

THE POWER OF WORDS IN READING COMPREHENSION

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ABSTRACT

The current research aims at identifying how High school learners inferred the meaning of unknown words. For that purpose, a quasi-experimental design that relied on a pretest, treatment, and posttest was used. The participants completed a 20-item related to reading comprehension test in which they were asked to complete a vocabulary task and provide the most suitable choice for an unknown term without utilizing dictionaries. The Chi-2 tests show that the L2 learners' context and lexical knowledges were the most critical factors in understanding language and the treatment affected the experimental group's results positively.

Keywords: Reading skills, Mental lexicon, Inferencing skills, Context, Cognitive schemas, Contextual cues, EFL classroom

1.0 OVERALL REVIEW OF LITERATURE

Language comprehension relies heavily on vocabulary knowledge and development. Lexicon and meanings are acquired by children in their first language via oral and regular exposure to words in context. Conversely, in L2, the process of vocabulary acquisition is more formalized as reading is frequently promoted, and written texts become a primary source of new word exposure. Learners frequently make predictions or inferences about the meaning of new terms in context. The process of recognizing a new word in context is then linked to the word's and surrounding text's useful clues, which draw on prior knowledge to make predictions. Readers then go through a process of accepting and rejecting various interpretations in order to arrive at the most appropriate meaning.

In linguistics, context is not a novel subject of investigation. It has long been thought to be a necessary component in the interpretation of language utterances. Firth (1935) noted that the complete meaning of a word is always contextual and that there can be no genuine study of meaning without a comprehensive context. By the late 1970s, even then, most linguistic trends had focused on context. In recent years, cognitive linguistics has emphasized the importance of incorporating context into meaning. In fact, it is not language as an abstract entity that it is studying, but language to mean, namely language in use, and it is self-evident that real language use appears to require context.

The effects of linguistic context on the recognition and interpretation of spoken and written utterances are well established. When a well-defined and explicit framework is supplied, a

sentence may only require a single representation of its meaning. Unknown words could be used to recall a specific framework. As a result, the linguistic context influences word interpretation because it not only allows the listener to select appropriate meanings for ambiguous or unknown words, but also leads to representations of more specific referents. As a result, it recommends a meaning aspect for a word that appears to be relevant to the context.

Scholars agree that little is recognized about the mental lexicon (Aitchison, 2003; Channell, 1988; McCarthy, 1990) and that all definitions and descriptions utilized identify it as metaphors (Peppard, 2007). According to (Richards and Schmidt, 2002), an individual's mental store of words, their meanings, and associations could be defined as a mental lexicon.

Assuming that the mental representation of lexical meaning has immediate access to lexical representation, the mind encompasses lexical entries which provide meaning to the word. There are three hypotheses of lexical entries generated concerning the meaning of words, according to certain theorists. To begin, the sense of words is composed of a structured set of semantic features as mentioned in Schaeffer & Wallace, 1970; Smith, Shoben, & Rips, 1974. Secondly, the mental lexicon appears in the form of a semantic network or a network and feature combination (Anderson, 1976; Anderson & Bower, 1973; Collins & Quillian, 1969; Rumelhart, Lindsay, & Norman, 1972). These two theories place a premium on meaning deconstruction. Eventually, there are no semantic representations of words, only a vast set of rules of inference or meaning postulates (Fodor, Fodor, & Garrett, 1975; Fodor, 1977; Kintsch, 1974).

Learners employ a variety of ways to arrive at a suitable meaning for a lexical item. Form-focused strategies, meaning-focused strategies, evaluative strategies, and monitoring methods are the four categories of strategies. When it comes to form-focused tactics, students frequently examine a word using their knowledge of grammar, suffixes, prefixes, and punctuation. They also use association to try to figure out what the target word means from other words that are similar. A meaning-focused method that leads to successful inferencing is using textual clues and predicting the meaning of the target word. The use of meaning is also required when paraphrasing and translating parts of the text that contain target words. L2 inferences may use evaluation tactics such as questioning their inferences, confirming or disconfirming their inferences using textual evidence, or making evaluative comments about the target word. Monitoring tactics may be used by L2 inferences, such as forming conclusions about the target word's failure or difficulty, then deferring the inference to a later time 'suspending judgment', or attempting a new inference after discarding an old one 'reattempting'. Those who are successful at lexical inference usually use a conceptual framework that incorporates their prior knowledge and textual clues from the target words and their context (Oxford, 2011). Hence, they analyze both surface and implicit meaning so as to determine the meaning of a word.

A successful influencer is one who employs the appropriate strategy at the appropriate time. They have a better understanding of contextual clues and how to leverage the larger environment. They use their background knowledge, which includes grammatical and contextual knowledge. Inferencing and predicting strategies are used by both successful and unsuccessful learners, but only successful learners modify their predictions. Failure to monitor one's strategies is common among failing students 'strategy orchestration'. Moreover, successful inferences frequently use their past knowledge and the context

surrounding the target words to construct a larger conceptual framework. In fact, an effective inference requires the use of linguistic and background information since it provides a conceptual framework that allows inferences to fill in the gaps in the textual meaning. This generates a "perceptual filter" (Kintsch, 1998, p. 94) that aids in distinguishing significant from irrelevant information and, if necessary, suppressing irrelevant information. The text factor, which relates to how challenging the text is, the relevance of the text, and the category that attracts inferencing attempts are all elements that influence lexical inference. Alternatively, failure to infer meaning could be owing to a lack of proper textual clues; precise contextual cues are essential for word guessability. This failure could also be caused by a lack of understanding of the surrounding words. Considering pre-existing lexical knowledge influences vocabulary inference, it is asserted by Haastrup (1991) that L2 proficiency is a critical factor in lexical inference.

1.1. Lexical Inferencing as a Reading Strategy

Reading strategies are often employed to compensate for a reader's lack of a certain reading skill that does not come naturally or effortlessly to them. Grabe (2009) distinguished skills and strategies by assuming that strategies are cognitive processes that can be consciously reflected on yet may be on their way to becoming skills. According to this explanation, strategies are methods or techniques used to boost reading skills. In this respect, reading strategy research has aimed to establish which techniques are most effective in order to make practical recommendations for teaching and language learning. These facts discovered in the study demonstrate that vocabulary knowledge is directly related to the academic performance of reading comprehension. If a reader does not recognize a given term, they must "guess" the meaning, and it is this process of guessing or inferencing that academics try to define so as to provide assistance for learners (Grabe, 2009; Nation & Coady, 1988). In the same vein, it is suggested that teachers are to direct students to read a text in a precise way and provide them with relevant instructions, which are explicit clues that show how relevant information is to the task (Yukino Kimura, 2022,p.41). Hence, readers who use relevant instructions can more easily recognize material that is pertinent to their reading activities and adjust how they process text accordingly. They focus their attentional resources on information that is relevant to the job at hand, which improves memory for that knowledge (Yukino Kimura, 2022, p.42). Various factors, notably lexical inference strategies, have been found to influence the implementation of reading strategies, according to research. While it emerges that bilingual students use a wide range of strategies when reading in their second and subsequent languages, there have been concerns raised about strategy awareness, the use of metacognitive strategies, levels of literacy in the second language, the use of multilingual teaching strategies in schools, and motivation for future language learning and usage (Michael Markey, 2022, p.82). Factors in reading studies frequently include several elements that can have an impact on the goal of reading effectively such as the type of text, complexity of the text, the reader's, level of reading skills, reader's background, etc. Indeed, reading comprehension is also a systematic process in L2 and EFL reading, requiring readers to deliberately direct their reading processes in compliance with a specified goal. In general, text processing consists of higher-level processing as well as lower-level processing that aids in decoding processes such as lexical and grammatical processing (Yukino Kimura, 2022, p.43)

Grammatical knowledge, topic familiarity, vocabulary knowledge, L1 transfer, L2 competence, learning styles, and use of context are just a few of the variables that researchers look into in lexical inference tactics employed by EFL students. The effects of inferring words in syntactically (syntax referring to sentence forms) and rhetorically (rhetoric referring to paragraph or passage structures) complex texts, as well as the effects of knowing the language's morphology or word forms and structures, are frequently compared in studies on the influence of grammatical knowledge (Feng & Morkhtari, 1998; Kaivanpanah, 2008).

Not only is the intricacy of the grammatical structure and passage examined, but so is the topic's familiarity (Pulido, 2003). The majority of research on vocabulary knowledge centers on whether inferring terms from context increases a learner's lexicon and whether the breadth of a learner's lexicon influences the inference process (Boggards, 2011; Salsbury, Crossley & McNamara, 2011). Accordingly, it is important to provide methods for determining the vocabulary levels of students and selecting graded readers (Betsy Gilliland, 2022, p. 205)

In their research on lexical inference strategies, Nation and Coady (1988) devised ways to efficiently infer the meaning of unknown words in their early research on lexical inference strategies. Nation and Coady claimed at the time that it was critical for students to go through all of the phases so as to successfully infer the meanings of words. In the same vein, while it is not necessary to follow the prescribed strategies in any particular order, it has been discovered that using more than one strategy at a time is beneficial. Scientists have observed, for example, that more proficient, skilled readers employ multiple reading strategies while also employing the same strategies effectively (Hamada & Park, 2011; Kojic-Sabo & Lightbrown, 1999; Nassaji, 2003).

Metacognition is one aspect of inferring unknown words that have been argued to be a lexical inference strategy. In fact, metacognition is a term that refers to one of two types of reading processes: cognitive and metacognitive. Cognitive processes happen without conscious thought, whereas metacognitive processes happen when a reader intentionally evaluates what they're thinking and which parts of a text they're interested in. Readers must engage in higher-level cognitive processes when reading a book to accomplish a certain objective, determining whether the current information is pertinent to the goal and encoding pertinent information into their memory representations (Yukino Kimura, 2022, p.43).

When considering all of the various types of metacognitive and cognitive strategies available to readers, there is frequently a substantive difference between bottom-up and top-down lexical inference strategies. In its essence, there are three models of reading that are emphasized in reading instruction: top-down, bottom-up, and interactive (Grabe, 2009). Top-down models are built on the concept that readers only process the information provided to them and that they process it quickly. Top-down strategies in lexical inference are those that take into account the sources surrounding a word as well as the ultimate gist of a passage. Bottom-up models contest this assumption by suggesting that people read very slowly and frequently refer to their own particular experiences and background knowledge. Readers adopting the bottom-up approach describe their journey from sentence to sentence, concluding that they have reached the last sentence. When asked to summarize the text's overall meaning, they offer a summary based on the specific details he had just provided, pointing out that he mostly employed verbs and terms like "fitness" and "diet" to do so (Michael Markey, 2022, p.76). The interactive model combines the two previous models. The

top-down and bottom-up reading models interact constantly and in a variety of ways in the interactional model. Readers that use a mixed approach start with a concise description before citing several sources to back up their arguments. They use textual information to support their interpretations of the texts as they progress through their explanations, adding various facts and ideas that were previously aroused. In order to communicate ideas that employ several levels of the material (words, sentences, context), these students go beyond a focus on individual words. Ultimately, when dealing with the unfamiliar, their methods extend beyond lexical retrieval and direct translation (Michael Markey, 2022, p.76). Provided that the body of research posits that both top-down and bottom-up methods are applied in the lexical inference tasks, it is this final model that defines the theoretical underpinning for the current investigation.

2.0 THE STUDY

2.1. The Design

As highlighted in the previous section, there is a strong link between vocabulary knowledge and reading comprehension in academic performance which basically occurs thanks to the metacognitive processes that readers use when they intentionally evaluate what they are thinking and which part of a text they're interested in. In this respect, learners commonly encounter unknown words while reading which they may attempt to guess their meaning. This process of deriving meaning 'lexical inferencing' might facilitate text comprehension. With this line of thought, this study is based on one research hypothesis, a null hypothesis, and an alternative hypothesis:

RH: "There are lexical entries that are prompted by the context in order to infer meaning"

NH: "There is no significant difference between the experimental and control group's post-test results"

Ha: "the treatment affects participants' scores positively"

This implies that the mental lexicon is insufficient, and inferential strategies impart meaning to words, implying that there are cognitive processes that assign "aptness" in contexts.

So that the aforementioned hypotheses would be tested, a quasi-experimental design was used. This design consists of a pretest targeting the control and experimental groups, a treatment for the experimental group, and posttest for both groups.

2.2. Instruments and Sample

The data were collected from two groups of Moroccan EFL learners. Both the control and experimental group were completing their final year in high school. These groups contained 30 subject searches. Thus, 60 participants who had the same level were involved.

A pretest, which is based on a diagnostic test, and a posttest which consisted of a reading excerpt that incorporated "null" words were administered to both groups. Participants had to infer the meaning of the null words relying on the context of the reading extract both at the

paragraph and sentence level. In this respect, the passage comprised 20 null words that do not exist in English. These words were written in bold and the participant's task was to choose the most suitable synonym from the choices given. The following is an example of the task :

Excerpt:

The Taj Mahal is one of the most forcing monuments built in 1631 by "Shah Jahan " in memory of his wife. It is situated on the banks of a roinad. In front of the monument, there is an amazing sign with fascinating flowers known as Charbagh.

Task: Choose the suitable synonym for the word in bold.

	<i>a. damaged</i>		<i>a. castle</i>		<i>a. garden</i>
1. forciner	<i>b. happy</i>	2. roinard	<i>b. river</i>	3. satigne	<i>b. space</i>
	<i>c. beautiful</i>		<i>c. view</i>		<i>c. shore</i>

Among the three distractors (a, b, and c), there is only one suitable word for the context of the sentence and the text while the others are inadequate and thus incorrect. The study's objective, as such, was to obtain answers to the research questions, and this instrument enabled to achieve that goal.

RQ1: Will participants choose proper responses for an invented word even if they are unfamiliar with it?

RQ2: Is there any significant difference between the control and experimental group in the posttest results?

2.3. RESULTS AND DISCUSSION

To answer both questions, a pretest was mandatory to pave the ground for this research. As a modus operandi, a diagnostic test is administered to learners in the beginning of the school year in order to spot their deficiencies in both basic skills and sub-skills. The diagnostic test, as such, was used as an instrument to pre-test participants' ability of reading comprehension. It is worth mentioning that the reading text matched the level they are involved in alongwith the conventional tasks of reading comprehension set by the guidelines of the ministry of education.

2.3.1. Pretest

Table 1: Pretest results

	<i>Participants</i>	<i>Mean</i>	<i>> the average</i>	<i>percentage</i>	<i><the average</i>	<i>percentage</i>
<i>Group A</i>	30	9.59	3	10%	27	90%
<i>Group B</i>	30	9.91	18	60%	12	40%

As can be noted, both groups got low results in the pretest with no significant difference in the means. On the one hand, group A had a remarkable percentage of participants who got below the average with a percentage of 90% (M= 9.59, SD=7.72). In this respect, only 10% of the participants managed to get an average which is 10/20. This indicates that few learners

attained the comprehension of the text including vocabulary. On the other hand, statistics are more noticeable in accordance with group B since 60% of learners could get more than the average. Still, the mean was not significantly different from that of group A ($M=9.91$; $SD=.02$). This reveals that the majority of learners attained the average but did not reach a full understanding of the reading text and vocabulary. Although there is no significant difference between the means of both groups, group A data, with the help of an independent t-test, reveal that learners' scores are dispersed and spread out in accordance with the means.

The aforesaid figures entail that the understanding of lexis might impede learners' willingness and ability to finish reading the text. Moreover, they might lack knowledge about the strategies to be equipped with in order to overcome the obstacle of difficult or unknown words. Indeed, this assumption was confirmed right after the correction of the diagnostic test (pretest) when learners admitted that encountering unknown vocabulary prevented them from focusing on the idea of the passage and, hence, understanding it in order to perform its related tasks. This is due to their poor knowledge about strategies to use in order to infer the meaning of the lexis and grasp the meaning of the whole passage.

2.3.2. Treatment:

Given the statistics provided, one of the groups was non-randomly selected in order to receive the treatment and thus be the experimental group. The treatment was provided to "group A" given the fact that 90 % of the participants didn't manage to reach the average which implies that they experience more issues in reading and lexical inferencing.

Throughout the semester, seven reading texts on different themes, depending on the theme of units provided in the textbook, were used as treatment. Participants read the passage and were encouraged to infer the meaning of real words based on different criteria; Learners were encouraged to explore a word employing their grammar, suffixes, and prefixes, as well as the word category. It is worth mentioning that the 'word formation' lesson was introduced at the beginning of the year to both the experimental and control group as it is part of the syllabus. The experimental group was also urged to pair unfamiliar terms with familiar ones. Obviously, this could be done at the word level. At the sentence and paragraph levels, indeed, learners were encouraged to guess the meaning of a word based on textual clues along with questioning their inferences by confirming or disconfirming them using textual evidence. Making conclusions about the failure of the influence besides attempting a new inference is also a crucial strategy that learners were supplied with, which enabled them to analyze both the explicit and implicit meanings.

Form-focused, meaning-focused, evaluative, and monitoring strategies, in essence, were used in reading lessons that focused on top-down strategies in which lexical inference along with the surrounding words and the ultimate gist of a passage are taken into consideration in the comprehension of the text. Unlike the bottom-up model of reading which assumes that readers refer to their background knowledge solely.

2.3.3. Posttest:

As mentioned previously, the posttest incorporates a paragraph including 20 words that do not exist in English "null words". These terms were written in bold, and the aim for the

participants was to identify the best synonym from the options provided. There were also comprehension questions to check the understanding of the paragraph and to calculate the mean of each group.

At the outset, the independent t-test reveals that there is a significant difference between the experimental and control group. The experimental group's statistics, in this sense, which benefited from the treatment was significant as they outperformed the control group (Mean = 14.59; SD= 2.19). Participants have shown a great deal of understanding of the reading passage which was revealed in their comprehension tasks responses. The control group's results, nevertheless, were mediocre as participants displayed less grasp of the reading excerpt (Mean= 10.93; SD= 4.57). It is worth mentioning that in the control group's responses the sentences that contained null words were avoided. Moreover, the control group's data is more dispersed (SD=4.57) than the experimental group (SD=2.19) which reveals the fact that the participants' scores were far from the mean vis-a-vis the control group. As a result, the null hypothesis which submits that there is no significant difference between the experimental and control group's post-test results is disconfirmed.

Table 2: frequencies by category and groups

	<i>Appropriate</i>	<i>Inappropriate</i>	<i>Total</i>
<i>Control group</i>	161	439	600
<i>Experimental group</i>	543	57	600
<i>Total</i>	704	496	1200

As can be noted, the frequency of appropriate answers (704) is higher than the inappropriate answers (496). This confirms our research hypothesis which suggests lexical entries are prompted by the context in order to infer meaning. It might be suggested that the participants employ pragmatic interpretation to assign a specific meaning based on a pragmatic context's structure. The word's 'appropriateness' is then determined by the communicative context. Indisputably, the word beach is linked to the word shore as the word door is associated with the verb to open and close. As a corollary, without a framed context, straight associations from the memory representation of one word to the presentation of another are unattainable. Even so, there is a framework that allows the most relevant word to be assigned. As a result, words do not operate in a vacuum from their context; rather, conceptions to which the words refer exist. Since these referents are not associated in isolation, but rather generated as a concept from the cognitive structures, the word association is related to the referents. The fact that the subjects chose the proper terms supports the hypothesis that there are lexical entries that are triggered by context to infer meaning. Not only is the relevant schema engaged, but the best relevant word is also retrieved premised on the text's clues. The context in the statements was obviously controlled in the sense that the tasks were designed to draw the participants' attention to a specific word.

A one-way chi-square statistic suggests that the difference between the two groups is indeed significant at a high degree of probability (df:1; $p < .02$). That is to say, this difference cannot be a result of chance except to a very low degree of probability. Thus, the null hypothesis

which suggests that there is no significant difference between the experimental and control group's post-test results is rejected. As the null hypothesis was rejected, the alternative hypothesis is to be tested. In this respect, the output of two-tailed tests suggests that there was a change in accordance with the experimental group ($p < 0.01$) which entails that the treatment affected the experimental group positively since the discrepancy between the pretest and post-test results is highly observed. The alternative hypothesis, which suggests that the treatment affects participants' scores positively, is confirmed.

In the essence of these results, it is well observed that the context plays a major role not only in the understanding of a word but also in a whole passage. In fact, foreign language learners frequently encounter unknown words when being exposed to a sentence or a passage. However, they might deal with these words differently. According to the previous data, learners who use different strategies to infer the meaning of a word succeed to understand the general idea of the text and are not threatened to use the "null" word in the comprehension answers. Context, as such, along with the learner's use of inferencing strategies trigger the lexical entries which provide meaning to words. Nonetheless, participants who do not use their inferencing skills and try to give meaning to lexis through the context provided usually feel blocked to grasp the passage and respond to comprehension questions as well as the vocabulary task.

3.0 CONCLUSION

The mental lexicon is a sophisticated process that is organized on several levels, including phonology, semantics, and syntax. This research backs up the theory that there are lexical entries that are activated by context to infer meaning since the significance of appropriateness was emphasized by the participants. Even if the vocabulary test that participants were given wasn't typical. As a reason, several objects were included as distractions. The L2 learners selected the most suitable word based on the context's hints.

Both the experimental and control group employ inferential procedures to deduce the meanings of new words based on the context. Inferencing success is strongly reliant on the learners' prior knowledge and the context around the target words along with inferencing strategies they are equipped with which actually created the difference between the group's results.

4.0 IMPLICATIONS

Considering participants in the experimental group were more likely than students in the control group to infer the correct meaning, learners' instruction to infer the meaning of new words is critical to vocabulary acquisition and reading comprehension. To tease learners' cognition, this should go side in hand with creating proper context. The teaching of vocabulary must thus rely on tactics that enhance learners' interest in inferencing, and reading must be promoted in order to be understood in context. Indeed, because the majority of vocabulary knowledge is gained through reading, vocabulary should not be taught in isolation from context. As an outcome, a suitable learning environment will be created for vocabulary inferencing training.

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BIOGRAPHICAL STATEMENTS

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