

The Awareness of Morphemic Knowledge for Iraqi High School Learners' Vocabulary Acquisition in the EFL Context

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Abstract

The study attempts to assess the awareness of morphemic knowledge among Iraqi high school learners in the domain of English Foreign Language (EFL) context. Two tests were employed in this study namely, "Morphological Relatedness Test (MRT)" and "Morphological Structure Test (MST)" adopted and adapted from Curinga (2014). These two tests are essential and crucial instruments employed to measure the students' morphemic knowledge for this research. The students' ability was measured by the two tests to reflect and manipulate morphologically complex derived words in English. Twenty Iraqi high school students were involved to achieve the purpose of the study. The study analysis disclosed that the participants accomplished poorly in both tests of MRT and MST. The findings also revealed that there was no significant difference between the students' performance on MRT and MST. They were unable to reflect and manipulate efficiently. However, the students' performance on reflective aspect was a little higher than manipulative aspect. It is true that Iraqi students are suffering from the phenomenon of the morphemic knowledge. They indeed need to be aware of the importance of the morphemic knowledge because this knowledge can drive to construct new words and deconstruct the complex words in addition to the reading comprehension.

Keywords: EFL context, Iraqi high school learners, morphemic knowledge, vocabulary acquisition

1. Introduction

Morphemes are the essential parts construction of words for both spoken and written language. Carlisle (1995) has defined morphological awareness as a "conscious awareness of the morphemic structure of words and their ability to reflect on and manipulate that structure" (p. 194). Words with more than one morpheme are divided into the smaller pieces, cues are provided for three: "meaning, spelling, and pronunciation" (Carlisle, 2003). In this regard, the word *payment* includes two morphemes, the main part or the base is (*pay*) that is a verb and the suffix *-ment* that is added to transform the verb into a noun. The aim of research points out that morphological awareness plays a crucial factor to the students' ability on how they use the prefixes or suffixes to the intended purpose (Deacon & Kirby, 2004; Mahony et al., 2000; Nagy et al., 2006; Nunes & Bryant, 2006).

Vocabulary acquisition is a crucial process in field of language learning in both contexts the second or foreign language. From the perspective of Koosha & Salimian (2010), the heart of communicative competence is constructed and developed by lexical competence and this is regarded as a consensus among vocabulary experts. Some researchers claim that vocabulary is a vital factor in learning a language especially English language (Asgari & Mustapha, 2011; Gu, 2003; Letchumanan & Tan, 2011; Kitchakarn & Choocheepwattana, 2012). Learners encounter difficulties and obstacles in their communication and language development when they have deficiency of vocabularies (Kitchakarn & Choocheepwattana, 2012; Letchumanan & Tan, 2011).

Linguistic aspect is an essential factor leading learners to "obtain meanings of unfamiliar and unused words..." (Sabti et al., 2016, p. 212). The deficiency of vocabulary among either English Foreign Language (EFL) or English Second Language (ESL) learners is because the poor understanding of linguistic aspect especially in morphology (Jalaludin et al., 2008; Kaweera, 2013; and Chen et al., 2008). Since EFL/ESL learners do not use affixes suitably to the root words in the English language, EFL/ESL learners usually commit word-level errors (Jalaludin et al., 2008; Akande, 2005). These errors point out that EFL/ESL learners still suffer to comprehend the meaning of a complex word or to form a complex word. To be more precise, this refers to the learners' incompetence in morphology knowledge.

2. Research Problem

The comprehension of complex words is a main part in grasping the meaning of word and it is also a real problem among struggling learners in secondary schools and undergraduate level. It is considered a real problem when these learners have inability to analyze morphology or word parts to decode the meanings of word (Ferguson, 2006).

Morphology is the science which studies the structure of words, rather the smallest meaningful units of a language and the formation of these units into words such as inflected, derived, and compound words (Lam et al., 2012). It is necessary for learners to know the vocabulary size to help them approach a text comfortably. From viewpoint of Koosha & Salimian (2010), learners feel dissatisfied in reading a text that has numerous new and complex words. However, if the text has more familiar vocabularies, they probably tend more to resume with the reading task. Thus, vocabulary size is an essential step that learners should take before they can approach a text.

According to Ferguson (2006) numerous complex words can be absorbed by students if they have the ability to decode these complex words into minimal morphemic parts. In this regard, Kieffer & Lesaux (2007) state that learners can predict word meanings if they have morphological knowledge (the knowledge of root words and affixes). Morphemic knowledge is, therefore as an effective word-learning tool for the vocabulary development of learners that steers to decode meaning from part of words. Carlisle & Stone (2005) say if learners are familiar with the parts of words, they can derive the meanings or build new words. Similarly, Wang et al. (2009) claim that if learners are aware of the types of morphemes such as (prefixes, suffixes and base words), they are able to infer word meaning. The present study exclusively focuses on morphologically complex derived words. This is because learners have low level of competency in derivative and compound words compared to inflection ones in addition to the massive amount of derivational affixes (Feldman, 1993).

2.1 Purpose of the Study

The study aims to investigate knowledge of Iraqi high school learners in the content of morphologically complex derived words.

Three research questions are for this study:

- 1) What is the performance of the Iraqi EFL students in Morphological Relatedness Test (MRT)?
- 2) What is the performance of the Iraqi EFL students in Morphological Structure Test (MST)?
- 3) What is significant difference between Iraqi EFL students' performance on MRT and MST?

2.2 Research Hypotheses

- 1) There is a significant difference between Iraqi EFL students' performance on Morphological Relatedness Test and Morphological Structure Test.
- 2) Iraqi EFL students' performance on reflective aspect (MRT) is significantly higher than the manipulation aspect (MST).

2.3 Significance of the Study

The study attempts to add an importance to the existing literature in the field of morphological knowledge particularly derivational morphology. Morphological knowledge and derivational morphology in particular could be a significant element to increase learners' vocabulary size. The study can also be of great significance for textbooks developers, syllabus designers and English teachers in order to focus more on the use of morphological knowledge in both languages learning and teaching to assist learners to absorb and learn numerous new words.

3. Literature Review

3.1 Morphological Knowledge

Morphological knowledge has the high level of importance for students to absorb the meaning from words (Carlisle & Stone, 2003). Morphological knowledge is defined how the learners understand the structure of words morphologically in addition to their ability to reflect on and manipulate that structure (Carlisle & Feldman, 1995). Baumann et al. (2002) assert that the meaning of a word can be unlocked by examining its morphemes. Thus, morphological knowledge helps the learner to examine the complex word morphologically that drives to uncover the meaning of the word. Students with this knowledge have the ability to construct and deconstruct meaning from the morphemes within the word itself not depending on contextual clues or dictionary.

3.2 Morphemic Units

A morpheme is regarded as the smallest meaningful unit. Morpheme stands for affixes (prefix, infix and suffixes). Affixes are attached to a word stem to form a new word. Affixes may be derivational, like English -ness and pre-, or inflectional, like English plural -s and past tense -ed.

3.3 Derivatives

Derivational morphemes alter a word's part of speech. Affixation is a main element in the processes of derivational words and affixes are grammatical. Besides, they are interdependent as well as they have complementary roles (Saif, 2011). Derivative refers to a process of forming new words via the technique of affixation to an existing root word. It is regarded one of the techniques in the formation of a word such as the root person can be used to produce personal, personalization, etc (Saif, 2011). In addition, as argued by Zhang & Koda (2013) that derived words also include phonological or/and orthographic alterations, for example, (decide and decision), and thus, a derivational affix changes the meaning of word if it is added to a base word. The grammatical classification of a base word limits for derivation. In English language, prefixes and suffixes belong to derivatives and there are massive amounts of derivatives (im-, un-, -able, -er, etc).

3.4 Morphological Knowledge and Vocabulary Development

Numerous studies have dealt with the relationships between vocabulary and morphological knowledge. It is an essential step to nurture vocabulary among learners (Biemiller & Boote, 2006). Students in secondary or tertiary level should read more complex texts in order to be familiar with cognitive strategy to get more complex and new words from the texts (Kieffer & Lesaux, 2007). Students should be taught the affixes and base words as word-part clues to increase their vocabulary size and to drive to the text comprehension (Baumann et al., 2003 and 2003). This notion has been boosted by Gómez (2009) who said that morphemic awareness is the main element to increase students' vocabulary and lead to reading comprehension. In addition, Gómez (2009) states that the students' ability to perform morphemic analysis is leading to learning English faster.

3.5 Morphological Awareness

The ability of a student to identify families of a morphological word, for example, "*nation, national, nationalize and nationalization*" could be a valuable skill when reading (Curinga, 2014, p. 3). A study on printed words in English subject for school level, Nagy & Anderson (1984) discovered that 60% of words of third grade level students faced in texts were complex morphologically derived words. For this reason, the meaning was obtained for these complex words by using breaking down method into their morphemic constituents.

Awareness of a student in morphological complex words could lead to both breadth and depth in the knowledge of vocabulary. On the one hand, depth of vocabulary knowledge refers to the ability to recognize all morphemes in a word. For example, both *nation, national* have a high level of frequency in English than *nationalize and nationalization* (Graves et al., 2013; Curinga, 2014). However, the two examples of *nationalize and nationalization* could probably only be found in text instead of in oral language. Thus, the ability to use breaking down method for the word *nationalization* into its morphemic parts is assigning the meaning to the smaller constituents. Here is an example of the word "*nationalization* into its morphemic parts: the base noun *nation* + the adjectival suffix *-al* + the verbal suffix *-ize* + the nominal suffix *-tion*." (Curinga, 2014, p. 3). In this method, it could facilitate to produce comprehension of the whole word.

On the other hand, Breadth of vocabulary could also be extended in the same process. Here is an example to show meaning assigned to a novel low level of frequency for a complex word that a student encounters in a text. For example, the word *beautification*, here is to identify the nominal suffix *-(ca)tion* (Curinga, 2014). In this case, when a student separates the suffix *-(ca)tion* from the rest of the remaining word *beautifi-*, then the word *beautifi-* has two other meanings in English as a high level of frequency and it can be identified morphologically, i.e., *beautiful* and *beauty* and then utilized to assign meaning to the new word (Curinga, 2014).

3.6 Past Studies

A study conducted by Varatharajoo et al. (2015). The study dealt with the awareness of morphemic knowledge. The sample of the study was 75 Malaysian secondary school learners in the ESL context. Two instruments utilized in this study were "Morphological Relatedness Test" and "Morphological Structure Test" (adapted from Curinga, 2014). These two instruments were used to assess the morphemic knowledge of students and to measure their ability for both tasks (reflection and manipulation) of morphologically complex derived words in the target language, namely English language. The results revealed that the participants have modest ability in both tasks i.e., to reflect and manipulate morphologically complex derived words. In fact, the students demonstrated poor performance in manipulation task in comparison to the reflective task.

Another study done by Curinga (2014), the researcher examined morphological awareness role in reading comprehension of 88 high school emergent bilinguals. The participants' age was ranged from 15 to 20 years ($M = 17.4$, $SD = 1.2$; 50 males and 38 females). The study's materials were split into three categories: Control Measures, Reading Measures and Morphological Awareness Measures. Control Measures aim to control the perplexing variables in addition to the measurements of both independent and dependent variables whereas Reading Measures also focuses on the measurement of variables, yet on the dependent and mediating variables. Morphological Awareness Measures category also focuses on the measurement of variables but it only measures the independent, or predictor variables. The findings asserted that morphological awareness took an important role in reading comprehension. Specifically, morphological awareness in the First Language (L1) boosted both L1 reading comprehension in addition to the morphological awareness of second language.

Varatharajoo et al. (2015) attempted to explore the effect of morphemic analysis awareness on ESL secondary school students' vocabulary acquisition. The sample of the study was 100 ESL secondary school students and a quasi-experiment was run on two groups (inflectional and derivational) and one control group. Two tests were applied to measure the students' vocabulary acquisition, namely Morph-Analysis Test and Morph-Vocabulary Test. ANCOVA analysis exposed that the two groups of the experiment accomplished a significant score in the two tests ("Morph-Analysis Test and Vocabulary-Morphemic Test"). Yet, the inflectional group demonstrated a fairly higher score compared to the derivational group. Therefore, the findings of the study imply that morphemic analysis awareness can be as a major alternative strategy for acquiring and increasing ESL secondary school students' English vocabulary.

4. Methodology

4.1 Participants

Twenty high school learners from the Iraqi school in Malaysia participated in this study. Fraenkel et al. (1993) recommend a small number of participants for experimental studies, thus twenty participants are considered appropriate for this study.

4.2 Instrumentation

"Morphological Relatedness Test" and "Morphological Structure Test" adapted from Curinga (2014) are utilized to measure the ability of students to reflect and manipulate morphologically complex derived words in English.

4.3 Morphological Relatedness Test

The researcher administered "Morphological Relatedness Test" to determine the ability of participants to reflect on similar meaning of the given words such as A: weak weakness YES NO; B: bus business **YESNO**). Curinga (2014) claims that this test is vital as it leads them to measure the participants' reflective ability. Participants are asked circle **YES** if the second word means the same almost the same as the first word; **NO** if the second word is not similar to the first word.

4.4 Morphological Structure Test

The "Morphological Structure Test" is employed to measure the ability of participants to manipulate derivational morpheme to make new meanings. The test is crucial as it leads to measure their manipulative ability (Curinga, 2014). The participants were informed to alter the word that best matches the sentence, for example, **Use**. This book is very **useful**.

5. Results

The results of study disclosed that morphological knowledge of the participants was at a diffident level. The participants showed their inability to reflect and manipulate in these two tests proficiently. Thus, the alternative hypothesis was rejected due to no significant difference between the performances of the participants in both tests ("Morphological Relatedness Test" and "Morphological Structure Test"). Besides, the students did not display a higher proficiency level on reflective aspect than the manipulative aspect, therefore, the second hypothesis was also rejected. Rather, the participants did not perform more proficiently on reflective aspect than the manipulative aspect. As a result, their performance on reflective aspect was not significantly higher than the manipulative aspect. Table 1 illustrates the students' performances on the two tests.

Table 1. Descriptive statistics of paired sample t-test of the students' performance

Variable	No	Percent	Sum	Mean	Max	Min	SD
Morphological Relatedness Test	20	46.458	223	11.15	15	7	2.41214
Morphological Structure Test	20	39.375	189	9.45	13	6	2.064104

Table 1 illustrates that the students have shown a very poor performance on both tests, yet the performance on the “Morphological Relatedness Test” was slight higher than “Morphological Structure Test”. In this case, the students are not familiar with most of the common affixes and suffixes in particular utilized in the English lexicon. In effect, the findings of the study revealed that Iraqi EFL learners at secondary level have serious problems with the morphological knowledge and knowledge of derivational suffixes in particular and it creates a great challenge to this kind of students.

Figure 1 presents a clear picture of “Morphological Relatedness Test” results. Students' answers were 223 out of 480 as a sum of the answers and mean was also 11.15 out of 24. It is deemed as a poor performance and the students were unable reflect proficiently in this test. The participants have selected the wrong answer between Yes and No and the percent was 46.458. It implies that more than half of the participants failed to select the correct answer, rather they are not familiar with word building in English language and this poses a significant challenge for the Iraqi EFL learns. In this case, students require to read more a complex text in order to be familiar with morphological aspects and increase their vocabulary size. This method could steer them to achieve capably and the reading comprehension as well.

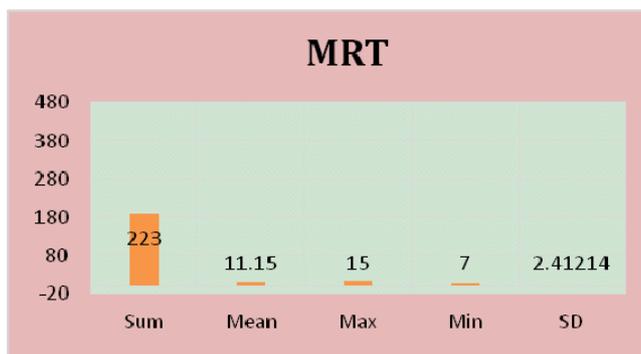


Figure 1. Morphological relatedness test

Figure 2 displays a complete depiction of “Morphological Structure Test” results. The figure elucidates the sum of participants' answers in manipulative aspect 189 out of 480 and mean was also 9.45 out of 24. It means that the participants failed to answer and were really not able to manipulate efficiently. This test had 39.375 percent of the answers right and this percent is less than the reflective test percent. The results obtained from this test signify that the participants encounter a real dilemma on how to manipulate capably. In fact, they need to learn how to deal with suffixes particularly and the morphological knowledge in general. Hence, they need to have more exposure to morphological knowledge and making them aware of the requirements of derivational suffixes.

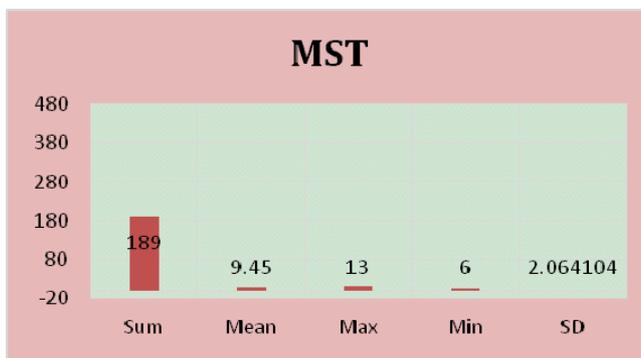


Figure 2. Morphological structure test

6. Discussion

The present study aims to investigate the effectiveness of morphemic awareness on EFL secondary school students' vocabulary acquisition. The findings of the research are discussed in two main areas, first, to investigate the performance of the Iraqi EFL students in both "Morphological Relatedness Test (MRT)" and "Morphological Structure Test (MST)"; second, to determine the significant difference between Iraqi EFL students' performance on MRT and MST.

The findings of the research revealed a very poor performance in both tests but the performance on reflective aspects was a slight higher than manipulative aspects. These findings refer to the severe setback of Iraqi EFL students. The first and second hypotheses were rejected because no significant difference between the students' performances in MRT and MST and they achieved poorly in both tests. In addition, their performances on reflective aspects were also not significantly higher than manipulative aspects.

These findings are in agreement with studies (Varatharajoo at al., 2015; Curinga, 2014; Varatharajoo at al., 2015). They allege that learners are not familiar with reflective aspects and manipulative aspects. They affirmed that the learners had inability to distinguish reflective ability from manipulative ability. This is because the learners suffer from the lack of knowledge on transparent and opaque derivations. Thus, this could be an obstacle in identifying word parts. Also, the findings of the study are in line with other studies done by Koosha & Salimian (2010). They asserted that derivational morphology generally plays the main challenge in contradiction of inflectional morphology. This sheds the light on the importance of teaching and learning morphology in Iraqi classrooms. Students should be taught how to apply the affixes generally and suffixes in particular to a root or base in order to aid them to become familiar with the structure of words. This could help them absorb the internal structure of the new words that they need to read and write (Koosha & Salimian, 2010).

The findings indicate that the participants face a hindrance in applying morphemic structure to construct new words. This is because of students' poor understanding and performance in derivational knowledge. Hence, the present study finds the morphological knowledge of Iraqi EFL high school learners is very low and some steps should be taken to solve this dilemma.

7. Conclusion

The study indicates that morphemic awareness is an effective vocabulary learning strategy and it certainly can become an obstacle for vocabulary acquisition for both ESL/EFL students in learning English vocabulary if they are not aware of this strategy. Morphemic awareness can become a real barrier for vocabulary acquisition in all levels from secondary levels to postgraduate levels.

Through the study results in comparing both tests "Morphological Relatedness Test" and "Morphological Structure Test", the study has drawn a conclusion that Iraqi EFL high school students are not able to reflect and manipulate morphologically complex derived words. In fact, Iraqi students are undergoing the occurrence of the morphemic knowledge. The importance of the morphemic knowledge should be taken into consideration because this knowledge is a substantial element in constructing new words and deconstructing the complex words. Besides, morphemic knowledge is the principal link that leads to the reading comprehension.

The finding of this study cannot be generalized because the tests covered a small number of the sample. Results extracted for this study will help Iraqi EFL students better understand the complexities of morphology in general and derivatives in particular, plus how this study contributes to increase students' vocabulary size in EFL context.

References

- Akande, A. T. (2005). Morphological errors in the English usage of some Nigerian learners: Causes and remedies. Retrieved from morphologyonline.com/documents/Akande3ug05.Pdf
- Asgari, A., & Mustapha, G. B. (2011). The type of vocabulary learning strategies used by ESL students in University Putra Malaysia. *English Language Teaching*, 4(2), 84. <https://doi.org/10.5539/elt.v4n2p84>
- Baumann, J. F., Edwards, E. C., Boland, E. M., Olejnik, S., & Kame'enui, E. J. (2003). Vocabulary tricks: Effects of instruction in morphology and context on fifth-grade students' ability to derive and infer word meanings. *American Educational Research Journal*, 40(2), 447-494. <https://doi.org/10.3102/00028312040002447>
- Biemiller, A., & Boote, C. (2006). An effective method for building meaning vocabulary in primary grades. *Journal of Educational Psychology*, 98(1), 44. <https://doi.org/10.1037/0022-0663.98.1.44>
- Carlisle, J. F. (2003). Morphology matters in learning to read: A commentary. *Reading Psychology*, 24(3-4),

- 291-322. <https://doi.org/10.1080/02702710390227369>
- Carlisle, J. F., & Feldman, L. B. (1995). Morphological awareness and early reading achievement. *Morphological aspects of language processing*, 189-209.
- Carlisle, J. F., & Fleming, J. (2003). Lexical processing of morphologically complex words in the elementary years. *Scientific Studies of Reading*, 7(3), 239-253. https://doi.org/10.1207/S1532799XSSR0703_3
- Carlisle, J. F., & Stone, C. (2005). Exploring the role of morphemes in word reading. *Reading Research Quarterly*, 40(4), 428-449. <https://doi.org/10.1598/RRQ.40.4.3>
- Carlisle, J. F., & Stone, C. A. (2003). The effects of morphological structure on children's reading of derived words in English. *Reading complex words* (pp. 27-52). New York: Springer US. https://doi.org/10.1007/978-1-4757-3720-2_2
- Chen, X., Hao, M., Geva, E., Zhu, J., & Shu, H. (2009). The role of compound awareness in Chinese children's vocabulary acquisition and character reading. *Reading and Writing*, 22(5), 615-631. <https://doi.org/10.1007/s11145-008-9127-9>
- Curinga, R. (2014). The effect of morphological awareness on reading comprehension: a study with adolescent Spanish-English emergent bilinguals. Retrieved from <http://works.gc.cuny.edu/etd/30/>
- Deacon, S. H., & Kirby, J. R. (2004). Morphological awareness: Just "more phonological"? The roles of morphological and phonological awareness in reading development. *Applied Psycholinguistics*, 25, 223-238. <https://doi.org/10.1017/S0142716404001110>
- Feldman, L. B. (Ed.). (2013). *Morphological aspects of language processing*. Hove, UK: Psychology Press.
- Ferguson, L. (2006). *The effects of explicit teaching of morphemic analysis on vocabulary learning and comprehension and its transfer effects to novel words*. Doctoral dissertation, Wichita State University.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (1993). *How to design and evaluate research in education* (Vol. 7). New York: McGraw-Hill.
- Gómez, G. E. R. (2009). *The role of morphological awareness in bilingual children's First and Second Language Vocabulary and Reading*. Doctoral dissertation, University of Toronto.
- Graves, M. F., August, D., & Mancilla-Martinez, J. (2012). *Teaching vocabulary to English language learners*. New York: Teachers College Press.
- Gu, P. Y. (2003). Vocabulary learning in a second language: Person, task, context and strategies. *TESL-EJ*, 7(2), 1-25.
- Jalaluddin, N. H., Norsimah, M. A., & Kesumawati, A. B. (2008). The mastery of English language among lower secondary school students in Malaysia: A linguistic analysis. *European Journal of Social Sciences*, 7(2), 106-119.
- Kaweera, C. (2013). Writing error: A Review of interlingual and intralingual interference in EFL context. *English Language Teaching*, 6(7). <https://doi.org/10.5539/elt.v6n7p9>
- Kieffer, M. J., & Lesaux, N. K. (2007). Breaking down words to build meaning: Morphology, vocabulary, and reading comprehension in the urban classroom. *The Reading Teacher*, 61(2), 134-144. <https://doi.org/10.1598/RT.61.2.3>
- Kitchakarn, O., & Choocheepwattana, M. (2012). Explicit teaching of vocabulary: It's still needed. Retrieved from http://www.bu.ac.th/knowledgecenter/executive_journal/april_june_12/pdf/aw021.pdf
- Koosha, M., & Salimian, M. (2010). The potential relationship between English vocabulary knowledge and morphological knowledge of Iranian pre-university students. *JSR*, 1(26), 249-274.
- Lam, K., Chen, X., Geva, E., Luo, Y. C., & Li, H. (2012). The role of morphological awareness in reading achievement among young Chinese-speaking English language learners: a longitudinal study. *Reading and Writing*, 25(8), 1847-1872. <https://doi.org/10.1007/s11145-011-9329-4>
- Letchumanan, K., & Tan, B. H. (2012). Using computer games to improve secondary school students' vocabulary acquisition in English. *Pertanika Journal of Social Sciences & Humanities*, 20(4), 1005-1018.
- Mahony, D., Singson, M., & Mann, V. (2000). Reading ability and sensitivity to morphological relations. *Reading and Writing: An Interdisciplinary Journal*, 12, 191-218. <https://doi.org/10.1023/A:1008136012492>
- Nagy, W. E., & Anderson, R. C. (1984). How many words are there in printed school English? *Reading Research*

Quarterly, 14, 304-329. <https://doi.org/10.2307/747823>

- Nagy, W., Berninger, V. W., & Abbott, R. D. (2006). Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. *Journal of Educational Psychology*, 98, 134-147. <https://doi.org/10.1037/0022-0663.98.1.134>
- Sabti, A. A., Mansor, Y. T. M. B. T., Altikriti, M. Q., Abdalhussein, H. F., & Dhari, S. S. (2016). Gender Differences and Foreign Language Reading Anxiety of High School Learners in an Iraqi EFL Context. *International Journal of Applied Linguistics and English Literature*, 5(5), 208-214.
- Saif, A. G. A. (2011). The importance of the processes of word-formation in the acquisition of English as a foreign language: a case study of Yemeni tertiary students of English. Retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/3271/7/07_abstract.pdf
- Varatharajoo, C., Asmawi, A. B., Abdallah, N., & Abedalaziz, M. (2015). The Awareness of Morphemic Knowledge for Young Adults' Vocabulary Learning. *The Malaysian Online Journal of Educational Science*, 45.
- Varatharajoo, C., Asmawi, A. B., Abedalaziz, N. A. M., Lee, W. A. S. S., & Azeez, M. I. K. (2015). Morphemic Analysis Awareness: Impact on ESL Students' Vocabulary Learning Strategy. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 9(9).
- Wang, M., Ko, I. Y., & Choi, J. (2009). The importance of morphological awareness in Korean-English biliteracy acquisition. *Contemporary Educational Psychology*, 34(2), 132-142. <https://doi.org/10.1016/j.cedpsych.2008.12.002>
- Zhang, D., & Koda, K. (2013). Morphological awareness and reading comprehension in a foreign language: A study of young Chinese EFL learners. *System*, 41(4), 901-913. <https://doi.org/10.1016/j.system.2013.09.009>

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