Learning Arabic Vocabulary: The Effectiveness of Teaching Vocabulary and Vocabulary Learning Strategies

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This paper intends to contribute to the research field of vocabulary learning from an Arabic language acquisition perspective. After a brief introduction, the paper deals first with some linguistic, Arabic-specific considerations within the vocabulary teaching theoretical framework and then presents a research project, the scope of which is the monitoring of students' vocabulary proficiency in two subsequent terms, where vocabulary instruction differed in focus on teaching methods. Specifically, the paper outlines the frequency ranges of the words taught during the course, accounts for the methods chosen to measure the students' vocabulary proficiency and compares and discusses the results.

Keywords: Arabic, Arabic vocabulary, Arabic language, vocabulary learning, vocabulary teaching, vocabulary learning strategies

INTRODUCTION

Within a structural approach to foreign language teaching, focus lies on learning and teaching the structure (i.e. mostly grammar) of the language, whilst a communicative approach mainly advocates the study of the language in context. Traditionally, little attention has been paid to vocabulary learning and teaching within either teaching approach, the general idea about vocabulary being that words in a foreign language are basically just words and therefore implying that learning new vocabulary is just a matter of mnemonic exercise of recognition and recall. However, the importance of the lexical dimension of language learning has substantially increased during the last 30/40 years (Richards, 1976; Carter & McCarthy, 1988; Blachowicz & Fisher, 2000; Chacón-Beltrán, Abello-Contesse & Mar Torreblanca-López, 2010, Horst, 2019) and vocabulary learning strategies have emerged as one of the main research topics in the field (Meara, 1987; Schmitt, 1997; Baumann et al. 2012). The body of research so far has mostly focused on English vocabulary acquisition, with a few single or comparative studies involving European languages[1] and even fewer about non-European languages.[2]

As for Arabic as a foreign language, the number of studies on Arabic language acquisition for non-native speakers has so far been relatively low compared to equivalent research about other foreign languages (Ryding 2019, p. 395). An overview of the existing body of research on Arabic-specific language acquisition studies is presented in *Second Language Acquisition* (Ryding, 2019), where only one study emerges as specifically about Arabic vocabulary acquisition: Keatley et al.'s study (2004, in Ryding 2019, p. 402) reports findings on the use of different vocabulary learning strategies and on vocabulary study between heritage and non-heritage learners. Other investigations on which Arabic vocabulary learning

strategies are employed and/or preferred by Arabic learners have been conducted by al-Shuwairekh (2001), Mustapha & Muhd (2014), Maskor and Baharudin (2016) and al-Schalchi (2018).

The aim of this paper is to contribute to the field of vocabulary acquisition in the specific case of Modern Standard Arabic (MSA) vocabulary acquisition from a foreign language learning perspective. The paper starts with a number of theoretical considerations relevant for the study - both linguistic Arabic specific and vocabulary-learning related, including Arabic morphology, form-focused instruction, what is involved in knowing a word and how many words a learner needs to know, the Involvement Load Hypothesis, vocabulary learning strategies and measuring learners' vocabulary acquisition. Subsequently it presents a pilot research project conducted on an internet-based Arabic course at beginner level taught at Dalarna University in Sweden. Scope of the project was to try to assess students' performance with regard to vocabulary acquisition over two different terms and verify, by differentiating vocabulary teaching methods over two subsequent terms and comparing the results of vocabulary tests, to what extent vocabulary teaching and vocabulary learning strategies are effective for Arabic beginners.

FORM-FOCUSED INSTRUCTION AND ARABIC MORPHOLOGY

Language-focused learning, also referred to as form-focused instruction, has been subject to debate from a language learning perspective, as research has only recently shown that

> language learning benefits if there is an appropriate amount of usefully focused deliberate teaching and learning of language items. From a vocabulary perspective, this means that a course should involve the direct teaching of vocabulary and the direct learning and study of vocabulary (Nation 2013, p. 2).

In her *Form-focused Instruction in Second Language Vocabulary Learning*, Laufer argues that it is not possible to take for granted the assumption that learners of a foreign language acquire most vocabulary from input and that, consequently, by for example reading a lot, vocabulary learning will take care of itself. Instead, she gives empirical evidence of the effectiveness of word-focused instruction, claiming that 'what affects learning is not whether learning is incidental or intentional, but what learners do with the word' (2010, p. 22), and concludes that 'doing something with a word is more effective than simply coming across it a number of times' (2010, p. 24).

The Arabic language is particularly suitable for word-focused instruction. Morphologically, Arabic is based on a consonantal skeleton, the elements of which are called radicals, or roots, conventionally expressed with the template *fa'ala*. From this template all Arabic lemmas are derived, by means of a set of prefixes and infixes and by the addition of diacritical marks representing short vowels. This can be exemplified with the verb to write *kataba*, constituted by the three consonantal radicals k, t and b, and the three short a-vowels, represented with diacritical marks, on each of them. From *kataba* a number of templates are applied to form words: for example the active participle is derived by adding a long a-vowel after the first consonant (*kātib*, writer/author); the passive participle uses the prefix ma, removes a short vowel sound from the second consonant and adds a long u-vowel (*maktūb*, written), and so on. In addition, other verbs are created - often related, in a way or another, to the original meaning of the three basic roots. In the case of *kataba*, the doubling of the second root forms *kattaba* (to make someone write), the addition of a long a-vowel after the first root forms the verb *kātaba* (to keep up a correspondence), and the prefix *ist-*, together with the removal of the short vowel on the first consonant, forms the verb *istaktaba* (to dictate). All these derived verbs have, in turn, their own templates to build participles, verbal nouns, etc. The patterns are morphologically fixed and predetermined.

Therefore it may be argued that form-focused vocabulary instruction can be extra beneficial for learners of Arabic, to a bigger extent than for learners of non-root based languages. In his *Learning Vocabulary in Another Language*, Nation presents an extensive list of activities for vocabulary learning, broken down according to Form, Use and Meaning (2013, p. 132). A specific activity for Arabic could be, for example,

'go back to the roots', which would not only benefit the students from a linguistic point of view but also increase their vocabulary knowledge.

WHAT IS INVOLVED IN KNOWING A WORD?

Vocabulary knowledge is challenging because to know a word implies to know many things about it (Nagy & Scott, 2000). Nation (2013, p. 49) claims that to know a word involves to know its Form, its Meaning and its Use. Each one of these three aspects comprises both receptive and productive knowledge. Form entails spelling, pronunciation and the morphological aspect, Meaning comprises labelling concepts, referents and associating other words, Use deals with grammatical functions and collocations, including any constrains.

The following considerations can be made for Arabic in relation to these three aspects. Firstly, for beginner learners of Arabic, the Form aspect significantly increases the learning burden, i.e. the amount of effort needed, to learn a word because of the new writing system, which 'constitutes a serious obstacle to comprehension at all levels' (Ryding 2019, p. 399). Besides having to learn how to pronounce - and identify - new, unknown sounds of some Arabic letters, students also have to learn how to write the letters of a word and to recognize them when they see them written down. This implies knowing how and which letters are written connected to each other and how they change shape depending on their position in the word. In addition, they need to understand how the diacritical marks system works in order to be able to pronounce the word – and consequently recognize it when they hear it. Finally, as mentioned above, knowledge of, and instruction on, the morphological patterns used to build words from the roots, is an essential component in an Arabic language course: which letters are added to the roots and where and how they are added, in order, for example, to be able to look them up in the dictionary.

As for Meaning, a learning burden factor that has to be taken into consideration is the language distance between the learner's language(s) and Arabic. Several European languages share some common vocabulary, cognates or similar words, which although spelt or pronounced slightly different are easily recognized by the students even if they have not properly 'learnt' them. However, apart from some obvious exceptions like Arabic words in English vocabulary and English loan words[3], Arabic is quite different from most European languages and cognates and similar words are quite rare. The language distance affects/is affected also by cultural implications, as different concepts may or may not be included in the words. An example is constituted by the owl, which in the Western tradition is usually regarded as a fascinating, almost magical bird (let's think for example of Harry Potter). In the Arabic literary tradition however, an owl is a symbol for ill-omen, misfortune or death. As with any other 'distant' language, Arabic vocabulary instruction must include also this kind of cultural associations.

Finally, the implications of diglossia cannot be underestimated when considering the Use aspect. In fact, Modern Standard Arabic (MSA), i.e. the written language used in literature, news and more formal contexts, is not the same language as the so-called dialects or vernaculars, i.e. the spoken languages, which differ from country to country and even from region to region. The differences are not just related to pronunciation and grammar issues but often concern the vocabulary itself. Examples go from words for fruit and vegetables to several specific commonly used words such as *money, car, bread and rice*[4]. Even if a course is aimed at teaching MSA, students should be made aware of variations in collocations, register and/or any other possible constraints between the Use of a word in a written MSA context and in a dialect.

HOW MANY WORDS DO STUDENTS NEED TO LEARN?

According to Nation (2013, p. 11), three types of information define how much vocabulary needs to be learned, namely *(a)* how many words there are in a language, *(b)* how many words native speakers know in the language and *(c)* how many words are needed to use the language.

Nation (2013, p. 12) suggests two ways to estimate *(a)* how many English words exist, the first one being to count the words in very large dictionaries and the second one to count how many words occur in large collections of texts. This becomes problematic when applied to the Arabic language. Despite the

extensive Arabic lexicography tradition (see for example Carter, 1990, and Solomon, 2019), there are no exact estimates of how many words actually exist in Arabic. Carter mentions the different numbers of words listed in some, for the Arabic lexicography, traditional dictionaries[5] and states that 'these figures can only refer to the total of words derived from all the roots rather than the actual number of roots themselves' (1990, p. 115). In his *Mu'jam 'ajā'ib al-lugha, Shawqī* mathematically calculates how many words can potentially exist in Arabic by counting all the possible root combinations, reaching the staggering sum of more than 12 million, but he stresses the fact that not all these words actually exist and/or are in use (2000, p. 83-84). An estimate of 30,000 entries is only provided for the *al-mu'jam al-wasīṭ* (Hassanein in EALL, 2011), although it is unclear what the term 'entry' exactly comprises. Moreover, an estimate would depend on how we decide to define and count words, i.e. types, lemmas or word families.

With regard to *(b)* how many words native speakers know, in their *How many words do you need to speak Arabic? An Arabic vocabulary size test*, Masrai and Milton (2017) refer to a list of approx. 100,000 most frequent words, or rather lemmas[6], generated by Kilgariff et al. (2014) on the basis of a web-based corpus of 180 million tokens in Arabic. Their conclusion is that 13-year old children have a vocabulary written knowledge of 10,000 Arabic words and 17- or 18-year old native speakers are up to 20,000 Arabic words, with 25,000 words as native-like standard.

Finally, as for *(c)* how many words are actually needed, research results about the English language have shown that 95-98% of the words must be known in order to understand a spoken-written narrative text. This apparently high percentage is due to the fact that approx 86% of the words in English are high-frequency words, for a total of 2,000 word families (Nation 2013, pp. 14-23), which by themselves are not enough to allow full comprehension. Therefore mid-frequency words (another 7,000 word families, corresponding to an additional 9%) become necessary. An estimate of the Arabic equivalent would be very difficult to calculate, especially because of the Arabic morpheme-based structure mentioned above – not only a beginner learner would differ from an advanced one, but also the single learner's ability at word formation would play a significant part.

Research has shown that high-frequency words tend to be learned earlier than less frequent words (see for example Milton 2009, pp. 26-29). They are usually concrete words or function words like prepositions and conjunctions and in vocabulary acquisition they are especially important, because they cover a relatively high proportion of a spoken or written text - comprehension of the text would be limited without them. High frequency words for the English language are the first 2,000 word families (Nation 2013, p. 22). *A Frequency Dictionary of Arabic* (2011), compiled by Buckwalter and Parkinson on the basis of a 30-million-word corpus of Arabic, provides an indication of the 5,000 most frequently used Arabic lemmas.

THE STUDENT'S ROLE: THE INVOLVEMENT LOAD HYPOTHESIS AND VOCABULARY LEARNING STRATEGIES

A main factor to be taken into consideration is the students' motivation and interest in connection with the words chosen for the courses. Laufer and Hulstijn (2001) point at the Involvement Load Hypothesis, which accounts for the importance of students' *need* to know a word, their *search* for the word in order to express a meaning of their own and their *evaluation* of the appropriateness of the word in the context they have chosen. In other words, retention of unfamiliar words depends upon the amount of the learner's involvement while processing these words. For students of Arabic, their need, search and evaluation of Arabic words depend not only on the context but also on a variety of other factors, including the specific situation and the word register required by the situation itself. Moreover, because of the diglossia that characterizes the Arabic language, different kinds of motivation may be of relevance, depending on the reason(s) why students decided to start studying Arabic.

Interest in vocabulary learning strategies and their importance has increased over the last 25 years (Schmitt, 1997), in connection with the increased interest in learners' active role in their learning process. The importance for learners to take direct, active responsibility for their own vocabulary learning process and the significance of them being aware of a wide range of learning strategies has frequently been stressed

by existing research (see for example Nation 2013, chapter 7 and Schmitt 2000, pp. 132-138). On the basis of existing research, Nation states that

> Learners need to understand the goal of each strategy and the conditions under which it works well. They need to gain the knowledge which is needed to use the strategy, and they need enough practice to feel comfortable and proficient in using the strategy. This all takes time, but it is repaid by the continuing gains that the learners get from being able to use the strategy well. (2013, p. 333).

A few attempts have been made to compile taxonomies of vocabulary learning strategies, for example based on which cognitive aspects (Schmitt, 1997) and which aspects and sources are involved in each strategy (Nation, 2013). Another distinction is also often made between intentional, language-focused vocabulary learning strategies and incidental, message-focused vocabulary learning strategies. Nation reports that different vocabulary learning strategies work differently for different students and that a combination of different strategies, usually give the best results (see for example 2013, pp. 334-342, see also Ellis 1994, p. 219, Chacón-Beltrán et al. 2010, pp. 3-6).

MEASURING LEARNERS' VOCABULARY ACQUISITION

Research field findings agree that there is no perfect method for testing acquired vocabulary knowledge (see for example Milton 2009, p. 72 and Schmitt 2000, p. 178). There are too many factors that may affect the validity and the reliability of any tests and may result in biased figures, among them guesswork, time constraints and/or place limitations and of course the type of the tests themselves. Many of these factors are listed in Nation's table *Aspects of word knowledge for testing*, broken down according to Form, Meaning and Use (2013, p. 538).

However, there are some general conclusions reached within the existing body of research. As a rule of thumb, passive recognition, or receptive, vocabulary breadth tests are the most basic forms of testing vocabulary but also the most affected by students' guesswork, especially checklist tests (Milton 2009 p. 72). A logical, common way to increase these tests validity is to increase the amount of words to choose from in every question, in both passive translation tests and tests about words in context. In addition, receptive tests are generally easier than productive tests (Nation 2013, p. 56), for many reasons – among them the presence of contextual clues that facilitate the recall of meaning. A more effective test would therefore attempt to extrapolate from the context the words being tested, although such a kind of test is not particularly advocated for within a communicative approach to language teaching. Moreover, measuring productive vocabulary knowledge presents several methodological problems and a definitive, reliable method has yet to emerge (Milton 2009). The most common productive tests are translation and forced answer tests, such as gap-fill exercises. Within the communicative approach to language teaching, neither form of measurement is particularly recommended: translation because it implies the use of source language (despite its advantages, like ease of construct and marking) and single word gap-fill tests because they remove the word from the context. Gap-fill tests with whole sentences may represent a solution, but it is important to keep in mind that they imply both receptive and productive vocabulary knowledge.

Milton (2009, 141-143) suggests word association tests as a potentially effective way to measuring overall productive vocabulary knowledge, as they measure a learner's ability to produce vocabulary while reflecting the totality of the learner's knowledge. However, he warns about a 'fatal flaw' with this testing method, i.e. the fact that it works only if the learner understands the purpose of the task instead of just trying to maximize the score of the test.

Regardless of the kind of tests employed and what exactly the tests are meant to measure, when testing Arabic vocabulary it is essential to keep into consideration how the different writing system affects the learners' ability to read and write the letters together with the presence (or absence) of the diacritical marks, particularly at beginner level.

PILOT STUDY

The aim of this study was to monitor Arabic vocabulary acquisition of learners of Arabic, specifically in an internet-based ('distance') beginner course for European adults taught at Dalarna University, Sweden, and explore the effectiveness of a more vocabulary focused instruction. For this purpose, the course was taught differently from a vocabulary acquisition perspective during two subsequent terms, and mid-term and end-of-term vocabulary tests were created in order to compare the students' performance.

The Course

The course, Arabic 1 for beginners (AR1) is given on a 50% basis, corresponding to approx 20 hours study per week. Direct teacher instruction amounts to two hours per week, for a total of 16 lessons per term in an online classroom. Class attendance is mandatory as the students' performance and progress are continually assessed. Students are provided with lesson material for every lesson, consisting of a written text and a wordlist, both also available as sound files, together with a grammar presentation and some exercises related to the grammar topic, which the students have to prepare before class. During class the students work, together with the teacher, on the text, the vocabulary and the grammar they have prepared and have the chance to practice conversation and ask questions. After class, homework (HW) related to each lesson have to be handed in. The students have access to the lesson materials via the university learning platform. The course aims at students being able to talk, in Modern Standard Arabic and in a simple way, about themselves and their family, friends, house, city, house, etc.

The course given in the Fall term 2019 (FT19) differed from the one given during Spring term 2019 (ST19) as far as vocabulary instruction is concerned. The ST19 course involved no specific vocabulary learning instruction, as the students were only provided with a document, made available via the course learning platform together with the course material, about the importance of specifically studying vocabulary when studying a new language. This document described some basic theoretical concepts of the research field, like for example incidental vs intentional vocabulary learning and the Form, Meaning and Use aspects of knowing a word, and stressed the importance for learners to take direct, active responsibility for their own vocabulary learning process. The document included an overview of vocabulary learning strategies, underlining their importance in general and explaining a few of them in detail by defining their goals, describing how they work and accounting for which conditions they work best. It was therefore left to the students themselves to work with them, on the basis of their own learning styles and preferences.

The FT19 course involved a more form-focused vocabulary instruction, with increased stress on vocabulary learning and with more specific vocabulary training and training on vocabulary learning strategies. Specifically, in addition to having access to the document mentioned before, the students also:

- were given in class (already in lesson 3) an introduction about vocabulary learning strategies in general and were encouraged to try and test, throughout the term, different strategies and to identify which one(s) best work for them. The topic was brought up for discussion during class and the students were invited to share with the other students both their thoughts on studying vocabulary in a foreign language and their suggestions about ways of studying vocabulary that they had previously used when studying other languages;
- were introduced, although in very general terms, to Arabic morphology and encouraged, throughout the whole course, to often leaf through and/or look up the words of the wordlists in the Wehr Arabic dictionary[7], in order for them to notice the Arabic morphological system of roots, prefixes and infixes;
- were presented in almost each lesson (from lesson 3 to lesson 15) with a new, different vocabulary learning strategy: the presentation covered the strategy's specific goal, together with the reason why and under which conditions it best works. A vocabulary exercise connected to that specific vocabulary learning strategy was also done during the class;

- had a mandatory, almost weekly HW vocabulary test, consisting of ten mixed questions (multiple choice, multiple answers) and focusing specifically on the vocabulary of the lesson, for a total of 12 HW vocabulary tests;
- had to hand in a mandatory 'Vocabulary Learning Strategies' mid-term assignment, where they were asked to briefly (200 words) reflect on their vocabulary learning strategies, and more specifically which ones they have tested, which ones in their opinion worked or didn't work and why.

The Words and Their Frequency

The word lists provided in the course material were analyzed in terms of their frequency ranges[8]. The wordlists amount to a total of 338 lemmas (hereinafter words). 177 words are in the 1st 1000 frequency range and another 62 are in the 2nd 1000 frequency range, for a total of 239 high frequent words (70.7%). Mid-frequency words in the ranges between the 3rd and the 5th 1000 are 74, which cover 21.9%. 25 words (7.4%) are to be considered low frequency as they are not in the first 5,000 most frequent words.

TABLE 1
WORD FREQUENCY RANGES

Frequency band	How many words	%
1 – 1000	177	52.4
1001 – 2000	62	18.3
2001 – 3000	35	10.4
3001 – 4000	21	6.2
4001 – 5000	18	5.3
5001 – 7000	3	0.9
n/a (not in the AFDoA)	22	6.5
Total lemmas	338	100

In all word counts, proper names such as names of persons, cities or countries, nationalities and numbers have been excluded.[9]

The Tests

The tests were construed so that almost exclusively words of the course's wordlists that are listed in the Frequency Dictionary mentioned above were employed.

Because of the difficulties and the limitations of vocabulary measurement outlined above, the tests were construed with a variety of question typologies, in order to attempt to measure the students' vocabulary knowledge from different perspectives. The choice was also influenced by the internet-based character of the courses, implying both the fact that writing Arabic letters within the interface of the university learning platform might have constituted a problem[10] and the impossibility for the teachers to discourage and/or avoid any form of cheating from the students' part.[11] Also because of the teaching format of the courses, the time available to complete the test has been limited[12] – this in order to try to prevent the students to look up the words in a dictionary or in the word lists. The tests settings were set on 'single attempt' and 'force completion', so that, once started, the students had no other choice but to complete the test.

For ease of reference, the mid-term test is called Homework 7 (HW7) and the end-of-term tests is called Homework 16 (HW16), as they are included in the lessons 7 and 16 homework respectively. The two tests consist of 20 questions and have the same format. All questions are mainly related to the Meaning aspect of knowing a word, but in some cases it is the Form (aka spelling) of a word that makes the choice of the correct answer 'tricky'. The last five questions also imply a Use aspect knowledge. The focus of the questions is exclusively the vocabulary and all the words and the sentences provided are grammatically

correct for two reasons, i.e. 1) not to allow the students to exclude a choice because they identify a grammar mistake and 2) reinforce the students' grammar skills.

The first ten questions aim at testing vocabulary knowledge by translation - the first set of five through receptive recognition and the second set of five through productive vocabulary - on the basis of the considerations made by Milton (2009, pp. 119-125). Questions 11 to 15 are groups of six or seven Arabic words related to each other, and the students are asked to mark the odd word in the group. This type of question is based on checklist method outlined by Milton (2009, pp. 71-75), but all the words are existing Arabic words and the criteria for the exclusion is a context, which is not given and has to be deduced on the basis of the words presented. Questions 16 to 18 vary: in the mid-term test, the students are asked to choose which Arabic sentence out of three best describes an English statement, while in the end-of-term test they have to choose which Arabic statement of three best completes an Arabic sentence. The questions are built on a variation of Nation's Level test, as outlined in Milton (2009, pp. 74-75). The last two questions are construed on the basis of the word association tasks outlined by Milton (2009, pp. 141-143). They are similar to questions 11-15, but the context is provided by means of an Arabic word and students are asked to mark all the words that can be used together with it (same part of speech within the question, different parts of speech across different questions).

For a part of HW7 [13], sound files in mp3 format have been provided in order to compensate for the extra difficulty, especially for complete beginners, due to the new writing system.

The Results

As for ST19, 40 students took the mid-term test (HW7) and 26 students took the end-of-term test (HW16). In the FT19, 47 students took HW7 and 31 students took HW16. The breakdown of the number correct answers is given in the tables herebelow:

TABLE 2
MID-TERM AND END-OF-TERM RESULTS FOR SPRING TERM 2019 (ST19)

Spring Term 2019													
		Correct answers (of 20)											
	total taken	20	19	18	17	16	15	14	13	12	11	10	<10
HW 7	40	10	11	6	2	4	4	1	1	1			
HW 16	26	2	6	5	2	5	2		2		1		1
% HW7	100 %	25 %	28 %	15 %	5 %	10 %	10 %	3 %	3 %	3 %			
% HW 16	100 %	8 %	23 %	19 %	8 %	19 %	8 %		8 %		4 %		4 %

TABLE 3
MID-TERM AND END-OF-TERM RESULTS FOR FALL TERM 2019 (FT19)

Fall Term 2019													
		Correct answers (of 20)											
	total taken	20	19	18	17	16	15	14	13	12	11	10	<10
HW 7	47	14	13	8	8	2	1		1				
HW 16	31	8	12	6	4	1							
% HW7	100 %	30 %	28 %	17 %	17 %	4 %	2 %		2 %				
% HW 16	100 %	26 %	39 %	19 %	13 %	3 %							

DISCUSSION

Considering the fact that the tests were time limited (time constraints are not used in the other weekly homework of the course), a good proficiency level was deemed at minimum 14 correct answers, i.e. 70% of the total questions. This corresponds to 96% and 85% of the students 'passing' the HW7 and HW16 respectively in ST 19 and to 98% and 100% 'passing' the same HW7 and HW16 in FT19. The better scores for the FT19 tests clearly point at the importance of an increased focus on teaching vocabulary and vocabulary learning strategies. When comparing the percentage of students that answered at least 95% of the questions correctly, the effectiveness of teaching vocabulary becomes even more evident, with 31% of the students that had 19 or 20 correct answers for HW 16 in ST19 and 55% of the students for the corresponding test in FT19.

A few points have to be taken into consideration when looking at these results. Firstly, a necessary reflection concerns the overall validity and the reliability of the tests - many general factors can potentially always affect the results of this kind of tests (guesswork, students' proneness/aptness to this kind of tests, etc). Moreover, as already mentioned, the course is internet-based, i.e. students attend classes, study and do their homework from home. This means that the teachers have no control on how and by whom the tests are taken and the possibility that any student may have had help by an Arabic mother tongue speaker in taking these tests is never to be excluded, as well as the possibility of someone else taking the tests on behalf of any student by using their login IDs.[14] Despite being fully aware of these risks, a decision was made in favour of this kind of tests for consistency reasons: throughout the course, the students are assessed continuously - on the basis of their performance and their active participation to the lessons, on mid-term and final written and oral exams and on their submitted homework. Homework is a mandatory part of the course, but it is also a way for the students to further practice on what they have learnt so far, as they are specifically built on the relevant lesson's topics and in such a way to enable the students to assess their progress themselves. All grammar, listen and vocabulary HW have the same 'click on the right answer(s)' format.

Secondly, it may be argued that the amount of words to be learnt for the course is relatively small for a university beginner course. On the basis of the research conducted on vocabulary college and university learners of English as a foreign language, Laufer (2010 p. 15) claims that an average number of words learnt per hour of instruction amounts to 2-3. A comparison with Arabic words taught in AR1 is not completely feasible, for several reasons, one of them being that neither an exact definition of 'hour of instruction' nor of 'word' is explicitly supplied by Laufer (different terms are used, such as word families and lexical items). In addition, the English language cannot be directly compared to the Arabic language – a learner of Arabic also has to handle a totally new writing system. Furthermore, the internet-based nature of the AR1 course implies two-hours weekly direct class instruction within a frame of approx 20 hours per week of self-studies, for a total of 20 weeks. Despite the approximation of these figures, this suggests that the AR1 course should present a total of 800-1200 words – which is definitely much higher than the amount of the words presented in the course's wordlists.[15] Furthermore, it is important to consider that the first two lessons of the AR1 course deal almost exclusively with the Arabic script and the writing system - the students are expected to be able to read and hand write, albeit with some difficulty, already since lesson 3. Moreover, lessons 3 to 6 deal with basic grammar-focused vocabulary, like personal pronouns demonstrative pronouns, and nominal sentences.

Finally, some considerations have to be made about the students' vocabulary learning process - not directly related to the test scores but to the students' overall personal reflections on vocabulary acquisition. Firstly, it is relevant to record the students' increased interest in the morphological aspects of the words during the FT19 lessons. In class, this naturally lead to spontaneous vocabulary-focused questions and discussions on the students' part, such as observations about words that share the same roots - which may have helped with the memorization and learning and contributed to start some familiarity, albeit in a very simple and unstructured way, with the Arabic morphological system. Secondly, the students' active role in their vocabulary learning process is worth highlighting. As mentioned above, for the FT19 course they were asked to hand in a short paper with their personal reflections on vocabulary learning strategies - that is,

shortly, which ones they have tested, which ones work and which don't, and why. A total of 49 students handed in this assignment, and 42 of them mentioned the fact that they combine several strategies, receptive and productive – depending on their mood, what they have to learn, what they are doing during that day, etc. Most of them also reflected with personal insights on their own way of learning and on the reasons why some strategies worked for them better than others. The strategy most mentioned (24 students) is the one referred to as 'flash cards' or 'word cards'. Cards may be downloaded from some website, used with the mobile phone by means of an app and even own-made, and vary in the kind of information and degree of details about the word shown or marked on them. Another popular strategy (13 students) is what was described during the course as 'being selective', i.e. is to choose / pick out words, not necessarily from the course wordlists (they may be the ones that are most relevant for the student and/or the ones that more difficult to remember) and work with them singularly, like for example look them up in the dictionary (to see which other words they share the roots with), write them many times (to train writing and/or to 'see' them as pictures), listen to them (repeatedly, in various contexts) and repeat them (also to train pronunciation), etc. One of the most mentioned ways to work with single words belongs to the kind of strategy that, during the course, was termed as 'make it personal': 14 students wrote that they create their own sentences with selected words. Surprisingly, a total of 12 students mentioned what Nation calls the keyword strategy (2013, p. 462). In general terms, this strategy implies creating a strong, personal link between the word to be learnt and another word, in the student's own language or even in another language. It is a very subjective way of associating words - for this reason it was brought up neither in class during FT 19 nor in the document about vocabulary learning strategies available on the course learning platform. The following are some of the mentioned examples and show the personal way in which single students work with their vocabulary:

- the Arabic adjective *dhakī*, usually translated into the English 'clever', and associated to the English word 'key', because 'to be clever is the key to success';
- the Arabic word for sofa *'arīka*, the sound of which is associated to the student's name (Ulrica);
- the feminine singular demonstrative pronoun *tilka*, associated to the Swedish word tik, i.e. female dog;
- the expression *'ayyat khidma*, literally translatable into 'which service' and used in conversations as 'how can I help you?', the meaning of which is associated to the fact that it sounds both as polite Japanese and similar to Nicole Kidman;
- the Arabic word for 'restaurant' *maṭ'am*, which is associated to the imperative 'mata mig', Swedish for 'feed me'.

CONCLUSION

This paper has presented a pilot research project about Arabic vocabulary acquisition conducted at Dalarna University, Sweden. It started with some linguistic considerations specific for the Arabic language, in particular Arabic morphology, and with discussing, in relation to Arabic, some aspects of the theoretical framework of the vocabulary learning research field, specifically form-focused instruction, what is involved in knowing a word and how many words a learn needs to know, the Involvement Load Hypothesis, vocabulary learning strategies and measuring learners' vocabulary acquisition.

The pilot study conducted on an Arabic course at beginner level has then been presented, including general information about the course and the kind of vocabulary instruction given during two subsequent terms in 2019 - the Spring term one without any specific vocabulary instruction and the Fall term with form-focused vocabulary teaching and vocabulary learning strategies. The words of the course materials were analyzed in terms of frequency ranges and the type of questions in the tests were outlined in terms of general theoretical vocabulary acquisition framework. The construction of a mid-term test and a final vocabulary test, aimed at assessing the students' vocabulary proficiency, has been outlined. The results of the tests have been accounted for and compared. Main issues and concerns in conjunction with these results have been identified and discussed. The results of the tests have shown that form-focused vocabulary

instruction, together with vocabulary training activities, vocabulary teaching and training vocabulary learning strategies, significantly improve students' vocabulary acquisition.

ENDNOTES

[1.] See for example Mondria and Wiersma (2004) and Greidanus et al. (2000) about Dutch learners of French; Ellis and Beaton (1993) about English learners of German ; Lindqvist and Ramnäs (2017) about Swedish learners of French; Milton's (2009) comparison of UK, Greek and Spanish learners of French.

[2.] See for example Kilgarriff et al. (2013) about vocabulary lists in nine languages; Ahn (1999) about learners of Korean.

[3.] For example sukkar (sugar) and telefizīūn (television) respectively.

[4.] 'money' is nuqūd in MSA, maṣārī and flūs in the Levantine and Egyptian dialects; 'car' is sayyāra in MSA and 'arabiyya in the Egyptian vernacular; 'bread' is khubz in MSA, ṣammūm in the Iraqi dialect and 'aysh in the Egyptian one; 'rice' is ruzz in MSA and timman in Iraqi.

[5.] such as the Lisān al 'Arab by Ibn Manzūr and the Taj al 'arūs by al-Zabīdī, which list 80,000 and 120,000 words, respectively. The Lisān was completed in 1311 and the Taj in 1774 (Carter, 1990).

[6.] In their article they specify that 'the concept "lemma" was used in the process of generating the list although it should be noted that this seems to us a form of lemma that may yet prove not to be entirely appropriate for Arabic' (Masrai & Milton 2017, p. 5)

[7.] The Dictionary of Modern Written Arabic by Hans Wehr (1994) is one of the most extensive and employed Arabic-English dictionaries, where words are sorted according to their roots and not alphabetically. This promotes the students' acquaintance of and familiarity with the root system.

[8.] Despite the limitations described above, Buckwalter and Parkinson's A Frequency Dictionary of Arabic (hereinafter AFDoA) was deemed as the most suitable for this study for several reasons, among them its straightforward availability, its listing of the words together with their frequency ranges and its specific focus on the Arabic language (as opposed to the KELLY database, which deals with a total of nine languages).

[9.] Exactly what to count is also debatable and what is a word for dictionary compilers is not exactly the same as for frequency lists compilers. Milton reports that 'in producing frequency lists for estimating vocabulary size, in general, number, proper nouns and names, and false starts and mistakes are now excluded from word counts.' (2009, p. 9)

[10.] In particular we thought about Arabic keyboards and Arabic language settings on their computers, as for Arabic 1 the students are required to learn how to hand-write and might not have explored on their own how to type Arabic.

[11.] See Discussion.

[12.] 15 minutes for HW 7 and 20 minutes for HW 16, considering the students' difficulties with the alphabet.

[13.] The Arabic words in questions 1 to 5 and the possible choices in Arabic in questions 6 to 10. At the time of the HW 7, the students have been working with the Arabic script for seven weeks only.

[14.] Many students have parent(s), friend(s) and/or partner that are Arabic mother tongue speakers.

[15.] Findings by McKeown et al (1985), reported by Nation (2013, p. 92), indicate that at least 15 minutes per word should be spent on teaching each word to have 'a significant effect on language use': this is evidently not feasible in 2-hours weekly direct instruction.

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