
Morphological and Word-formation instruction Processes Knowledge of EFL Learners

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ABSTRACT: *This study is set up to investigate the impact of the morphological and word-formation instruction processes on Saudi EFL students' vocabulary knowledge. The New Vocabulary Level Test (NVLT) and the Morphological Awareness Test (MAT) were used to measure the extent of the words-formations process that can be received by Saudi EFL learners; and their ability to use these words-formations processes in a context appropriately. About two groups control and experimental (each had 20 female participants) from the first level, the descriptive analytical approach was used. The experimental group was taught using explicit word-formation processes theory, whereas the control had no specific paradigm. The results showed that it is beneficial to concentrate on word-formation processes instructions using explicit teaching methods in EFL classrooms to raise students' morphological awareness and improve their vocabulary knowledge capacity. Therefore, the study revealed that using an explicit teaching method, especially for the Arab EFL learners' classes can make a difference and should be added to the EFL classroom.*

KEYWORDS: applied linguistics, morphology, word-formation, vocabulary knowledge, semantics

INTRODUCTION

The process of word-formation is an essential part of learning a foreign language. Through learning new vocabulary, learners can develop their understanding and use of word production processes. Arab learners of English encounter major problems in forming words. Researchers found that Arab ESL/EFL learners face difficulties in learning and using English effectively because of their limited vocabulary and cultural knowledge (Abdan, 1991; Ahmad, 2004; Yen and Mohamad, 2020; Mohammed, 2021). They lack opportunities to use English in their daily life. As a result, many problems arise when they study at university because, in many cases, the medium of instruction is English (Khasawneh, Mohammad, and Ibrahim, 2012; Abdelgadir, 2016; Ghounane, 2020; Yungwei et al, 2019; Hisham, 2008; Rabadi, 2019, Mohammed, 2021). Saudi students at university lack knowledge in words-formation processes and this can affect their studies. Generally, EFL learners in Saudi Arabia show very little progress (Ahmed, 2010; Alrabai, 2016; Alshammari, 2020). Since the English language is considered a foreign language in Saudi Arabia, the use of the language is very little in public life. Thus, vocabulary acquisition is essential for learning a foreign language because learners rarely use vocabulary items outside

their classrooms. Therefore, learners with poor vocabulary need the ability to build their word-formation knowledge in their academic or non-academic endeavors (Al-Darayseh, 2014; Mohamed and Mahmoud, 2014). AL-Qahtani (2016) observed that learners' limited vocabulary normally leads to their poor reading skills. Additionally, (Alshammari, 2020) conducted a study on 85 participants from the Saudi context and studied their vocabulary levels. He found that the serious problem that students face (especially those who are majoring in English) is that the majority of students fall in the first 500-vocabulary level. Moreover, Alshammari's, (2020) results show it is better to use more than one strategy (two or more) to improve the vocabulary size, and to guarantee the improvement they should be used equally as well. In another study, Al-Masrai and Milton (2012) found that university-level students are somehow below the level in gaining enough vocabulary knowledge to make them study any texts independently, or have reached the levels of fluency associated with the required knowledge. Moreover, Al-Masrai & Milton (2012) found that the vocabulary size of their participant is around 5000 words after graduation which suggests that learners will be competent rather than fluent users of English thus, they will need language support and more training to succeed in their upcoming professional careers. This paper attempts to discover the reasons students make mistakes when forming the different types of English words. Moreover, through intervention, it attempts to investigate problems and difficulties that college learners face in making English words and find out the impact of word-formation instruction they received on their academic achievement. The study hypothesized that an explicit approach in teaching vocabulary and word formation morphological processes to students can facilitate the learnability of vocabulary. The following two questions guided this study.

- 1) *to what extent does word-formation process training received by Saudi EFL students affect their vocabulary?*
- 2) *are Saudi students able to use an appropriate word-formation process in a given context?*

LITERATURE REVIEW

Importance of Vocabulary Knowledge

EFL learners encounter major problems in forming words and learning effectively because of their limited vocabulary, idiom, and cultural knowledge (Yungwei et al, 2019; Yen & Mohamad, 2020; Mohammed, 2021).

Relatively, Saigh and Schmitt, (2012) considered vocabulary as an essential component of language teaching. Partly, the reason because only recently research focusing on vocabulary was published during the early 1990s (Laufer, 1997; Folse, 2004; Nation, 2001; Saigh & Schmitt, 2012), and several research articles focusing on vocabulary issues appeared with regularity and how to set up a principled approach to teaching vocabulary.

Some exceptional teachers treated language itself as a curriculum material, devoting attention to acquiring word meaning and interest in words (Allington and Johnston, 2002). Therefore, active engagement plays an important role in learning the meanings of specific words (Blachowicz & Fisher, 2004).

Various researches investigate strategies for teaching words and suggest that there is no single model of instruction that is uniformly effective. The context for learning new word meanings varies depending on factors, the depth of word knowledge, and the complexity. Thus, effective vocabulary instruction requires a repertoire of teaching activities and instructional strategies coupled with the teacher's ability to choose appropriately within this repertoire (Carter and McCarthy, 2014). Luckily, contexts can apply to a certain characteristic of effective instruction (Blachowicz and Obrochta, 2005).

Types of Words and Word-Formation Processes in English

The smallest units of language that have a meaning or a grammatical function and form words or parts of words are called morphemes. In writing, individual morphemes are usually represented by their graphic form (Zapata, 2000). There are four main kinds of word-formation differentiated. They are prefixes, suffixes, conversion, and compounds (Cambridge Dictionary, 2021). Researches show that words that are difficult to pronounce are more difficult to learn (Thornbury, 2004).

As proposed by Hiebert & Kamil (2005) word has two forms, oral and printed vocabulary. Meanwhile, they add that knowledge of words consists of two forms (productive and receptive or recognition).

In vocabulary learning, according to (Madden, 1987; Wei and Wenyu, 2014; Xhina, 2013), there are several aspects of lexis; a) boundaries between conceptual meaning (separate it from words of related meaning, e.g., cup, mug, bowl); b) polysemy (various meaning of a single word form, e.g., head: of a person, of a pin, of an organization); c) homonymy (several meanings which are not closely related (e.g. a file); d) homophony (e.g. flour, flower); e) synonymy (e.g. extend, increase, expand); f) affective meaning (attitudinal and emotional factors/denotation and connotation); g) style, register, dialect (levels of formality, the effect of different contexts and topics, as well as differences in geographical variation); h) translation (differences and similarities between the native and the foreign language); i) grammar of vocabulary (rules of different words forms e.g. sleep, slept, sleeping); j) pronunciation (ability to recognize and reproduce items in speech).

Word-Formation

In recent decades, the importance of new words increasingly evolved into languages which draws our attention to gain more knowledge about the target language, "*a new word is created*

every 98 minutes. It is also stated that approximate estimation of words in English is 1,041,257.5 number of words by January 1, 2017” (Monitor, 2017). The processes of word-formation may be defined as a set of procedures for making new words. It is the creation of new words as defined in the Dictionary of Applied Linguistics. It also involves the words’ meanings and how words are constructed using small important items (Soudek, 1981) and word-formation processes (Mustafa, Kandasamy, and Yasin, 2015; Wei & Weny, 2014).

METHODOLOGY

As mentioned above, this study aims at investigating the impact of the word-formation instruction processes and morphological awareness on Saudi EFL students’ vocabulary knowledge. The method used here is quantitative methodology. Thus, participants were given pre and post-tests (New Vocabulary Level Test and Morphological Awareness Test) to measure their word-formation instruction processes and morphological awareness. Therefore, the researcher assumes that students face difficulties in making English word-formation and morphological process and highly affect their vocabulary knowledge.

Population

The population includes all students from English Department in the University colleges who enrolled in the academic year 2019-2020 (First term). About 40 female students from the first level were chosen to participate in this survey. They were divided into two groups to see if any significant differences can be reflected between the two groups. Each group (the control and the experimental) contains 20 participants. All the participants are Saudi EFL learners. They are required to study about 18 hours weekly during this term within 15 weeks to develop their skills in reading, writing, listening, and speaking in English, besides the vocabulary component to succeed in their subsequent academic studies. The intervention was done during the first term of the academic year 2019-2020. The selection of the sample of the study is done using a non-probability method (i.e., the outcomes of the study cannot be generalized to all students all over the world, but only to the students who are majoring in English as a foreign language in Albaha University as well as to Arab natives).

Tools of the Study

Two tests were used to measure the study’s questions regarding the impact of morphological instruction on the participant’s morphological awareness; and their vocabulary knowledge capacity of them. The two tests are:

1) New Vocabulary Level Test (NVLT) which was designed by the researcher and modified according to McLean and Kramer from Abdan’s, (1991) model, and

2) Another sample test was taken from McBride-Chang, et al (2005) Morphological Awareness Test (MAT) with its two parts (Morphological Structure Test and the Morpheme Identification Test). The MAT test was adjusted to fulfill the purpose of the study and be more appropriate to the participants. It is used to test students' receptive and productive vocabulary knowledge. Additionally, it aims at determining students' vocabulary knowledge; and the degree of proficiency in the most frequent words in each corpus (Level Tests).

According to many scholars, The Vocabulary Level Test was widely used to test students' vocabulary (Bauer and Nation, 1993; Schmitt, 2000; Nation, 2001). As the participants are considered EFL learners, it is expected that their vocabulary size is limited, so having this test is appropriate for them. Moreover, according to Bauer & Nation (1993); Schmitt (2000); Nation (2001), the NVLT is created from frequency lists that are representative of newer and larger corpora. Additionally, the NVLT overcomes the biggest problems with the VLT item format that does not support item independence, and its instructions are complicated and require much time to make students understand them. Therefore, the NVLT test, as McLean & Kramer (2015) state, is used because it could be applied to diagnose students' vocabulary knowledge at the beginning of the study; determines performance throughout the study (i.e., formative assessment); and finds the knowledge earned by learners (i.e., summative achievement). In this test, students were asked to answer two parts. In each part (part 1 and part 2) there were 10 items. As revealed by McBride-Chang, et al, (2005), they were constructed to measure analytic and synthetic word-formation rules (*see Appendix 1*). The total is 10 marks for the two parts. On the other hand, the MAT test is adapted from McBride-Chang, et al (2005), and some of its items were modified by the researcher to suit the Saudi context following the AI Break module (AI Braik, 2007). It is used to examine students' awareness level of the relationships between words and how they correlate to each other in a sentence (*see Appendix 2*). It consists of two parts. The first part (part 1), the Morphological Structure Test (MST) measures students' ability to produce new words using different morphemes. About 5 expected items were presented into sentences and the participants are asked to produce words for each object or concept presented in each situation. The responses required morpheme compounding or syntactic manipulation. The purpose of this test was to check learners' awareness of lexical structure, and the way morpheme or words parts relate to each other in a sentence (inflectional and derivational affixes). Each morpheme in this test is given one point, so the total score of the MST test (part 1) is 5 marks accordingly. The second part (part 2), includes the Morpheme Identification Test (MIT). Likewise, the MIT test includes 5 items (also given 5 marks) that determine learners' knowledge and ability to analyze and divide words into smaller meaningful units (*see Appendix 2*). The items used in both parts differ somewhat from the items of the original MIT test to suit the participants' tailored curriculum and vocabulary capacity. The participants were asked to identify words and segment them into their morphological components based on their vocabulary knowledge without context influence. The chosen morphemes in the test were neutral. So, no phonological and orthographical changes were caused to the stem. Each morpheme in this test received one point.

Moreover, in each item, there is a stem with inflectional affix or derivational affix. Both tests were given to the sample of the study in two phases (pre-and post-test).

Procedures

As mentioned above, the participants were divided into two groups (control and experimental). The intervention took place during the first term of the academic year 2019-2020. First, the control group was taught traditionally without giving any special concentration on morphological awareness or word-formation processes, while the experimental group was taught using explicit teaching of vocabulary processes (morphological awareness and word-formation processes) and teaching word parts to test their effect on increasing students' vocabulary knowledge. Both groups sat for the pre-test at the second week in the first term. Then they were given the post-test at the end of the first term of the same academic year (after 14 weeks). The participants' (control and experimental group) marks of both tests (pre and post-tests) were collected and calculated using SPSS program analysis to find the differences between them. The t-test analysis method is used to determine whether there are any statistically significant differences between the two groups in the two tests (see table 1 and appendix 3). Again, the SPSS program was used to calculate and analyze the data collected from both pre-and post-tests.

The two groups were involved in a vocabulary course which has been prepared by the English department for the first level students. The experimental group was subjected to an explicit teaching method (teaching word parts and/or formation), but the control group was not to see if their scores were obtained by any influence factors. The pre-test was given to both groups at the beginning of the program and the post-test was presented after the experimental group finished the expected time to cover the curriculum using the explicit method.

RESULTS AND DISCUSSION

To analyze the impact of morphological awareness and vocabulary knowledge on students' performance, the researcher collected the participants' scores of both groups on the two tests (pre and post-tests) and calculated carefully to draw the results (see table 1 and appendix 3). Moreover, to find any possible significant difference between the mean scores of the experimental group on the pre and post-test, the SPSS was used in the calculation of the two test types respectively. Concurrently, a t-test analysis method to measure the study questions and interpret the participants' scores was used to find the results. Therefore, as the first question states "*To what extent word-formation process and morphological awareness training received by Saudi EFL learners impact their vocabulary?*" the analysis shows that there is no significant difference between both pre and post-test of (NVLT) model. The mean value of the experimental group in (the NVLT) test (see table 1 and appendix 3) is 4.05 and the standard deviation is 1.959 with a variance of 3.389, while their average score increased in the post-test (the mean 7.25, and

the standard deviation is 1.715 with variance 2.303). On the other hand, the control group's mean is 3.75 and the standard deviation is 2.552 with variance 6.513 repeatedly, while their scores in the post-test slightly increased (mean=4.05; standard deviation=.466; and the variance 4.261). Concurrently, their results in the MAT test (the two parts together), the experimental group showed an interesting result, especially in the post-test. The experimental group results in the pre-test mean value is 6.90, and the standard deviation is 1.682 with variance 2.832; whereas the mean value in the post-test is 8.80 and the standard deviation is 1.005 with variance 1.011. However, the control group, with some sort of frustration, their results declined in the post-test compared with their scores in the pre-test (in the pre-test the mean=6.45; standard deviation=1.791; variance=3.208; whereas in the post-test the mean=6.250; and the standard deviation=1.681; and the variance is 2.829). Logically, from the previous results, one can conclude that there is a difference in the improvement of the students of the two groups in the vocabulary component.

TABLE 1. the mean and standard deviation of both control and experimental groups

	Experimental Group		Control Group		Experimental Group		Control Group	
	NVLT test				MAT test			
Students Code	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Mean	4.05	7.25	3.75	4.05	6.90	8.80	6.45	6.250
Std. Deviation	1.959	1.517	2.552	.466	1.682	1.005	1.791	1.681
Variance	3.839	2.303	6.513	4.261	2.832	1.011	3.208	2.829

Implications

Explicit teaching of vocabulary

Scholars have examined the value of teaching vocabulary. For instance, Nation (2001) concludes that there are other ways of increasing the vocabulary size such as incidental learning, and ways how vocabulary should be taught are questionable, isolated, integrated, or incidental. In fact, there are many differences between teaching a language to native speakers and EFL learners, but native speakers quickly learn a huge amount of vocabulary more than foreign language learners (Nation, 2001). Consequently, a study by Rabadi, (2019) revealed that explicit teaching of morphological awareness in the classes must be put into practice, besides using morphological knowledge in the English language curriculum in classes to improve the morphological awareness and vocabulary size of the students.

It can be said that this study covered the important aspects in studying how to improve students' level and find a suitable method to study morphological and word-formation processes such as

explicit teaching of vocabulary. As revealed in previous studies, the current study concluded that one can find that almost all of them covered the study of native learners, but it was neglected in investigating EFL and mainly Saudi students. Even though the results in some are similar, this study recommended that the application of explicit teaching of vocabulary should be limited to morphological awareness and word-formation processes.

Teaching word parts to increase students' vocabulary

Linguistically, there is a general saying state that because 97% of the English words are derived and contain suffixes and prefixes it is helpful to teach students morphology to increase their knowledge of vocabulary (Nation, 2001). Additionally, Nation (2001) adds these affixations are essential in forming and reforming words rather than memorizing their semantic function. Therefore, learners can meaningfully derive and decompose words that will lead to meaningful learning instead of rote memorization. The most interesting finding related to a new paradigm is that Al Jarf's (2011) use of translation method reconciled with this study which deals with morphological processes. Therefore, it is better to try to use this method in teaching vocabulary components.

Recommendations

The findings of this study proved that students who are given word-formation process instructions correctly scored higher on the New Vocabulary Level Test and the Morphological Awareness Test. Thus, it is confidently concluded that word-formation process instruction helps students to raise their morphological awareness and improve their vocabulary knowledge. Therefore, this paper highly recommends the use of word-formation process instructions as an explicit teaching method in EFL classrooms. Additionally, it is highly recommended to master the word-formation process by learners as morphological awareness helps learners to remember the meaning of the newly learned words (Yucel-koc, 2015). As mastering vocabulary is considered as one of the most necessary tasks in an EFL class, teachers can adopt different strategies for teaching word or vocabulary, such as repetition, memorization, and morphology instructions and mainly explicit and word parts; and translation method (Al Jarf, 2011) as a result students can infer the meaning of any unfamiliar word when they received a great knowledge about the instruction in morphological analysis (Anglin, Miller, and Wakefield, 1993).

CONCLUSIONS

As mentioned in the previous sections, the purpose of this study is to examine the impact of the morphological and words formations instruction processes on Saudi EFL students' vocabulary knowledge and acquisition. In conclusion, the results of this study show the important role that morphological instruction and analysis play a crucial role in improving students' vocabulary knowledge and morphological awareness. In this study, the NVLT and the MAT tests were given to a small number of students because of the time limit and the limitations of the study. After increasing their awareness about segmenting words, and made up of affixes (prefixes and

suffixes), they became skillful in decomposing and reconstructing words. Additionally, as English words are described as derived and contain suffixes and prefixes it is helpful to use explicit and word parts to increase students' vocabulary capacity. As seen in the discussion, better learning outcomes could be achieved by the word-formation process because it is related to various language skills, such as spelling, vocabulary growth, and reading comprehension. It is important to emphasize that studies that examined the difference between explicit vs. implicit instruction are in favor of explicit teaching. Thus, explicit teaching can make a difference and should be added to the EFL classroom. Therefore, the study revealed that it is beneficial to use word-formation process instructions as an explicit teaching method in EFL classrooms especially in the Arab learners' classes of English as a foreign language. Moreover, teaching word parts helps in increasing students' vocabulary knowledge capacity. Thus, the results of the tests of the study were conducted at Albaha University and especially those who studied at the College of Sciences & Arts in Qilwah with a relatively small number of Saudi EFL students in size, so it is highly suggested to replicate another study with larger sample size. Also, a similar study should be conducted involving male students as this study investigated only female students.

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Appendices

Appendix 1

This is a vocabulary test. Please select the option A, B, C or D which has the closest meaning to the word in **bold**.

Example question

Time: they have a lot of **time**

A. money B. hours C. food D. friends (*The correct answer is B*)

If you do not know the word at all, please do not answer the question and continue to the next question. However; if you think you may know the word please try to answer.

New Vocabulary Level Test (NVL) Part 1

1\ **See**: They **saw** it

A. Cut B. waited C. looked at D. started

2\ **Stone**: She sat on a **stone**

A. hard thing b. kind of chair C. soft thing on floor D. part of tree

3\ **Poor**: We are **poor**

A. Have no money B. happy C. Very interested D. tall

4) **Drive:** She **drives** fast

- A. Swims B. learn C. Throw balls D. uses a car

5) **Jump:** She tried to **jump**

- A. Lie on top of the water B. get up off the ground C. Stop the car on the road
D. very fast

6) **Shoe:** Where is your other **shoe**?

- A. The person who look after you B. the thing you keep your money in
C. The thing you use for writing D. the thing you wear on your foot

7) **Test:** We have a **test** in the morning

- A. Meeting B. travelling somewhere C. a set of question D. an idea to do something

8) **Nothing:** he said **nothing** to me

- A. Very bad thing B. zero C. Very good thing D. something

9) **Cross:** do not **cross**

- A. Go to other side B. push something C. Eat too fast D. wait for something

10) **Actual:** the **actual** one is larger

- A. Real B. old C. round D. other

NVLT Part 2

1) **Maintain:** Can they maintain it?

- a. keep it like it is b. make it larger c. get a better than it d. get it

2) **Period:** It was a difficult period

- a. small set of question b. time c. thing to do d. book

3) **Standard:** Her standard is very high.

- a. the back under her shoes b. test scores
c. cost of something d. level of how good she wants things to be

4) **Basis:** this was used as the basis

- a. answer b. resting place c. main part d. next step

5) **Upset:** I am upset.

- a. strong b. famous c. rich. d. angry

6) **Drawer:** the drawer was empty

- a. box that goes in and out for clothes b. place to keep cars
c. place used to keep things cold d. animal house

7) **Pro:** He is a pro

- a. a person who has the job to fine important secrets
b. person who writes articles
c. someone who is very good at doing something and is paid to do it.
d. stupid person

8) **Result:** they were waiting for the results.

- a. right time b. questions c. money d. effects of something

9) **Lend:** she often lends her books.

- a. lets people use them b. draws inside them
b. c. cleans them d. Writes her name on them

10) **Seal:** they sealed it.

- a. sign b. ball c. bar d. many

Appendix 2**The Morphological Awareness Test (MAT) part 1.****1- Morphological Structure Test (MST)**

Using one word only, come up with a noun or a verb for the underlined actions and objects. Please remember, if you do not know the correct answer, do not Guess. Just leave it blank.

See the example below.

Example:

There is a kind of box for lunch, and we call it a lunchbox. However, if there is another kind of box for tools. We call it a toolbox.

- 1\ Early in the morning we can see the sun coming up. This is called a sunrise. At night, we might also see the moon coming up. What could we call this? We call it a _____.
- 2\ Yesterday my mother cooked lunch for us, now it is lunchtime and she is _____.
- 3\ Ahmed is professional in taking photographs. He is a photographer. However, Ali is professional in writing, so he is a _____.
- 4\ I have one monkey, but my sister has many of them. She has five _____.
- 5\ The better name for flower made of paper is _____.

The Morphological Awareness Test (MAT). Part 2, Morpheme Identification Test (MIT).

Please break up the words into their meaningful parts. Please state the meaning of words chunks in English.

NO	Word	Meaning	Part 1	Part 2	Part 3
e.g.	Bilingualism	Able to speak and understand two languages. Expressed or used in two languages.	Bi	lingual	
1	Government				
2	Changeable				
3	Education				
4	Productive				
5	Teachers				

Appendix 3

pre- and post-tests results of both (NVLT) and (MAT) tests scores of both groups

	Experimental Group		Control Group		Experimental Group		Control Group	
	NVLT test				MAT test			
Students Code	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	3	7	3	4	6	9	7	6
2	4	7	3	4	6	8	6	6
3	2	8	4	4	5	7	8	8
4	5	8	7	6	7	8	8	7
5	3	7	2	3	7	9	5	6
6	2	7	10	10	5	9	4	5
7	1	4	5	6	4	8	6	5
8	4	7	8	7	8	9	10	9
9	7	9	0	2	9	10	10	9
10	9	10	5	5	8	10	7	6
11	3	6	3	3	5	7	5	6
12	2	5	2	3	4	7	5	5
13	5	7	6	5	8	9	6	4
14	5	8	4	4	9	9	6	5
15	4	7	3	2	9	10	6	5
16	5	8	2	3	8	9	7	7
17	3	5	3	3	6	9	5	5
18	3	8	1	2	7	9	3	4
19	4	7	0	1	8	10	7	7
20	7	10	4	4	9	10	8	8
Mean	4.05	7.25	3.75	4.05	6.90	8.80	6.45	6.250
Std. Deviation	1.959	1.517	2.552	.466	1.682	1.005	1.791	1.681
Variance	3.839	2.303	6.513	4.261	2.832	1.011	3.208	2.829