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The Relationship Between Morphological Knowledge and The Breadth of Vocabulary Knowledge Among Moroccan EFL University Students

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Abstract: The present study investigates the relationship between derivational morphemes and breadth of vocabulary knowledge. The participants consist of 130 university students. So as to determine this relationship a two- section test is used: the X-Lex Vocabulary Size Test and Derivational Morphemes Test. The main findings of this study empirically indicate that the overall size of the student's vocabulary knowledge is approximately 4014 word-families. As for the second section of the test, the findings showed that the majority of students revealed a definite knowledge in using these 22 derivations. The correlation tests proposed that there is a positive significant relationship between the two variables. Additionally, the result indicated a positive impact of gender on both components of vocabulary knowledge. This research has been concluded by suggesting some pedagogical solutions on different parts and stressed further research guidelines.

Keywords: Derivational Knowledge, Vocabulary Knowledge, Lexical Competence, Intercorrelations

1. Introduction

It is conventionally approved that language is an important tool that helps people to communicate among the universe. Indeed, one of the most wide spreading languages that allow people to communicate with other people from all around the world is English. In this way, English is considered as a Lingua Franca of the present time. Since capturing a language requires learning the words of that language, a very important part of learning English is the mastering of its vocabulary. Therefore, learning vocabulary is considered to be an important element in using a language as a means of communication. On this matter, though students need to learn it well, most of Moroccan students still have difficulties in English, because their vocabulary knowledge is still limited. Thus, without a good-sized vocabulary, one's means of expressing ideas will be limited too. In the same vain; Fauziati (2010) argues that, "having a limited vocabulary is also barrier that precludes learners from learning a foreign language. When they do not know how to enrich their vocabulary, they will lose interest in learning" (p. 61). On this basis, vocabulary is one of the language components, which has to be primarily mastered by the students who are acquiring a new language. Vocabulary, then, should be mastered as well as the four language skills, mainly reading, writing, listening and speaking. As for how it is related to morphology, Auglin (1993) believes that "expansion of vocabulary is achieved by the essential role that morphological knowledge plays, and this expansion impacts reading comprehension" (as cited in Nagy, Berninger and Abbot, 2006).

In addition, in learning languages, specifically a foreign language, there are three factors that are likely to be detected: the first aspect is related to the number of words in the language. The second aspect is concerned with the amount of words that the native speaker knows, and the last aspect is the number of words that are required by a learner in order to use the language productively. Instead, this study focuses on the third aspect: the words required by EFL learners to use English productively in the light of appropriate use of its derivational morphemes, specifically for EFL learners in Morocco.

2. Theoretical Background

2.1. Vocabulary Knowledge

As far as vocabulary knowledge is considered, Chapelle

(1998) believes that such definition of vocabulary knowledge should include four properties: "(a) vocabulary size, (b) knowledge of word characteristics, (c) lexicon organization, and (d) processes of lexical access"; whereas, Henriksen (1999) included three dimensions of vocabulary knowledge: (a) a "partial-precise knowledge" dimension, (b) a "depth of knowledge" dimension, and (c) a "receptive-productive" dimension. Qian's (2002) in his recent model proposed that vocabulary knowledge is constituted of four dimensions that are intrinsically connected: (a) vocabulary size, (b) depth of vocabulary knowledge, (c) lexical organization, and (d) automaticity of receptive–productive knowledge. It is noteworthy in this regard that these dimensions may vary according to the specific purpose of language use (as cited in Shen, 2008). It is worth synthesizing in this instance that "vocabulary knowledge", "lexical knowledge", "vocabulary ability" and "lexical competence" "have been used largely interchangeably in the L2 vocabulary acquisition literature" (see Henriksen 1999; Meara 1996a, 1996b; Qian 2002, 2004, as cited in Yanyan, 2006).

2.2. Vocabulary Breadth and Depth

Breadth and depth of vocabulary knowledge as mentioned above make another pairs of categories of word knowledge. Vocabulary breadth is associated with the number of words which a learner knows; that is to say, the passive recognition of the words. While vocabulary depth refers to what the learner knows about these words; for example: word associates, collocation, derivation, colligation or word's function. In this way, Qian (1999) shed further light by stating that vocabulary depth refers to" a learner's level knowledge of various aspects of a given word, or how well the learner knows this word. It covers components such as pronunciation, spelling, meaning, register, frequency, and morphological, syntactic, and collocational properties" (p. 162).

There are many cases in which learners might learn a lot of words but cannot use them appropriately in certain context. Nation (2001) indicates that the vocabulary breadth entails knowledge of word form either spoken or written, whereas vocabulary depth entails knowledge of word parts, the inflection and derivations that allow new words to be created and change of grammatical function. Schmitt (2000, p. 50) emphases that "it is an advantage to have as large as vocabulary as possible to recognize any word that happens to come up". It is noticed from this statement that there is a link between vocabulary breadth and depth. That is, the more words a learner may have, the more options to recognize those items he would have. Accordingly, Shen (2008) argues that:

Vocabulary breadth refers to the number of words the meaning of which a learner has at least some superficial knowledge. Depth of vocabulary knowledge is defined as a learner's level knowledge of various aspects of a given word, or how well the learner knows this word (p. 136). It is worth noting in this sense that the relationship between vocabulary breadth and depth will be investigated in this study, wherein vocabulary breadth will be tested in the first section of the test and vocabulary depth will be tested in the second section of the test.

2.3. Receptive Vs Productive Vocabulary

On the account sketched above, the term vocabulary knowledge is commonly divided into two main categories: active (productive) knowledge and passive (receptive) knowledge. By receptive vocabulary knowledge is meant words that are recognized when heard or read. In this sense, Nation argues that receptive vocabulary knowledge basically involves "perceiving the form of a word while listening or reading and retrieving its meaning". On the other hand, productive vocabulary refers to the words which are used in speech or writing. Indeed, productive vocabulary use involves "wanting to express a meaning through speaking or writing and retrieving the appropriate spoken or written word form" (Nation. 24).

2.4. Derivational Knowledge as a Component of L2 Vocabulary

To the present time, most second language researchers incorporate morphological knowledge into a framework of vocabulary knowledge. Richards (1976), for example, cited eight assumptions about second language vocabulary knowledge in which the fourth and fifth components are related directly to morphological knowledge (as cited in Benjamin, 2011).

In paraphrasing Richards (1976), the components that are involved in L2 vocabulary knowledge are stated in this way:

(1) The vocabulary knowledge of native speakers continues to expand in adult life.

(2) Knowing a word means knowing the degree of probability of encountering that word in speech or print. For many words learners also know the sort of words most likely to be found associated with the word.

(3) Knowing a word implies knowing the limitations on the use of the word according to variations of function and situation.

(4) Knowing a word means knowing the syntactic behavior associated with the word.

(5) Knowing a word entails knowledge of the underlying form of a word and the derivations that can be made from it.

(6) Knowing a word entails knowledge of the network of associations between that word and other words in the language.

(7) Knowing a word means knowing the semantic value of a word.

(8) Knowing a word meaning knowing many of the different meanings associated with the word. Richards (1976, p. 83, as cited in Benjamin, 2011).

Dealing with the above quote, "knowing a word" involves that the learner has acquired the underlying sub-properties of the word form along with the appropriate inflections and derivations "based on how the word is used within a syntactic frame." If we focus on the number 6, Richards suggests that

knowing a word implies knowledge of word associations, its derived form (number 5), its collocation (number 4), its spoken and written form (number 2) and knowing of its meaning or several meanings like in number (7, 8).

Based on this, many other researchers in linguistics, psychology and applied linguistics focused on the degree to which foreign learners have acquired the form, meaning, and usage of vocabulary items (Laufer, 1998; Nation, 2001; Schmitt & Meara, 1997; Wolter, 2001). On the other hand, the process through which, the form, meaning, and how lexical items are represented in L2 lexicon was theorized by (Jiang 2000, 2002, as cited in Benjamin, 2011).

As for as the receptive and productive components of vocabulary knowledge are concerned, Nation‘s (1990; 2001) framework of the receptive components of *undeveloped* word as reported by (Benjamin, 2011) includes:

(1) Being able to recognize the word when it is heard.

(2) Being familiar with its written form so that it is recognized when it is met in reading.

(3) Recognizing that it is made up of the parts *under-*, *-develop-* and *–ed* and being able to relate these parts to its meaning.

(4) Knowing that *underdeveloped* signals a particular meaning.

(5) Knowing what the word means in the particular context in which it has just occurred

(6) Knowing the concept behind the word which will allow understanding in a variety of contexts.

(7) Knowing that there are related words like *overdeveloped*, *backward*, and *challenged*

(8) Being able to recognize that *underdeveloped* has been used correctly in the sentence in which it occurs.

(9) Being able to recognize that words such as *territories* and *areas* are typical collocations (Nation, 2001, pp. 26-28).

Productive components for the word *underdeveloped* as reported by (Benjamin, 2011) include:

(1) Being able to say it with correct pronunciation including stress

(2) Being able to write it with correct spelling

(3) Being able to construct it using the right word parts in their appropriate forms

(4) Being able to produce the word to express the meaning ‗underdeveloped‘

(5) Being able to produce the word in different contexts to express the range of meanings of *underdeveloped*

(6) Being able to produce synonyms and opposites for *underdeveloped*

(7) Being able to use the word correctly in an original sentence

(8) Being able to produce words that commonly occur with it.

(9) Being able to decide to use or not use the word to suit the degree of formality of the situation (At present developing is more acceptable than *underdeveloped* which carries a slightly negative meaning (Nation, 2001, p. 28).

It is worth noting in this regard that both receptive and productive vocabulary knowledge definitions have already been tackled in detail while dealing with vocabulary knowledge. To be concise, the terms active and passive have been used in the literature to refer to productive (depth) and receptive (size) vocabulary knowledge (c.f. Corson, 1995, as cited in Nation, 2001; Laufer, 1998). More interestingly, both receptive and productive knowledge represent such continuum in such way that both types of knowledge incorporates with each other (op.cit).

2.5. The Relationship Between Vocabulary Depth and Breadth

In addition to the already mentioned studies that tackled the issue of vocabulary knowledge and reading comprehensions, empirical ones dealt with the relationship between morphological knowledge and L2 vocabulary knowledge. The findings of the majority of them suggest that “ knowledge of morphology is significantly related to vocabulary knowledge” (Blachowicz et al., 2006; Carlisle & Fleming, 2003; Goodwin & Ahn, 2010; Nagy, Berninger, & Abbott, 2006, Chung, 2012, p. 113 al., 2006; Carlisle & Fleming, 2003; Goodwin & Ahn, 2010; Nagy, Berninger, & Abbott, 2006, as cited in Chung, 2012, p. 113).

The current research paper is intended to investigate the relationship between vocabulary breadth and the acquisition of derivational morphemes (depth) among EFL Moroccan university students. Indeed, it becomes quite significant to explore more studies that lie within the same scope of interest.

As far as the role of morphological awareness in developing vocabulary knowledge of L2 learners is concerned, Khodadoust et al. (2013, p. 60) conducted a study about “the relationship between English morphological awareness and receptive vocabulary knowledge of Iranian university students.” The study included 86 undergraduate students, studying English Translation at the University of Zanjan. The results of the study showed a significant relationship between the students' performance on vocabulary knowledge and morphological awareness. The implication that the researcher made was that morphological awareness can be considered as an effective vocabulary learning strategy for Iranian university students in learning English vocabulary. Similarly, Morin's (2003) carried out a study “to examine the acquisition of derivational morphology: the use of suffixes that can change the part of speech and cause variations in meaning by native English-speaking learners of Spanish” (as cited in Khodadoust et al., 2013, p. 61). The findings of the study suggested that morphological knowledge could be considered an effective strategy in building vocabulary knowledge. With regard to morphology and vocabulary teaching, Long and Rule (2004) “ investigated the role of morpheme or root word families in teaching vocabulary of ESL learners”. The sampling groups were learning vocabulary items through two ways, “traditional worksheet versus object boxes with word cards”. One of the main findings of this study indicates that the learners’ lexical knowledge is likely to be developed by applying morphological analyses rather than through

traditional class instruction methods. (op.cit). Lately, Mehrpour, Razmjoo and Kian (2011) investigated the relationship between breadth and depth of vocabulary within an EFL context. The findings indicated that both breadth and depth were related.

Among the contradictory arguments against the aforementioned findings, Nurhemida (2007) conducted a study that included "98 students (29 males and 69 females) at a public Islamic senior high school in Indonesia." The researcher used three instruments to collect his data. One among which included (Nation's vocabulary levels test (VLT) which was utilized to test student's knowledge of vocabulary. Another instrument was used to examine two morphological awareness among learners. The questionnaire was used to elicit information concerning participants 'perceptions of the test generally and particularly their knowledge of vocabulary. The obtained results revealed that there is no correlation between morphological awareness test scores and the scores of vocabulary knowledge of students. Additionally, the results also expressed that the students' general knowledge of morphological awareness and vocabulary size were limited (op.cit). Within the same scope, Farsi (2008) conducted a study to investigate relationship between morphological awareness and vocabulary knowledge and morphological complexity Omani EFL university students. The study included 54 Omani university students. The findings of the study revealed that there is no correlation between morphological awareness and vocabulary size and between morphological awareness and ability to cope with word complexity (as cited in Khodadoust, 2008).

Overall, the literature review part has tried to shed some lights on the different angles of the current study that assumes of the correlation between vocabulary breath and derivational morphemes (depth). Indeed, the chapter has provided a large body of background knowledge about vocabulary and wide information as well about the acquisition of derivational morphemes. In this connection, the review of related literature states that there is a relationship between derivational morphemes (depth) and L2 vocabulary knowledge (breadth). Its main concern was to explore words' knowledge and structure. Of course, word's morphological and meaningful levels' analyses were under focus. The main objective then is to prepare the reader and trigger his consciousness for the data analysis and discussion. The following chapter will present the research methodology and design.

3. Methodology

3.1. Research Questions

In order to achieve the objectives of this research, the present study attempts to answer the following questions:

1. What is the vocabulary size of Moroccan EFL third year student?
2. Does the vocabulary knowledge of EFL students help in spotting derived forms from familiar words?
3. Is there any relationship between familiarity with the derivational morphemes (depth) and vocabulary breadth?
4. Is there a significant effect of gender on EFL vocabulary knowledge among Moroccan EFL students?

3.2. Participant

In the investigation of the phenomenon of the relation between vocabulary breadth and depth, the test was administered to the sixth- semester students belonging to the third year who are majoring in English studies. The participants voluntarily participated in the study which consisted of the students belonging to the department of English. They have more or less the same linguistic background as far as they belong to the same level (third year). The participant students' age ranged from 20 to 32 years. The first language of all participants is Moroccan Arabic and they used English as a foreign language. The data of this research were eventually generated from a sample of 130 students. 49 of the participants are males, while 81 are females. This number represents the whole number of 2 English classrooms, which represent almost the half number of students who belong to English department enrolled in the third year. Each class includes 65 students.

3.3. Instruments and Statistical Measures

Two tests were used to the purposes of the study: X- Lex vocabulary level test with its analysis and synthesis and derivational morphemes test.

3.3.1. X_Lex Vocabulary Test

X-Lex version test used in the study is designed to test knowledge of the most frequently occurring 5000 words in English and presents an estimate of the overall breadth knowledge of this vocabulary. It is a shorter version of the Vocabulary Size Test (Meara & Milton, 2003) X-Lex Test. The test is divided into 5 columns; each one represents one level of word according to their frequency of occurrence. That is, words from the first 1000 word band (frequency) are presented in column 1 of the test. Words from the second 1000 word band are presented in column 2 of the test, and so on. The sixth column is devoted for non-existing word. It is worth noting that the first section of the test that includes Vocabulary Size Test is designed to measure receptive vocabulary.

3.3.2. Testing Derivations

The derivational morphemes test is developed to measure derivational aspects of vocabulary knowledge. The number of 100 derivational words was determined based on the number of vocabulary items, specifically the number of real words. In addition, the words were classified in eight different tables which are supposed to provide the derivation of 22 common derivational morphemes. Precisely, the second section included 16 prefixes and 6 suffixes. This number was determined by the first section of vocabulary breadth. There

are some derivational morphemes which reoccur throughout the test which the researcher puts on purpose.

3.4. Procedure

After a session, the researcher asked the students to stay inside the classroom. Then, he talked to students about the aim behind their participation so that he would be able to give confidence to them to participate actively and honestly. Respecting research ethics, the researcher informed the participants of the study that the test is meant for research purposes only and that such non- participation would not affect their academic grades. Next, under the supervision of the researcher and pertinent help of the tutor, the test sheets were distributed to students. After that, the researcher read the instructions, and explained how the task should be done in order to clarify any vague point. The students were asked to answer the tests on their own pace. The maximum time allowed to answering both sections of the test was 45 min. At the same tune, attention was paid to strictly controlling the time of the test sessions

3.5. Data Analysis

The data in this study include descriptive statistics, inferential statistics, reliability and correlation coefficient. The Pearson correlation coefficient was carried out to explore the relationship between the breadth of vocabulary knowledge (the passive recognition of words) and vocabulary depth (the 22 derivational morphemes used in the study).

4. Results

4.1. Results for Question 1 (Results of the X-Lex Vocabulary Level Test)

The first research question concerned the students' receptive vocabulary size. The test results are meant to test the general breadth of 5000 most frequent words among the students. The results indicated that the overall size of the student's vocabulary knowledge in both sections was approximately 4014 word-families.

The figure 1 shows descriptive Statistics of the Students' Scores on X-lex vocabulary size test. In this sense, the vocabulary breadth of the students in the first band is thus estimated to be 837 word-families. Additionally, the vocabulary size of the students in the second band is 794 word-families. Dealing with the third band, the students' mean score is thus estimated to be 807 word-families. As for the fourth band, the students' mean score is thus estimated to be 800,5 word-families. Accordingly, the mean score of informants in the fifth band attained 776, 5 word-families. To answer the first research question which is about the overall vocabulary size in English as for as Moroccan EFL learners are concerned, it was necessary to estimate the total vocabulary size. Indeed, the following calculations were made to find the overall vocabulary breadth of 130 tested students. Therefore, the overall vocabulary size of Moroccan EFL students is estimated to be 4015 word-families. Thus, students overall vocabulary level fell in the fourth frequency band, this claim is confirmed by the gained results wherein 4015 word-families is included relatively among 4000 word frequency band.

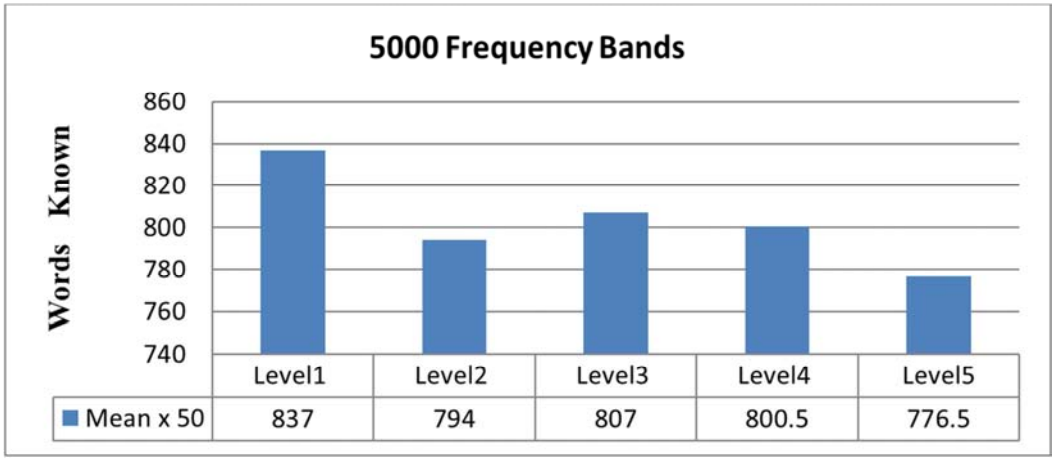

Figure 1. *Frequency Scores and Percentages on the Vocabulary Size Test.*

Mean= Average score within each Level
%= Shared proportion among 5 bands

4.2. Results for Question 2

The second research question concerned with the students' derivational morphemes. The findings showed that the rate of right and wrong use of 22 derivational morphemes that were tested among 130 Moroccan students differ while moving from one student to the other. However, what is common among all informants is that most of students showed a definite knowledge in using these derivations. To put it another way around, more than half of the respondents revealed the prerequisite knowledge to derive the different given forms in the right way. Hence, the percentage of students who did not manage to use these morphemes in the right place is remained to be low. The figure 2 shows student's scores for the 22 tested morphemes.

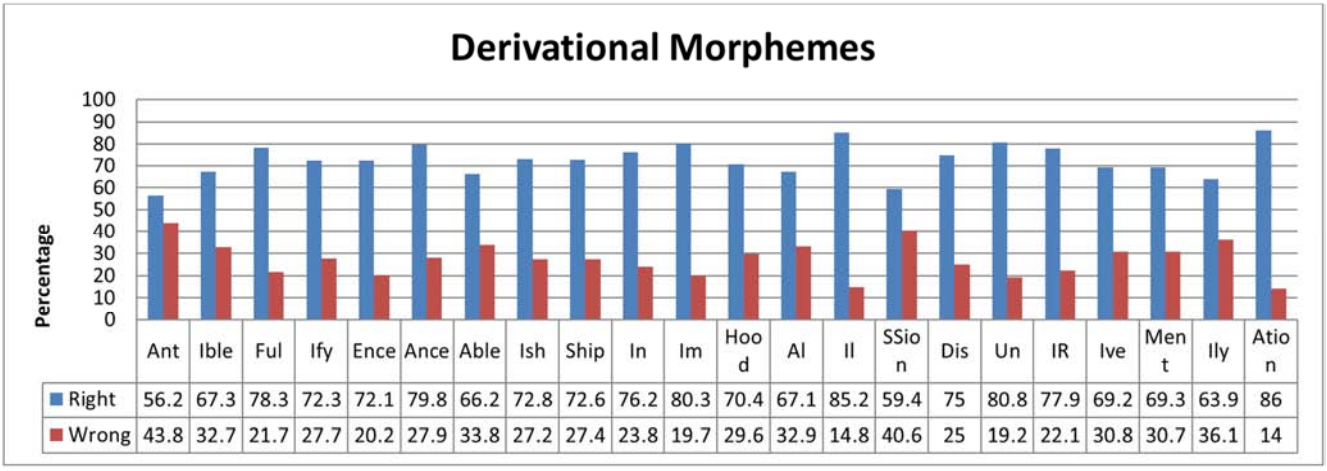

Figure 2. *Percentages of Using the 22 Derivational Morphemes.*

4.3. Results for Question 3 (Results of Vocabulary Size and Its Relationship to Derivational Morphemes (Depth)

Question 3 examined the relationship between the students' vocabulary size and derivational morphemes. Table 1 shows the correlation coefficient of the students' vocabulary and vocabulary depth.

Table 1. *Pearson Correlation (Two-Tailed) between Scores on the Vocabulary Depth Test, and the Vocabulary Breadth Scores (N=130).*

Correlations		
	DM	**VS**
Pearson Correlation	1	,513**
Sig. (2-tailed)		,000

**. Correlation is significant at the 0.01 level (2-tailed). N=130

Generally, as being illustrated in the table 1 in terms of the relationship between Derivational Morphemes, (depth) and Vocabulary Size, results yielded to a moderate, yet significant and positive correlation r =.513, p<.001. Thus, intercorrelations among the scores of the 2 tests are statistically significant. This means that there is a positive relationship between vocabulary size and vocabulary depth. Subsequently, simple linear regression analyses were conducted to determine how well vocabulary size could be predicted by means of derivational morphemes (depth). To determine this process of prediction, scores of the depth of vocabulary knowledge were taken as a predictor (independent) variable and scores of vocabulary breadth were regarded as the criterion dependent variable. Table 2 shows multiple regression analyses of the scores on Derivational morphemes (Depth) and Breadth of Vocabulary Knowledge.

Table 2. *Simple Linear regression Analyses of the Scores on Depth and Breadth of Vocabulary Knowledge.*

Model Summary				
Predictor Variable	**R**	**R Square**	**Adjusted R Square**	**Sig.**
Vocabulary Depth	,513[a]	,263	,257	,000[b]

a. Predictors: (Constant), VS
**p<0. 01

The column marked R^2 indicates the proportion of the total variance in the criterion variable (i.e., the range of vocabulary breadth in this case) accounted for by the predictor variable (i.e., depth of word knowledge in this case). Respectively, as shown in Table 2 there is a significant relationship between depth, and breadth of vocabulary knowledge. Overall, vocabulary depth can account for 26, 3.% of variability in breadth of vocabulary knowledge. To put differently only 26, 3% of the variation of the vocabulary breadth is explained by vocabulary depth. Rather, 73,7% of the variance that is remained might be predicted by other factors that could not be examined in the current study. Again, P value found in this study was significant at the level ($p \leq 0.05$), and therefore this regression can be extended to the population of this study which is Moroccan EFL third year. One of the aims of using regression is prediction. That is, when studying the relationship between two variables; the independent variable is used as a predictor variable (explanatory) to predict the amount of change one would expect for the dependent variable. In this case, the independent variable (vocabulary depth) was entered into the regression to explain the dependent variable (vocabulary breadth). The statistical rule adopted for this process of prediction is when given a one-unit change in the value of one variable, this change would be given that all to the other variables under examination.

Table 3. *Simple Linear regression Analyses of the Scores on Depth and Breadth of Vocabulary Knowledge.*

Coefficients			
Predictor Variable		Unstandardized Coefficients	Sig.
		B	
1	(Constant)	14,976	,000
	DM	,83	,000

a. Dependent Variable: VS

The finding displayed in table 3 shows that when the depth of vocabulary increases by 1 word (1 unit) the breadth of vocabulary increases by 0,83 words. To put it differently, when vocabulary depth increases by 10 words the vocabulary size increases by 8 words. Thus, the regression Equation of the above data is stated as: Vocabulary breadth = constant (14,976) + 0.836 Depth.

4.4. Results for Question 4 (The Effect of Gender on Depth and Breadth)

Table 4. *Vocabulary Depth Male and Females' Mean and Standard Deviation.*

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
DM	Male	49	79,94	5,517	,788
	Female	81	76,68	7,592	,844

Table 5. *Running SPSS Independent T-Test for Vocabulary Depth.*

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference
*DM	Equal variances assumed	5,971	,016	2,615	128	,010	3,260
	Equal variances not assumed			2,824	123,630	,006	3,260

As being revealed in the table 4 that the total mean of all male students (M= 79,94) is higher than that of females (M= 76,68). In this example, male students outperformed the female students. The standard deviation of all males is 5, 51, while all females have achieved a standard deviation of 7, 59. It reveals that males' scores have a small amount of variation rather than males'. This illustrates also that males scores are less heterogeneous than those of females ones.

Additionally, the assumption of the homogeneity of variances was examined by checking Levene's Test value. Since Sig. value of variance .016 is *bellow* the required cut-off of .05, then this value is not statistically significant. Thus, the researcher consulted the results of 'Equal variances not assumed' line Table 4 which aims to confirm that the two groups are different in terms of homogeneity of variance. By moving to compare the means scores, it was also elicited from the table abovementioned that the Sig. (2-tailed) value is .006 which is again less than 0.5. Due to the fact that this value was smaller than 0.05, it was revealed that there was a statistically significant difference between the males group (M = 79, 94, SD =5, 51) and the females group (M = 76,68, SD =7,59) in terms of the knowledge of English vocabulary Depth (Table 5). Therefore, the null hypothesis of equality of means was rejected and the alternative hypothesis that assumes that the two means are different was accepted. Interestingly, the claim of the effect of gender on the use of vocabulary depth was confirmed to be true.

In order to draw a clearer picture about the effect of the gender on the vocabulary size of the participants with which the second hypothesis was tested, the results of the independent sample *t*-test reported in table 6 were used.

a) The Effect of Gender on Vocabulary Breadth

Table 6. *Vocabulary Breadth Male and Females' Mean and Standard Deviation.*

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
VS	Male	49	84,22	10,365	1,481
	Female	81	77,58	11,454	1,273

Table 6 indicates that the total mean of the vocabulary size of male students (M=84, 22) is significantly higher than that of females' (M= 77,58). In this case, male students outperformed the female students. Accordingly, male students have a standard deviation of 10,36 whereas that of females' is 11,45. This shows that the amount of variation within male scores is a bit smaller than males.

Table 7. *Running SPSS Independent T-Test for Vocabulary Breadth.*

Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
VS	Equal variances assumed	,130	,719	3,320	128	,001	6,644	2,001
	Equal variances not assumed			3,403	109,321	,001	6,644	1,952

The table 7 indicates that the significance level for Levene's test is .719. This is larger than the cut-off of .05. This means that the assumption of equal variances has not been violated; therefore, we will use the figures provided in the first line of Table 7. Since, the sig value of variance was found to be not scientifically significant. So the null

hypothesis of the homogeneity of means was accepted and the alternative hypothesis which assumes that the two means are different was rejected

By Comparing the mean scores of both groups (males-females) in terms of vocabulary size, it was revealed from the table 6 that the Sig. (2-tailed) value is (p = 0.001) which is largely smaller than the specified alpha value of .05. Due to the fact that this value was smaller than 0.05, it was regarded in this case, that the p value is statistically highly significant. Hence, the difference between the male group (M = 84,22, SD =10,36) and the females group (M = 77,58, SD =11,45) in terms of the knowledge of English vocabulary breadth was confirmed. Furthermore, the null hypothesis of equality of means was rejected and the alternative hypothesis that assumes that the two means are different was accepted. Interestingly, these finding were found to be consonant with the claim made in H2 of the effect of gender on the use of vocabulary breadth.

To sum up, we can conclude that the results have confirmed the hypothesis H2 stating that the gender affects students' scores in both vocabulary depth and breadth. As shown in the above analyses, an independent-samples t-test was conducted to evaluate the impact of the gender on students' scores. The findings show a statistically significant difference between scores achieved on the vocabulary

5. Conclusions and Pedagogical Implications for EFL Teachers

Altogether, indeed, this study was pursued for the sake of discovering the relationship between the derivational (depth) and vocabulary breadth of Moroccan EFL students enrolled in Moulay Ismail University. So as to determine the type of relationship between the two variables, a test of two sections was used. The first section of X-Lex Vocabulary Size Test was adopted to measure the student's receptive vocabulary size, while the second section was devoted to measure the student's vocabulary depth. The results indicated that the overall size of the student's vocabulary knowledge in both sections was approximately 4014 word-families. As for the second section of the test, the findings showed that the rate of right and wrong use of 22 derivational morphemes that were tested among 130 Moroccan students differ while moving from one student to the other. However, what is common among all informants is that most of students showed a definite knowledge in using these derivations. To put it another way around, more than half of the respondents revealed the prerequisite knowledge to derive the different given forms in the right way. Hence, the percentage of students who did not manage to use these morphemes in the right place is remained to be low. After obtaining the data from both section of the test, correlational analyses were conducted to determine the kind of relationship between the vocabulary size and depth. The correlation tests proposed that there was a positive relationship between the two variables, which stays compatible with what has been proved in the literature. As for the impact of gender on depth and size of vocabulary knowledge, the result was confirmed initially by the first simple Independent T-Test wherein the male 'students outperformed the female's ones. Accordingly, this claim was another time supported by means of the second independent T-Test when the mean scores of males have been proved to be higher than male' vocabulary breadth scores. Consequently, all questions; number 1, 2, 3, and 4, were thoroughly answered from within the data gathered. And both H1 and H 2 were supported by the majority of the respondents. Though for very few of the respondents, both hypotheses were not supported in few cases.

It could be proved now that the findings of the current investigation do really meet with the hypotheses built in the beginning of the study. Unsurprisingly, the first hypothesis which claimed from the early beginning that vocabulary breadth and depth are related was confirmed by means of the positive correlation analyses conducted by the researcher. That is to say, the students with deeper knowledge of derivational morphemes have proved to have wider breadth of word families and vice versa. Similarly, the second hypothesis which claimed that gender affects vocabulary breadth and depth was again confirmed. Very briefly, research findings pointed out the fact that receptive vocabulary size and, depth of vocabulary knowledge are significantly and positively interrelated with each other, indicating that both dimensions of lexical competence are developing in balanced way. Thence, a balanced language course that incorporates both entities is called for to boost up the overall improvement of lexical competence.

Certainly, the pedagogical implications and practical solutions that can be derived from this study are of great importance. Being exposed to derivational and vocabulary breadth test, subjects showed a positive reflection on the latter. As a result, the informants demonstrated that there is an association between the words they know and their families which form different parts of speech. However, some informants were not able to derive some derivational morphemes appropriately. In this line, and according to the objectives of this research, this study tends to suggest some tentative solutions and pedagogical implications for the learners to improve their knowledge of vocabulary, and therefore derivation process.

Thus, on the learners' part, learners are required to look up some words in their dictionaries to make sure that some words are not always matched with the same derivational morphemes to form a certain part of speech (e.g. fast/hard/bad adjectives, fast/hard/bad adverbs not fastly, hardly, badly). Also, students are required to make a lot of reading and do a lot of research which will help improve their vocabulary knowledge.

On the curriculum designers' part, since vocabulary size was proved to have a simultaneous evolution with derivational morphemes, they should produce books and materials that incorporates both skills; vocabulary and grammar, certainly those focusing on generating different parts of speech through using derivational morphemes. For

example, assessing reading comprehension activities that combines both vocabulary breadth and depth seems to be interesting. Thus, much attention should to be paid to the learning process which will enhance students' capacities to widen the size of their receptive and productive knowledge. Also, in order to enhance learning, designers should, via the materials, give examples and further illustrations through various activities and tasks which will facilitate and enrich learning and, thereby, allow long term retention of both entities.

For future researchers, future research may benefit from this study in a variety of ways. The aim behind this study is to demonstrate whether there is any difficulty in acquiring vocabulary and the derivational morphemes by EFL students in Morocco. This study, thus, is a tentative contribution in the field of applied and educational linguistics which may push educator to reconsider the inclusion of specific courses that will reinforce students' knowledge. Besides, it might be a foundation for further investigations about the techniques to be used to solve the issue. Thus, another study should be conducted to measure vocabulary acquisition in light of reading and writing skills in order to check the best predictors of vocabulary knowledge among both entities. Multiple receptive and productive tests and varied instruments can also be used to give much more accurate assessment and more reliable finding. Additionally, this present study could be reduplicated within the same Moroccan or another foreign language context in order to generalize the findings of the current study to other populations. Furthermore, in this study, only 1 component, derivational morpheme, of vocabulary knowledge was examined, other components such as collocations and polysemy could be investigated as well.

References

[1] Al Farsi, B.(2008). Morphological awareness and its relationship to vocabulary knowledge and morphological complexity among Omani EFL university students. Unpublished master' thesis, University of Queensland, St Lucia, Australia.

[2] Chung, S. (2012). Research-Based Vocabulary Instruction for English Language Learners. The Reading Matrix, 12 (2), 105-120. Retrieved from http://www.readingmatrix.com /articles/september _2012/chung.pdf

[3] Fauziati, Endang.(2005). Teaching of English As A Foreign Language (TEFL). Surakarta: Muhammadiyah University Press.

[4] Friedline, Benjamin E. (2011) CHALLENGES IN THE SECOND LANGUAGE ACQUISITION OF DERIVATIONAL MORPHOLOGY: FROM THEORY TO PRACTICE. Doctoral Dissertation, University of Pittsburgh.

[5] Henriksen, B.(1999). "Three dimensions of vocabulary development." Studies in Second Language Acquisition, 21: 303–317.

[6] Hu, M. H., & Nation, P. (2000). Unknown vocabulary density and reading comprehension. Reading in a Foreign Language, 13 (1), 403-430.

[7] Khodadoust, E., Hesamiddin Aliasin, S., & Khosravi, R. (2013). The Relationship between Morphological Awareness and Receptive Vocabulary Knowledge of Iranian EFL Learners. International Journal of Educational Research and Technology, 4 (1), 66-67.

[8] Meara, P. and Milton, J. (2003) X_Lex, The Swansea Levels Test. Newbury: Express.

[9] Nagy, William, Virginia B. Berninger & Robert D. Abbot. 2006. Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. Journal of Education Psychology 98 (1). 134-147.

[10] Nation, I. S. P. (2001a). Learning Vocabulary in another Language. Cambridge: Cambridge University Press.

[11] Qian, D. D. (1999). Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. The Canadian Modern Language Journal, 56, 262-305.

[12] Read, J., (1997) Vocabulary and Testing. In Schmitt, N & McCarthy, M. (Eds), Vocabulary Description Acquisition and Pedagogy (pp. 303-320). Cambridge: Cambridge University Press.

[13] Read, J. (1998). Validating a test to measure depth of vocabulary knowledge. In A. Kunnan. (ed.), Validation in language assessment. Mahwah, NJ: Lawrence Erlbaum. pp. 41-60.

[14] Richards, J. C., & Renandya, W. A. (2002). Methodology in language teaching: An anthology of current practice (pp. 258-266). New York: Cambridge University Press.

[15] Schmitt, N. (2000). Vocabulary in Language Teaching Cambridge: Cambridge University Press. Soekemi. (1995). Linguistic: A work Book. Surabaya: IKIP Surabaya Press.

[16] Shen, Z. (2008). The roles of depth and breadth of vocabulary knowledge in EFL reading performance. Asian Social Science Journal. Retrieved from www.ccsenet.org/journal.html

[17] Yanyan, C. (2006). An Exploration into the Development of Lexical Competence of Chinese Tertiary English Majors (Doctoral dissertation, University of SHANGHAI JIAOTONG).