EFL Vocabulary Acquisition: Narrow Reading versus Reading plus Vocabulary-Enhancement Activities. A Case Study with Spanish Secondary School Students

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ABSTRACT: This article examines the role of reading in vocabulary acquisition, focusing for the purpose on two different approaches: narrow reading (NR) and reading plus vocabulary-enhancement activities (RV). In an attempt to assess the effectiveness of these two instructional approaches in the acquisition of English vocabulary by Spanish students in secondary education, a classroom-based study over a 6-week period was conducted. Two groups of students took part in it, each receiving a different treatment. An adapted version of Paribakht & Wesche's Vocabulary Knowledge Scale (VKS) has been employed to measure students' knowledge of 20 target words. Both groups demonstrated noticeable vocabulary gains with the two methodologies.

Keywords: vocabulary acquisition, narrow reading, vocabulary-enhancement activities, incidental learning, intentional learning.

Adquisición de vocabulario de ILE: Lectura enfocada frente a lectura combinada con actividades para el desarrollo del vocabulario. Un estudio de caso con alumnos españoles de secundaria

RESUMEN: El presente artículo examina el papel de la lectura en la adquisición de vocabulario, centrándose para ello en dos métodos: la lectura enfocada y la lectura combinada con actividades para el desarrollo del vocabulario. Con objeto de evaluar la efectividad de dichos métodos en el aprendizaje de vocabulario en inglés como lengua extranjera por alumnos españoles de educación secundaria, se llevó a cabo un estudio en el aula durante un período de seis semanas. Dos grupos de alumnos participaron en él, recibiendo cada uno de ellos un tratamiento diferente. Se ha utilizado una versión adaptada de la *Vocabulary Knowledge Scale* (VKS) (escala de conocimiento de vocabulario) de Paribakht & Wesche para medir el conocimiento de los alumnos de 20 palabras. Ambos grupos demostraron un aumento considerable de vocabulario con las dos metodologías.

Palabras clave: adquisición de vocabulario, lectura enfocada, actividades para el desarrollo del vocabulario, aprendizaje incidental, aprendizaje intencional.

1. Introduction

A considerable number of studies in the field of second language acquisition have been conducted over past years to find out how vocabulary is acquired by foreign learners and what the most effective methods for acquisition are (see Hasbún Hasbún, 2005; Agustín Llach, 2009). This article is concerned with vocabulary acquisition and reading. Some views held by teachers and researchers are in line with the idea that the higher the exposure to vocabulary through reading, the better. Others maintain that there is no better way to acquire vocabulary than when students are consciously working with vocabulary itself. From a pedagogical point of view, this reflects the distinction between incidental and intentional learning. The former "occurs when the mind is focused elsewhere" and therefore students are unconscious of the learning process (Decarrico, 2001: 289). On the contrary, in intentional learning students "are aware of the fact that they are participating in a formal learning task" (Dörnyei, 2009: 140-141). In terms of reading, this incidental versus intentional dichotomy is directly related to narrow reading, on the one hand, and reading plus vocabulary-enhancement activities, on the other.

1.1. Narrow reading

Narrow reading, a term first coined by Krashen over thirty years ago, can be defined as "reading in only one genre, one subject matter, or the work of one author" (Cho et al., 2005). In the present study, it particularly refers to reading a series of thematically related texts. The narrow reading approach has been claimed to be one of the main ways to acquire vocabulary incidentally (Krashen, 1989). There is significant evidence proving and supporting the idea that narrow reading has beneficial effects on vocabulary gains (see for instance Schmitt & Carter, 2000). Bearing this in mind, the question of why English textbooks for foreign learners still introduce isolated vocabulary arises. Let us take, for example, the first section of units in the textbook Switch 4 (Krantz, 2010), which focuses on vocabulary and in which an average of 15 new words are explicitly taught. Every unit also includes two readings related to the topic of the vocabulary section. However, in spite of the fact that the texts are thematically related to the vocabulary presented at the beginning of the units, they do not include the same target words. As a consequence, students never find the words to be learned in context.

It has been estimated that the number of times a new word needs to be encountered before it is learned ranges from 5 to 17, being the average 10 occurrences (Perry & Mac-

¹ 'Acquisition' and 'learning' have been defined as "the internalization of rules and formulas [...] used to communicate in the L2" (Ellis, 1986: 292, 299) and, as such, they are treated as synonyms in this article. The same applies for 'second' and 'foreign' language, since both concepts are considered synonyms and employed to refer to "any language that is learned subsequent to the mother tongue" (Ellis, 1997: 3). It may take place in classroom settings or in the country where it is spoken. Finally, following Lewis (1998: 217), a distinction is made between the notions of 'vocabulary' and 'lexis'. On the one hand, the term 'vocabulary' is "often used only to talk of the individual words of the language". On the other, 'lexis' is "a more general word than the common vocabulary [...]; lexis covers single words and multi-word objects [as well]".

Donald, 2001). Thus, the answer to the question about the way in which some textbooks present vocabulary could be answered by saying that "the process by which "incidental" acquisition through reading occurs is slow" and that "there is no way to predict which words will be learned, when, nor to what degree" (Paribakht & Wesche, 1997: 174). This might be the reason why many other theorists in the field of second language acquisition argue that vocabulary is best acquired when reading is enhanced with intentional learning exercises. These would include, among others, vocabulary related activities, which will be briefly discussed in the following sub-section.

1.2. Reading plus vocabulary-enhancement activities

The use of explicit learning vocabulary activities in the classroom has been claimed to be helpful for successful second language vocabulary acquisition (Nation, 2001: 157-158). These explicit activities are conciousness-raising and centre on receptive skills, ensuring that learners note features of the input which can help them turn it into intake (Lewis, 1998: 215). 'Input' is understood as the "language the learner meets", whereas 'intake' would be the "language internalized by the learner in such a way that it becomes available for productive use".

Explicit learning has been described by Dörnyei (2009: 136) as a "process characterized by the learner's conscious and deliberate attempt to master some material or solve a problem". In this line, programmes that include direct vocabulary instruction have been found to be more effective for the enlargement of vocabulary than those focusing solely on implicit treatments (Hunt & Beglar, 2005: 27). It has also been asserted that vocabulary acquisition gains are greater when students are asked to complete intentional vocabulary-enhancement activities after reading (Paribakht & Wesche, 1997; Min & Hsu, 2008). Wesche & Paribakht (1994: 8-11) and Lewis (1998: 86-141) propose a list of basic exercise types helpful for vocabulary acquisition:²

- Selective attention exercises (e.g., reading a text with target words in boldface).
- Matching target words to definitions.
- Fill-in-the-gaps using target words. They may include word-formation exercises.
- Translating target words into the mother tongue.
- · Rearranging words into complete sentences.

These activities are used to facilitate students' "apperception" of target words. They are normally employed in explicit instruction to make learners conscious of their learning process.

1.3. Aims and research questions

The main aim is to investigate which methodological approach, narrow reading or reading plus vocabulary-enhancement activities, better facilitates vocabulary acquisition for

² These types of exercises have been employed in our research.

³ This term refers to "the subset of novel language data that is in some sense "noticed" by the learner and related to some prior knowledge" (Wesche & Paribakht, 1994: 4).

students of English as a foreign language. The effectiveness of both treatments is analysed in detail, providing evidence from two groups of learners at secondary school level. The study reported in this article sets out to provide answers to the following research questions:

RQ1. Which method is more effective for the acquisition of vocabulary in a foreign language context: the narrow reading treatment (NR) or the reading plus vocabulary-enhancement activities treatment (RV)?

RQ2. What are the quantitative gains in vocabulary acquisition between the groups?

RQ3. Are there any differences in vocabulary gains within and between the groups regarding receptive and productive word knowledge of the target vocabulary?

2. METHODOLOGY

2.1. Participants and study design

The subjects in this study were two groups of EFL students at their 4th year of ESO (compulsory secondary education) in the school Mariano Baquero Goyanes in Murcia, Spain. The school offers a bilingual section for both ESO and Bachillerato (non-compulsory secondary education), in which only a few students were enrolled. For this reason, the experiment was conducted in the non-bilingual section. Two groups attending regular English classes, each made up of 21 and 14 students, were monitored. Both classes were taught by the same teacher, who had 27 years of teaching experience at secondary education. Students and teacher met three times a week in sessions of 55 minutes (2.75 hours per week). All the participants had already studied English in school settings for about 9 years prior to the experiment. However, they were all learners with a poor level of English despite years of formal study. The first group, which received the narrow reading treatment (henceforth NR group), was made up of 21 students (8 were repeating the year and the rest had successfully completed their 3rd year of ESO). The second group, which received the reading plus vocabulary-enhancement activities instructional treatment (henceforth RV group), consisted of 14 students (8 were also repeating the year, 4 had repeated the previous year and had passed the subject for reasons of legal requirement, and the remaining 2 passed English last year but they still have other subjects to retake).

In order to ascertain whether the groups' proficiency in English was similar prior to the experiment, the teacher provided us with the results' average obtained by each group in the previous term assessment. The last English exam evaluation score average for the NR group was 3.09 out of 10, and that for the RV group was 3.9 out of 10.

⁴ The school is located in the suburbs of the city. Although the area has recently been urbanised and expanded, it is next to *El Carmen* train station in Murcia. This creates a very noisy environment, which does not help to the correct development of the classes. In general terms, this school is characterised by the low socio-economic level of the families (parents are generally illiterate and unemployed; there is a lack of interest to collaborate in their children's learning process; and an important number of families are dysfunctional), the high percentage of immigrants in all levels of *ESO* and a very significant percentage of students who are demotivated.

During the experiment, the groups met three times per week for a total of 16.5 hours spanning 6 weeks. Twenty single words – including nouns and verbs – were selected as target words (see Appendix A) from two different texts.⁵ The main criterion was to choose words related to the field of communication and technology. In the first week and before formal instruction, participants were tested on these twenty target words by taking a pretest. Strictly after the 16.5-hours instruction, they took a post-test (see Appendix A). Both the pre-test and the post-test were adapted versions from the Vocabulary Knowledge Scale (VKS) designed by Paribakht & Wesche (1996: 178) to measure vocabulary acquisition.

In the second week, both groups read the first main text with target words in boldface to guarantee that they were noticed (Appendix B).⁶ After the text was read, the teacher conducted some discussion on the reading, but no grammar explanation was provided.⁷ The students were then required to answer five reading comprehension multiple-choice questions at home (Appendix C) and checked answers with the teacher when they met again the following week. Some of these multiple-choice questions were adapted from the reading comprehension section in the textbook. The results obtained in these activities by each group pointed to the fact that the differences between the two groups' English proficiency levels were not significant.

During the third week the NR group was given a thematically related text containing the same target words (Appendix D). Students read this supplementary text and discussed it with the teacher. Thus, this group was acquiring vocabulary through the incidental learning approach. Meanwhile, the RV group was required to complete a variety of vocabulary-enhancement exercises focusing on the target words and which had been specifically designed to activate students' intentional learning (for instance, matching English definitions to target vocabulary items, translating Spanish words into English, and reorganising words into sentences) (Appendix E). Each target word occurred in the vocabulary exercises at least three or four times. Consequently, students worked at least three times with each target word besides encountering it in the main text. The teacher also checked answers with students to ensure their completion and comprehension.

For the remaining weeks, the same instructional procedures were repeated with each group using a second main text (Appendix F). Tables 1 and 2 (based on Min & Hsu, 2008: 90-91) summarise the schedule for each instructional treatment.

⁵ Both texts were taken from the last units of the students' textbook in order to ensure that the participants had not encountered any of the target words. These texts were then adapted for the purposes of the study.

⁶ Due to space restrictions, Appendices B-F cannot be included. Please contact the authors if you would like to have access to them.

⁷ Dictionaries were not allowed at any stage of the investigation either.

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Table 1. Schedule for narrow reading (NR group)

Week	Texts	Activities	
1		Doing the pre-test.	
2	Text 1: R U a gr8 txter 2?	Reading Text 1. Reading comprehension activities (for homework).	
3	Text 1: R U a gr8 txter 2?	Checking the answers to the homework. Doing supplementary reading on Text 1: <i>Text messages</i> .	
4	Text 2: Think before you click	Reading Text 2. Reading comprehension activities (for homework).	
5	Text 2: Think before you click	Checking the answers to the homework. Doing supplementary reading on Text 2: Social networks.	
6		Doing the post-test.	

Table 2. Schedule for reading plus vocabulary-enhancement activities (RV group)

Week	Texts	Activities		
1		Doing the pre-test.		
2	Text 1: R U a gr8 txter 2?	Reading Text 1.		
	Text 1.11 o a gro ano. 2.	Reading comprehension activities (for homework).		
3		Checking the answers to the homework.		
	Text 1: R U a gr8 txter 2?	Doing and checking supplementary exercises on Text 1.		
4	Text 2: Think before you click	Reading Text 2.		
		Reading comprehension activities (for homework).		
5	Text 2: Think before you click	Checking the answers to the homework.		
		Doing and checking supplementary exercises on Text 2.		
6		Doing the post-test.		

2.2. Reading materials

2.2.1 Main texts

The main reading materials were selected from *Switch 4* (Krantz, 2010: 103, 106). As explained previously, the main texts were chosen from the last two units of the textbook in order to guarantee that students were not familiar with the target words. Another selection criterion was that of students' interest. The first text deals with mobile phones and texting. The second text is about emails and the Internet. Ten words were selected from each text as the target words (see Appendix A).

2.2.2. Supplementary texts

The supplementary texts read by the NR group were specially designed to achieve appropriateness (topic engagement for teenagers), linguistic difficulty (low-intermediate) and text length (average of 270 words per text). The first one deals with text messages and the second one with social networks. These texts are thematically related to the main texts and the topics also have a great impact on today's teenagers' interests. This supplementary material has been used to highlight the effect of narrow reading by having students exposed to additional incidental encounters with the target words during reading. Table 3 provides summarised details about the reading materials and the vocabulary-enhancement activities used during the 16.5-hours' instruction for each group.

	Narrow reading (NR)	Reading plus vocabulary- enhancement activities (RV)	
Main texts	Text 1: R U a gr8 txter 2?	Text 1: R U a gr8 txter 2?	
	Text 2: Think before you click	Text 2: Think before you click	
Instructional treatments	Supplementary Text 1: Text messages Supplementary Text 2: Social networks	Supplementary vocabulary exercises on Text 1.	
	Supplementary Text 2. Social networks	Supplementary vocabulary exercises on Text 2.	

Table 3. Instructional treatments and reading materials

2.3. Test instrument

The Vocabulary Knowledge Scale (VKS) designed by Paribakht & Wesche has been employed in order to monitor students' vocabulary gains, taking into account both the number of words they had some knowledge of and the depth of that knowledge (1997: 179-181).

This scale is generally used to measure vocabulary acquisition and retention, but in this study it has only been employed for acquisition measurements in the pre-test and the post-test. In order to be tested on their vocabulary knowledge, students were presented with 20

target words and they had to complete a pre-test (Appendix A) with the categories shown in Table 4, which range from total unfamiliarity with the word (1 point) to its correct use in a sentence, both grammatically and semantically (5 points).

Table 4. VKS self-report categories

I. I don't remember having seen this word before. II. I have seen this word before, but I don't know what it means.						
III. I have seen this word before, and I think it means (synonym or						
translation).						
IV. I know this word. It means (synonym or translation).						
V. I can use this word in a sentence: (write a						
sentence).						
(If you do section V, please also do section IV)						

2.4. Scoring system

A scale from one to five points, following Paribakht & Wesche's criteria (1996: 178), has been used to test the subjects' VKS self-analysis of each target word. The adapted scoring criteria are presented in the following table:

Table 5. VKS scoring categories: meaning of scores

- (1) One point is given when the word is not familiar at all.
- (2) Two points are given when the word is familiar but its meaning is not known.
- (3) Three points are given if a synonym or translation of the target word is correct.
- (4) Four points are given when the target word is used with semantic appropriateness in a sentence.
- (5) Five points are given when the use of the target word is both grammatically and semantically correct in a sentence.

3. RESULTS AND DISCUSSION

For the analysis of data, descriptive quantitative statistics along with other test instruments have been employed. Due to the non-parametric nature of this study, the tools used to calculate and compare the results for the NR and the RV groups are non-parametric tests such as Pearson's chi-square test, Wilcoxon signed-rank test, Mann-Whitney U test, as well as contingency tables. Differences within and between the NR and the RV groups' scores in the pre- and post-tests, quantitative gains between the two groups, and gains in receptive and productive knowledge are examined and reported.

3.1. Assessment of the effect of each treatment on learners' vocabulary development

3.1.1. NR group

The scores provided by the VKS were converted into a contingency table in order to analyse and compare the NR group's performance in the pre- and post-tests. The results reveal that students's knowledge of words was lower than expected in the pre-test (188 vs. 302.3),8 whereas it was higher than expected in the post-test (529 vs. 414.7). As for the results obtained for Pearson's chi-square test, they indicate that the amount of words learned by the NR group between the pre-test and the post-test is statistically significant.

3.1.2. RV group

The same procedure was followed for the RV group. Results of the total words known by the RV group signal that, in the pre-test, they did know more than half of the items they were supposed to recognise (187 vs. 243.8). On the other hand, this group was familiar with a larger number of words than expected after completing the post-test (370 vs. 313.2). The results obtained from Pearson's chi-square test prove that the quantity of words acquired by the RV students is statistically significant.

In general terms, it has been observed that the groups have significantly acquired vocabulary with both treatments.

3.2. Comparison of the groups' performances in the pre-test and post-test: quantitative gains

In order to answer the second research question, the results attained by the two groups in the pre-test and then in the post-test have been analysed and compared, and the quantitative gains determined.

3.2.1. Pre-test

Considering known words, the NR group deviated negatively, obtaining a lower score than expected (188 vs. 217.3). Contrariwise, the RV group showed a positive deviation from the expected counts (187 vs. 157.7).

Differences between the results in the pre-tests are remarkable. This may be explained by the fact that English proficiency levels in these two groups before they completed the pre-test were similar but not identical. The NR group had knowledge of a fewer number of words than expected, contrary to what occurred with the RV group, which was familiar with a larger amount of items than expected.

3.2.2. Post-test

Taking into account the number of words known by each group, the NR group stayed below expectations (529 vs. 535.3). The RV group, on the contrary, knew more words when compared to what was expected (370 vs. 363.7).

⁸ It should be noted that the figures provided hereafter do not refer to numbers of words, but to the scores given to the pre- and post-tests according to the VKS.

3 2 3 Gains

Reference to the gains achieved after the treatments is mandatory. By applying Wilcoxon signed-rank test, data were obtained regarding differences in vocabulary knowledge between the groups in the pre- and post-tests. Based on the scores, it can be asserted that both groups did acquire new words after the post-test was taken. Nevertheless, the comparison of results shows that the groups present statistically significant differences in the volume of words acquired, the RV group outperforming the NR group.

3.3. Assessment of the impact of the two instructional treatments on receptive and productive knowledge of the target vocabulary

The last research question sought to assess the impact of each treatment on the groups' gains in receptive and productive knowledge of the target words. The former has been assessed by means of word translation or synonyms provided by the students for each target word (Sections 1-3 in Paribakht and Wesche's VKS scoring categories (see Table 5)). Productive knowledge, on the other hand, has been tested by requesting students to write a sentence containing the target word (Sections 4-5 in Paribakht and Wesche's VKS scoring categories (see Table 5)).

3.3.1. Receptive knowledge

Results in the pre-test have shown that the NR group remained below the estimated average (123 vs. 159.3) and the RV group surpassed the expected counts (122 vs. 85.8). Surprisingly enough, the NR group's gains after the treatment exceeded the expected counts (293 vs. 256.8). However, the RV group's gains were below expectations (102 vs. 138.3).

3.3.2. Productive knowledge

As for productive knowledge, although both groups obtained exactly the same scores in the pre-test (65 vs. 65), the expected counts were different for each of them. The NR group outperformed what was first estimated (65 vs. 56.7). On the contrary, the RV group's expected counts were higher than observed (65 vs. 73.3). Concerning gains, the NR group did not come up to expectations (48 vs. 56.3). However, the RV group's gains were greater than the expected counts (81 vs. 72.7).

4. Conclusions

Findings concerning the effectiveness of the treatments have revealed that both narrow reading and reading plus vocabulary-enhancement activities have positive effects on learners' vocabulary development. The quantitative gains attained by each group are statistically

⁹ Zhou (2010: 15) provides a very straightforward explanation of receptive and productive vocabulary knowledge: "[r]eceptive vocabulary knowledge refers to the ability to understand a word when it is heard or seen while productive knowledge is the knowledge to produce a word when one writes or speaks".

significant, being the RV group's gains greater than those of the NR group. However, pretests have shown that both groups did not have the same level of vocabulary when they took this first test. Although the average score obtained by the NR and the RV group in their last English examination was initially deemed to be similar (3.09/10 and 3.9/10, respectively), the results obtained have demonstrated that the difference is relevant. The fact that the RV group outperformed the NR group in the pre-test might have had an influence on the quantitative gains obtained by each group. Therefore, it cannot be affirmed that the RV treatment is more effective than the NR treatment.

With regard to receptive and productive knowledge, the NR group's performance was superior to that of the RV group in terms of receptive knowledge. In contrast, students who worked with isolated words through reading plus vocabulary-enhancement activities were able to produce a larger number of semantically and grammatically appropriate sentences containing the target words. Accordingly, one of the curricular implications of this research is that EFL teachers should make use of narrow reading in order to help their students build up their receptive vocabulary knowledge. In this line, teachers might also consider the positive effects of reading plus vocabulary-enhancement activities on their lessons to facilitate the development of productive knowledge.

Some limitations have been faced when carrying out this research. Thus, it should be pointed out that the results obtained cannot be generalised because the sample has been drawn from one specific school in one particular city in Spain. Another constraint is the diverse language backgrounds from which the students participating in this study come. Although all of them live in Murcia, there is a high percentage of immigrants in both groups. This might have affected the process of vocabulary acquisition due to the influence of their native languages on the target language. The fact that a substantial number of the participants were learning English as their third language could have also impinged upon the process of acquisition. Bearing this in mind, it should be highlighted that this study has provided some insights which future teachers may take into account when planning their vocabulary lessons. Future research could productively build on this work by:

- Assessing learners' vocabulary acquisition at several language proficiency levels in order to analyse whether the processes for vocabulary development are different.
- Broadening the scope by testing students' acquisition of other types of lexical units and analysing distictions in the acquisition process (e.g., is it easier to learn adjectives than nouns?).
- Comparing results on vocabulary acquisition and its development obtained by different groups: bilingual versus non-bilingual groups.

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APPENDIX A. List of Target Words; Pre-test; Post-test

WORD	1. I don't remember having seen this word before.	2. I have seen this word before, but I don't remember what it means.	3. I have seen this word before, and I think it means (synonym or translation).	4. I know this word. It means (synonym or translation).	5. I can use this word in a sentence: (write a sentence).
Task					
Abbreviation					
Message					
Mistake					
To text					
To deny					
To claim					
To suffer					
Advice					
To let					
To click					
To spread					
To forward					
To add					
To receive					
To check					
Inbox					
To reply					
To type					
File					