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Analyzing vocabulary activities in EFL textbooks*

Uma análise de atividades de vocabulário em livros didáticos de ILE

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ABSTRACT

EFL textbooks were analyzed to investigate the relationship between the reading units and the vocabulary activities. From the three textbooks analyzed, only textbook one has a clear relationship between reading and vocabulary. A framework was also developed to investigate several aspects regarding the vocabulary activities. The first aspect regards how vocabulary was approached, and results have shown that vocabulary appears in different ways. The second aspect concerns glossaries/dictionary use, which was found that activities from all textbooks could be used as glossaries, while only textbooks two encourage dictionary use. The third aspect regards word-frequency, and only textbook one had more high-frequency words. The fourth aspect concerns the number of opportunities to find words in the input, and, again, only textbook one did so. The last aspect examined the depth of processing of the activities, and it was found that most of them promote a shallow level of processing.

Keywords: Vocabulary, Reading, Textbooks

RESUMO

Livros didáticos foram analisados para investigar a relação entre unidades de leitura e atividades de vocabulário. Dentre os três livros analisados, apenas o livro um apresenta uma relação entre leitura e vocabulário. Uma abordagem para investigar diversos aspectos das atividades de vocabulário foi elaborada. O primeiro aspecto corcerne como o vocabulário é abordado, e os resultados mostraram que este aparece em atividades variadas. O segundo se refere ao uso do dicionário/glossários, e enquanto as atividades de todos os livros podem ser utilizadas como glossário, apenas o livros dois encoraja o uso do dicionário. O terceiro aspecto concerne à frequência lexical, e apenas o livro um aborda palavras frequentes. O quarto aborda o número de repetições das palavras, e apenas o livro um apresenta o léxico em diversos contextos. O último aspecto corresponde ao nível de processamento das palavras, e a maioria das atividades promove um nível de processamento raso.

Palavras-chave: *Vocabulário, Leitura, Livros Didáticos*

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1. Introduction

Reading and vocabulary acquisition have a close relationship. Readers need vocabulary knowledge to construct meaning from text, in the same way as reading increases readers' vocabulary. After all, do we learn words in order to read, or do we read and as a result of learning new words? The answer to both questions is yes. There is evidence from research that reading is a source of vocabulary learning and that word knowledge predicts reading comprehension (Laufer, 1992, 2001, 2003, 2017; Joe, 1995; Stahl & Nagy, 2006, Tumolo, 2007).

In fact, Laufer (2017) endorses that there must be a combination of three factors for second language vocabulary acquisition to happen: *input, instruction and involvement* – the three 'I's of vocabulary learning. For Laufer (2017b), language input is the first factor for vocabulary acquisition. Reading input, for instance, must provide several encounters with the words to guarantee that the learner knows 98% of the vocabulary in the text, a figure which is relevant for learners to infer the meaning of new words from context (Laufer 2003). The second factor for vocabulary acquisition is instruction. The author argues that any type of word-focused instruction is effective, for it directs learners' attention to the lexical items (Laufer, 2017). The third factor is involvement, which means that vocabulary acquisition is dependent upon how involved learners are in processing these lexical items (Laufer & Hulstijn, 2001). According to the aforementioned authors, involvement with the words is dependent upon *need, search* and *evaluation*. The first one consists whether learners *need* a specific word for reading, while the second regards *searching* for the word, in case of an absence of a glossary, for instance. The third one consists of *evaluating* whether the word fits the context it is put in.

It seems, therefore, that vocabulary is vital for language use, however, in the 1980s, Meara declared that vocabulary was a neglected area of language learning. As a matter of fact, Nation (2011) has observed that this scenario has changed[3], highlighting that all the research carried out in the area of applied linguistics should be moved to the classroom environment. In fact, in a recent review study performed by De Azevedo, Pires, Lorenset and Tumolo (2017), a small number of studies dealing with vocabulary in a foreign language was found. According to them, between 2007 and 2017, only fourteen studies were carried out in the Brazilian context, which fit into the following categories: vocabulary and reading; textbooks and vocabulary instruction; perceptions about teaching and learning vocabulary; technological resources and hypermedia in teaching and learning vocabulary in a foreign language; and at last, working memory and vocabulary learning. Within the scope of this piece of research, De Azevedo et al. (2017) found four studies dealing with vocabulary and reading, two studies on incidental vocabulary acquisition through reading and two on professors' and learners' perceptions (see De Azevedo et al. 2017 for a complete account). In addition to enhancing the small number of studies on vocabulary in the Brazilian context, the findings of this piece of research may contribute for teachers and professors' knowledge, especially when deciding on which materials to choose for their classes.

Aiming to contribute to research in the area of reading and vocabulary, the main goal of this piece of research is to analyze the vocabulary activities of the English as a Foreign Language textbooks used in the English undergraduate program[4] of the Federal University of Santa Catarina in order to investigate the relationship (if any) of the vocabulary activities contained in them and the reading section.

[3] In 2011, Nation reported that "over 30% of the research on L1 and L2 vocabulary learning in the last 120 years occurring in the last 12 years" (p.2).
[4] Our translation for *Curso de Letras-Inglês.*

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2. Input, Instruction and Involvement for vocabulary acquisition

In this piece of work, we view reading as a complex cognitive process comprised of conceptual understanding – knowledge of topic of the text, text schema and vocabulary - automated basic skills and strategies (Gagné et al., 1993). Regarding the latter, decoding and literal comprehension[5], known as lower-level comprehension processes, they have to become automatized in order for higher level comprehension processes, that is, inference generation and comprehension monitoring[6], to be executed with enough cognitive resources not to overload the working memory[7] systems (Alptekin & Erçetin, 2009; 2010). Therefore, it is extremely important that vocabulary be tackled in any reading program, so that readers can make inferences and monitor their comprehension, especially considering that successful reading comprehension is the joint application of lower and higher comprehension processes (Gagné et al., 1993, Grabe, 2009; Tomitch, 2009).

With this in mind, we wonder how vocabulary must be addressed in a reading lesson. Should words be always taught or should learners be expected to pick up words from context? In order to answer such questions, we adopted the view that Laufer (2017) discusses in a very straightforward chapter called "the three 'I's of second language vocabulary learning. The author advocates that second language vocabulary learning depends on input, instruction and involvement.

Language input, according to Laufer (2017), consists of being exposed to large amounts of reading materials, which, depending on the reader context, might be unrealistic. In fact, research has agreed that learners should meet new words from 6 to more than 20 encounters so that any word knowledge is retained in memory (e.g. Laufer, 2017; Laufer & Rozovski-Roitblat, 2015). Taking this into account, the author endorses that instruction be taken into account as well.

According to Laufer (2017), "word-focused instruction refers to directing learner's attention to lexical items by means of a variety of techniques, such as glosses in texts, dictionary use" (p.7) among others. In fact, Laufer and Rozovski-Roitblat (2015) found that reading with a dictionary was more effective for vocabulary learning than simply meeting the words in the input. In addition to that, the authors advocate that the type of task might be more effective than the number of encounters, which leads to the third 'I', involvement.

The involvement factor is related to the depth that information is processed (Craik & Lockhart, 1972). In other words, it not the time of exposure with vocabulary that guarantees its retention, but the shallowness or depth that the lexical items are encoded in memory. However, what constitutes processing a word in a shallow or deeper manner? The authors themselves acknowledged the limitations of the hypothesis. In order to surpass this limitation, Laufer and Hulstijn (2001) operationalized Craik and Lockhart's hypothesis for vocabulary acquisition, which has been called the Involvement Load Hypothesis.

According to the *Involvement Load Hypothesis*, retention of words is conditional upon *need, search* and *evaluation* (Laufer & Hulstijn, 2001). *Need*, in particular, refers to the idea of needing to achieve. For instance, when facing an important yet unknown word for text comprehension, the reader

[5] Decoding refers to processing at the word level, to making sense of individual words, while literal comprehension refers to processing at the sentence level, constructing literal meaning from print, once words have been decoded (Gagné, et al., 1993).
[6] Inferential comprehension regards making sense of what is not explicitly stated in the text, providing connections between clauses, and across sentences and paragraphs, while comprehension monitoring regards the strategies of goal setting, selecting appropriate strategies, checking whether the reader's goal is being achieved, and remediating by selecting alternative strategies when the goal is not being met (Gagné, et al., 1993).
[7] Working memory is known to be a system responsible for manipulating and storing information during the execution of complex cognitive tasks, such as thinking, reading, and calculating (Baddeley, 2011).

may feel the *need* to look up the meaning of the word in a dictionary (Laufer & Hulstijn, 2001). Search, therefore, is the action of looking up the unknown word in the dictionary. As the learner consults the word meaning in the dictionary, s/he may find several meanings, so s/he may have to *evaluate* which meaning is suitable for the given context, for instance, when a learner looks up the meaning of a word in a dictionary, he is presented with several alternative meanings, and s/he has to evaluate, according to the context, which meaning is appropriate (Laufer & Hulstijn, 2001). In a paper of the same year, Hulstijn and Laufer (2001) go on explaining that each of the three factors (*need, search and evaluation*) may be present or not when learners process vocabulary, be it in a natural or artificially designed task. It is, therefore, "the combination of factors with their degrees of prominence that constitute the involvement load" (Hulstijn & Laufer, 2001, p. 544). The types of activities of the *task-induced involvement load*, as it is called by Laufer and Hulstijn (2001), is later explained in the method section.

Some of Laufer's views have been shared much earlier in a chapter by Sökmen (1997), in which the author supported that a vocabulary instruction program should help learners, (1) build a large sight vocabulary, (2) provide a number of encounters with the words and (3) promote a deep level of processing. In 1, the author advocates that the 2,000 most frequent words should provide learners with a good basis. In 2, the author explains that numerous encounters with the words enable knowledge of what actually means to know a word[8]. In 3, the author takes the depth of processing hypothesis (Craik & Lockhart, 1972) to make the claim that deeper elaboration with the words is suitable for retention, which is the same thing as the involvement factor, according to Laufer (2017).

Having these issues in mind, this study approaches the three 'I's for vocabulary learning, adopting a framework originally used in De Azevedo (2018) and later refined in De Azevedo and Tomitch (in press), in order to achieve the following objectives:

1) Examining whether the vocabulary activities are linked to the reading section of textbooks;
2) Investigating how vocabulary is presented in the reading section of textbook units, and whether there are any glossaries and/or suggestion for dictionary use;
3) reporting whether the activities focus on frequent words;
4) calculating the number of encounters with the words in order to examine whether there are opportunities for learners to meet the words in several language contexts;
5) investigating whether the vocabulary activities promote a deep level of processing for word retention.

Next, we will describe the method for achieving the aforementioned objectives.

3. Method

The main objective of this piece of research is to analyze the vocabulary activities of EFL textbooks used in the English undergraduate course of the Federal University of Santa Catarina, Brazil. Therefore, we have decided to analyze the textbooks that were designated to be used in the courses of reading and writing, as stated by the course program available at the website (http://www.lle.cce.ufsc.br/cursos/ingles/). For the course of the first semester, the textbook *North Star: Focus on reading and writing level 2,* from Pearson Education Inc and *Strategic Reading from Cambridge University Press* are listed on the aforementioned website. For the fifth semester, *Just: Reading and*

[8] According to Richards (1976 as cited in Sökmen, 1997, p. 241) "knowing a word means knowing how often it occurs, the company it keeps, its appropriateness in different situations, its syntactic behavior, its underlying form and derivations, its word associations, and its semantic features".

Writing (Upper-Intermediate) from Marshall Cavendish ELT has been listed (for details, see De Azevedo, 2018).

The first textbook (henceforth textbook one) contains ten thematic units, from which two units were randomly chosen to be analyzed (units three and seven). From the second textbook (henceforth textbook two) which contains twelve units[9], units four and eight were randomly chosen. Last, the third textbook (henceforth textbook three), contains 14 units, each being subdivided into sections A, B, and C. Due to space constraints only section A of units four and eight were randomly selected for the analysis.

In order to analyze vocabulary activities of the EFL textbooks, a framework of analysis based on previous research on second language vocabulary acquisition was elaborated, according to our review of literature, mainly Sökmen (1997), Laufer (2017), Laufer and Rozovski-Roitblat (2015), Laufer and Hulstijn (2001), and Craik and Lockhart (1972). The framework is displayed on Table 1.

Table 1. Framework for EFL textbook analysis.[10]

1. The Reading section
1.1. How is the vocabulary presented in the reading section? 1.1.1. Are there marginal glosses? 1.1.2. Is there any suggestion of dictionary search?
2. The Vocabulary Activities
2.1. Do the activities focus on high frequency words?
2.2. Do the books provide a number of encounters with the words? 2.2.1. Is there a variety of contexts so the learner can meet the words? 2.2.2. Is there a variety of vocabulary activities that allow a more accurate understanding of a word?
2.3. Do the activities promote a deep level of processing for word retention?

Adapted from: De Azevedo (2018); De Azevedo and Tomitch (in press)

The first part of the framework (1. The reading section) focuses on investigating how the vocabulary activities are presented, with special regards to how they are presented in the reading section. It aims at showing whether this presentation deals with dictionary and glossaries, whose importance for incidental learning comes from research from Laufer (2001; 2017) and Laufer and Rozovski-Roitblat (2015).

The second part focuses on the vocabulary activities per se, and it is subdivided into four parts. Part 2.1 investigates whether words are highly-frequent ones for two reasons. First, highly-frequent words should be considered in a teaching lesson (Sökmen, 1997), since they help learners build a large sight vocabulary, that is, they help constructing vocabulary that is easily recognized by the reader (Gagné et al., 1993), and freeing working memory resources for more higher-level processes such as inferential comprehension (Alpetkin & Erçetin, 2009; 2010). Second, due to the premise that highly-frequent words

[9] Each unit is subdivided into Reading 1, 2 and 3. In De Azevedo's (2018) study, *Readings 1,2 and 3* were analyzed, but here, due to space constraints, only results from *Readings 1 and 2* will be reported.
[10] See the complete version of the framework in De Azevedo and Tomitch (in press).

give text coverage[11] (Nation, 2001; 2006a), that is, knowing the 2,000 most frequent words of a language should help learners comprehend texts (see Nation, 2006a for a complete discussion).

In order to verify the frequency of the words, the Corpus of Contemporary American English (COCA)[12] was used. However, to our knowledge, it seems difficult to judge the frequency of words just by the number of occurrences in corpora, so we have decided to use word family lists created from the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA) in order to depict learners' vocabulary sizes (Nation, 2014). The rationale behind this choice relies on Nation's claim that looking at "the text coverage provided by successive frequency-ranked groups of words" (p.14) is the most usual way of investigating how many words are considered of high frequency (Nation, 2001). The author adds that "the 2,000-word level has been set as the most suitable limit for high frequency words" (p.14). With this in mind, the BNC/COCA lists with the 1st 1000 words and 2nd 1000 words were used, and we considered highly-frequent only the words present in both the Corpus and Nation's lists[13].

Part 2.2 encompasses the number of encounters learners might have with the words, granted that providing a number of encounters with the words enhances the possibility of retention (Baddeley, 1999; Laufer & Rozovski-Roitblat, 2015). Given that vocabulary learning is an incremental process (Grabe, 2009), having multiple encounters with vocabulary enables learners to incorporate features[14] to words stored in memory. Research has estimated the figure ranging from six to more than twenty encounters with the words might be needed "to retain some kind of word knowledge", as Laufer (2017, p. 3) reviews.

In order to investigate the depth of processing (Craik & Lockhart, 1972) of the vocabulary activities, we have decided to borrow the *task-induced involvement load hypothesis* (Laufer & Hulstijn, 2001), for, as Laufer and Hulstijn themselves mention, it is the operationalization of the depth of processing hypothesis (Craik & Lockhart, 1972) for L2 vocabulary learning (Laufer & Hulstijn, 2001). The degree of involvement in processing novel words is determined by the need to understand a word for reading; search the correct meaning for a word; and evaluating whether a word fits the context. The presence and/or absence of these three components (*need, search* and *evaluation*) determine the involvement load (Laufer & Hulstijn, 2001), considering that activities with "higher involvement loads are more effective than those with lower loads" (Zou, 2017, p. 55). Therefore, Table 2 below will be used to determine the task-induced involvement load of the activities from this study.

Table 2 - Task-induced involvement load.

TASK	STATUS OF TARGET WORD	NEED	SEARCH	EVALUATION
1. Reading and comprehension questions	Glossed in the text but irrelevant to the task	-	-	-
2. Reading and comprehension questions	Glossed in the text and relevant to the task	+	-	-

[11] According to Nation (2006a), "text coverage refers to the percentage of running words in the text known by the readers" (p. 61).

[12] The Corpus of Contemporary American English is composed of texts from five different genres of spoken, fiction, popular magazines newspapers and academic journals. To see the complete list of texts that compose the COCA, see https://www.english-corpora.org/coca/

[13] Nation's lists are composed of word family (see Nation, 2014) lists from the BNC (British National Corpus) and COCA. The lists were created using spoken and written texts, ranging from "transcriptions of informal spoken language, scripts of movies and TV shows, novels, academic texts, and popular journal type articles" (Nation, 2014, p. 4)

[14] By features we mean that knowing a word is more than only knowing its form and meaning. According to Nation (2001), it is necessary to have knowledge of form (spoken, written, word parts), meaning (form and meaning, concept and referents, associations) and use (grammatical functions, collocations, register and frequency).

3. Reading and comprehension questions	Not glossed but relevant to the task	+	+	-/+ depending on the word/context
4. Reading and comprehension questions and filling gaps	Relevant to reading comprehension. Listed with glosses at the end of the text.	+	-	+
5. Writing original sentences	Listed with glosses	+	-	++
6. Writing a composition	Concepts selected by the teacher and learner has to look the L2 form	+	+	++
7. Writing a composition	Concepts selected and looked up by the learner	++	+	++

Adapted from: Laufer, B. & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: the construct of task-induced involvement. *Applied Linguistics, 22(1), 1-26.*

Next, we present the results and discussion of the textbooks analyzed.

4. Results and discussion

This section is aimed at reporting the results of the qualitative analysis of the textbooks listed in the programs of the reading and writing disciplines of the English undergraduate course *at the Federal University of Santa Catarina*. The section is divided into three main subsections, a) on textbook one; b) on textbook two; and c) on textbook three. The paragraphs of the results and discussion section will be organized according to the framework presented on Table 1, as an attempt to answer the questions proposed in the present study. It is also important to point out that each subsection has been divided according to the units that were analyzed for this piece of research. Last, the research questions are answered in the subsection entitled conclusions on textbook analysis.

4.1. Textbook 1 – Unit 3

Under the title *Making money*, unit three encourages readers to infer the meaning of the words by context, by claiming that learners might still understand the story despite the lack of word knowledge. After that, the textbook suggests that learners answer two comprehension questions regarding the text with the missing words, so then, learners may have access to the words. The approached words are *(1) bills; (2) fake; (3) counterfeiters (4); technologies; (5) scanners; (6) equipment; (7) ink; (8) illegal; (9) prevent* and *(10) completely.* Inferring word meaning using context is "the most important of all sources of vocabulary learning", (Nation, 2001, p. 232), and for this condition to happen in a second language learners should know at least 95% of the running words of the text in order to correctly infer meaning of the words via context. It is interesting to point out that after having instructed learners to try to read the text with the missing words, the following exercise provides the text with the actual words, so that learners can check whether their guesses. Having done that, learners might end up with a glossary of the words.

However, considering that this activity was designed for basic/lower intermediate students, it lacks instructions on how to guess from context[15]. In other words, it does not mean that the exercise from unit 3 was poorly designed and should be abandoned; in fact, it seems interesting to show students that inferring from context can be an interesting resource. What lacks in this activity are clear guidelines.

As for the frequency of the vocabulary of this unit, results have suggested that, from the ten words approached in this unit, three can be considered high-frequency words, to mention, *technology, equipment,* and *prevent*. Despite the fact that the word *counterfeit* is considered a low-frequency word, it is crucial to the understanding of the main idea of the text. In fact, the text entitled *Making money* explains how making money was easier in the past (counterfeiting money), and how technology nowadays has made it more difficult.

The words from unit three seem to respect what the relevant vocabulary literature has shown regarding the number of encounters with the words for memorization (from six to more than twenty, as presented by Laufer & Rozovski-Roitblat, 2015), as it can be seen in table 3. The only words with fewer opportunities of encountering them in textbook 1 are the words *technology, equipment, illegal and completely*.

Table 3 - Number of possible encounters with the words of unit 3

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Bill	57	Equipment	09
Fake	35	Ink	15
Counterfeiter	37	Illegal	09
Technology	06	Prevent	17
Scanner	11	Completely	05

Source: data collected by the researchers. For a full account see De Azevedo (2018)

In the text of unit three, which is about counterfeiting money, eight of the target words are relevant for the main idea, as it can be seen in this summary: "a $50 *bill* could be put into a computer *scanner* to easily *counterfeit* money". Besides, the text explains how *technology* has allowed a color-changing *ink* to *prevent counterfeiters* from making *fake* money. With this in mind, according to the *task-induced involvement load hypothesis* (Laufer & Hulstijn, 2001), fill-in-the blank exercises induce *moderate need*, *no search,* and *moderate evaluation*. As for moderate need, from ten words, eight seem to be essential for comprehending the text. The activity is followed by the answer key, so *no search* is necessary, only *evaluating* whether the word meanings fit the context. In sum, having *moderate need* and *moderate evaluation* means that learners might process words in a deep manner, because they *need* to comprehend the words in order to *evaluate* their usage. Therefore, we suggest that this activity promotes a deep level of processing. Next, we will report the analysis of unit 7 of textbook one.

4.2. Textbook 1 – Unit 7

The unit begins with a picture of produce market displaying several fruits and vegetables, followed by four warm-up questions. In fact, one of these questions directs learners to read the title of the

[15] Nation (2001) discusses, on chapter 7 of his book "Learning vocabulary in another language", the strategies for guessing vocabulary from context.

unit, *The Best Produce there is,* and challenges learners to think about the meaning of the word *produce.* Later, in the pre-reading section they are encouraged to think about its meaning one more time.

Regarding the target words, the first instruction directs learners to read the gardening chart for San Francisco and to infer the words in bold. The instruction explicitly requests learners to "try to understand the boldface words without looking them up in a dictionary" (Haugnes & Maher, 2009, p. 135). After that, an exercise tells readers to match the words with their definitions. Interestingly, the authors decided to unite two powerful strategies in this lesson, that is, inferring meaning from context and matching words with their corresponding definition. The first one is one of the most effective strategies for vocabulary learning (e.g. Nation, 2001; Sökmen, 1997), for it allows learners to revisit previous seen words and learn new ones, especially when learners are exposed to large amounts of reading. The second might integrate dictionary search, in case learners need clarification in meaning. At the end, learners might end up having a glossary of the words. In addition to that, in the text there is a glossary for the words that were not approached in the pre-reading section. The target words/phrases of this unit are (1) *insects; (2) chemicals; (3) concerned about; (4) old-fashioned; (5) weeds; (6) pick; (7) ripe; (8) it's worth it; (9) cancer; (10) produce;* and (11) *fresh.*

From these words, five are considered highly frequent. Three words are in the first thousand most frequent English words (*pick; ripe;* and *fresh*), and two words are in the second most frequent English words (*weed* and *produce*), according to Nation's family list (2006b). Despite the fact that the words *insect, chemical* and *cancer* are not among the most frequent of the English language, learners can benefit from the fact that they are cognates.

Concerning whether there is a variety of opportunities for learners to meet with the words, the target ones (except for *weeds*) provide from six to more than twenty encounters, as it can be seen in table 4.

Table 4 - Number of possible encounters with the words of unit 7

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Insects	09	Ripe	15
Chemicals	40	Worth it	07
Concerned about	09	Cancer	08
Old-fashioned	06	Produce	86
Weeds	05	Fresh	18
Pick	15		

Source: data collected by the researchers. For a full account see De Azevedo (2018)

Still concerning whether there is a variety of opportunities for learners to meet with the words, the vocabulary approached before reading is reviewed in a writing exercise. Interestingly, the authors used a different approach for presenting/reviewing the target vocabulary. The target words appear in boldface, and the headline of the exercise instructs learners to cross out the words that are not related to the boldface word. This type of activity seems to engage learners in activating their background knowledge of the words and their associations. Next, there is an excerpt from a journal, and learners are told to focus on the words in boldface, again, the target ones. After that, among two options, learners have to select one as being the suitable definition of a word/phrase. This type of activity resembles a specific componential reading process, namely lexical access, in which learners automatically select the best meaning for a word in that specific context. In other words, it seems that by choosing the best meaning, textbook authors are

enabling learners to deautomatize lexical access, which in fact, might be positive, in the sense that it works as a scaffolding[16] for novice learners. Last, a fill-in-the-blanks exercise is provided under the headline "Complete the journal entry with the appropriate words or phrases from the box". After that, learners have to use some of the words in the box to complete the letter. In this case, learners are supposed to evaluate the use of words, in order to guarantee coherence for their text. To be more precise, learners can only productively use the words they know, considering that knowing a word entails knowing its meaning, written and spoken form, its grammatical behavior; its collocations, register, association and its frequency (Nation, 1990) Overall, by reviewing the words, the authors provide learners with a variety of activities, dealing with words in different contexts, which actually might be positive, despite the limitations aforementioned.

The main idea of the text of this unit consists of Mr. Green explaining the reasons why organic produce might be more expensive than regular produce. In this case, it seems that the word *chemicals* is essential for the learner to comprehend the higher cost of organic produce. In addition to that, from the eleven words, nine of them are relevant. For instance, in the first paragraph, the word *produce* is essential, since regular produce looks nicer due to the use of chemicals to kill insects and weeds, according to the text. The same can be noted for the second paragraph, where the words *chemicals, insects* and *weeds* are relevant to express the fact that regular produce looks nicer due to the use of chemicals to kill insects and weeds. In the third paragraph, the word *ripe* conveys the essential idea of the paragraph, which is the fact that farmers use chemicals to make fruits and vegetables ripe, allowing them to be available all year long. In paragraph four, *cancer*, an identical cognate conveys the negative aspect of consuming chemicals, e.g. too many farming chemicals can cause cancer. In paragraph five, *old-fashioned* is used to explain what organic produce is, that is, the fact that chemicals can be bad for nature as well, leading farmers to produce in the old-fashioned way (organic produce). In paragraph six, the word *fresh* is used to explain that organic produce might be more expensive because it needs to be fresh at all times. Last, in paragraph seven, *worth it* is relevant for it explains that the reader has to decide whether organic produce is worth it or not.

In order to report the results of the *depth of processing* of the activity from unit seven, it is important to remember the activity instructions. First, learners are directed to read the text trying to infer word meanings using the context as a clue, so then they are directed to match the words of the text with the meanings in the next column. With this in mind, an attempt was made to equate this activity with item 2 of the *task-induced involvement load hypothesis* (Laufer & Hulstijn, 2001), which posits that reading and comprehension questions with the target words not being glossed despite being necessary for the task might demand *moderate need, no search,* and *no evaluation*. It has become apparent in the overall analysis that learners may need the words for comprehending the task; therefore, it is possible to claim that there is a *moderate need* of knowing the words. On the other hand, learners might not have to look up the meanings of words in a dictionary, considering that the result of matching, might be used as a glossary, leading to the conclusion that *no search* is needed. Last, *moderate evaluation* might be necessary[17], especially regarding the second part of the exercise, in which it would be unrealistic to match a word with its meaning without evaluating the context it happens. In sum, this activity does not seem to promote a deep level of processing. Next, we move to the results of textbook two.

4.3. Textbook two – Unit 4 – Reading 1

[16] Scaffolding is used here as "the process by which learners utilize discourse to help them construct structures that lie outside their competence "(Ellis, 2010, p. 143).
[17] Despite the fact that the original model proposes no evaluation.

Reading one starts by the title *Music and moods* followed by a picture. To begin with, there are neither instructions on how learners should deal with unknown words, nor glossaries. The only instruction before reading is for learners to read to find out the connection between music and moods. After that, an exercise approaches the target vocabulary - *(1) rejuvenated; (2) boost; (3) good state of mind; (4) switch; (5) serene;* and *(6) ballad* - addressing learners to find them in the text in order to select the correct meanings. To be more precise, the vocabulary activity contains sentences such as "when you feel *rejuvenated*, you feel sleepy/energetic" (Richards & Eckstut-Didier, 2012, p. 34). This type of exercise could be used as a glossary, in case learners need it while reading.

The frequency of the target words varies from highly-frequent (*switch* and *boost*) to low-frequent (*rejuvenated* and *good state of mind*). The importance of focusing on high-frequency words has been pointed out along this work, in the sense that they "cover a very large proportion of the running words in spoken and written texts" (Nation, 2001, p. 13). As for this unit, focusing on low-frequency words might be problematic, especially with beginners. To be more precise, beginners need to be familiar with high-frequency words, especially due to the fact that they cover large amounts of written and spoken texts (Nation, 2001). The authors examine that "when teachers spend time on low-frequency words in class, they should be using the words as an excuse for working on the strategies" (p. 21). Put another way, the primary concern of didactic material developers and teachers should be to provide exposure to highly frequent words, so that learners can use strategies for dealing with low frequency words (Nation, 2001).

Regarding the number of encounters the textbook provides, results (as shown in Table 5) have shown that the target words of reading one can only be found in reading one itself and in the vocabulary activity, leading to the conclusion that it lacks opportunities for learners to meet with the words in different contexts. Furthermore, meeting a word two or three times might not be enough for its retention, considering the literature reviewed in this study. In sum, one question seems to remain unanswered: what is the goal of approaching words that are not relevant to the reading section? To be more precise, in a unit where the words have been presented aiming to help learners read the text, but first, they are not connected to the reading, and second, they appear only two to three times (in the text and vocabulary activity, according to table 5), would leave the questioning of what would be the purpose of bringing them in the first place.

Table 5 - Number of possible encounters with the words of unit 4 – reading 1

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Rejuvenated	03	Switch	02
Boost	02	Serene	02
Good state of mind	02	Ballad	03

Source: data collected by the researchers. For a full account see De Azevedo (2018)

The main idea of the text is given in the headline of reading one, where the authors mention "skim the reading to find the connections that the writer makes between music and moods" (Richards & Eckstut-Didier, 2012, p. 32). Moreover, the context seems to give clues to help learners infer word meanings. To be more precise, in the sentences "music can also help you relax and feel *rejuvenated";* "to cheer up or *boost* your energy" and "start with something *serene* and relaxing, and then gradually increase the tempo and beat" (p.33), there are some very similar words in meaning to the target ones, such as *relax-rejuvenated; cheer up-boost energy; and serene-relaxing.* In sum, all these synonym-related words may help learners infer meanings using context, leading to questioning what would be the goal of approaching

such words. With this in mind, the activity from this unit seems to promote a shallow level of processing, since vocabulary is not necessary for reading the text, in spite of being in a section devoted only to reading. If learners do *not need* them, neither *search* nor *evaluation* is necessary, since they may not look up word meanings nor evaluate their use in the context. In case learners need them, their meanings are given in the exercise itself. Next, we will present the analysis of *Reading 2* of unit 4.

4.4. Textbook two – Unit 4 – Reading 2

Reading 2 of unit 4 presents vocabulary (1) before the text and (2) after the text. In (1) instructions lead learners to pay attention to the words in a box, for they will be in the text. Then, instructions direct learners to discuss the possible word meanings with a partner and to consult the dictionary. In this section, the target words presented before reading are *(1) brain; (2) melody; (3) composition; (4) opera; (5) computer program; (6) pattern; (7) database;* and *(8) software*. In (2), learners are instructed to find the words in italics in the text and match with their possible meanings.

In regards to the use of dictionary, researchers seem to agree on its effectiveness for vocabulary learning. In fact, there is substantial evidence to support the superiority of reading with a dictionary (see Laufer, 2017; Nation, 2001 for a review). In summary, these authors present results from studies which compared reading only and reading with dictionary and found superiority of word learning in the latter (e.g. Laufer, 2017; Laufer & Rozovski-Roitblat, 2015; Nation, 2001). Laufer (2017) explains that by using a dictionary, learners focus on lexical items in order to achieve a communicative task, which could be inferred, therefore, that vocabulary acquisition is the result of reading, since learner's main goal is not necessarily to learn new words, but to read a text. As for matching exercises, Nation (2001) argues that the only goal of this type of activity is to link form and meaning, which could be a start, but according to Richards (1976) matching form and meaning might not actually represent what it means to know a word[18].

This time, the words are *(1) original; (2) analyze; (3) complex; (4) collaboration; (5) review;* and *(6) feedback.* In regards to the frequency of these words, results have shown that only three words are considered highly-frequent, to mention *brain, pattern* and *original.* Several authors have agreed on the importance of highly-frequent words, be it for the fact that they help learners to build a large sight vocabulary for quicker lexical access (Gagné, et al., 1993) and/or the premise that the 2,000 most frequent words help learners read texts (Nation, 2006a).

Regarding the number of encounters with the words (Table 6), several observations can be made. First, most of the words seem to have been brought up only for reading the text of the unit, since results have shown that different opportunities for learners to deal with these words lack throughout textbook 2. To be more specific, the words that appear more times along the textbook are *brain, melody, opera, computer program, database,* and *software* (see table 6 below). Second, this lack of variety of word context fails to provide learners with a better understanding of the words. Third, the number of encounters with them do not seem to favor memorization, especially considering the need for the figure six to more than twenty encounters. Last, not a single target word was approached in a post-reading section.

Table 6 - Number of possible encounters with the words of unit 4 – reading 2

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Brain	19	Software	08

[18] Nation (2001) explains that knowing a word involves form (spoken, written, word parts), meaning (form and meaning, concept and referents, associations) and use (grammatical functions, collocations, register and frequency).

Melody	06	Original	03
Composition	03	Analyze	04
Opera	11	Complex	04
Computer program	08	Collaboration	02
Pattern	05	Review	02
Database	09	Feedback	03

Source: data collected by the researchers. For a full account see De Azevedo (2018)

The text of reading 2 is about a software designed to compose original pieces of classical music. The first paragraph seems to explicitly state the main idea of the text, words that appear in it are cognates (*original* and *compositions*) and the word *software* is used in Brazilian Portuguese, since it was borrowed from the English language. The remaining words seem to be useful for comprehension of paragraphs two, three and six, all of which support ideas are expressed. Having taken this into account, learners may *need* them for comprehension but the fact that they are glossed in the text entails *no search* regarding their use. Last, learners might not have to *evaluate* word usage, since they are not essential for text comprehension. To conclude, it seems that the aforementioned activity promotes a rather shallow processing. Next, we will present the results of unit 8 of textbook two.

4.5. Textbook two – Unit 8 – Reading 1

Reading 1 presents vocabulary in different moments, before and during reading. However, in these moments, the authors chose to address different words, instead of allowing learners to have multiple encounters with the same words. The instructions were the same as unit 4 – *reading 2*, directing learners to discuss word meanings with their partners and use a dictionary if necessary. After that, learners are instructed to scan the text to find the approached words and circle them in order to find "the qualities of a good friend" (Richards & Eckstut-Didier, 2012, p. 72). By doing that, leaners' attention is directed to the lexical items, different from unit 4, in which words did not seem to deserve much attention. The target words are *(1) caring, (2) self-critical, (3) consistent, (4) shy, (5) generous, (6) supportive, (7) popular, (8) talkative, (9) observe, (10) strong point, (11) dominate, (12) pursue, (13) admire,* and *(14) loyal.*

The importance of focusing on highly-frequent words has been strongly defended in this work. With this in mind, only five out of fourteen words are highly-frequent, to say, *shy* (8461 occurrences), *popular* (54923 occurrences), *observe* (8661 occurrences), and *admire* (4956 occurrences). All of these words were also in Nation's lists (2006b).

The results from the search of the vocabulary items along textbook two (Table 7) have shown that most of the words have been approached only for the sake of reading the texts of the unit. The lack of opportunities for learners to meet with the words might difficult word retention and recall. The only word which appeared more often was *popular*, totalizing 22 encounters. Grabe (2009) explains that we do not know everything about a word[19] from a first encounter, meaning that we must have several encounters with the same word in order to acquire it. Taking this into account, the results displayed in table 7 do not seem to promote multiple encounters so that learners can increment on their word knowledge.

Table 7 - Number of possible encounters with the words of unit 8 – reading 1

[19] This is related to what it means to know a word – form, meaning and use (Nation, 2001).

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Caring	05	Talkative	02
Self-critical	02	Observe	04
Consistent	03	Strong Point	02
Shy	04	Dominate	02
Generous	02	Pursue	02
Supportive	03	Admire	03
Popular	22	Loyal	04

Source: data collected by the researchers. For a full account see De Azevedo (2018)

As opposed to results from the previous unit of textbook two, the target words are relevant to the reading task, that is, in a text about the qualities of being a good friend, the authors use the target words, which range from verbs (*observe, dominate, pursue,* and *admire*) and adjectives (*popular, shy, consistent, self-critical, supportive, generous,* and *caring*), in order to give tips on behaviors in making friends. Consequently, it can be attributed moderate *need, search* and *evaluation* to the words. Put another way, learners may *need* the words for reading, which may lead them to *search* word meaning, which finally ends with *evaluating* whether the words are suitable for the given context. In sum, the activity seems to provide a deep level of processing. Next, we show the results of *Reading 2* of unit 8.

4.6. Textbook two – Unit 8 – Reading 2

Reading 2 begins with an activity for learners to predict some specific information regarding the text. Vocabulary is addressed during reading in the section entitled *vocabulary study*, in a matching exercise in which learners have to match the target words with their meaning. The way the activity is put suggests that learners might use it as a glossary during reading. This time, the target words are (1) *happiness*; (2) *variety*; (3) *safe*; (4) *encouragement*; (5) *behavior* and (6) *hesitation*.

Results of word frequency have shown that none of the words approached in this section are highly-frequent. Equally worrying is the fact that these words do not seem to help the reader construct meaning from the text, so they do not seem to have a clear purpose for being in the lesson. To be more specific, the main idea of the text is expressed in the first line of it, where it is written "in this introduction to her book, the writer explores why best friends are the family that we choose" (Richards & Eckstut-Didier, 2012, p. 75). In explaining why best friends are the ones we choose, the only word that it is closely related to these reasons is *safety*, in the sense that best friends bring safety.

Regarding the number of opportunities learners might have to meet with the words in the input, again, it is worrying the fact that the words appear a few times, as it can be seen in table 8. The only word that appears the most is behavior, with a total of 14 times along textbook 2.

Table 8 - Number of possible encounters with the words of unit 8 – reading 2

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Happiness	04	Encouragement	02
Variety	03	Behavior	14
safety	01	Hesitation	01

Source: data collected by the researchers. For a full account see De Azevedo (2018)

The analysis has shown that despite the fact that words approached by the activity analyzed here are glossed in the text, they might be of little use for learners' comprehension of the text. Therefore, according to *the task-induced involvement load hypothesis* (Laufer & Hulstijn, 2001), this activity does not seem to induce *need, search,* or *evaluation.* This result suggests that this activity does not promote a deep level of processing for word retention.

This unit appears to be troublesome for several reasons. First, the words are presented in a matching exercise, whose format could be a start for word learning but it does not account for the complexities of knowing a word. Second, none of the target words are highly frequent, which leads us to infer that the approached words might not provide text coverage (Nation, 2001; 2006a). Third, the few opportunities for meeting the words in the input might not be sufficient for the incremental process of word acquisition. Fourth and last, the vocabulary activity seems to promote a shallow level of processing, which in turn, is faulty for memory retention (Craik & Lockhart, 1972; Laufer & Hulstijn, 2001). Next, find the results of the analysis of textbook three.

4.7. Textbook three – Unit 4A

The unit begins by showing a table and directing learners to fill in the table with the information from the two texts presented in the section A of the unit. Vocabulary is only introduced as the first activity after the text. The target words are *(1) launch; (2) piece; (3) frail; (4) vulnerable; (5) thesis; (6) scuba-diving; and (7) apparatus.* The instructions tell learners to "look at these sentences from the texts. What parts of speech are the words in blue? What words or phrases can replace the words in blue without changing the meaning too much?" (Harmer, & Lethaby, 2005, p. 23). By doing this exercise, learners are expected to use the context as a clue for inferring the meanings of the target words. Another possibility is using a dictionary, if learners find that the context does not provide enough clues for making inferences. Previous results in this study have shown that the vocabulary activities could be used as a glossary, in case learners need it. It is difficult to make such suggestion here, considering that the vocabulary activity is after the text and it does not deal with definitions. As for the frequency of the target vocabulary, only the word *piece* is highly-frequent, which might be troublesome, as we have pointed out previously.

Concerning whether this unit provides an appropriate number of encounters with the words, results displayed in table 9 have shown that the only word which provides a great deal of encounters is the highly-frequent word *piece*, totalizing 14 appearances along the textbook. The remaining words range from two to five encounters, below the figure suggested by the literature.

Table 9 - Number of possible encounters with the words of unit 4A

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Launch	05	Thesis	03
Piece	14	Scuba-diving	02
Frail	02	Apparatus	02
Vulnerable	03		

Source: data collected by the researchers. For a full account see De Azevedo (2018)

Regarding the level of processing of the aforementioned activity, it is possible to observe that the words have neither been glossed in the text, nor in the activity. Moreover, the target words do not seem

to be connected to the main ideas of the text. According to *the task-induced involvement load hypothesis*, reading comprehension questions with words glossed in the text but irrelevant to the task induce *no need, no search* and *no evaluation*. Therefore, it is possible to claim that this activity does not promote a deep level of processing for word retention. Next, see the results of unit 6A of textbook 3.

4.8. Textbook three – Unit 8A

The unit begins with two brainstorming activities related to the topic, followed by the text. Vocabulary is presented after the text, in a matching exercise comprising the following words: *(1) numerous; (2) risky; (3) consent; (4) urging; (5) objections; (6) substantiated; (7) cultivate; (8) yields; (9) enhance; (10) millennia; and (11) advocates.* Similar to previous results in this study, this type of activity may be used as a glossary, which might compensate for the fact that matching exercises do not guarantee a word's full knowledge. Another limitation of this unit is that none the target words of this unit seem to be highly frequent.

In agreement with results from previous units, these words have been approached only for the sake of reading the text, bearing that few opportunities are given for learners to meet with them in further contexts in the textbook. For instance, the words appear two to three times, considering that the first time is in the text of unit 8A, and the second time in the vocabulary activity (see table 10).

Table 10 - Number of possible encounters with the words of unit 8A

WORD	TOTAL NUMBER OF ENCOUNTERS	WORD	TOTAL NUMBER OF ENCOUNTERS
Numerous	02	Cultivate	02
Risky	03	Yield	02
Consent	02	Enhance	02
Urging	02	Millenia	02
Objections	03	Advocate	03
Substantiated	02		

Source: data collected by the researchers. For a full account see De Azevedo (2018)

According to the *task-induced involvement load hypothesis* (Laufer & Hulstijn, 2001), the activity fits the status of reading and comprehension questions with words glossed in the text but irrelevant to the task, since they might not be crucial for the main ideas. Consequently, it induces *no need, no search* and *no evaluation,* which can be translated into shallow level of processing. The words are not relevant to the task because they are only useful for supporting ideas, and learners might construct meaning using other strategies. Next, we move to the final remarks of this study.

5. General Discussion

This study aimed at analyzing vocabulary activities of EFL textbooks and their relationship with reading units of textbooks assigned in the course programs of Federal University of Santa Catarina. From the three textbooks analyzed, only textbook one seemed to have a clear connection between the vocabulary approached and the reading units. Textbook two and three, on the other hand, did not seem to have a clear

purpose for approaching the words, considering that they were not connected to the main ideas of the texts.

In addition to analyzing the relationship of vocabulary activities and reading units, this study also investigated (1) how vocabulary was presented in the textbooks and whether there was any suggestion for glossary/dictionary use; (2) whether high-frequency words were approached; (3) the number of opportunities learners might have with the words in the input; and (4) whether the activities promoted a shallow or deep level of processing for word retention. The main conclusions are organized in the following paragraphs.

Regarding how vocabulary was approached in the textbooks, results have demonstrated that textbook one mostly deals with activities such as inferring word meanings using the context, while textbook two focuses only on matching form-and-meaning activities, which might be problematic considering that form-meaning does not provide a full account on what it means to know a word (Nation, 2001; Richards, 1976). To be more precise, knowing all the nuances of a word requires multiple encounters, so that learners might be able to know its form, meaning and use (Nation, 2001).

Textbook three, on the other hand, approaches words only after the text, but it would be interesting for vocabulary to be presented before reading, so that learners might have more memory resources for making inferences and monitoring comprehension (Gagné et al., 1993; Tomitch, 2009). In addition to that, once vocabulary is approached before reading, learners might have more opportunities to meet the words in the input, which can be relevant for retention (Laufer, 2017; Laufer & Rozovski-Roitblat, 2015; Grabe, 2009). Despite the fact that none of the analyzed units had glossaries, the activities in textbooks one, two and three could be used as such. Textbook two, on the other hand, was the only one to have instructions on dictionary use.

Concerning the frequency of the vocabulary, all of the textbooks had mixed results. In other words, in textbook one, from 21 words, 8 were highly-frequent; in textbook two, from 32 words, 8 were highly-frequent; and in textbook three, from 18 words, only one was highly frequent. In sum, textbook one seemed to be the only one to approach highly-frequent words. Approaching highly-frequent words is of extreme importance, considering that (1) it enhances learners' sight vocabulary (Gagné, et al., 1993; Sökmen, 1997); (2) it covers large proportion of texts (Nation, 2001; 2006a) and (3) knowing the highly-frequent words might enable learners to cope with low-frequency ones (Nation, 2001).

As for the number of opportunities learners might have to meet the words in the input, only textbook one appeared to have a great deal of chances for learners to revisit the words. Research has extensively debated the appropriate figure for ideally memorizing new words (Sökmen, 1997; Nation, 2001), and the last update, to our knowledge, has suggested a range of 6 to more than 20 encounters to retain some part of word knowledge (Laufer, 2017; Laufer & Rozovski-Roitblat, 2015). With this in mind, it seems troublesome to have textbooks that do not offer multiple opportunities for learners to revisit vocabulary in order to memorize it. Therefore, teachers could approach vocabulary before reading as a resource to improve the number of encounters learners have with the words.

Last, it seems that most of the activities analyzed in this study promote a rather shallow level of processing, suggesting that it is detrimental for word retention. In other words, the more involved learners are with the words, the better the retention will be (Laufer & Hulstijn, 2001; Sökmen, 1997). Therefore, processing a word in a shallow manner might not be sufficient for its retention. With this in mind, it seems that the more elaborative the work with vocabulary, the better the retention will be, if we consider table 2. Therefore, teachers and materials designers should develop vocabulary activities in which learners be able to actively manipulate the words, that is, activities in which they feel the *need* to use the words, in which they *search* for suitable word meanings and finally *evaluate* whether word meaning fits the context. Next, we more the final remarks of this study.

6. Final Remarks

This study has some limitations. One regards the number of units analyzed. In order to make generalizations of the textbooks analyzed, more units had to be investigated. The other limitation regards the application of those activities in the classroom environment, that is, the activities analyzed here could be tested in learners, especially in regards to word retention. Despite its limitations, we believe that the study brought contributions to the field by bringing together theory and practice, that is, by devising a framework for analyzing vocabulary activities that is based on the results of scientific studies in the area. As such, the results obtained in the study enable us to discuss its pedagogical implications, portrayed below.

The results of this study point to the direction that materials designers and educators should be careful in designing vocabulary activities that can assist reading, especially considering that only one textbook had a close relationship between the reading unit and the vocabulary activities. The claim made by Sökmen (1997) seems to be appropriate, considering the results found in this study. To be more precise, the author advocated that lessons should (1) incorporate the most frequent words of the language, so that learners can build a large sight vocabulary; (2) provide a number of encounters with a word, so that as the learner meets the words in a variety of contexts, more aspects of vocabulary should be incorporated in memory; (3) and promote a deep level of processing for word memorization (Sökmen, 1997).

In regards to (1), it seems that frequency of vocabulary was not a concern for materials designers, considering that only textbook one had a great deal of frequent words. The same concern is shared in providing different opportunities for meeting the words along the textbook, since only textbook one had this feature. In fact, it might not be expected that textbooks account for all input learners have access to, but our claim relies on the fact that it might not be relevant to approach words that are neither related to the readings, nor to vocabulary learning (e.g. words that appear only twice in matching form-meaning exercises).

In addition to that, we side with Laufer's (2017) claim *input, instruction* and *involvement* should be taken into account, not only for vocabulary acquisition, but also for improving readers' comprehension in reading units. Materials designers and teachers should be careful in approaching words that foster lower-level comprehension processes (Gagné et al., 1993) so that learners might be able to have attentional resources to draw inferences, for instance, which is crucial for comprehension. In addition to that, teachers should be cautious in following textbooks, in the sense that, at times, some adjustments to fit vocabulary that is missing in textbooks (and hence in the lesson plan) are necessary in order to provide a full learning experience.

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