

THE EFFECT OF GUESSING VOCABULARY IN READING AUTHENTIC TEXTS AMONG PRE-UNIVERSITY STUDENTS

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The omnibus question proposed here is to pinpoint the impact of a contextual guessing strategy (CGS) on vocabulary and reading authentic texts at the pre-university level. One-hundred male and female students were randomly selected and assigned to 'context' and 'non-context' groups. The context group received a CGS instruction to infer the meaning of low-frequency words while the non-context participants were treated by a direct method. The results revealed that CGS instruction was more effective vis-à-vis direct vocabulary instruction in all particulars, and was more effective than the non-context method in improving reading. The tentative estimation would be that some of the assumptions about the futility of teaching contextual clues should be rigorously re-examined and that CGS can account for a substantial proportion of vocabulary growth during the school years.

INTRODUCTION

Lexical competence is a central part of communicative competence and is regarded as a key concept in teaching vocabulary (Decarrico, 2001, p. 297). Richards and Renandya (2002, p. 255) hold that vocabulary is a core component of language proficiency and much of the basis for how well learners speak, listen, read, and write is provided by vocabulary. They maintain that learners, without an extensive vocabulary and strategies for acquiring novel vocabulary, often achieve less than their potential.

Taken together, a prima facie case for the development of intervention programmes that boost vocabulary in students with poor language skills seems to be inevitable. Even though applied linguists agree that the acquisition of vocabulary is probably the greatest stumbling block in language acquisition, there is no consensus on how vocabulary should be taught. For that matter, there are various techniques and devices for vocabulary teaching in methodology textbooks one of which is contextual guessing strategy (CGS).

CGS, among other strategies, deserves a careful attention because it is

considered as a useful tool in teaching and learning of reading by many practitioners. Not every study, however, supports utilization of this strategy or contextual clues as a sound strategy for identifying semantically unfamiliar words. Liu and Nation (1985, pp. 38-39) claim CGS as a complex and often difficult strategy to carry out successfully and are of the opinion that in order to guess successfully from context, learners are required to know about 19 out of every 20 words (95%) of a text, which entails knowing the 3,000 most common words. Kelly (1990, p. 199) has strongly questioned the reliability of context clues even with easy texts and concludes that 'unless the context is very constrained, which is a relatively rare occurrence, or unless there is a relationship with a known word identifiable on the basis of form and supported by context, there is little chance of guessing the correct meaning' (p. 203). However, putting the two opposing points side by side, one cannot ignore the role of context and the guessing through the context because the literature is replete with empirical studies (Redouane, 2004; Alesweed, 2005; Nash and Snowling, 2006, among others) that demonstrate the facilitating effects of context on word recognition. To further the understanding of guessing effects of vocabulary, we formulated this research question as whether this technique has some strong effect in reading authentic texts by a group of pre-university students.

BACKGROUND

Guessing from the context is one of the most useful skills learners can acquire and apply inside and outside classroom and, more importantly, can be taught and implemented relatively easily (Thornbury, 2002, p. 202).

Fukink and De Gloppe (1998), using a meta-analysis of 22 instructional treatments aiming at enhancing the skill of deriving word meaning from context during reading, revealed that deliberately deriving word meaning from context is amenable to instruction and the effect of even relatively short instruction is awarding. Contextual clue instruction appeared to be more successful than other instruction types.

Rodriguez and Sadoski (2000) scrutinized the effects of rote rehearsal, context, keyword and context-keyword methods on immediate and long-term retention of EFL vocabulary in natural classroom setting. The participants were 160 ninth-grade students from 8 intact EFL classes from two different schools in Trujillo, Venezuela. The subjects had been studying EFL for more than 2 years. Two experienced female EFL instructors took part in this study and each instructor used two different methods to teach the vocabulary words in four intact classes. The classes were randomly assigned to either an immediate cued-recall or a delayed cued-recall condition. Two 15-item multiple-choice tests were utilized to assess participants' vocabulary knowledge both in English and Spanish. The experimental words consisted of 15 English nouns. Obscure and low-frequency words were used to ensure the unfamiliarity of them to the students. The booklet for the rote rehearsal condition provided the Spanish translation of the English word and the booklet

for the keyword condition, in addition to providing the Spanish translation of the English word, included a key word for each vocabulary item. The booklet for the context condition did not give an explicit Spanish translation of the vocabulary word. In lieu, it represented three examples of the vocabulary word's use in context, in Spanish. The participants, working together with their instructors, inferred the Spanish meaning of each target word. Finally, the booklet for the context-keyword method included the three-context sentences for each vocabulary word along with the Spanish keyword.

The immediate performance of the participants using the combined context/keyword method was significantly better than that of students using the keyword method. After a week, the combined context/keyword was significantly better than all other methods: subjects in the combined context/keyword condition were able to retain 1.5 to 4 times as many correct definitions as students in the other conditions. Interestingly, the context-keyword method proved effective for students with different levels of English vocabulary knowledge.

A large scale study was carried out in Hong Kong by Fan (2003) concerning the learning of English by Cantonese speakers. The aims of the project were threefold: (a) to find out the vocabulary size of the tertiary students and whether they need help with academic vocabulary, (b) to identify the strategies that are conducive in general and the strategies that are particularly beneficial for learning high- and low-frequency words in particular, and (c) to look at the discrepancies among the frequency of use, the perceived usefulness, and the actual usefulness of vocabulary strategies.

The participants were 1067 students who had recently been offered places by the 7 local institutions of higher education. ANOVA and Multiple Regression were employed for data analysis. Among the 56 strategies identified, 'guessing from context' was reported as the second strategy used most often and perceived as most useful. Another finding of this study was that the students who were the most proficient in L2 vocabulary, used significantly more often both 'guessing from context' and 'dictionary strategies' in learning new words. In Fan's view, these findings implied that students required both 'contextual guessing' and 'dictionary' strategies in order to learn new words.

Redouane (2004) examined the efficacy of the guessing-from-context strategy versus a word-list strategy in learning French lexical words and their meanings as well as retention of those words at the university level. Specifically, the study aimed at a) investigating the extent to which the use of the guessing-from-context strategy will enable L2 learners to obtain a footing in the process of acquiring various French words and their meanings and b) demonstrating whether learners exposed to a guessing-from-context strategy exhibit enhanced retention of French words and their meanings than learners without benefit of such a learning strategy. To this end, 12 fourth-semester university students of French, 5 males and 7 females with an age range of 18-30, with nearly the same level of French language proficiency, were the participants. The subjects were randomly assigned to two groups; 6 to the

guessing-from-context strategy condition (the experimental group), and 6 others to the word-list condition (the control group). The data were collated by means of two instruments: a cued-recall test, and a comprehension four-choice multiple-choice test, with the former to measure the subjects' ability to retrieve the 20 target words in French by asking them to provide their translations in English, and the latter to gauge their retention by giving them 10 vocabulary items. Both tests were given immediately after the learning period, then one week, and finally one month after the learning period so as to investigate shorter and longer retention. The findings manifested the facilitation role of guessing-from-context strategy in learning more French words. Moreover, the guessing-from-context technique proved to have an impact not only on immediate recall but on long-term retention.

Allesweerd (2005) in a study examined whether and how the participants would use the different word-solving strategies mentioned in the literature (i.e., guessing from context, appealing for assistance, and skipping). Subjects were 39 Saudi male freshman undergraduates studying English as a foreign language, who voluntarily participated in the study. They had approximately the same proficiency levels, and they were studying in the same class. The instrumentation in the study was a questionnaire which took the participants 20-30 minutes to complete. The analysis was divided into 4 parts: overall strategies, guessing from context, dictionary use, and skipping.

The results indicated that contextual guessing was the second strategy used by the participants in terms of priority. They used global and local clues almost identically. Allesweerd concluded that his subjects used the dictionary more often than other strategies because they were in the low-proficiency level and did not want to miss any new word, as they were unable to decide whether the word is important or not. Skipping strategies did not seem to be very popular among students vis-à-vis other strategies.

The notion that EFL students can easily learn a mammoth amount of vocabulary through CGS is impulsively appealing; however, it has not been comprehensively proven through experimentation and, due to the methodological weaknesses, it is only possible to draw tentative conclusions from the existing studies concerning the effect of CGS on vocabulary and reading comprehension. The evidence to date is equivocal as to whether CGS can increase vocabulary knowledge, and studies on the context method have failed to include measures of reading comprehension. The present investigation is an attempt to fill up this gap in the database of research into the impact of CGS on vocabulary and reading comprehension in reading authentic texts as it utilizes participants from the pre-university level.

METHODOLOGY

Setting and Participants

One-hundred and twenty senior high school students (an equal number of males and females from two top pre-university centers) with an age range of 17 to 19 were randomly selected as the participants in this study.

They were selected from the two very top pre-university centers in Gachsaran, a southern city in Iran. None of the participants had prior experience of attending language institutes or other English classes excepting their regular English classes at school which were two sessions per week for six years totaling to about 600 hours.

The subjects were randomly divided into two experimental groups, namely context and no-context groups. Because the students' marks in almost every subject including English were close to the top, that is at least 85.0% of the highest achievable mark, the random selection was made, presupposing that majority of these students enjoy nearly the same level of English. A further supporting point was that one of the researchers in this study had been directly involved in teaching them English for a few years, and he knew almost every subject's proficiency level. As for the selection of materials, *Newsweek*, *Time* and *The Economist* were the magazines from which the texts were taken.

Instrumentation

A pre- and a post-test were used as the required instruments in this investigation. Each test was composed of 30 items on vocabulary and 10 items on reading comprehension, all in the multiple-choice (MC) format. The reason for choosing MC format than other types was that it was more convenient because the number of population was somewhat big and the other reason was that these students were more familiar with MC types than other test types in their English textbooks at high school and pre-university. The texts were selected from the *NEWSWEEK*, the *TIME*, and the *ECONOMIST* to represent our authentic materials. To construct the pre- and post-tests, a total MC experimenter-made achievement test containing 60 items on vocabulary and 10 items on reading comprehension was made first. The vocabulary items, then, were split up into two equal halves based on odd and even numbers. The odd numbers were, at random, assigned to the pre- and the even ones to the post-test. However, the 10 reading comprehension items remained constant and intact for both pre- and post-tests. We considered the hiatus between the administration of the pre- and post-tests (about three months) to be considerably long so as to diminish the test effects (memory factors) of the pre- on the post-test. Using KR-21 method, the reliability quotient for vocabulary and reading comprehension tests was tallied to be 0.77 and 0.72, respectively.

Material selection

CGS is strongly applicable to low-frequency words (Nation, 1990, cited in Redouane, 2004, p. 2). These were the main source of inspiration behind choosing 'low-frequency' words in the current study. A low-frequency word, in the present study, was defined as a word which appears four times or less in a million running words, as reported in the Kucera and Francis (1967) word frequency list. In this study, the four main meaning classes of words or content words (i.e. adjectives, adverbs, nouns, and verbs) were considered.

The materials chosen for inclusion had to span a wide range of topics and be written in a variety of styles by different authors to meet the demands of the study. Also, to account for the generalizability of the research findings, a reasonable proportion of nouns (26.6%), verbs (26.6%), adjectives (26.6%), and adverbs (20.0%) were chosen for pre- and post-tests in this study. The situational contexts in the present investigation were neither weak nor supportive or 'highly informative' (Jenkins et al., 1984, p. 782; Jenkins et al., 1989, p. 219).

The difficulty level of each text was adjusted to a fortunate level for pre-university students, an average 19.38 (congruent to the average text difficulty level of the participants' textbook) on the basis of Fog reading difficulty index. The situational contexts were not modified and therefore the overriding idea expressed in the contexts survived intact. After the target word was identified, a one-, two-, three-, four- or sometimes six-sentence test passage was constructed for it. The choice of appropriate length for each paragraph turned on the number of sentences which bore any relation to the sentence containing the target unfamiliar word. It is to note that the passages ranged from 80 to 100 words.

A final set containing 60 items was identified as the most appropriate vocabulary test to accomplish the objectives of the study. Together, the choice and selection of target words and reading passages in this study were based on three major criteria: a) target words and reading passages had to be commensurate with the subjects' level, b) low-frequency words were chosen, and c) the target words had to be unfamiliar to the subjects.

Two reading comprehension passages were found to be most well-thought-out for both pre- and post-tests in this study. The passages were expository and narrative prose texts since the participants were more familiar with these types of text in their educational setting and textbooks. The passages also embodied at least 30 low-frequency words (other than those included in the vocabulary tests). To control for authenticity of passage selection, the reading passages were neither simplified nor abridged, but were original and unmodified. The 10 passage-dependent questions tapped factual, referral, inferential, main idea, and evaluative comprehension as well as some vocabulary-dependent questions.

Selection of authentic texts

In our high school and pre-university textbooks, students are chiefly engaged with texts which have undergone adaptation and/or simplification both in vocabulary and syntax to suit their level. During this simplification or adaptation process, students are exposed to artificial and non-authentic language presentation. Two principal justifications, above all else, were behind the use of authentic texts in this investigation, as put forth by Berardo (2006, p. 60): a) motivation and interest, and b) acquisition-promoting context, meaning that authentic texts, due to their versatility, provide a rich source of natural language for learners to acquire.

Procedures

To test the homogeneity of the participants in respect of the independent variable (CGS), the pre-test (after being revised and pilot-tested for reliability and validity) was administered in the first session at the commencement of the school year. The vocabulary and reading comprehension items required approximately 50 minutes for completion. It was highly strived to administer the test under real testing conditions. The homogeneity of the subjects was substantiated via the statistical technique of independent t-test and none of the participants was dropped from the experiment.

The study entailed two experimental groups each enjoying a specific treatment. The subjects in the first experimental group (hereafter called ‘non-context group’), through a direct teaching procedure, were exposed to a number of low-frequency words used in the authentic texts. Each word was presented without the provision of their actual context and via a simple dictionary definition, a synonym, the realia available in the immediate environment, and occasionally by providing its equivalent word in the students’ native language.

The experimenter, in each session, began by reading each unfamiliar low-frequency word and its concise definition to the class. The students then read each word and its definition aloud in unison. Next, the experimenter covered the definitions and asked the students to read each word and then supply the definitions themselves. Finally, the definitions were shown but the words were covered, and the subjects were asked to read each definition aloud and give the corresponding target word. This entire set of procedures was considered one instructional exposure to the target word. Generally, the participants were given roughly 45 to 50 minutes of formal instruction per session on about 7 to 8 new low-frequency words, and this set of words was not reviewed on the next day because a single or very little exposure to the target word was favored in the two treatments in this study. The non-context participants were urged to diligently attempt to memorize these lexical items and their meanings without the provision of any context.

The subjects in the second experimental group (‘context-group’ henceforth), through a regular teaching procedure, were exposed to the same lexical items within their actual authentic context. First, a miscellaneous assortment of contextual clues collated from the classification schemes of contextual aids devised by Artley et al. cited in Ames (1966, pp. 66-67) and Zarrinpoush (2005, pp. 17-18), was prepared and taught. Then, a ‘vocabulary rule’ adapted from Ruddell (1999, pp. 151-152) was presented: when you come to a word you don’t know, use a) context clues (i.e. read the sentences around the word to see if there are clues to its meaning) and b) word-part clues (i.e. see if you can break the word into a root, prefix, or suffix to help guess the meaning). Besides, participants in the context group were taught one other strategy. This was a replication of the strategy employed by Carnine et al. (1984, p. 197) in their second study: ‘When there is a hard word in a sentence, look for other words in the [text] that tell you more about that word’. This

strategy indeed emphasized the use of internal contextual clues to work out the meaning of unfamiliar words in the current study.

Each session, the context group subjects were introduced to the same lexical words in their actual contexts. As with the non-context subjects, only one exposure was considered optimal to each target word. Although it might be argued that multiple exposures are needed in order for context to be beneficial, Nagy et al. (1985, p. 236) provide considerable evidence that ‘substantial’ knowledge about a word can be gained via only one exposure. These participants were provided with contexts of approximately a four-sentence paragraph on average for each unfamiliar word. However, this was not an irrevocable criterion for contextual situation selection. Often, the full grasp of an unfamiliar word’s meaning depended on more than three sentences before and after the sentence containing the unknown word. When they failed to guess the right meaning, they were given corrective feedback.

To establish fidelity to the treatment, other conditions for the two groups were the same. These were the teacher, class period, and supplementary curricular materials. The classes were conducted two sessions a week for each group and the whole treatment lasted about three months. The post-test was administered approximately two weeks after the end of the treatment sessions. This short interval was regarded sufficient for the participants in each group to practice and rehearse pursuant to their particular instructional method. The procedures for administering the post-test strictly resembled those of the pre-test stage.

RESULTS

Subjects’ performance on vocabulary at the pre-test stage

The pre-test of performance on vocabulary in reading authentic texts prior to the treatments by means of independent t-test revealed the following.

Table 1: Independent T-Test for the Two Groups’ Performance on Vocabulary at the Pre-Test Stage

Group	Mean	Standard Deviation	Variance	$t_{observed}$
Context	7.583	5.931	35.185	0.125
Non-context	7.450	5.646	31.878	

P-value = 0.05

n=60

d.f. =118

$t_{critical}$ =1.980

The analysis indicates that there is statistically no significant difference between the two groups. The t-observed value is much less than that of t-critical ($0.125 < 1.980$), revealing that context and non-context subjects were, to an entirely satisfactory extent, homogeneous with regard to the independent variable (i.e. contextual guessing strategy) prior to the treatments.

Thus, we felt confident about the existence of no significant gains in vocabulary in reading authentic texts between the two groups of subjects.

Subjects' performance on vocabulary at the post-test stage

After the treatment, the next step for us was to determine if any significant change occurred in the performance of the experimental group who received instruction and training in contextual guessing strategy (i.e. the context group) and the group who did not receive any instruction concerning this technique (i.e., the non-context group). In so doing, the results of the performances of the two groups on vocabulary in reading authentic texts were compared (at the post-test stage). Once again the independent t-test was run to accomplish this objective, as illustrated in Table 2 below.

Table 2: Independent T-Test for the Performance of the Two Groups on Vocabulary at the Post-Test Stage

Group	Mean	Standard Deviation	Variance	$t_{observed}$
Context	18.499	12.692	161.110	3.680
Non-context	11.216	8.427	71.025	

P-value=0.05

n=60

d.f. =118

$t_{critical}=1.980$

This time a significant difference between context and non-context was obtained. The magnitude of t-observed exceeded the t-critical value ($t_{observed}=3.680 > t_{critical}=1.980$) at the 0.05 probability value, providing strong evidence that CGS engendered an enhancement in vocabulary of the actual context group in reading authentic texts.

Subjects' performance on reading comprehension at the pre-test stage

In the same vein, all the participants were pre-tested for their reading comprehension ability with regard to authentic texts prior to the treatments. In pursuance of this objective, the independent t-test technique was applied.

Table 3: Independent T-Test for the Two Groups' Performance on Reading Comprehension at the Pre-Test Stage

Group	Mean	Standard Deviation	Variance	$t_{observed}$
Context	1.799	1.660	2.757	0.168
Non-context	1.850	1.658	2.750	

P-value=0.05

n=60

d.f. =118

$t_{critical}=1.980$

As Table 3 displays, the magnitude of t-observed is much less than t-critical value at 0.05 level of significance ($t_{observed}=0.168 < t_{critical}=1.980$). This means there was no significant disparity between the context and non-context participants' on reading comprehension in reading authentic texts, further substantiating the homogeneity of the subjects prior to their respective treatments.

Subjects' performance on reading comprehension at the post-test stage

After the specific treatment each group received, the next step was to find out how the reading comprehension ability of the context group, as compared to the other group, would be influenced. As it was adverted to earlier, unlike the non-context group, the context group was exposed to instruction in the use of contextual aids to decipher the meaning of unfamiliar words in reading natural unmanipulated (unexerpted) texts. To this end, the independent t-test was utilized again, as displayed in Table 4 below.

Table 4: Independent T-Test for the Two Groups' Performance on Reading Comprehension at the Post-Test Stage

Group	Mean	Standard Deviation	Variance	$T_{observes}$
Context	8.000	5.873	34.496	3.986
Non-context	4.516	3.372	11.371	

P-value=0.05 n=60 d.f. =118 $t_{critical}=1.980$

The results of the independent t-test at the post-test stage revealed a significant and meaningful difference between context and non-context participants. The magnitude of t-observed outstripped the t-critical value ($t_{observed}=3.986 > t_{critical}=1.980$) at the 0.05 probability value, providing strong evidence that contextual guessing strategy augmented the ability of the actual context group to grasp authentic texts containing low-frequency words.

DISCUSSION

The findings indicate that contextual guessing strategy (CGS) helped subjects, who were exposed to instructional intervention to this strategy, to obtain a footing in the process of acquiring low-frequency words and learn more words and their meanings compared to the participants without benefit of such an instructional method. The results of the post-test strongly vindicated that learning that occurred through this strategy was effective and efficient. Furthermore, participants who were exposed to this strategy exhibited enhanced retention of low-frequency words in reading authentic texts via their performance on comprehension items. While the CGS effect may seem rather small in absolute terms, it was significantly robust and very consistent across types of text, method of measurement, and level of scoring.

The findings of this study are consistent with and lend support to the previous research in first language (L1) and second language (L2) vocabulary learning which indicate that learners can derive the meaning of unfamiliar words while reading by using the contextual clues in which they appear (e.g. Camine et al., 1984; Fukkink and De Glopper, 1998; Frantzen, 2003; Redouance, 2004 and Nash and Snowling, 2006). On the other hand, the findings repudiate, in particular, the results of Schatz and Baldwin (1986), and those of Kelly (1990), and also those studies which claim that there are limitations to the value of context and that reliance upon context clues to

unlock the meanings of unfamiliar words can be problematic (e.g. Beck et al., 1983; Carnine et al., 1984; McKeown, 1985 and Frantzen, 2003).

Vocabulary enhancement attributable to CGS

From the results of the post-test, it was revealed that delivery of the instructional strategy to the context group was more effectual in comparison to the non-context group ($mean_{context}=18.499 > mean_{non-context}=11.216$ and $t_{observed}=3.680 > t_{critical}=1.980$, as illustrated in Table 2 above). This difference implies that the semantic representations created via contextual clues were more durable. To assess the durability, the hiatus of about three months was taken as a measure. Moreover, instead of using transfer tests, none of the contextual situations selected for use and practice during the treatment sessions was incorporated in the pre- and post- tests. This durability could show that the semantic accounts were better particularized and/or were easier to access than those created without the aid of contextual cues. An alternative explanation might be that the context method emboldened the subjects to formulate verbal definitions for the words.

The role of instruction in CGS

Another important finding in this study was that, when explicitly taught how to use contextual clues, context subjects could competently infer word meanings from written contexts ($mean_{context}=18.499$ and $t_{observed}=3.680 > t_{critical}=1.980$, as Table 2 above illustrates). So, those with poor vocabulary may not automatically guess the meanings of new words from context, but can be taught to do so, though their new-word learning may require considerable reinforcement, i.e. sufficient contextual support and exposures.

Arguably, there are a number of possible explanations for the greater efficacy of the contextual clue instruction over direct vocabulary instruction in the present experiment. The first is that seeing the word in a written context can provide more syntactic, semantic and pragmatic information in creating a well-specified semantic representation. In line with semantic network theory, based on which a word obtains its meaning by its place in a network of other meanings, the overt semantic mapping might have helped to place the semantic representation within the network. Insights from cognitive linguistics in combination with Anderson's (1983, 1990, cited in Verspoor and Lowie, 2003, pp. 551-552) theory on semantic networks lend theoretical support to the beneficial effect of meaningful links in vocabulary learning. The process of vocabulary acquisition has been simplified into two recursive stages, namely 'semanticization' and 'consolidation' by Verspoor and Lowie (2003, p. 550). Matching the formal characteristics of a word with its semantic content occurs at the first stage. At the second stage, the incorporation of a newly acquired word into the learner's permanent memory takes place. A word requires to be adequately semanticized; otherwise, consolidation cannot be brought about.

The other justification would be that the context method was more interactive and the context-group participants were more engaged with the

material thereby culminating in better learning compared to the non-context method which was more didactic.

A third possibility is that the information about word meaning was presented in a more accessible format in the context group in comparison with the other method. It has been demonstrated that a familiar context facilitates vocabulary development and retention (Wittrock et al., 1975, p. 487) and thus, the context method in this study incorporated suggestions for concept development.

The effect of passage length and context type on CGS

An intriguing finding in this study was that the proportion of correct responses descended as we progressed from longer passages to shorter ones due very likely to the existence of more than one unfamiliar low-frequency word per paragraph or passage (approximately 66.6% and 35% for relatively short and relatively long passages, respectively). The longer passages with more than one unfamiliar word might have disrupted subjects' overall comprehension. The general expectation was that the longer the passage, the easier for students to infer the meaning of the unknown word owing to the redundancy factor. Longer passages made students averse to leaving no stone unturned in an attempt to use contextual information. It is also probable that a strong link between the word and the context in lengthy texts might sometimes distract the attention from what should be the focal point in vocabulary acquisition: the matching of the semantic characteristics of a word to its formal characteristics. Long, redundant contexts can culminate in reduced attention to the unfamiliar low-frequency word and a lack of what has been labeled 'noticing' (Verspoor and Lowie, 2003, p. 549). The reverse was almost true of shorter passages.

Increase in reading comprehension ascribable to an increase in vocabulary knowledge

The second main finding in this study has answered an appreciable question not previously scrupulously addressed in vocabulary training research with both children and adults, that whether or not one method is more effective than the other in improving reading comprehension for a passage containing some of the taught words. As Table 4 above indicates, the participants who received training to use CGS outstripped those who did not receive instruction in this strategy ($mean_{context}=8.00 > mean_{non-context}=4.516$ and $t_{observed}=3.980 > t_{critical}=1.980$). This finding lends support to and comports with Anderson and Freebody's (1979, cited in Kameenui et al., 1982, p. 385) contention that 'people are helped to comprehend a text if they learn the meanings of the unfamiliar words it contains'. The superior performance of the context participants on all formats of comprehension questions at the post-test stage suggests a possible explanation for the negligible effects of contextual vocabulary instruction on overall reading comprehension.

A number of factors might be considered in explaining the apparent lesser effect of increased knowledge of word meanings on reading

comprehension by non-context group. One possible justification might be that these participants relied heavily on memory rather than text understanding as they attempted to perform on comprehension items. The majority of non-context participants replied correctly to those comprehension items which were rather fact-oriented. When it came to the main idea, inferential, referral, and low-frequency vocabulary-dependent questions, majority of the subjects failed to come to a correct choice.

The apparently lesser effect of increased word knowledge on certain comprehension measures by non-context students may also be related to the nature of the instructional procedure, which tended to emphasize word definition. These participants may still lack an adequate understanding of the particular concept albeit they may verbalize a rote definition. Even though care was exercised to define the target words using very basic vocabulary or provide subjects with synonyms they were already familiar with, this procedure may not have been sufficient to guarantee a functional understanding of the concepts taught. Therefore, reading comprehension was not greatly affected because the students were still unable to use their vocabulary knowledge while reading authentic texts.

CONCLUSION

Succinctly stated, the major result of this investigation has been to demonstrate unmistakable learning from contextual guessing strategy (CGS) from one or a very few exposures to unfamiliar words in natural text. The success of CGS vis-à-vis other methods of vocabulary learning depends on how the comparison is made; the strength of CGS lies in its long-term, cumulative effects. Thus, the results suggest that a more effective way to produce large-scale vocabulary growth is through CGS. Another subsidiary but still crucial finding of this study was that instruction in CGS culminated in an increase in reading comprehension ability of the pre-university students. The interaction of reading comprehension test performance and contextual learning was significant, with some subjects scoring near the ceiling. However, the complexities involved with vocabulary-to-comprehension processes are also acknowledged.

Finally, the motivating effect of using authentic texts in the classroom is a certain possibility. We believe that authentic texts must be circumspectly used in the EFL pre-university situations due to their oddity in such an educational setting. They should be intervened as instructional materials before they are exploited as vocabulary and reading comprehension measures.

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