# Vocabulary Knowledge of Primary Students in Morocco: The 6th Grade Students as a Case Study

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**ABSTRACT:** This paper presents an empirical study with the aim of investigating Arabic, as a second language, vocabulary knowledge of 122 primary school students in Morocco. To fulfill our aim, it is necessary to prepare valid and reliable tests that can be useful and practical for both teachers and textbook designers in order to plan, diagnose, research and foster learners' vocabulary development. Two tests were designed; the first one is a Yes/No format of a vocabulary test, and a multiple choice questions test (MCQ). The main objectives behind this paper are: to measure L2 Arabic learners' vocabulary knowledge (Vocabulary size) and to compare the scores of the Arabic Yes/No test with scores of the multiple choice questions test and to see how they correlate with each other. Hence, we will be able to know how much vocabulary learners learn after six years of studying Arabic and to relate our findings to the teaching methodology of Arabic as a second language. The obtained findings confirmed Palmer's hypothesis that claims the more frequent a word is, the more likely it is to be learned; also it revealed a significant correlation of .71 between vocabulary knowledge scores and the multiple choice questions scores.

Keywords: Vocabulary knowledge, Arabic as a second language, L2 Arabic learners, frequency words.

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## I. INTRODUCTION

Modern Standard Arabic (MSA) is the first language taught in Moroccan public schools. It is used in different domains such as administrations, media, and education, which is our concern, especially at the primary levels. MSA is rich with its vocabulary, but unfortunately, most learners have a deficiency when they communicate or write it due to a shortage of vocabulary. The scarcity of research and studies related to the Arabic language in Morocco was a principal reason to conduct this research in order to know the vocabulary size of Arabic L2 learners. Besides, there are no official statistics about how much vocabulary Arabic L2 learners need to gain after the six years of studying Arabic at primary levels. Hence this research is an attempt to fill in the empirical gap in the area of Arabic as a second language in Morocco. This research is significant, as we expect, because of its results on both teachers and learners since both of them need to assess vocabulary knowledge in order to understand and perceive the process that L2 Arabic learners are following and making in their teaching and learning processes and to implement certain strategies and methods to boost their vocabulary learning outcomes. The two tests are based on a corpus of 30 million tokens from A Frequency Dictionary of Arabic (Buckwalter and Parkinson, 2011).

## II. LITERATURE REVIEW

One thing that all of the partners involved in the learning process (students, teachers, materials writers, and researchers) can agree upon is that learning vocabulary is an essential part of mastering a second language (Schmitt 2010, p. 3)<sup>2</sup>. In the body of literature, I have read that most studies and research conducted in the area of vocabulary knowledge focused on English, as an L2 or FL, and other European languages. Unfortunately, very few studies were conducted about Arabic vocabulary knowledge, which is our concern in this research, even though it is the fourth spoken language in the world. Therefore this study works on measuring vocabulary knowledge of Arabic L2 learners.

There is a general consensus between researchers (Nation, 2011; Schmitt, 2014; Masrai and Milton, 2017)<sup>.3,5</sup> and teachers that vocabulary knowledge is a pivot for successful language learning either as a second or as a foreign language. Mastering as much as possible of vocabulary at an early age will definitely be an important facilitator for language achievement. Vocabulary knowledge is widely-researched in second language teaching and learning, regarded as fundamental to overall language proficiency and development (Nation,

2013)<sup>5</sup>. It is, also considered, more important than grammar as Wilkins (1972, p. 111)<sup>6</sup> pointed out that "without grammar little can be conveyed, without vocabulary, nothing can be conveyed". The four language skills of a learner (reading, speaking, writing and listening) are based on vocabulary knowledge. For the importance of vocabulary knowledge for language use, Alderson (2005, p. 88)<sup>7</sup> reported: "that the size of one's vocabulary is relevant to one's performance on any language test, in other words, that language ability is to quite a large extent a function of vocabulary size".

In addition, vocabulary is an essential building of language and it makes sense to be able to measure learners' knowledge and use of it (Schmitt and Clapham 2001)<sup>8</sup>. Similarly, Lewis and Wills (2009)<sup>18</sup> stated that "you can get by without the correct syntax or grammar, but not vocabulary". In the same line, Folse (2004)<sup>9</sup> acknowledged that "without syntax, the meaning is hindered; but without vocabulary meaning is impossible". Also, Alderson (2005)<sup>7</sup> pointed out that "we really know very little about what is normal and what is abnormal in foreign language development. If the process of a foreign language is to be better understood, then the collection of normative data is essential. Then can we begin to understand not only what is learned and when, but also how individuals and groups will vary? Measuring vocabulary knowledge in foreign language learners should be part of this process" (Cited in Milton, 2009, p. 71)<sup>11</sup>.

Before we go any further, it is necessary to define the two terms, what is a word and what is vocabulary? There are many definitions given by researchers to define the concept of "word", depending on their purposes and contexts. Presenting one definition seems difficult, Read  $(2000)^{12}$  put down this difficulty to the fact that this difference is related to different methods of counting words in the text. (Milton, 2009, p. 7)<sup>11</sup> we tend to use the word 'word', presumably for ease and convenience, when we are really referring to some very specialist definitions of the term, such as types, tokens, lemmas, word families. The first one refers to the number of words we have in a sentence or in a paragraph, researchers use types to vocabulary knowledge and to know how many words learners know, the second one means the total number of words in a text or in a corpus while the third one refers to what Vermeer  $(2004)^{14}$  called the most reliable unit of counting words. The lemma includes a headword and its most frequent inflections without changing or modifying the part of speech from the headword as in the following example:

/zls al-walad Sla: ælkrsi:/ تجلس الولد على الكرسي"

In this example, we can count up the number of separate words; thus, there are six words and they are called tokens, whereas we have only five types because of /ل/ (the) occurs twice. The last one which is word family refers to different words with their different parts of speech like the example in Arabic: /Ktb/ (writes) "/ka:tb/ (writer)" 2/mktub/ (something is written)"

It is pivotal to say that these types are much more interesting for researchers in order to measure the vocabulary knowledge for learners because of our principal goal in this research is to know the size of words that Arabic L2 learners know.

The second term which is vocabulary knowledge, some L2 Lexical researchers (Daller, Milton & Treffers-Daller 2007; Haastrup 2000)<sup>15,10</sup> have presented different definitions of knowing a word as they have different concepts of what learners' word knowledge comprises, and of statistical counts of their vocabulary size (p. 8). They agreed that this term includes different kinds of linguistic knowledge starting from pronunciation, spelling, and morphology to syntactic knowledge. Nation (2001, p. 40)<sup>16</sup> enumerated nine types of knowledge to be able to know a word as follows:

- 1. Knowledge of the spoken form of a word
- 2. Knowledge of the written form of a word
- 3. Knowledge of the parts in a word which has meaning
- 4. Knowledge of the link between a particular form and a meaning
- 5. Knowledge of the concepts a word may possess and the items it can refer to
- 6. Knowledge of the vocabulary that is associated with a word
- 7. Knowledge of a word's grammatical functions
- 8. Knowledge of a word's collocations
- 9. Knowledge of a word's register and frequency

After that, Nation  $(2011)^3$  has divided the ninth items into productive vocabulary (active) and receptive vocabulary (passive). The former refers to the words we use when we speak or write and the latter refers to the words we use when we read and listen.

## III. PROBLEMS WITH L2 ARABIC LEARNERS

Most faced problems by L2 Arabic learners can be summarized by lack of vocabulary knowledge. Therefore, it makes the process of using MSA in the classroom a challenging task for learners to express their ideas or opinions which facilitates them to switch into the Moroccan dialect (dialect is dominating). Moreover, the lack of vocabulary pushes some learners to be bashful. According to many Arabic teachers lack of reading is

also a significant factor that complicates the use of MSA in the classroom in addition to the topics of the program that do not attract or encourage learners to take part at any discussion.

#### Aims and objectives

#### IV. METHODOLOGY

Based on the literature review section, the purpose of this research is twofold: Firstly, to measure the size of receptive vocabulary of Arabic L2 learners, sixth grade, in Morocco and secondly, to compare the scores of the Yes/No test with scores of MCQ test and to see how they correlate with each other. In other ways, to show the impact of vocabulary knowledge on learners' performance at the MCQ test. The results are expected to be interesting for both teachers and learners in setting the benchmark for attainment if Arabic L2 learners want to communicate successfully in Arabic.

#### Subjects

A total of 122 students from different public schools in Meknes, Khemisat, and Tamssna (42males 80 females) took part in this research. Their ages range between 10 and 14. Their mother tongue differs between the Moroccan dialect and Tamazight.

#### **Instruments and instructions**

Two tests are used in this research: an Arabic Yes/No format of a vocabulary test, and an MCQ test, both of them are based on frequency data. The first one, which is the Yes/No test contains 200 words; each list comprises 60 words in which 40 words are chosen from each band, which represent the real words while 20 words are imaginary words and learners are asked to tick the vocabulary they know and to skip the one they do not. The second test which is a multiple choice questions tests contains 50 questions based on a frequency order. In order to better represent the underlying population of the chosen words in the corresponding frequency bands in testing Arabic L2 students, a sampling of 1 word for each 1000 is probably needed (Masrai, 2017).

All the instructions are written in MSA and they are identical to the same one used by Meara (1992). Learners are asked to tick the words they know and to skip the words they do not know or they are not sure. The Yes/No test took about 15 minutes while the multiple chose questions test took only 10 minutes.

#### Data collection

The data were collected, from the two described tests above, in the same session. Learners started with the Yes/No test (15 minutes) then they moved to the multiple choice questions test (10 minutes) and the mean of instruction was in Moroccan dialect. It is worth mentioning that the selected words from both tests are those that appear relatively frequently in textbooks used by learners.

## V. RESULTS AND DATA ANALYSES

This part of the research zooms in on the results of the data analysis regarding the frequency profile of Arabic learners and the correlation between Yes/No vocabulary knowledge test scores and the MCQ scores. It is worthy to mention that the correlation was analyzed through Pearson correlation statistics.

Concerning our first question about how many words learners learn, we notice from figure 1, that Arabic learners tend to know more words in the first band (1000 words) more than the second band and so on. Statistical analysis in Milton's study confirms the relationship between frequency bands and vocabulary knowledge size. This supports the idea that says the higher the frequency of words the better the chance of its learnability. Thus, the implication we deduce in this is that an Arabic test based on most frequent words is likely to give us a good estimation of Arabic learners' vocabulary size. Arabic learners know about 90 % at the first and the second bands, 89.5 % at the third band, 79% at the fourth band and finally about 63 % at the fifth band. Consequently, we got a typical learners' knowledge which is according to Meara is high in the frequent columns and lower in the less frequent columns, giving a distinctive downwards slope from left to right. As Arabic vocabulary knowledge of Moroccan learners increases, the profile moves upwards until it reaches the ceiling of 100%. Our results go in line with Meara's results (1992). Therefore, it confirms Palmer's frequency hypothesis that claims the more frequent a word is, the more likely it is to be learned.



Figure 1: Frequency profile for Arabic learners.

It would be safe to state that learners know about 900 words out of 1000 in both the first and the second band, 890 words in the third band, 790 words in the fourth band and about 630 at the fifth band. That is to say; they know about 4100 words out of 5000 frequency words in Arabic. This level would be helpful for learners to understand around 80% of any authentic text.

Concerning the correlation between Yes/No vocabulary knowledge scores and multiple choice questions scores, table 1 elaborates the statistical data about the first test (Yes/No vocabulary knowledge test).

N	Valid	122
	Missing	0
Mean		16,4760
Median		16,8500
Mode		17,70 <sup>a</sup>
Std. Deviat	ion	2,46890
Variance		6,095
Skewness		-1,742
Std. Error o	f Skewness	,219
Minimum		5,28
Maximum		19,70
Sum		2010,07
Percentiles	25	15,2000
	50	16,8500
	75	18,2000

 Table 1: Descriptive statistical about the Yes /No test (First test)

a. Multiple modes exist. The smallest value is shown

The descriptive statistics of the first test (Yes/No test) show the maximum score in the first test was 19.7 points out of 20. And the minimum score was 5.28 points, a mean of 16.47, a median of 16.85 that is to say that they are close to each other and they can be considered as symmetric), the mode is 17.7 as a measure of central tendency and S.D of 2.46 which is a very small level that illustrates a weak deviation among the scores of students in the first test (Yes/No). This also suggests that almost all students have the same score range or they are close to the average as it is shown in the following histogram.



Figure 2: Figure 2: Histogram of vocabulary Yes/No test and students' scores.

	Та	ble	2 D	escrip	tive	statistical	about	the	MCO	test	(the	second	test).
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N	Valid	122
	Missing	0
Mean		16,2052
Median		17,0000
Mode		18,00 <sup>a</sup>
Std. Deviation	1	3,47952
Variance		12,107
Skewness		-1,218
Std. Error of S	Skewness	,219
Minimum		6,00
Maximum		20,00
Sum		1977,04
Percentiles	25	15,0000
	50	17,0000
	75	19,0000

a. Multiple modes exist. The smallest value is shown

The results of the descriptive statistics of the second test (MCQ) demonstrated almost the same obtained results in the first test. The maximum score in the test was 20 points out of 20 while the minimum score is six points out of 20, a mean of 16.20, a median of 17, S.D. of 3.47 and a mode of 18. This shows that there is a normal distribution between the scores of the students in the second test as it is shown in histogram 4.



Figure 3: Histogram of multiple choice questions test and students' scores.

To answer the second research question, multiple regression analyses were performed. To this aim, scores from the Yes/No vocabulary test were taken as independent variables and scores of the multiple choice questions were taken as dependent variables. The use multiple linear regression has been recommended by recent and existing research such as Qian 2002; Kehen 2015; Khaldieh 200) and it refers to the amount of variance in a dependent variable test that is explained by the independent variable.



Figure 4: multiple regression analysis

As we can see from the scatter plot above, we deduce that the graph slopes upward from score five till score 20. That is to say that there is a statistically significant correlation between the Yes /No vocabulary test and the MCQs test. In other words, the higher numbers of vocabulary learners know at the first test (Yes/No vocabulary test), the better score they get at the second test (MCQs test). This can help both Arabic teachers and learners that knowing a lot of vocabulary items in Arabic may increase their performance at other skills especially writing and speaking (production).to put it simply, when the scores of vocabulary knowledge increase, the same thing happens with MSQ scores.

	-	X-Lex vocabulary Test	Multiple choice Question Test
X-Lex vocabulary Test	Pearson Correlation	1	,716 <sup>**</sup>
	Sig. (2-tailed)		,000
	Ν	122	122
Multiple choice Question	Pearson Correlation	,716 <sup>**</sup>	1
Test	Sig. (2-tailed)	,000	
	Ν	122	122

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\*\*. Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation analysis shows a significant and positive correlation between the Yes/No test and MSQ test. Generally speaking, learners with a high vocabulary score achieved a higher score at MCQ as well. The obtained results confirm the probability that says that learners with a large vocabulary size score better at any other tests. On the contrary; learners with less vocabulary size are likely to have more difficulties to perform better. Researchers support the idea that claims that an increase in vocabulary knowledge will directly have a positive effect on other skills. Results of this research are found to be aligned with previous EFL and ESL studies such as Qian (2002), Kirby (2014), Masrai (2017) and others.

## VI. RECOMMENDATION

The significance of this research provides us with some fruitful implications for both Arabic teachers and textbook designers such us:

- MSA should be used in the classrooms as much as possible during giving instructions.
- Teachers have to help and encourage learners to use MSA during discussions and to decipher the meaning of vocabulary during reading texts.
- Arabic high-frequency words should be thought at early years to learners.
- Arabic textbook designers should carefully examine learners' needs of Arabic vocabulary size and to design vocabulary accordingly.
- Teachers have to improve their awareness during both pre-service and in-service years about the usefulness of these frequency verbs.
- Arabic learners should acquire more training in reading by focusing on vocabulary in order to boost their vocabulary repertoire.

## VII. CONCLUSION

As can be deduced from the obtained results, Arabic learners tend to know most of the high-frequency words in the Arabic language then moving downwards to the less frequent words. This evidence supports Meara's (1992) model of a frequency profile. Thus teachers and curriculum designers should be aware of these frequency words and they need to highlight on it because when they are put in a text it makes the understanding process easier. In addition, the finding showed a strong significant correlation was found between Yes/No vocabulary test and MCQ test. Put it succinctly, the more known words the better score obtained. Further research is recommended in this field in order to enrich it.

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