



Undergraduate Students' Morphological Awareness and Difficulties in EFL Class

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Abstract. Students' vocabulary knowledge is related to their morphological awareness, which plays an essential role in word comprehension and vocabulary development. This case study is aimed at describing undergraduate students' morphological awareness and difficulties in morpheme identification and word relationship. This study employed the MAT test in two analytical tests. The Morpheme Identification Test is used to measure how well first-year college students can analyze and break down complicated words into their smaller meanings. Meanwhile, the Word Relation Test is administered to measure undergraduate students' awareness of relations among base or root words and their inflected or derived forms. An interview was used to support the results of the tests. The result showed that the students performed better in breaking down inflected forms than those in derived forms. As in the Word Relation Test, it was discovered that the students had done better in identifying morphologically related word pairs. There were three types of difficulties in the morpheme identification test. The first was in breaking down complex words into smaller morphemes; the second was in stating the meaning of each smaller morpheme, especially affixes; and the third was in categorizing the complex words into inflected or derived forms.

Keywords: Morphological Awareness, Morpheme Identification, Word Relation

Introduction

A basic rule when learning a foreign language is to master the vocabulary of that language. Vocabulary is important for language proficiency, and teaching English requires vocabulary (Alsaedi, 2017). Students who do not have an adequate vocabulary may not be able to understand people, express their opinions and thoughts, or utter or understand words. Furthermore, Nation (1993) confirms that one of the essential skills in using natural language is vocabulary knowledge, and that vocabulary is one of the indicators of a good command of scientific language. Therefore, students need to know as many English word families as possible in order to improve their English proficiency (Somathasan, 2018). Integrating morphological awareness has proven beneficial to improving reading and writing (Collins et al., 2020).

Students' morphological awareness is connected to their lexical knowledge because both contribute to their ability to understand and create new words (Jornlin, 2015). This indicates that students' knowledge of words and vocabulary, particularly their comprehension of words that contain multiple morphemes, can be determined by their level of morphological awareness. Awareness of morphology might be helpful to writers in expanding their vocabulary in productive ways (Asaad & Shabdin, 2021). The understanding that students have of the morphological structure of words, as well as their capacity to reflect on and manipulate that structure, is the primary focus of this activity. This leads us to the conclusion that morphological awareness refers to the knowledge of various forms. Morphology is a subject that can be studied by undergraduate students, and by doing so, they can gain knowledge of morphology. By studying morphology, students can learn about morphemes and

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the compositions that go into the formation of words. Morphology helps students learn morphemes and morpheme boundaries, as stated by Alsaeedi (2017). This is accomplished by breaking down compound words into meaningful components, comprehending the meaning and purpose of roots and affixes, and reassembling new meanings from useful parts. Students learn how to study words, the internal structure of words, how words are formed and related, and so on through the study of morphology, which teaches students how to study words.

Morphological awareness provides students with different types of analytical skills. The ability to break down complex words into smaller meanings is called morphological discrimination (Aydin and Yildirim, 2017). In this study, these complex words are classified as inflections or derivations. The ability to identify relationships between base or root words and their inflections or derivatives is called word relationships). Students who understand these two analytical aspects of morphological awareness are therefore equipped with good literacy skills. As supported by Qiao et al. (2022), more successful word learners use morphological analysis to understand and learn new words and to predict literacy development. This means that morpheme identification and word relationships are also crucial for vocabulary acquisition.

As it is revealed that morphological awareness is important and has a positive longitudinal relationship with students' literacy development, students with morphology difficulties may have trouble using morphemes orally or in their written work, making it difficult for others to understand them (Collins et al., 2022; Zhang, 2021). Considering that learners learning English as a second language understand morphemes in complex words, it could assist writers in increasing productive vocabulary (Asaad & Shabdin, 2021). The advantage of having word part knowledge, especially that of derivational and inflectional morphemes, for efficient word recognition is clear: morphological awareness can help the students identify partially known words and thereby expand the range of recognizable words. Hence, it is necessary to investigate students' morphological awareness in Morpheme Identification and Word Relation as they reveal students' ability in breaking down complex words into smaller meanings and categorizing them into inflected or derived forms and affirm their conscious awareness of relations among base or root words and their inflected or derived forms. Both analytical aspects of morphological awareness can also be used to develop students' awareness of morphology. In addition, Asaad and Shabdin (2021) explained that there was a significant correlation between morphological awareness and academic writing.

However, many students find morphology difficult, with some confusing branches (Jiang Kuo, 2019; Nuril et al., 2017). The branches include bound morphemes, which are divided into inflectional and derivational morphemes. Affixes make lexical recognition difficult, especially identifying the roots' beginning. It is due to a lack of knowledge of the word's meaning. Akbulut (2017) also mentioned that the major impact of morphological direction is the recognition of morphemes (prefixes, suffixes, and roots) and vocabulary recognition.

Several studies examined the morphological awareness of students by administering various types of the Morphological Awareness Test. First, Aydin and Yildirim (2017) discovered that students have a limited understanding of word morphology and the lexical and grammatical functions of word parts; however, they require additional instruction in these areas. Second, Rabadi (2019) said that there is a link between how well students understand morphology and how many words they know. Thirdly, according to Sarfaz et al. (2018), students have made few word-formation errors in their writing, demonstrating a lack of morphological awareness.

Considering that fact, this current study not only carries out the MAT tests but also interviews undergraduate students to collect as many detailed details from the study as possible, such as their difficulties in morpheme identification and word relationship, through a case study using the descriptive research method. Morphology is important to English learners because it breaks down language and creates patterns of meaning. Therefore, it is crucial for undergraduate students to have good abilities in morpheme identification and word relationship, as both are analytical aspects of knowledge of morphology and are important for understanding as well as learning new words. Thus, this study aims to determine students'

morphological awareness in morpheme identification and word relationship and to investigate their difficulties in those two analytical aspects.

Theoretical Framework

Morphological Awareness

Morphological awareness involves recognizing and manipulating a word's smallest linguistic units (Qiao et al., 2022). Predicting language development requires metalinguistic awareness. Metalinguistic awareness, such as morphological awareness (MA), can predict literacy development. Morphological awareness emphasizes lexical inference. It involves students guessing a word's meaning based on their general knowledge, text awareness, and linguistic knowledge.

Kirby et al. (2012) and Deacon et al. (2013) define morphological awareness as conscious awareness of the morphemic structure of words, including meaning and sound. It showed knowledge of language morpheme rules for word formation. Morphology shows English morpheme learners how complex words are made. Thus, students can break down complex words into their simplest meanings (neighbourhood = next-door neighbour + -hood = state of being). Students then learn the complex word's root and affixes. Students can create new vocabulary by reassembling meaningful parts of complex words (brotherhood, childhood, priesthood).

Morpheme Identification

The morpheme was the central notion in morphological theorizing in the 20th century (Leu, 2020). Morphem identification aims to measure students' ability to analyze and break down complex words into smaller meanings. Furthermore, those complex words can then be categorized into inflected or derived forms. There are six principles of identification of morphemes as proposed by Nida (1949) in Leu (2020) as follows: The first forms, which possess a common semantic distinctiveness and an identical phonemic form in all their occurrences, constitute a single morpheme. Nida (1949) refers to a similarity in the phonological realization of the bound morpheme affixed to the root of the words that qualifies such a group of words to be referred to as a single morpheme. Examples of words from this principle are dancer, smoker, drinker, and so on, in which the // element symbolizes sameness in the semantic meaning of the words as the agentive nominalization (i.e., doer of something) of the verbs dance, smoke, and drink.

Second forms that share a common semantic distinction but differ in phonemic form (i.e., constituent or shape) constitute a single morpheme if the distribution of formal differences can be defined phonologically. For example, the prefix morphemes in-, il-, ir-, and im- in the words inaudible, impossible, illogical, and irrelevant share a common semantic distinction of not being in them but have different phonological realizations due to the conditioning of the prefixal morpheme to enable it to cohere with the initial sound of the root or base to which it is attached.

The third forms that share a common semantic distinction but differ in their phonemic form to the point where their distribution cannot be defined phonologically constitute a single morpheme if their distribution is complementary. The morphemic elements of oxen, children, larvae, hats, and hoes are phonologically realized as /in/, /rn/, //, /i:/, /s/, and /z/. These words are distinct in phonemic form but share a semantic distinction as the pluralized form of the root words. The fourth form's overt formal difference among related forms (forms containing recurrent partials or occurring in complementary distribution) is a morpheme if, in any of these forms, it and a zero tactical difference are the only significant features for establishing a minimal unit of phonetic-semantic distinctiveness.

Fifth, any form can be understood by referring to a quality or qualities shared by its contexts. These conditions determine whether homophonous forms (linguistic forms that sound alike) are identical or distinct morphemes: 1) Homophonous forms that have different meanings are each considered to be a separate morpheme. 2) If the meaning classes are paralleled by distributional differences, then they are considered to be a single morpheme. If

this is not the case, then they are considered to be multiple morphemes. Both the verb and the noun can be referred to as "run." A morpheme is said to be isolatable if it can be found in any of the following three situations: 1) in isolation; 2) in multiple combinations, of which at least one contains other combinations in which the unit with which it is combined also occurs; and 3) in a single combination with constituents that are not unique to the combination. Compound words, such as respectable and new-borns, provide evidence of this point.

Word Relation

The objective of word relation is to heighten students' awareness of the connections that exist between the base words or roots and their respective inflected and/or derived forms. Aydin and Yildirim (2017) state that it is the students' ability to recognize these relationships that is the most important factor. In addition, they point out that the goal of the instructor is to get the students to understand that some multi-morphemic words share the same base word or root, and are consequently connected to one another. It is an indication that these words are related to one another in the sense that some of them may look and sound alike, whereas others may look but not sound alike, and still others may neither look nor sound alike.

Apel and Werfel (2014) suggest that teachers use the analogy of family members to help students comprehend the relationship between multimorphemic words and how their appearance and sound may differ. Specifically, they suggest that teachers use the analogy of family members to help students comprehend the difference between morphemes. Students could be presented with a root word, like "act," and then asked to produce all of the multi-morphemic words that can be derived from that word (such as action, actor, actress, and acting). Students will be able to generate all of the associated terms by using the same approach that was used for roots (such as vert, which means to turn in a specific direction) (such as introvert, introverted, extrovert, extroverted, convert, and conversion).

Material and Method

This study employs a mixed method to achieve fuller understanding about undergraduate students' morphological awareness and difficulties in EFL class (Frankel and Wallen, 2005). This study involves the collection or analysis of both quantitative and qualitative data in a single study (Dornyei, 2007) and employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information as well as text information so that the final database represents both quantitative and qualitative information.

Eighteen fourth-semester undergraduate students of Wiralodra University's English Education Department in the academic year 2021-2022 were selected for this study. Quantitative data was used for numerical and statistical analysis of undergraduate students' morphological awareness in morpheme identification and word relationship. However, morphological awareness tests (MAT tests) and interviews were used to analyze their morphological awareness and difficulties in both abilities. This study used MAT tests and interviews. The MAT tests assessed undergraduate students' analytical morphological awareness knowledge in morpheme identification and word relationship. The reasons described the students' ability to break down complex words into smaller meanings and identify the relationship between base or root words and their inflected or derived forms. Interviews provided supporting data. The interview examined the students' morpheme identification and word relationship difficulties. It examined MAT test responses as well. The Morpheme Identification Test assesses undergraduate students' ability to deconstruct complex morphemes. 15 complex words—inflected, derived, and compound—with two to three morphemes were tested. The Word Relation Test assesses undergraduate students' ability to analyse and identify base or root words and their inflected or derived forms. Aydin and Yildirim (2017) supplied the sample. Students received 20 word pairs: 10 morphologically related (inflectionally or derivationally) and 10 unrelated. Undergraduate students were given

a semi-structured interview with three main questions and follow-up questions on morphology's morpheme identification and word relationship topics.

The writer used Utami-Mujadidah (2021) data analysis to analyze the two MAT tests. The writer read all the MAT Test answers, counted the undergraduate students' scores on each test, and then calculated their morphological awareness scores in morpheme identification and word relationship. Cresswell's (2013) data analysis was used to analyze interview data.

Results and Discussion

Result

Undergraduate students' Morphological Awareness in Morpheme Identification and Word Relation

The data showed that 67% students belonged to enough category, 11% students acquired good category and the remaining 22% had low morphological awareness in Morpheme Identification and Word Relation. To conclude by reiterating the previous statement, the overall score of undergraduate students' morphological awareness in Morpheme Identification and Word Relation was categorized as enough or medium. The explanation is as follows.

Undergraduate students' Morphological Awareness in Morpheme Identification

To describe undergraduate students' morphological awareness, a morpheme identification test was registered with the participants first, and a word relationship test was assigned second. The results of both tests were calculated by finding out the undergraduate students' percentage in each test and the overall score of their morphological awareness in both tests. To gain insight into undergraduate students' morphological awareness in morpheme identification and how they deal with complex words, knowledge of inflectional and derivational affixes is sought by breaking down those complex words into smaller parts (roots and affixes), then categorizing them into inflected or derived forms. To reiterate, the total number of items in this test was 15: 3 inflected words, 7 derived words, 4 inflected compound words, and 1 derived-inflected word. Thus, the total of inflected and derived forms was 7 items each with 1 inflected-derived form. Meanwhile, the total score of the Morpheme Identification Test was 270 from the total test items (15) multiplied by the total number of samples (18).

The result showed that the total score of the undergraduate students' correct answer in the Morpheme Identification Test was 175 or 64.81%. It meant that the students' morphological awareness in morpheme identification was in a sufficient category (Nurgiyantoro, 2010). They were able to break down certain complex words that were given to them in the test into smaller morphemes, state the meaning of their smaller morphemes, and then classify them into inflected or derived forms. This result determined their morphological awareness ability in morpheme identification.

The data showed that the highest score in inflected form was the inflected compound word for the word snowballs (test item 14), which 100% or all of the students had answered correctly. The word snowballs consists of two base or root words, snow and ball, and a suffix -s, which indicates pluralization. It is inflected from the singular noun snowball to the plural noun snowballs. On the other hand, it was also found out that the first lowest frequency of the undergraduate students' correct answers in the Morpheme Identification Test was the derived form of the word carelessness (test item 4), which was 5.56% in frequency, or only 1 student had answered correctly. Based on the results of the students' answers, it seemed that some of them had difficulty stating the meaning of the suffix -ness for the word carelessness, and some of them had stated it wrongly, which led them to misinterpret the word carelessness. As supported by the result of the students' interview, they mentioned that:

"Like in the word carelessness, I thought I knew what it means as a whole word. But, after I broke it down into care, -less and -ness, then I didn't know what the suffix -ness is. So, at first I thought carelessness means kurang kepedulian because care is peduli and -less is kurang. But, after I checked the meaning of the word

careless, it can be kurang peduli or ceroboh. So then I checked the word carelessness, it becomes kecerobohan and not kurang kepedulian. They are different words.” (MA)

It can be concluded that they knew the vocabulary *carelessness* as a complex word and knew that it is formed with three morphemes, the root *care* and the suffix *-less* and *-ness*. However, when they were asked to state the meaning of its small morphemes, they had problems with stating the suffix *-ness* which actually indicates *the state of being careless*. Therefore, the word *carelessness* is a complex word that has two derivational affixes (Boaneges, 2017 in Larsen, 2022). First, it is derived from the verb *care* to the adjective *careless* by adding the suffix *-less*. And from the adjective *careless*, it is derived again by adding the suffix *-ness* which changes the word category again and its meaning to the noun *carelessness*.

Meanwhile, the second lowest score of the undergraduate students' correct answer frequency was 3 or 16.67% for the inflected word *oxen* (test item 12) and derived word *cowardice* (test item 15). The reasons were because they were unfamiliar with the word *oxen* and *cowardice*, and few understood what the word *cowardice* refers to but didn't know the exact meaning of the word. Thus, other than 3 students who answered correctly, most of the students left their answers blank for those words. As stated by the students:

“The word oxen is a new vocabulary to me. So I don't know which one is the root and which one is the affix. I also don't know the meaning of that word.” (AH)

“It is the same case with the word cowardice. I just knew the vocabulary cowardice and oxen when I was doing the Morpheme Identification Test.” (CS)

The data showed that they had difficulty for answering the test item *oxen* and *cowardice*. In fact, the word *oxen* is formed with two morphemes, the root *ox* which refers to *a male cow* and the suffix *-en* that indicates pluralisation for the word *ox*. As for the word *cowardice*, it has two morphemes, the root *coward* which refers to *lack of courage* and the suffix *-ice* which indicates *the act of being coward or the act as a coward*.

Undergraduate students' Morphological Awareness in Word Relation

The Word Relation Test measures students' ability to identify the relations among base words or root words with their inflected or derived forms (Aydin & Yildirim, 2017). To gain insight into undergraduate students' morphological awareness in word relationships and how they deal with inflectional and derivational word pairs, knowledge of morphological relations is sought by analyzing and identifying whether or not the word pairs are morphologically related; if they are related, it is inflectionally or derivationally related. The test consisted of 20 word pairs; 10 were morphologically related (inflectionally or derivationally), and the other 10 were unrelated or foil. The total score for the Word Relation Test was 360, calculated from the total number of test items (20) multiplied by the total number of samples (18).

The result showed that the total score of correct answers in the word relationship test was 235, or 65.28%. The result was classified as enough. Thus, it was determined that their ability to identify the relationship between base or root words and their inflected or derived forms was enough. They were able to identify whether certain word pairs in the Word Relation Test were morphologically related (inflectionally or derivationally) or morphologically unrelated. Following that, it was disclosed that the students had performed better in identifying morphologically related word pairs than morphologically unrelated word pairs.

The highest scores in morphologically related word pairs by leaving out test item 1 were the adjective-making suffix for *healthy* (test item 3) and noun-making suffix for *sign-signature* (test item 12), which 88.89% or 16 of the students had answered correctly in those both word pairs. In the word pair "healthy, the suffix "y" changes the noun *health* to the adjective *helthy*. In the word pair *sign-signature*, the suffix *-ature* changes the verb *sign* to the noun *signature*. Thus, the word pairs are derivationally related since their suffix carries lexical change.

Meanwhile, the lowest correct score frequency was the morphologically unrelated word pair buy-brought (test item 17). The frequency was 16.67%, or only 3 students had answered correctly. The result of the interview showed that some of the students had mistakenly considered the word brought as bought," which is the past form of the verb buy, while some of them thought that there was spelling error for the word "brought," so that 83.33% of the students answered it inflectionally related. However, the correct answer for the word pair buy-brought is morphologically unrelated or foil because they have different meanings altogether. As confirmed by the students:

"I thought the word were buy-bought, the change of tense from the verb 1 to verb 2. I didn't see it clearly." (AH)

"I answered inflectionally related because I thought it had misspelling in the word brought. It should be buy-brought, so I circled YES, inflectional. I thought it was accidentally and not purposely written brought to outwit us." (AA)

The second lowest correct score frequency of the undergraduate students' answers was the derivationally related word pair *deep-depth* (test item 6) which was 6 or 33.34%. As gathered from the students' interview, they thought there was grammatical relation (such as suppletion) or tense change in the word pair *deep-depth* since they understood the word *deep* as a verb, not as an adjective. The students stated that:

"The word pair deep-depth is inflectionally related because there is tense change from deep to depth." (AD)

"In fact, when I was answering the word pair deep-depth, I was a little bit confused with the word deep and depth meaning. But, after I recalled again, they are verb1 and verb2. So, it is grammatical change, inflection." (AA)

The correct answer for the word pair *deep-depth* is derivationally related in which 33.34% or 6 of the students had answered correctly. In the word pair *deep-depth*, the root appears in altered form (Mann, 2000). The root word *deep* is an adjective that turns into noun *depth* where the suffix *-th* forming noun action for the adjective *deep*.

Undergraduate Students' Difficulties in Morpheme Identification and Word Relation **Undergraduate Students' Difficulties in Morpheme Identification**

There were three steps in doing the Morpheme Identification Test. First, the students were asked to break down complex words into their smaller units. After that, they were asked to state the meaning of each morpheme of those complex words including the meaning of the complex words themselves. Last, they were asked to categorize those complex words into inflected or derived forms. Thus, there were three types of difficulties that the students might face while doing the test.

When the students were asked whether or not they had difficulty in breaking down complex words into smaller morphemes, the students expressed that:

"Yes, it is difficult if I don't know the meaning of the word, like which one is the root and which one is the affix." (AH)

"Actually, it is not that difficult. But, if suddenly the vocabularies that appear are new, it becomes hard too. And when the complex word is too long, like have more than one affix which I am not familiar with, then it is quite difficult to identify its root and affixes." (PN)

Those statements indicated that the students faced the same difficulty in breaking down the root and affixes. It could be drawn that it was due to the lack of their vocabulary knowledge of some multi-morphemic words that were given to them in Morpheme Identification Test.

Other than the difficulty in breaking down complex words, the students also face difficulty in stating the meaning of each morpheme of the complex words especially the meaning of affixes. As confirmed by the students:

"Yes, this is the most difficult ones. For example, we know the meaning of the complex word, but when we have to state the meaning of each morpheme, it is difficult, especially the meaning of affixes." (AH)

Based on those statements, it can be concluded that stating the meaning of affixes was the most difficult to do than stating the meaning of the root when they know the meaning of the complex words as whole. Affixes are meaningless when they act as a single morpheme. However, they have meaning and purpose when they are attached to another morpheme to form a new word. As mentioned by Josiah and Udoudom (2012), affixes take on several forms and serve different functions such as to mark changes in meaning, part of speech or grammatical relationship.

As for categorizing the complex words into inflected or derived forms, the student interviewees felt that it was difficult if they didn't know the meaning of the complex word, its root and its affixes. They mentioned that:

"Yes, it is difficult when I am not familiar with the complex word and don't know the meaning of that word." (AH)

"It is easy for me if I know the meaning of the word. Because, I know the difference between inflectional and derivational. But, if I don't know the root word meaning then...it is difficult to determine the complex word is inflected or derived" (AA)

Defining whether a complex word is inflected or derived, students first need to know the meaning of the complex word as a whole, the meaning of its root as a free morpheme, and then the meaning of the affixes. Other than what have mentioned by the students, it is due to the fact that certain affixes serve different function for certain words (Josiah and Udoudom, 2012). For instance, the suffix *-en* can be inflectional or derivational. In the word *harden*, the suffix *-en* acts as verb making suffix for the adjective *hard* that changes the lexical category from adjective to verb. It is a different case in the word *oxen*. The suffix *-en* indicates pluralization for the noun *ox* which has the meaning of *male cow*.

Undergraduate Students' Difficulties in Word Relation

In doing the Word Relation Test, two steps were needed. First, the students needed to analyze and identify whether or not word pairs were morphologically related to each other so that they were asked whether the second word of each pair came from the first word. Next, if they answered yes, then they needed to analyze whether the word pairs were inflectionally or derivationally related. Therefore, there were two kind of difficulties students might face during doing the Word Relation Test. For the first type of Word Relation difficulties, the students mentioned that:

"It depends on the word pair. I mean if I don't know their meanings or just know the meaning of one of the word pair, then it is difficult to identify whether they are related or not." (PN)

It indicated that their ability in identifying the relatedness of the word pairs depended on their knowledge of the words given on the test. Meanwhile, the other reason for this difficulty was as shown in the statement below:

“Yes, it difficult. It is confusing. Like the word crumb and crumble. I think their meanings have connection but I don't know whether they are related or not. Or, they are different words altogether.” (AD)

The statement implied that the student was aware that the word pair had relation in meaning, but didn't know their relatedness. In fact, the word pair is related because the first word of the word pair is the root of the second word. Therefore, the second word is the derived form of the first word. It is difficult for the students to identify their relatedness due to the fact that derivational suffixes can change the meaning of the root to the extent that it is difficult for the English learners to identify the relation of the roots and their derived forms. As supported by Mann (2000), the relational property of suffixes refers to the fact that they unite with bases to produce derived forms that are semantically related to their base and to other derivations of the same base, although not always in predictable ways.

Nevertheless, both students' statements showed that they had difficulty in identifying whether or not the second word of each word pair came from the first word. It is not the same case with some of the students. They felt that it wasn't that difficult to do since they knew most of the vocabulary in the test. As confirmed by them:

“Not quite difficult for me because I know most of the word pairs meaning.” (AA)

Meanwhile, as for analyzing or judging the word pairs morphological relatedness, the students faced difficulty to state whether the word pairs were inflectionally related or derivationally related. As supported with the students' interview:

“It is quite difficult when I don't know the meaning of the word pair to state whether they are inflectional or derivational related.” (AH)

“Yes. When I know the word pair is related in meaning but I feel difficult to state whether it is inflectional or derivational related.” (AD)

Some students said that it was a difficult task because they didn't know or weren't sure with the meaning of the word pair to state their morphological relatedness. However, some other students said it was difficult not because they didn't know the meaning of the words. They were aware that the word pairs were related to each other but just felt it difficult to state their morphological relatedness. Based on that statement, it can be drawn that it is due to the fact that affixes take on several forms and certain affixes serve different functions for different words just as stated by Josiah and Udoudom (2012). Hence, it was difficult then to recognize their functions on the word pairs, as inflectional affixes or derivational affixes.

Discussion

The first research question aimed at investigating students' awareness of morpheme identification and word relations. In the morpheme identification test, it was found that the students performed better in breaking down inflected forms than those in derived forms. This result showed that language learners' acquisition of inflectional is ahead of their acquisition of derivational. It means that the students understand inflectional affixes first before derivational affixes since their meanings reflect grammatical relationships such as tenses and pluralization. It is not the case with derivational affixes. Their meanings reflect the formation of a new word by modifying the meaning of the root word by changing or not changing the lexical category of the root word. Thus, acquiring the meaning of affixes and root words would help students unlock the meaning of complex words and identify whether the complex words are in inflected

or derived forms. The outcome that the students had performed better in inflected forms was similar to the findings of the study done by Rabadi (2019), who found that the students' results were higher in inflectional affixes than derivational affixes. In addition, it was also supported by the fact that the students' possible highest score in the Morpheme Identification Test was in inflected form (in an inflected compound word), and the possible lowest score was in derived form. The study conducted by Badawi (2019), Li et al. (2020), and Zhang (2021) proved that there is an increasing robustness of the relationship between morphological awareness and written composition across time.

As in the Word Relation Test, it was discovered that the students had done better in identifying morphologically related word pairs. This result was in comparison with the study done by Aydin and Yildirim (2017), who reported that the students unexpectedly showed the best performance in the verb-making suffixes. Noun-making suffixes are considered the simplest among the parts of speech or other derivational affixes. This study was similar to the studies done previously by Rabadi (2019) and Utami and Mujadidah (2021), which ranged from 65-70% and were categorized as medium or enough. They reported that although the participants had already taken morphology in the previous semester before they participated in the study, their result was not satisfactory enough because they fell into the wrong category. In the same case, in analyzing English complex words, some of the participants in this study still struggled with the morpheme identification test and the word relationship test as a result of learning English as a foreign language, so their results only reached a certain category. The result resonates with Allen and Lembke (2022), who found that morphological awareness had a moderately positive effect on students' writing.

The interview results helped investigate the reasons for their difficulties in doing the MAT tests. The data from the interview showed that the students faced three types of difficulties in the morpheme identification test. The first was in breaking down complex words into smaller morphemes; the second was in stating the meaning of each smaller morpheme, especially affixes; and the third was in categorizing the complex words into inflected or derived forms. The causes of these difficulties lie in the fact that the students had limited vocabulary knowledge of some multi-morphemic words in the tests and lacked knowledge of affix forms and meanings. Even though it was discovered that the students understood that the affixes can be inflectionally or derivationally based on their function, it seemed that they still struggled in identifying affix forms and meanings, particularly when different affixes serve the same functions for certain words or the same affixes serve different functions for certain words, just as affirmed by Akbulut (2017). Based on the students' interview, it was the consequence of plenty of affixes in English that they were not familiar with.

It was the same case for the word-relationship test. The lack of vocabulary knowledge and affixes forms and meanings, including their functions, became the students' problems in judging word pair relatedness. The students found it difficult to identify whether the word pairs have morphological relations, and if they are related, is it inflectional or derivational related? Thus, their performance in the test depended on their knowledge of words meanings and affixes forms, meanings, and functions, especially that derivational suffix. It was because most of the test items in the Word Relation Test for morphologically related word pairs had derivational relations, mostly by adding suffixes.

Conclusion

This study aimed at investigating undergraduate students' morphological awareness and difficulties in morpheme identification and word relations. Based on the result of the study, it can be concluded that, first, the students performed better in breaking down inflected forms than those in derived forms. Second, in the Word Relation Test, it was discovered that the students had done better in identifying morphologically related word pairs; test item 12 for the word pair sign-signature, which has a derivational relationship, got the highest score. The students faced three types of difficulties in the morpheme identification test. The first was in breaking down complex words into smaller morphemes; the second was in stating the meaning of each smaller morpheme, especially affixes; and the third was in categorizing the

complex words into inflected or derived forms. The result indicated that if English learners do not understand the etymological relationship of English words, they are unlikely to understand them in their complex form. However, since the English language is not their mother tongue, they struggled to master as many English words and affixes as possible, which would lead them to unlock the meaning of complex English words.

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