S	M		**S5**
"Information is, of course, power, and… fake news is a real danger," U.S. Ambassador to Kenya Robert Godec told the AP.	S	D	M	**D**	**D2**
He added that it had destroyed public trust in Kenya's real news media.	M	D	S	**D**	**D3**
"It's being weaponized. It's undermining democracy in Kenya," he said.	D	D	M		**D4**
Earlier this month, the U.S. ambassador sent an email to the 47,000 members of the State Department's Young African Leaders Initiative.	S	D	D		**D5**
Godec asked them to promise to prevent the spread of fake media.	D	D	S		**D6**
He wants them to confirm the source and truthfulness of stories before passing the information along to others through social media.	S	D	S		**S6**

For a time, the hashtag #StopReflectVerify was the No. 2 trending hashtag on Twitter in Kenya, where the U.S. Embassy pushed it to its 256,000 followers.	D	D	D		**D7**
In addition to offering tools to help identify differences between fact and fake, the campaign involves a three-day training program for public affairs officials in Kenyan counties.	D	D	D		**D8**
It urges local governments to be more open and helpful to reporters so that they have an easier time confirming information they hear.	S	D	S		**S7**
The program is expected to expand to an Africa-wide international fact-checking day and a worldwide event on World Press Freedom Day in May.	D	D	S		**D9**
The decision to fight fake news in Kenya appears to be the opposite of what is happening in the United States.	M	D	M		**M5**
President Donald Trump has used the term to insult media that publish critical stories about him or his administration.	S	D	S		**S8**
Trump has also downplayed claims that false information from less-than-truthful sources may have had an effect on the 2016 U.S. presidential election.	S	D	M	**S**	**S9**
The campaign also comes as U.S. officials have been warning Kenya's government about restrictions on the news media.	D	S	S		**S10**
The group Human Rights Watch has said Kenyan officials try to stop stories critical of the government by threatening reporters.	S	D	S		**S11**

The United States was very concerned in February when Kenya told major broadcasters to suspend operations after opposition leader Raila Odinga held a make-believe swearing-in ceremony.	D	D	M		**D10**
Yet there are risks for the U.S. government in appearing to tell people what to believe, say or not say in Kenya, a former British colony.	M	D	M		**M6**
So the embassy is trying to show that the campaign is a local operation.	S	D	S		**S12**
It has partnered with groups like AfricaCheck, a fact-checking website.	D	D	D		**D11**
"We're not asking them to believe any particular thing," Ambassador Godec said.	D	D	S		**D12**
"We're just saying, don't take everything you see on your phone via WhatsApp as the truth because it may not be."	S	D	S		**S13**

6 M (main ideas), 13 S (supporting ideas), 12 D (details) TOTAL = 31 ideas

TEXT 2 **Google pledges $300m to support journalism and fight fake news**

Sentence	**R1**	**R2**	**R3**	**R4**	
Google pledges $300m to support journalism and fight fake news	M	M	M		**M1**
Google has said it will invest $300m in helping news organisations to fight fake news and grow their businesses.	M	M	S		**M2**
The search engine giant will also invest in new technological tools to enhance online news consumption.	M	M	S		**M3**
The firm, which some argue has taken advertising money away from newspapers, acknowledged journalism was "under pressure" in the digital age.	S	S	D		**S1**
However, it said it had a "shared mission" with the industry and wanted to support its future.	D	S	D		**D1**
The search giant said it had already tweaked its search algorithms to recognise "misinformation", but would now go further.	D	S	S		**S2**
In the past Google itself has been criticised for promoting fake articles, for example, in 2017 claiming that the shooter who killed more than 50 people in Las Vegas was a Democrat who opposed Donald Trump.	S	S	S		**S3**
It said will now launch an initiative called Disinfo Lab, which will "use computational tools and journalistic oversight to monitor misinformation during elections".	S	S	D		**S4**

It has also launched a project called MediaWise - in partnership with Stanford University among others - to help young news readers "distinguish fact from fiction online".	S	S	D		**S5**
A struggling industry	M	D	D		**D2**
Philipp Schindler, Google's chief business officer, said the firm was working "closely with the news industry to drive sustainable growth".	D	D	S		**D3**
Many print media organisations have been hit hard as journalism has moved online over the last 15 years and print circulation has diminished.	S	D	**D**		**D4**
According to research from OC&C last year, by 2020 Google and Facebook are expected to take 71% of all the money spent in the UK on digital advertising.	S	D	M	**D**	**D5**
Mr Schindler said Google had launched a new initiative called Subscribe with Google, which will allow readers sign up for paid subscriptions from partner publishers with a single click.	S	D	S		**S6**
He also promised to do more to help news portals enhance the news reading experience online, for example, with its fast loading mobile web pages.	D	D	S		**D6**
He flagged another example, in which Google worked with the South China Morning Post to provide immersive VR experiences that showed the evolution of Hong Kong throughout history.	D	D	S		**D7**
"This is just the beginning.	D	D	D		**D8**

We want to continue working closely with publishers to experiment on new ways they can reach audiences and produce impactful storytelling," Mr Schindler said.	D	D			**D9**

3 M (main ideas), 6 S (supporting ideas), 9 D (details) TOTAL = 18 ideas

TEXT 3 **Fact-checking Facebook CEO Mark Zuckerberg's congressional testimony**

Sentence	**R1**	**R2**	**R3**	**R4**	
Fact-checking Facebook CEO Mark Zuckerberg's congressional testimony	M	M	**M**		**M1**
By Jon Greenberg on Thursday, April 12th, 2018 at 11:16 a.m.	S	D	**D**		**D1**
Mark Zuckerberg, the 33-year-old billionaire founder of Facebook, underwent two days of hearings on Capitol Hill, explaining the company's policies and the role it had in the 2016 election.	M	M	**M**		**M2**
While Zuckerberg's answers generally expressed the literal truth, they also tended to omit some key details.	S	S	**S**		**S1**
We spoke with social media investors, academic analysts and privacy advocates to evaluate his testimony.	D	D	**S**		**D2**
"We have kicked off an investigation of every app that had access to a large amount of people's data before we locked down the platform in 2014.	D	D	**S**		**D3**

That's under way, I imagine we'll find some things."	D	D	**D**		**D4**
Cambridge Analytica, a data mining firm used by the 2016 Trump campaign, had obtained between 50 million and 87 million Facebook user profiles harvested by a Facebook-approved app, most without the users' consent.	M	S	**M**		**M3**
That privacy breach is what led to Zuckerberg's appearance.	S	S	**S**		**S2**
Roger McNamee, the co-founder of the private equity group Elevation Partners and an early Facebook investor, said that while people might be focused on Cambridge Analytica, "the scope of the problem is huge."	M	D	**S**	**S**	**S3**
Many developers, McNamee said, were searching in users' friends lists to reach new people, and that fed directly into Facebook's business plan.	S	D	**M**	**S**	**S4**
"It was vital to have access to friend lists.	S	D	**S**		**S5**
This increased the number of minutes of use per day which made the advertising more valuable for Facebook."	M	D	**S**	**D**	**D5**
Brian Wieser, an analyst at Pivotal Research, said that even with the fully implemented changes, "there is still a lot of personal data that is used in the targeting of ads and delivery of content."	S	D	**S**		**S6**
"We have already a 'download your information' tool that allows people to see and to take out all of the information that Facebook — that they've put into Facebook or that Facebook knows about them."	D	D	**M**		**D6**

Zuckerberg offered versions of this statement to bolster his point that "you control your information."	D	D	**S**		**D7**
But Zuckerberg skips what users can't control, said Alex Howard, deputy director of the Sunlight Foundation, an advocacy group that helped craft the Honest Ads Act aimed at online campaign advertising.	D	D	**S**		**D8**
"There's a difference between what you are putting into Facebook and what Facebook is collecting about you," Howard said.	M	D	**M**		**M4**
"You can see your profile. But you only have access to the content you put on the platform.	S	D	**S**		**S7**
You can take down your photos, but not the record of who reacted to them.	D	D	**S**		**D9**
Not the metadata, not your search history, or your activity stream."	D	D	**S**		**D10**
All of that data helps Facebook target ads, which keeps it profitable.	S	D	**S**		**S8**
Facebook also has information on people who aren't registered with Facebook.	S	D	**S**		**S9**
For the first time, Zuckerberg publicly acknowledged that.	D	D	**S**		**D11**
"The average American uses eight different apps to communicate with their friends and stay in touch with people."	D	D	**D**		**D12**
Sen. Lindsey Graham, R-S.C., pressed Zuckerberg on Facebook's market power.	D	D	**D**		**D13**

Zuckerberg said that people have choices and that he doesn't feel that the company enjoys a monopoly.	D	D	**M**		**D14**
Research suggests that smartphone users may utilize about nine apps per day.	D	D	**D**		**D15**
The list includes Twitter, Snapchat and LinkedIn.	D	D	**D**		**D16**
But some of the most popular apps, such as Whatsapp and Instagram, are owned by Facebook.	S	D	**S**		**S17**
If Zuckerberg downplayed Facebook's dominance, researchers did not.	D	D	**M**		**D17**
"This is not an ordinary company, not a company of a sort we've seen before," said University of Colorado media studies professor Nathan Schneider.	D	D	**M**		**D18**
"It dominates the markets for news distribution and advertising, and many people have no meaningful choice over whether to use it."	M	D	**M**		**M5**

5 M (main ideas), 10 S (supporting ideas), 18 D (details) **TOTAL = 33 ideas**

APPENDIX X1 – Reports of individual performance – Pilot study

P1	Text 3 (Facebook)	Text 1 (Kenya)	Text 2 (Google)
Strategy	Note taking (N)	Highlighting (H)	Rereading (R)
Notes	3 main ideas 3 supporting ideas 4 details		
Highlights		3 main ideas 7 supporting ideas 6 details	
Immediate recall	5 main ideas 1 detail	2 main ideas 5 supporting ideas 1 detail	2 main ideas 2 supporting ideas 1 detail
True or False	3/5	4/5	4/5
Retrospective Questionnaire pt 1	Understood? Yes Glossary – helpful Difficulty – 2 (low)	Understood? Yes Glossary – helpful Difficulty – 2 (low)	Understood? Yes Glossary – helpful Difficulty – 2 (low)
Delayed recall	2 main ideas 1 detail	2 main ideas 3 supporting ideas	2 main ideas 1 supporting idea
Critical Writing Task	1 main idea	2 main ideas	1 main idea 1 supporting idea

P 2	Text 1 (Kenya)	Text 2 (Google)	Text 3 (Facebook)
Strategy	Note taking (N)	Highlighting (H)	Rereading (R)
Notes	5 main ideas 3 details		
Highlights		2 main ideas 6 supporting idea 5 details	
Immediate recall	2 main ideas 4 supporting ideas 2 details	3 main ideas 1 supporting idea 2 details	1 main idea 5 supporting ideas 3 details
True or False	4/5	2/5	3/5
Retrospective Questionnaire	Understood? Yes Common words Difficulty – 1 (low)	Understood? Yes Low cohesion Difficulty – 2 (low)	Understood? Yes Easy reading Difficulty – 1 (low)
Delayed recall	3 main ideas 2 supporting ideas 1 detail	1 main idea 1 supporting idea 1 detail	2 main ideas 3 supporting ideas 1 detail
Critical Writing Task		1 main idea 1 supporting idea	1 main ideas

P3	Text 2 (Google)	Text 3 (Facebook)	Text 1 (Kenya)
Strategy	Note taking (N)	Highlighting (H)	Rereading (R)
Notes	2 main ideas 1supporting idea 1 detail		
Highlights		3 main ideas 5 supporting ideas 6 details	
Immediate recall	2 main ideas 1 supporting idea 1 detail	4 main ideas 3 supporting ideas 2 details	4 main ideas 3 supporting ideas 2 details
True or False	3/5	3/5	5/5
Retrospective Questionnaire	Understood? Partly Difficulty – 2 (low)	Understood? Yes Highlighting helped Difficulty – 2 (low)	Understood? Yes Common vocab Difficulty – 2 (low)
Delayed recall	1 main idea 1 supporting idea	1 main idea 2 supporting ideas 2 details	2 main ideas 1 supporting idea 1 detail
Critical Writing Task			

APPENDIX X2 – Reports of individual performance

G1 P11	Text 1 (Kenya)	Text 2 (Google)	Text 3 (Facebook)
Strategy	Note taking	Rereading	Highlighting
Notes	3 M (50%) 2 S (15%)		
Highlights			4 M (80%) 5 S (50%) 4 D (22%)
Immediate recall	2 M (33%) 3 S (23%) TOTAL = 16%	1 M (33%) 3 S (50%) TOTAL = 22%	3 M (60%) 1 S (10%) TOTAL = 12%
Delayed recall	3 M (50%) 1 S (7%) TOTAL = 12%	1 M (33%) TOTAL = 5%	3 M (60%) 1 S (10%) TOTAL = 12%

G1P12	Text 1 (Kenya)	Text 2 (Google)	Text 3 (Facebook)
Strategy	Note taking	Rereading	Highlighting
Notes	2 M (33%) 8 S (61%) 4 D (33%)		
Highlights			4 M (80%) 3 S (30%) 4 D (22%)
Free recall	1 M (16%) 4 S (30%) 1 D (8%) TOTAL = 19%	2 M (66%) 2 S (33%) 3 D (33%) TOTAL = 38%	3 M (60%) 2 S (20%) 3 D (16%) TOTAL = 24%
Delayed recall	2 M (33%) 1 S (7%)	1 M (33%) 2 S (33%)	1 M (20%) 2 S (33%)

	1 D (8%) TOTAL = 13%	TOTAL = 16%	TOTAL = 9%

G1P13	Text 1 (Kenya)	Text 2 (Google)	Text 3 (Facebook)
Strategy	Note taking	Rereading	Highlighting
Notes	1 M (16%) 1 S (7%)		
Highlights			3 M (60%) 2 S (20%) 3 D (16%)
Immediate recall	1 M (16%) 1 S (7%) 1 D (8%) TOTAL = 16%	1 M (33%) 3 S (50%) 1 D (11%) TOTAL = 27%	3 M (60%) 2 S (20%) 2 D (11%) TOTAL = 21%
Delayed recall	1 M (16%) 1 S (7%) TOTAL = 6%	1 M (33%) 1 S (16%) TOTAL = 11%	1 M (20%) 3 S (30%) 2 D (11%) TOTAL = 18%

G1P15	Text 1 (Kenya)	Text 2 (Google)	Text 3 (Facebook)
Strategy	Note taking	Rereading	Highlighting
Notes	4 M (66%) 3 S (23%) 4 D (33%)		
Highlights			3 M (60%) 6 S (60%) 5 D (27%)
Immediate recall	2 M (33%) 7 S (53%) 1 D (8%) TOTAL = 32%	2 M (66%) 3 S (50%) 3 D (33%) TOTAL = 44%	3 M (60%) 4 S (40%) 3 D (16%) TOTAL = 30%
True or False	5/5	3/5	4/5

Retrospective Questionnaire pt 1	Understood? Yes Missed details Difficulty – 3	Understood? Yes Vocabulary OK Difficulty – 2	Understood? Yes Main ideas OK Difficulty – 3
Delayed recall	2 M (33%) 6 S (46%) TOTAL = 26%	 4 S (66%) 1 D (11%) TOTAL = 28%	3 M (60%) 3 S (30%) 1 D (5%) TOTAL = 21%

G1P18	**Text 1 (Kenya)**	**Text 2 (Google)**	**Text 3 (Facebook)**
Strategy	Note taking (N)	Rereading (R)	Highlighting (H)
Notes	1 M (16%) 7 S (53%) 4 D (33%)		
Highlights			3 M (60%) 5 S (50%) 3 D (16%)
Immediate recall	3 M (50%) 3 S (23%) 3 D (25%) TOTAL = 29%	2 M (66%) 4 S (66%) 2 D (22%) TOTAL = 44%	2 M (40%) 3 S (30%) 3 D (16%) TOTAL = 24%
Delayed recall	3 M (50%) 3 S (23%) 2 D (16%) TOTAL = 26%	2 M (66%) 4 S (66%) 1 D (11%) TOTAL = 39%	3 M (60%) 1 S (10%) 1 D (5%) TOTAL = 15%

G1P19	**Text 1 (Kenya)**	**Text 2 (Google)**	**Text 3 (Facebook)**
Strategy	Note taking	Rereading	Highlighting
Notes	1 M (16%) 3 S (23%)		
Highlights			3 M (60%)

			3 S (30%)
Immediate recall	1 M (16%) 5 S (38%) 1 D (8%) TOTAL = 22%	2 M (66%) 1 S (16%) TOTAL = 16%	2 M (40%) 1 D (5%) TOTAL = 9%
Delayed recall	1 M (16%) 4 S (30%) TOTAL = 16%	2 M (66%) 1 S (16%) TOTAL = 16%	1 M (20%) 1 S (10%) TOTAL = 6%

G2P2	**Text 2 (Google)**	**Text 3 (Facebook)**	**Text 1 (Kenya)**
Strategy	Highlighting	Note taking	Rereading
Notes		2 M (40%) 2 S (20%) 4 D (22%)	
Highlights	2 M (66%) 4 S (66%) 3 D (33%)		
Immediate recall	2 M (66%) 3 S (50%) 1 D (11%) TOTAL = 33%	2 M (40%) 3 S (30%) 1 D (5%) TOTAL =18%	2 M (33%) 7 S (53%) 3 D (25%) TOTAL = 38%
Delayed recall	1 M (33%) 3 S (50%) TOTAL = 22%	1 M (20%) 1 S (10%) 1 D (5%) TOTAL = 9%	2 M (33%) 4 S (30%) 2 D (16%) TOTAL = 26%

G2P4	Text 2 (Google)	Text 3 (Facebook)	Text 1(Kenya)
Strategy	Highlighting	Note taking	Rereading
Notes		3 M (60%) 1 S (10%) 1 D (5%)	
Highlights	1 M (33%) 4 S (66%) 5 D (55%)		
Immediate recall	1 M (33%) 2 S (33%) 1 D (11%) TOTAL = 22%	3 M (60%) 1 S (10%) 1 D (5%) TOTAL = 15%	3 M (50%) 3 S (23%) 2 D (16%) TOTAL = 25%
Delayed recall	1 M (33%) 2 S (33%) 1 D (11%) TOTAL = 22%	3 M (60%) 1 D (5%) TOTAL = 12%	2 M (33%) 1 S (7%) TOTAL = 9%

G2P5	Text 2 (Google)	Text 3 (Facebook)	Text 1 (Kenya)
Strategy	Highlighting	Note taking	Rereading
Notes		3 M (60%) 5 S (50%) 5 D (27%)	
Highlights	3 M (100%) 3 S (50%) 3 D (33%)		
Immediate recall	3 M (100%) 2 S (33%) TOTAL = 27%	3 M (60%) 2 S (20%) 2 D (11%) TOTAL = 21%	2 M (33%) 3 S (23%) 1 D (8%) TOTAL = 19%
Delayed recall	2 M (66%) 2 S (33%) TOTAL = 22%	3 M (60%) 2 S (20%) 2 D (11%) TOTAL = 21%	1 M (16%) TOTAL = 3%

G2P8	Text 2 (Google)	Text 3 (Facebook)	Text 1 (Kenya)
Strategy	Highlighting	Note taking	Rereading
Notes		2 M (40%) 3 D (16%)	
Highlights	1 M (33%) 4 S (66%) 2 D (22%)		
Immediate recall	1 M (33%) 1 S (16%) 3 D (33%) TOTAL = 27%	2 M (40%) 1 S (10%) 3 D (16%) TOTAL = 18%	3 M (50%) 3 S (23%) 1 D (8%) TOTAL = 22%
Delayed recall	 2 S (33%) TOTAL = 11%	2 M (40%) TOTAL = 6%	2 M (33%) 2 S (15%) TOTAL = 13%

G2P9	Text 2 (Google)	Text 3 (Facebook)	Text 1 (Kenya)
Strategy	Highlighting	Note taking	Rereading
Notes		2 M (40%) 1 D (5%)	
Highlights	1 M (33%) 4 S (66%) 3 D (33%)		
Immediate recall	1 M (33%) 4 S (66%) TOTAL = 27%	2 M (40%) 2 S (20%) 3 D (16%) TOTAL = 21%	1 M (16%) 4 S (30%) 3 D (25%) TOTAL = 25%
Delayed recall	1 M (33%) 3 S (50%) TOTAL = 22%	1 M (20%) 1 S (10%) 2 D (11%) TOTAL = 12%	1 M (16%) 4 S (30%) 1 D (8%) TOTAL = 19%

G2P16	Text 2 (Google)	Text 3 (Facebook)	Text 1 (Kenya)
Strategy	Highlighting	Note taking	Rereading
Notes		3 M (60%) 3 S (30%) 3 D (16%)	
Highlights	1 M (33%) 4 S (66%) 3 D (33%)		
Immediate recall	2 M (66%) 3 S (50%) 2 D (22%) TOTAL = 38%	2 M (40%) 2 S (20%) 2 D (11%) TOTAL = 18%	6 S (46%) 1 D (8%) TOTAL = 22%
True or False	4/5	3/5	5/5
Retrospective Questionnaire pt 1	Understood? partly Unknown words Difficulty – 3	Understood? Yes Glossary - helpful Difficulty – 3	Understood? Yes Simple language Difficulty – 2
Delayed recall	1 M (33%) 2 S (33%) TOTAL = 16%	1 M (20%) 3 S (30%) 1 D (5%) TOTAL = 15%	1 M (16%) 2 S (15%) TOTAL = 9%

G3P1	Text 3 (Facebook)	Text 1 (Kenya)	Text 2 (Google)
Strategy	Rereading	Highlighting	Note taking
Notes			2 M (66%) 3 D (33%)
Highlights		2 M (33%) 7 S (53%) 4 D (33%)	
Free recall	2 M (40%) 1 S (10%) 2 D (11%) TOTAL = 15%	1 M (16%) 2 S (15%) TOTAL = 9%	1 M (33%) 1 D (11%) TOTAL = 11%

Delayed recall	1 M (20%) TOTAL = 3%	 2 S (15%) TOTAL = 6%	1 M (33%) 1 S (16%) TOTAL = 11%

G3P3	**Text 3 (Facebook)**	**Text 1 (Kenya)**	**Text 2 (Google)**
Strategy	Rereading	Highlighting	Note taking
Notes			1 M (33%) 4 S (66%) 2 D (22%)
Highlights		4 M (66%) 5 S (38%) 5 D (41%)	
Free recall	2 M (40%) 4 S (40%) 3 D (16%) TOTAL = 27%	1 M (16%) 2 S (15%) 3 D (25%) TOTAL = 19%	 1 D (11%) TOTAL = 5%
Delayed recall	1 M (20%) 1 S (10%) 1 D (5%) TOTAL = 9%	 2 S (15%) TOTAL = 6%	1 M (33%) TOTAL = 5%

G3P6	**Text 3 (Facebook)**	**Text 1 (Kenya)**	**Text 2 (Google)**
Strategy	Rereading	Highlighting	Note taking
Notes			1 M (33%) 5 S (83%) 2 D (22%)
Highlights		2 M (33%) 5 S (38%) 2 D (16%)	
Immediate recall	4 M (80%) 4 S (40%) 2 D (11%) TOTAL = 30%	3 M (50%) 4 S (30%) 4 D (33%) TOTAL = 35%	1 M (33%) 4 S (66%) 1 D (11%) TOTAL = 33%
Delayed recall	3 M (60%)	3 M (50%)	1 M (33%)

	1 S (10%) 2 D (11%) TOTAL = 18%	1 S (7%) 4 D (33%) TOTAL = 26%	3 S (33%) 1 D (11%) TOTAL = 28%

G3P7	**Text 3 (Facebook)**	**Text 1 (Kenya)**	**Text 2 (Google)**
Strategy	Rereading	Highlighting	Note taking
Notes			2 M (66%) 3 S (50%)
Highlights		7 S (53%) 4 D (33%)	
Immediate recall	1 M (20%) 1 S (10%) 1 D (5%) TOTAL = 9%	1 M (16%) 4 S (30%) TOTAL = 16%	2 S (33%) TOTAL = 11%
True or False	4/5	3/5	2/5
Retrospective Questionnaire pt 1	Understood? Yes Vocabulary - diff Difficulty – 3	Understood? Yes Vocabulary - diff Difficulty – 3	Understood? Yes Difficulty – 4 high
Delayed recall	1 S (10%) 1 D (5%) TOTAL = 6%	1 M (16%) 2 S (15%) TOTAL = 9%	2 S (33%) TOTAL = 11%

G3P10	**Text 3 (Facebook)**	**Text 1 (Kenya)**	**Text 2 (Google)**
Strategy	Rereading	Highlighting	Note taking
Notes			1 M (33%) 2 S (33%) 1 D (11%)
Highlights		4 M (66%) 2 D (16%)	

Immediate recall	2 M (40%) 2 S (20%) 1 D (5%) TOTAL = 15%	3 M (50%) 2 S (15%) TOTAL = 16%	 2 S (33%) TOTAL = 11%
True or False	3/5	4/5	4/5
Delayed recall	2 M (40%) 1 D (5%) TOTAL = 9%	2 M (33%) 2 S (15%) TOTAL = 13%	1 M (33%) TOTAL = 5%

G3P14	**Text 3 (Facebook)**	**Text 1 (Kenya)**	**Text 2 (Google)**
Strategy	Rereading	Highlighting	Note taking
Notes			1 M (33%) 3 S (50%) 1 D (11%)
Highlights		3 M (50%) 1 S (7%) 3 D (25%)	
Immediate recall	3 M (60%) 1 S (10%) 2 (11%) TOTAL = 18%	2 M (33%) 2 S (15%) 1 D (8%) TOTAL = 16%	1 M (33%) 2 S (33%) TOTAL = 16%
Delayed recall	3 M (60%) TOTAL = 9%	2 M (33%) 2 S (15%) TOTAL = 13%	1 M (33%) TOTAL = 5%

G3P17	Text 3 (Facebook)	Text 1 (Kenya)	Text 2 (Google)
Strategy	Rereading	Highlighting	Note taking
Notes			1 M (33%) 4 S (66%) 3 D (33%)
Highlights	4 M (80%) 4 S (40%) 2 D (11%)		
Immediate recall	2 M (40%) 1 S (10%) 1 D (5%) TOTAL = 12%	1 M (16%) 3 S (23%) 2 D (16%) TOTAL = 19%	1 M (33%) 1 S (16%) 1 D (11%) TOTAL = 16%
Delayed recall	2 M (40%) 1 S (10%) 2 D (11%) TOTAL = 15%	2 M (33%) 3 S (23%) 1 D (8%) TOTAL = 19%	1 M (33%) 1 D (11%) TOTAL = 11%

APPENDIX Y –Answers for Retrospective Questionnaire part 1 divided by text

Retrospective questionnaire Part 1 Text 1
1. Você conseguiu entender o texto? Sim 18 participants (94,8%) Não 1 participant (5,2%) Justifique G1P11 “Em parte pois faltou tempo para ter um melhor entendimento do texto. É a questão do raciocínio um pouco mais rápido entendo eu!” G1P16 “Me senti um pouco pressionada e no final fiquei um pouco nervosa” G1P13 “Apesar de não saber a tradução de algumas palavras, isto não influenciou diretamente a compreensão do texto em si” G1P15 “Pois consegui entender a ideia geral, porém vários detalhes eu não consegui entender por falta de vocabulário” G1P18 “Imagino ter entendido as ideias principais do texto” G1P19 “Nem todas as palavras eram de meu conhecimento, mas com a ajuda do glossário e de uma leitura do todo, consegui ter um contexto e entendimento sobre o que se tratava o texto” G2P2 “Considerei esse texto mais simples e fácil de compreender. Vocabulário mais usual. Consegui compreender mais do que os outros dois” G2P5 “O texto era muito denso e continha informações difusas sobre o tema principal e não seguia uma organização em relação a sua estrutura como os outros” G2P8 “Além deste (sic) ser o texto mais fácil, reler ele várias vezes me ajudou muito” G2P9 “Achei o vocabulário mais fácil que os outros textos” G2P16 “Foi ainda mais fácil de entender depois de ler os outros textos, a linguagem era simples” G3P1 “Consegui entender mas por ser bem mais longo acredito que precisaria de um pouco mais de tempo para ler outra vez e captar ideias mais detalhadas” G3P6 “Considero o texto em questão de mais fácil compreensão, principalmente pelo vocabulário e acredito que a marcação no texto me fez separar os fatos mais relevantes” G3P7 Mesma ideia do texto anterior. Muito do vocabulário não conheço, e, por este motivo, acredito ter compreendido errado a informação. Não consegui reler, portanto, esqueci vários detalhes” G3P10 “Sim. O segundo texto tem assunto relacionado com o primeiro,

o que facilita o entendimento da maior parte do contexto”
G3P14 “Alguns termos mais políticos dificultaram a interpretação do texto”
G3P17 “Acredito que li melhor este texto do que o primeiro oferecido. Aparentou que consegui interpretar e entender melhor o contexto”
2. Em uma escala de 1 a 5, como você classificaria o grau de dificuldade do texto?
(1) 3 participants (15%)
(2) 4 participants (21%)
(3) 11 participants (57%)

Retrospective questionnaire Part 1Text 2

1. Você conseguiu entender o texto?
Sim 19 participants (100%)
Não
Justifique
G1P11 “Acredito que o meu entendimento foi dentro de um limite razoável longe de estar bom”
G1P13 “Os textos possuíam linguagem fácil mesmo sem saber o vocabulário 100%”
G1P15 “Porque entendi a ideia geral, já que maior (sic) parte do vocabulário eu sabia”
G1P16 “Algumas palavras eram desconhecidas, mas tentei ver o contexto”
G1P19 A partir de uma leitura do todo, consegui entender a proposta do texto. A releitura de partes foi fundamental para isso”
G2P2 “Grande parte sim. Em alguns trechos tive dificuldade por desconhecer algumas palavras”
G2P5 “O texto utilizou palavras chaves e uma estrutura coesa. Propôs dois assuntos relacionados e dividiu os parágrafos para discuti-los”
G2P8 “Algumas palavras eu não sabia/recordava o significado, entretanto não é um texto difícil. Achei difícil me recordar de diversos detalhes do texto”
G2P9 “Não consegui entender algumas frases do texto o que fez eu ficar um pouco travada para continuar, como se aquela parte fosse o necessário para eu entender todo o resto mas no geral, entendi o contexto”
G2P16 “Consegui ler o texto com algumas dúvidas de vocabulário que acredito ser natural acontecer na fase em que me encontro”
G3P1 “Esse texto foi mais fácil de entender tendo em vista que foi mais

curto”
G3P3 “A dificuldade do texto era intermediária. O texto estava dividido em duas partes com assuntos principais um pouco diferentes, causando certa dificuldade em tomar notas”
G3P6 “A compreensão do texto foi tranqüila e tomar notas ajudou a gravar melhor algumas partes. Acredito que por ter sido o último texto talvez a compreensão tenha sido afetada”
G3P7 “A última parte, na verdade, entendi muito pouco, realmente mais o contexto”
G3P10 “Sim, tomar notas e reler ajudou a fixar melhor o conteúdo apresentado”
G3P14 “Este texto foi o que consegui entender de maneira mais fácil por sua linguagem mais atual”
G3P17 “Consegui ler bastante informações do texto, no entanto na hora de descrevê-las na folha de avaliação me perdi um pouco”
2. Em uma escala de 1 a 5, como você classificaria o grau de dificuldade do texto?
(1) 1 participant (5,2%)
(2) 6 participants (31,5%)
(3) 11 participants (57,8%)
(4) 1 participant (5,2%)

Retrospective questionnaire Part 1 Text 3

1. Você conseguiu entender o texto?
Sim 16 participants (94%)
Não 1 participant (6%)
Justifique
G1P16 “Achei esse texto mais difícil p/ gravar, mesmo podendo sublinhá-lo. Havia palavras que desconhecia.”
G1P15 “Pois sabia a maior parte do vocabulário, e entendi as ideias principais do texto, apesar de ter esquecido principalmente o início.”
G1P18 “Com alguma dificuldade”
G1P19 “Consegui entender algumas partes. O texto era mais longo, por isso acabei fazendo uma leitura mais apressada. Isso acabou prejudicando um pouco minha compreensão”
G2P2 “Consegui compreender o assunto tratado, porém novamente com dificuldades relacionada (sic) ao vocabulário”
G2P5 “Em função da distribuição do texto foi possível entender a proposta, pois o título falava somente dos depoimentos e análise factual

de Mark Zuckerberg ao Congresso Americano”
G2P8 “Não entendi tão bem pois tive falta de tempo para acabar o texto, escrever o que li demorou muito”
G2P9 “Porém nos dois primeiros parágrafos eu senti mais dificuldade para entender”
G2P16 “Foi um pouco complicado pela quantidade de informações, mas o glossário ajudou”
G3P1 “Eu consegui entender a ideia geral do texto, mas tive dificuldade com algumas palavras (vocabulário)”
G3P3 “A linguagem do texto era um pouco difícil. Exigiu bastante concentração para tentar entender os parágrafos”
G3P6 “O texto no geral foi de fácil compreensão. A possibilidade de reler as partes que não compreendi foi essencial. Um fator que ajudou foi o fato de eu me interessar pelo tema abordado”
G3P7 “Consegui compreender a informação essencial, mas, devido à dificuldade no vocabulário, algumas informações ficaram perdidas para mim”
G3P10 “O texto apresentado foi de acordo com o nível de inglês que estou cursando, não entendi o significado de algumas palavras, então procurei entender o contexto”
G3P14 “O texto apresenta alguns termos e expressões difíceis, mas a continuação da frase permite a compreensão melhor do texto”
G3P17 “Com auxílio do pequeno glossário a compreensão foi muito mais fácil. O texto trata de um assunto que conheço então ajudou”
2. Em uma escala de 1 a 5, como você classificaria o grau de dificuldade do texto?
(2) 3 participants (17,6%)
(3) 10 participants (5,8%)
(4) 4 participants (23,5%)

APPENDIX Z– Answers for Retrospective Questionnaire 2

Você acha que a estratégia de **reler** ajudou a entender os textos estudados?
Sim 19 (100%)
G1P11 “Reler sempre é bom”
G2P9 “Acredito que reler foi o que mais me ajudou”
G3P1 “Acredito que foi a melhor estratégia, pois você pode retomar as ideias”
G2P4 “Sempre quando somos expostos a uma informação mais que uma vez, a retenção é maior”
G2P14 “Esta técnica foi o que consegui interpretar de forma melhor o texto”
G3P17 “ A estratégia de poder retomar a leitura melhorou a interpretação. Num primeiro momento em alguns parágrafos, não consegui entender muito bem, porém quando retomei a leitura aparentou melhorar no nível de compreensão”
G3P6 “Na minha opinião é uma das melhores estratégias pois ajuda a compreender melhor o texto como um todo”
G1P13 “A estratégia de reler ajuda o cérebro a se familiarizar melhor com o texto facilitando a compreensão”
G1P12 “É importante reler, pois tu consegues pescar os pontos mais importantes”
G2P5 “Na primeira leitura eu não tive condições de compreender sequer a ideia principal to texto. Após a segunda e terceira tentativas isso foi possível”
G1P15 “Pois após ler o texto, algumas dúvidas foram sanadas por entender melhor o contexto”
G1P18 “Já é o que faço normalmente, mas ajuda a organizar ideias”
G2P8 “Ajudou muito para entender os detalhes”
G3P3 “Reler traz melhor compreensão do texto e possibilita atentar para alguns detalhes”
G2P16 “Quando reli consegui guardar e perceber detalhes que haviam fugido da minha atenção na primeira vez”
G2P2 “Não sei se foi pelo fato do texto 3 ter sido mais fácil para minha compreensão, mas notei que na técnica de releitura foi onde mais consegui recordar”
G1P19 “Acho que essa é uma estratégia natural, voltar e reler o que não entendeu. Mas ter tempo hábil para isso facilita muito”
G3P7 “Contudo, com o tempo disponível foi difícil reler os textos completamente, dada a dificuldade de compreensão de alguns termos”
G3P10 “Reler ajuda, mas prefiro marcar enquanto leio. Reler sem marcar ajuda a fixar o contexto, não os detalhes”

Você acha que a estratégia de **marcar o texto** ajudou a entender os textos estudados?
Sim 16 G1P11 “Te orienta no entendimento do texto” G1P13 “Marcar o texto ajuda a destacar as ideias principais em meio as secundárias” G1P15 “Porque se lê o texto com o objetivo de selecionar as ideais mais importantes, apesar de parecer não ajudar a lembrar para a realização do primeiro questionário” G2P9 “Pois após marcar o texto é mais fácil identificar as informações mais importantes do texto” G1P18 “Ajuda a verificar o mais importante” G3P3 “Marcar o texto colabora no momento de lembrar os principais tópicos” G3P6 “Essa estratégia tem como característica, no meu caso, me fazer lembrar das partes que marquei, o que ajuda a compreender os pontos principais” G2P16 “Ajuda pois chama atenção das partes importantes, tanto na hora de marcar (por exigir a escolha do que é importante), quanto na hora de reler e já ver o que é essencial” G3P10 “Eu sempre utilizo a marcação de texto, isso ajuda a retornar às partes que preciso verificar posteriormente” G3P17 “Já tenho este hábito praticado em minhas leituras. No texto que não pude fazer os grifados parece que me perdi mais” G2P4 “A memória visual tem % importante em nossa retenção de dados” G2P2 “Acho que ajuda, mas pode funcionar melhor junto com a técnica de releitura” G2P8 “Estou acostumada e me sinto confortável” G1P12 “É mais uma estratégia para ajudar na compreensão e ajudar na memorização” G2P5 “Foi possível identificar espacialmente e mentalmente as informações questionadas. Além disso o texto continha menos palavras e estava bem delineado/organizado” G3P14 “Mas esta técnica não pude compreender o texto totalmente” **Não 3** G3P7 “A entender não; apenas auxilia na memorização das partes mais importantes” G3P1 “Eu acredito que a estratégia de marcar seja mais eficiente para o momento em que você precisará retomar a leitura”. Para um primeiro aprendizado não foi muito útil” G1P9 “Acho uma boa estratégia de síntese de raciocínio, mas não para entender a ideia principal do texto.”

Você acha que a estratégia de **tomar notas** ajudou a entender os textos estudados?
Sim 15 G1P11 “Também ajuda” G2P5 “Através das notas foi possível resumir e organizar em tópicos as ideias principais bem como classificar palavras chave e informações relevantes” G2P16 “Ajudou a organizar melhor as ideias depois de ler um texto com muitas informações diferentes de fontes diferentes” G1P12 “Acho que é uma das mais importantes e fixa o conteúdo na memória. Creio que todas estas estratégias ajudam na compreensão, na ... do tema principal e na memorização do texto” G1P13 “Tomar notas ajuda a gravar melhor as ideias mais importantes do texto em caso de estudo” G1P18 “Foi a estratégia de melhor me ajudou na memorização” G2P2 “Sim, quando leio e escrevo consigo memorizar melhor o conteúdo. Pois quando escrevo reflito e releio a informação” G3P6 “Na minha opinião essa estratégia serve bastante para memorizar o texto, pois o fato de reescrever as partes importantes me ajuda na compreensão e lembrança dos fatos” G1P19 “escrever ajuda a sistematizar as ideias e, ao mesmo tempo, memorizá-las tendo uma maior absorção do conteúdo” G3P14 “Esta técnica ajuda a relembrar o texto a longo prazo” G3P1 “Essa foi a segunda melhor estratégia na minha opinião, pois é possível fazer um resumo do texto” G1P15 “Pois no processo de transcrever a ideia principal com as próprias palavras, parece que entendo melhor as ideias principais do texto” G2P4 “É um combinado de reler + marcar texto” G3P10 “Sim, ajuda, mas não tenho o hábito de fazer isso em uma folha à parte” G3P17 “Porém, como era meu último texto e por estar com mais pressa, senti que poderia ter desenvolvido melhor” **Não 4** G3P7 “Mesma ideia acima, porém, neste caso, devido ao tempo. Auxiliaria mais no entendimento se houvesse mais tempo para estudá-los” G3P3 “Tomar notas dá a segurança de que a informação principal está anotada e então não é preciso lembrá-la” G2P9 “Como não estava entendendo muito bem os dois primeiros parágrafos acabei não tomando notas sobre, apenas anotei sobre os últimos parágrafos” G2P8 “Achei essa estratégia meio ruim pelo fato da maior demanda de tempo, eu poderia ter relido duas vezes no espaço de tempo que escrevi