

**The Relationship between Morphological Awareness
and English Vocabulary Knowledge
of Indonesian Senior High School Students**

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STATEMENT OF AUTHORSHIP

I declare that this thesis does not contain material which has been accepted for the award of any other degree or diploma in any university, nor does it contain material previously published or written by any other person, except where due reference is made in the text of the thesis.

Nurhemida

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ABSTRACT

The main purpose of the present study is to investigate the relationship between English morphological awareness and vocabulary knowledge in the context of English as Foreign Language (EFL) for senior high school students in Indonesia. Measurements of learner vocabulary size and morphological awareness are obtained and then correlated to assess the degree to which knowledge of English morphological processes and structures can be systematically related to vocabulary knowledge. Based on the findings, the possible role that morphological awareness can play in second language (L2) vocabulary development is discussed. Implications for vocabulary instruction are also addressed.

The participants were 98 students (29 males and 69 females) at a public Islamic senior high school in a rural area in West Sumatra, Indonesia. The participants were grouped into two groups according to program of study: Social Science and Natural Science. The data collection tools were Nation's Vocabulary Levels Test (VLT), which tested knowledge of words drawn from the 2000, 3000 and 5000 most frequently occurring word families (90 words in total) and two morphological awareness tasks. The first consisted of a Morpheme Identification task (item matching, 5 questions) and the second was Morphological Structure test (short answer, 20 questions). A 10-item questionnaire that elicited the participants' perceptions of the tests and their English vocabulary learning in general was also administered. The VLT results revealed that the students performed better at the 2000 level than the two higher frequency levels, with little difference between the Social Science and Natural Science groups. Performance on the Morpheme Identification Test approached the ceiling for both groups, while the Natural Science group did better on the Morphological Structure Test. There was a

significant relationship between the students' performance in the vocabulary level test and the morphological awareness tasks. Finally, the participants gave feedback that suggested their interest in applying the morphological knowledge to their vocabulary learning. Thus, the findings have implications as to the importance of facilitating the students' morphological awareness in English vocabulary learning for EFL senior high students in Indonesia.

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CHAPTER 1

Introduction

Vocabulary is a key part of any language-teaching program. Nation (2001) proposed four general goals that are important in a language classroom. These learning goals concern: Language, which includes vocabulary; Ideas, which covers content and subject matter as well as cultural knowledge; Skills; and finally Text or discourse (Nation 2001, p.1). Moreover, in learning a language, specifically for vocabulary goals, there are three aspects to be looked at: the number of words in the language, the number of words known by the native speakers, and the number of words needed by a learner to use the language productively. The number of words in English and number known by English native speakers are not the interest of the current study, which instead focuses on the third aspect: the words needed to use English productively, specifically for EFL learners in Indonesia.

The research literature in vocabulary learning in a second language (L2) has revealed the importance of knowing a sufficient number of words to be able to function in the language (Duin and Graves, 1987; Walker, Greenwood, Hart and Carta, 1994; Nation, 2001; Read, 2004; Tschirner, 2004; Zimmerman, 2005). The development of adequate vocabulary size is vitally important, and researchers have examined the use of learning strategies as one means to foster the development of L2 vocabulary knowledge. Strategies that have been proposed to help develop vocabulary learning include Memory Strategies (MEM), Social Strategies (SOC), Cognitive Strategies (COG), Metacognitive Strategies (MET) and Determination Strategies (DET) (Schmitt, 1997). Morin, 2003;

Chang, Wagner, Muse, Chow, and Shu; 2005; and Schiff and Calif, 2007) have also suggested that use of morphological cues for inferring meaning can help L2 learning.

Although only a handful of studies have examined the role of morphological awareness in L2 vocabulary development, the findings suggest that various aspects of morphological awareness may be particularly useful for vocabulary building. Morphological awareness is defined as the "awareness of and access to the meaning and structure of morphemes in relation to word" (Chang et al., 2005, p. 417). For example, Wysocki and Jenkins (1987) found that students were able to learn new words by generalizing from those sharing a root morpheme. Pica (1988, as cited in Morin, 2003) also states the importance of the study of interlanguage morphology and the belief that "morpheme analysis can provide important insights into the sequences, processes, and input relevant to second language acquisition" (Morin, 2003, p. 107).

This paper builds on this body of research by examining the relationship between the English vocabulary size of EFL senior high school students in Indonesia and their morphological awareness. The study presented here attempts to evaluate and possibly extend findings from previous studies to the context of EFL learners in Indonesia. The obstacle that lack of vocabulary knowledge presents for Indonesian EFL learners has been noted (Nur, 2004). An ultimate aim of the study is to assess the potential value of incorporating instruction in morphological awareness as part of EFL vocabulary instruction in Indonesian settings, similar to the one examined here. There are three research questions to be tackled in the current study:

1. *What is the vocabulary size of the Indonesian senior high school students in the study, and does this differ by area of study, Social Science and Natural Science?*

2. *What level of English morphological awareness do these learners possess?*
3. *Can measures of morphological awareness be systematically related to the measure of English vocabulary size?*

Following the introduction, the review of previous studies in vocabulary learning and morphological awareness are discussed in Chapter 2. At the end of the discussion, the three research questions are presented. The methodology used in the study is described in Chapter 3, and the report on the results obtained is presented in Chapter 4. Those results then are analysed in Chapter 5 and compared to findings from previous studies. Finally, in Chapter 6, a brief conclusion of the current study, the pedagogical implication, limitations, and suggestions for the further study are provided.

CHAPTER 2

Literature Review

All languages have a vocabulary, a set of words that is the basis for making and understanding sentences (Miller, 1991). Therefore, "without some knowledge of that vocabulary, neither language production nor language comprehension would be possible" (Anglin, 1993, p.2). Laufer and Nation (1999) stated that vocabulary provides the enabling knowledge, which is required to be successful in other areas of language proficiency. Thus, this chapter begins with a review of studies on the importance of vocabulary learning, followed by a discussion on morphological awareness as a vocabulary learning strategy and its two aspects, Morpheme Identification Awareness and Structural Morphological Awareness. Finally, it presents the three research questions examined in the present study.

2.1. Vocabulary Learning

There have been many studies about the significance of vocabulary in language learning. For example, Walker, Greenwood, Hart and Carta (1994) stated that early vocabulary knowledge has been shown to be a strong predictor of school progress in the first language (L1). They found that vocabulary knowledge was particularly important in reading achievement. In addition, Tschirner (2004) states that vocabulary size has been identified as one of the most important indicators of L2 reading proficiency and of academic language skills in general. He discusses the relationship between the extent of participants' L2 English vocabulary and other background information such as length of time spent in English language-speaking countries, number of English books read per

year, learning strategies, etc. In other studies, the size of students' vocabulary has also been found to closely correlate with L2 writing ability (Laufer and Nation, 1995; Laufer, 1998; Beglar and Hunt, 1999; Zimmerman, 2005). Furthermore, Duin and Graves (1987) found that if students are given a related set of words (through an intensive vocabulary instruction as a prewriting technique) before they write an essay in which the words might be used, the quality of their writing improves.

In another study, Read (2004) found that L2 learners are typically aware of the extent to which limitations in their vocabulary knowledge hinder their ability to communicate effectively in the target language. This is because lexical items carry the basic information load of the meanings they wish to comprehend and express. In other words, the learners realize that knowing more vocabulary will have a direct effect on their ability to use and further develop the L2 they are learning. Thus, vocabulary can lead the learners to be more confident in using the language.

Words are the primary carriers of meaning, and it is widely recognized that there is a strong relationship between the individual's vocabulary size and his/her general language proficiency (Vermeer, 2001; Zimmerman, 2005). Methods for learning vocabulary, then, are an important part of language learning.

There is variety of ways in which a child learns vocabulary in the L1. These include:

- 1) Experiential learning (Armbruster, Lehr, and Osborn, 2001). The authors claim that a child learns most vocabulary through reading or listening to words being used in context. In other words, children are able to develop vocabulary through their experiences with the words.

- 2) Memorizing (Levin, Levin, Glasman and Nordwall, 1992). These authors believe that students learn new words by memorizing. If students are able to connect words to a familiar image or visualization, they are more likely to be able to remember, retrieve, and use the words in sentences.
- 3) Using words repeatedly, namely, the students are given practice (Long and Rule, 2004). The learners are provided with worksheets to practice words that have already been introduced.

Some of the viewpoints discussed above are also adopted for vocabulary learning in the L2 teaching context. Additionally, Anglin (1993), referring to some previous studies, proposed three approaches in the research literature to the development of vocabulary knowledge:

- 1) Direct instruction of vocabulary in school (McKeown, Beck, Omalson, and Perfetti, 1983)
- 2) Learning words and their meanings from context, especially during reading activities (Miller, 1991; Nagy and Anderson, 1984). In addition, Zimmerman (2005) emphasizes that the primary method for acquiring new vocabulary (breadth) and deepen understanding for existing vocabulary (depth) is through extensive reading. Furthermore, Krashen, (1985, 1989, as cited in Morin, 2003) believes that reading is the most efficient way to learn vocabulary naturally.
- 3) Applying morphological knowledge to infer the meanings of words (Nagy and Anderson, 1984; Wysocki and Jenkins, 1987).

The third approach is the focus of this thesis. In particular, it will consider the individual learners' application of morphological knowledge as a vocabulary learning strategy. Learning strategies can play an important role in development because they encourage the learner's active involvement in the learning process. Vocabulary instruction is most effective when students are positively and actively involved in their learning and they are allowed to use their own strategies to learn the vocabulary (Long and Rule, 2004). Therefore, investigating instructional approaches to the use of morpheme or root word families in teaching vocabulary, Long and Rule (2004) found that the learners could develop their vocabulary better when vocabulary was taught through concrete representations (i.e. using pictures and real objects) and morphological analyses rather than more traditional class instruction methods (e.g. simply writing words down, students note taking, no morphological analysis).

The use of morphological knowledge as a potential strategy for vocabulary learning was the focus of the following studies. Anglin (1993) found that the students could analyze the morphological structure of complex words which they have not actually learned before to figure out the meanings. Morin (2003) proposed the strategy of using morphological knowledge to infer word meanings, and with it, the need to develop morphological awareness in the L2. She characterizes morphological awareness as the ability to reflect on and manipulate morphemes and word formation rules in a language Morin (2003). Similarly, Chang et al. (2005) define morphological awareness as "the awareness of and access to the meaning and structure of morphemes" (the smallest units of meaning in a language) in relation to words. They quote Carlisle (1995, p. 194), who defines morphological awareness as "children's conscious awareness of the morphemic

structure of words and their ability to reflect on and manipulate that structure". The focus is on children's abilities to distinguish and manipulate morphemes at the word level, so that children's knowledge of both inflections and derivations in language are simultaneously considered.

English morphology involves knowledge of both inflectional and derivational processes, and each makes a distinctive contribution to language learning and use. Fromkin, Blair and Collins (1999) define inflectional morphology as changes in the form of a word according to its grammatical function, for example, *talk* becomes *talked* to indicate activity in the past time. On the other hand, derivational morphology concerns changes of a word to give additional meaning to the original word (e.g. *sufficient* becomes *insufficient*) and may be in a different grammatical class from the underived word as well (e.g. *beauty*, a noun, becomes *beautiful*, an adjective).

Knowledge of inflectional morphology plays a key role in grammatical accuracy, while knowledge of derivational morphology plays a role in the development of vocabulary knowledge. The role of learner knowledge of both inflectional and derivational morphology in the development of L2 vocabulary is the focus of the present study.

The study examines the relationship between morphological awareness and vocabulary knowledge for the EFL Indonesian learners, with a focus on possible implications this relationship might have for incorporating morphological awareness as a part of vocabulary instruction in the L2 classroom. Morphological awareness will be discussed in the next section.

2.2. Morphological Awareness as a Vocabulary Learning Strategy

As noted above, morphological awareness refers to the awareness of and access to the meaning and structure of morphemes that are part of or related to the word. It includes knowledge of derivational morphology such as prefixes (e.g., the *un-* in *undisciplined* to indicate the antonym of the original, *disciplined*), suffixes (e.g., the *-ion* in *graduation* changes the part of speech of the base word –*graduate* is a verb whereas *graduation* is a noun), and compounding (e.g., *cowboy* to create new word combining the two root morphemes: *cow* and *boy*). On the other hand, knowledge of inflectional morphology focuses primarily on indicating grammatical changes in words (e.g., the *s* in *dogs* to indicate the plural form of the base or the *-ed* in *acted* to refer to the action in the past time).

Kuo and Anderson (2006) argue that morphological awareness in L1 English becomes an increasingly important predictor of reading ability, as children grow older because this awareness contributes to the decoding of morphologically complex words and it is therefore assumed to contribute to the development of reading comprehension. They also suggested that morphological awareness is intertwined with other aspects of metalinguistic awareness and linguistic competence, especially phonological awareness, syntactic awareness, and vocabulary knowledge.

Schiff and Calif (2007) compared previous studies that investigated the relationship between phonology and reading, and morphology and reading. They found that the relationship between phonology and reading development in English (as an L1) is well-documented (Nagy and Anderson, 1998), but the parallel relationship between morphological awareness and reading skill has been less studied (Singson, Mahony, and

Mann, 2000). Even fewer studies have dealt with vocabulary learning and morphology or morphological awareness, but the small corpus of existing research suggests a strong link between morphological awareness and vocabulary learning. Prince (2007) reports a study done by Nonie Lesaux (in press), that shows that a learner who understands how words are formed, by combining prefixes, suffixes, and roots, tends to have larger vocabularies and better reading comprehension. The main concern for this present study is to relate morphological knowledge to vocabulary learning in the L2.

The type of morphological knowledge, namely derivations and inflections, will also have an effect on vocabulary learning (Anglin, 1993). For example, previous research suggests that derived words might be acquired somewhat later than inflected and compound words (Wysocki and Jenkins, 1987) and that, morphologically speaking, words that are more complex generally will be acquired later than simpler words (Clark and Berman, 1987).

Nunes, Bryant, and Bindman (2006) reported that the English L1 children took several years to learn to use the *-ed* ending systematically to denote the past of regular verbs: even at the age of 10 years many children still made mistakes with this morphologically based rule. The authors concluded that awareness of morphology influences children's knowledge of when and when not to use the morpheme *-ed*. Moreover, Fowler and Liberman (1995) assessed children's knowledge of the connection between a base and a derived form, and proposed three measures of progress in literacy (word recognition, pseudo-word decoding, and spelling). They observed significant correlations between all three measures of literacy and performance in the morphological awareness tasks even after controlling for age and vocabulary. Of interest in the present

study is whether EFL students in Indonesia (after five years of learning English at schools) acquire the aspects of morphological knowledge in a manner similar to that reported in studies in an L1 context.

Chang et al. (2005) note that there are differences in languages as to the relative importance of derivational and inflectional morphemes. For example, inflectional morphology is obviously important in English or Finnish, but is relatively unimportant in Chinese. In contrast, lexical compounding is far more common in Chinese than it is in English. Bertram, Laine and Virkkala (2000) examined the role that morphology plays in vocabulary acquisition in L1 Finnish. Systematically, they investigated the role that affix frequency and productivity might play in the development of the children's knowledge of words. The results showed that the Finnish elementary school children benefit significantly from utilizing morphology in determining word meanings.

In contrast to the research done on morphological awareness in the L1, there have been only a few studies that have focused on morphological awareness in the L2. In order to investigate the role of morphological awareness in developing vocabulary for L2 learners, Morin (2003) studied Spanish classes to examine the acquisition of derivational morphology - the use of suffixes that can change the part of speech and cause variations in meaning - by native English-speaking learners of Spanish. In this study the main questions were: (1) Do beginning L2 learners who focus on Spanish derivational morphology learn more vocabulary than learners who do not, (2) can they apply morphological knowledge receptively and productively, and (3) does their success depend on their L2 proficiency level. The results indicate that the strategy for building vocabulary by consistently focusing on Spanish derivational morphology may yield

immediate benefits in the area of production, at least among one experimental group, the second-semester learners, who were introduced to Spanish morphology. There is also a suggestion that, for second-semester learners, there may be benefits or effects of such knowledge of derivational morphology with respect to their receptive morphological knowledge. In addition, the second-semester experimental group demonstrated a significantly greater knowledge of productive Spanish derivational morphology than any of the other groups studied. In her conclusion, Morin (2003) emphasized that the results of her study could not make specific claims to all L2 learners generally. However, it does indicate a positive trend in the effectiveness of morphological knowledge as a tool for building vocabulary knowledge.

Morin (2003), Schiff and Calif (2007) both cite Koda (2000) who underscores the effect that L1 knowledge can have on L2 morphological awareness. Schiff and Calif (2007) examined the effect of phonology and morphology awareness in Hebrew (L1) on L2 English development. Their findings revealed that the more similar the language features, the more positive the cross-linguistic influence in terms of learning outcomes, whereas for languages that are less similar, a less positive influence was shown.

In the current study, an attempt is made to investigate if the results of the previous studies hold when the L1 is Bahasa Indonesia. Tala (2003) stated that Bahasa Indonesia morphology can be considered simpler than English because it does not mark tenses, gender or plural forms. However, Sneddon (1996) found that two groups of verbs in Bahasa Indonesia primarily occur with form of affixation - prefixes and/or suffixes. In addition, the affixation rules for verb bases in Bahasa Indonesia can be unpredictable, with total mastery predominantly evident in native speakers only (Sneddon, 1996).

Compared to the learners' Bahasa Indonesia, English is more complicated morphologically. Nunens and Bryant (2004) show that there are many words in English whose spelling cannot be predicted from phonology, but are entirely regular if analyzed into morphemes. The word *madness*, for example, ends with a double *s*; this is entirely predictable from the fixed spelling of the suffix *-ness* but not from phonology. Similarly, the word *musician* would be considered highly irregular if it was analyzed in terms of letter-sound correspondences, but its spelling is completely regular considering it was formed by *music* and the suffix *-ian*, a morpheme to indicate 'doer' or 'person who xs' (where x refers to the noun the suffix attaches to). They conclude that an awareness of morphology should benefit the development of children's vocabulary. Thus, for L1 learners, knowledge of English morphology makes a significant contribution to the vocabulary size and other language skills. This present study is then aimed to investigate if such knowledge makes a significant contribution to English vocabulary learning for EFL students in Indonesia.

2.3 Measuring English Morphological Awareness

Anglin (1993) identifies five different morphological word types in English. The five types are root words (e.g., *short*, *closet*), inflected words (e.g., *smoking*, *reports*), derived words (e.g., *shortish*, *treelet*), literal compounds (e.g., *sunburn*, *birthday*), and opaque, idiomatic compounds or lexical idioms, which are then called simply 'idioms' (e.g., *mouse tail*, "a plant of the crowfoot family"; *pink lady*, "a cocktail").

In this present study, four of the morphological word types (root words, inflected words, derived words and literal compounds) were used to investigate the two types of

morphological awareness: Morpheme Identification Awareness and Morphological Structural Awareness. The Morpheme Identification task tests the participants' knowledge of root words and use of morphemes to guess meaning, whereas the Morphological Structure task assesses the ability to create literal compounds, inflected, and derived words. Further discussion on these two measures of morphological awareness is provided in the next sections.

2.3.1. Morpheme Identification Awareness

Chang, et al. (2005) define awareness of Morpheme Identification as the ability to distinguish different meanings across homophones, for example by understanding that *flower* in *flowerpot* is represented by a plant with petals as opposed to a sack of white powder (*flour*). The authors believe that this aspect of morphological awareness might help language learners to distinguish among meanings of syllables with identical sounds, facilitating language analysis and vocabulary growth. In this case, morphological awareness involves understanding that different meanings can simultaneously be attributable to phonologically identical words. For example, in the Morpheme Identification task used here, the participant is shown a picture of the sun and a picture of a male child and then given the word *grandson*. The participant is then asked to choose which picture correctly reflects the meaning of the word. This is an adaptation of the test used in study on young children by Chang et al. (2005). See appendix B, part 1 in Section B.

2.3.2. Morphological Structure Awareness

The other type of morphological knowledge measured in this study is the awareness of Morphological Structure. This Morphological Structure requires learners to make use of linguistic knowledge to derive new meanings. Skill in manipulating language, variously referred to as generativity, creativity, or productivity of language, may be important in learning new meanings within one's language (Chang et al., 2005, p. 421). For example, in the Morphological Structure Test used here the participant is given a single sentence scenario and a prompt to make a novel compound word, as in:

*There's a paper that is **white** in color, we call that **white paper**.
There's a paper that is **red** in color, what do we call it? _____ (red paper)*

The participants' knowledge of inflectional morphology is also assessed in the test by providing a context and then requiring the grammatically appropriate novel response.

*John is **stotting**. Yesterday he did this. What did he do yesterday?
Yesterday, he _____*

Of interest here is whether the knowledge required to complete these Morpheme Identification and Morphological Structure Awareness tasks relate to L2 vocabulary knowledge. Chang et al. (2005) believe this is important because it demonstrates that there are two different aspects of morphological awareness and that both of these might be important in fostering vocabulary acquisition.

2.4. Research Questions

A major challenge facing EFL learners like those in the Indonesian context is the development of a vocabulary of the size that would permit them to function adequately in many English language situations (Nurweni and Read, 1999, as cited in Nur, 2004). Through a research study conducted in an Indonesian university to estimate the English vocabulary knowledge of first-year students, the authors found that only a small proportion of the students came close to the threshold, in terms of breadth and depth of their vocabulary knowledge. This study was the only one found that addressed the issue of the English vocabulary size and proficiency of Indonesian EFL students. In addition, when considering the link between morphological awareness and vocabulary, there have only been a limited number of studies done on languages such as Finnish, Spanish and Hebrew, see discussion above (Section 2.2.) Therefore, more research is needed to provide a stronger empirical basis for our understanding of the issue. Motivated by earlier studies, this research will investigate the importance of morphological awareness in learning and teaching English vocabulary in Indonesian schools.

This study specifically aims to consider theoretical and practical aspects of measurement of morphological awareness and how they relate to the learners' EFL vocabulary knowledge. Research in the L1 has shown that understanding and mastery of morphology have been shown to be effective for building vocabulary. However, it is still largely unknown whether strategies for vocabulary building that prove fruitful for L1 learners also produce significant gains in learners of an L2.

The primary goal of this study is to investigate whether morphological awareness can be related to the vocabulary size of EFL Indonesian senior high school students. First,

the English vocabulary size of the Indonesian senior high school students in Social Science and Natural Science programs will be measured. Then a measure of English morphological awareness for these learners will be obtained. Of interest will be whether there is a difference between these two groups in both vocabulary size and morphological awareness. Finally, the link between vocabulary size and morphological awareness will be assessed, with possible implications for morphological awareness as a predictor of vocabulary learning.

CHAPTER 3

Methodology

3.1. Participants

The participants in this study were the students of the 12th grade in an Islamic public senior high school in a rural area in West Sumatra, Indonesia. In addition to English, the students also study Arabic as a foreign language, the latter reflecting the Islamic curriculum in the school.

In total 98 students participated in the study, 29 males and 69 females, and have learned English for about 5 years. They belong to two different programs of study, Social Sciences (N=49, 14 males and 35 females) and Natural Sciences (N=49, 15 males and 34 females). The students were grouped into the programs based on their own interest and their average grades for the first and second semesters of the 10th grade. Students in the Social Science typically have high marks in economics, sociology, history and geography, while Natural Science students are required to have high marks in math, physics, chemistry and biology.

English was not a factor in the students' program selection. However, English is one of three subjects examined in a national final exam in the last semester of the 12th grade for all students. It is also a requirement for university entrance for both programs. Therefore, English is an important part of the curriculum for both Social and Natural Science programs, and is taught in the two programs for four and six lesson hours (one lesson hour is approximately 45 minutes) per week in the 11th and 12th grades, respectively.

The English proficiency level for the students is based on the grades obtained in the end of semester test. The test is done at school level, but the education department at regional level provided the test papers. A group of teachers, selected as schools' representatives in the regency, developed the test. The exams typically assess reading, writing, listening, speaking and grammar proficiency. Based on test performance in the last semester at the 11th grade, there were different results of the test across the two groups, the students from the Natural Science program performed better than the students from Social Science (the averages are 72.67 and 66.30 respectively). In addition to this measure, the participants' English proficiency level was also assessed by a Vocabulary Levels Test (Nation, 2001) which was administered as part of the data collection.

3.2. The Testing Instruments

Nation's Vocabulary Levels Test (VLT) was used to measure the students' receptive vocabulary. This test was chosen because it is commonly used by other studies and it is easy to administer and score. Since the participants were senior high school students, the receptive vocabulary levels test used tested the participants' knowledge of vocabulary items from the 2000, 3000 and 5000 most frequently occurring words. These are seen as words that all learners need to know to read basic texts and that should be concentrated on in class (Nation, 2001). Each level had ten items containing six words and three meanings. The participants must choose the right word to go with each meaning. The following are the instructions and a sample item (see appendix B, Part A).

This is a vocabulary test. You must choose the right word to go with each meaning. Write the number of the word next to its meaning.

- 1 business
- 2 clock _____ part of a house
- 3 horse _____ animal with four legs
- 4 pencil _____ something used for writing
- 5 show
- 6 wall

The learners' morphological knowledge was tested by the *Morphological Awareness Test* presented in Chang et al. (2005). This test consisted of two parts: a Morpheme Identification Awareness test and a Morphological Structural Awareness test, which are discussed below. The purpose of the first test was to verify the participants' ability to distinguish homophones (words that have same pronunciation and possibly same and/or different spelling), while the aim of the second test was to check if the participants could demonstrate their ability to combine morphemes in a productive manner.

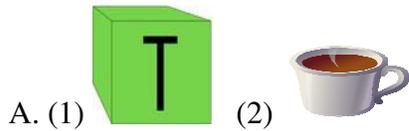
The Morpheme Identification Test consisted of one example and five test items. All the items have two pictures and the subjects were asked to look at the pictures and then answer the question by choosing the correct picture containing the meaning of the target word. The following is the instruction and an example (Chang et al., 2005, p. 430-431).

Instruction

There is one example item and five test items. All the items have two pictures. Look at the pictures and then answer the question by choosing the correct picture containing the meaning of the target word.

Example:

There are two pictures for the example item, which means "the letter T" and a "teacup," respectively.



Which contains the meaning of the “tea” in “tealeaf”?

Only five items were used because of the lack of time and resources to get the appropriate pictures best presenting the homophones.

The Morphological Structural Test consisted of twenty scenarios illustrating objects that are regularly encountered in daily life, as well as some which are rarer. As was the case with previous test, the items were adapted from Chang et al. (2005). The participants were asked to come up with words to describe the objects or concepts presented by each scenario. Fourteen of the scenarios required responses involving morpheme compounding, whereas the remaining six items involved syntactic manipulations. One example of the compounding items was this: *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?* The correct response for this item is *moonrise*. An example for manipulating grammar was this: *John is stotting. Yesterday he did this. What did he do yesterday?* The correct response for this item is *stotted*.

However, there was an important change made to the two tests in this present research. The scenarios for each item in the present study were in written form, not presented orally as in the previous study (Chang et al., 2005). There are two reasons behind this change; firstly, practicality in administering the test and validity of results. This is because teachers at the school conducted the test; neither the researcher herself nor English native speakers. It was practical for the teachers to administer the test by simply delivering the test papers to the students; moreover, an oral test given by a non-

native speaker may skew the result. Secondly, the participants were EFL senior high school students, not L1 children; therefore, their exposure to English is mainly through reading, not oral interaction.

Finally, in order to gain a better understanding of the participants' perceptions of the tests and their vocabulary learning, specific questions were included at the end of each test (VLT, Morpheme Identification and Morphological Structure Awareness test) and more general questions were given after completion of all three tasks. The questions were created by the researcher to investigate the participants' perception of their English vocabulary knowledge, as well as their reactions to the morphological awareness tasks. These questions were asked to provide a cross-check of what the test results show and to ascertain the participants' ideas about morphological awareness:

1. Which do you find easier? Morpheme Identification Test (Part 1) or Morphological Structure Test (Part 2)?

For all three tests, instructions and examples were written in Bahasa Indonesia, but the content of the tests was in English. On the other hand, all survey questions were in Bahasa Indonesia in order to ensure that the participants would understand them. Participants were instructed to respond in Bahasa Indonesia as well, so that they could express their ideas and thoughts more easily.

3.3. Procedure

Before administering the tests, the researcher contacted one of the English teachers at the school and explained the purpose of this study. The teacher then contacted the principal to ask for his approval. After getting his approval, the tests were administered to students at the beginning of their first semester in the 12th grade. The participants

completed the tests individually. The project received ethical clearance from the University of Queensland Medical Research Ethics Committee (MREC) and Behavioural & Social Sciences Ethical Review Committee (BSSERC).

The test consisted of three parts. Part 1 was Nation's Levels Test (VLT - 90 items). Part 2 was the Morpheme Identification Test (5 items) and Part 3, the Morphological Structural Awareness Test (20 items). The participants also completed a 10-question survey about their perceptions about vocabulary learning and morphological awareness. The test was administered over two days to minimize fatigue. The first day of testing consisted of the VLT, and two questions asking about the participants' perception of the test and their judgement on their vocabulary level. The second day of testing included the morphological awareness test and questions on their view about the concept of morphology and their beliefs on their vocabulary learning in general. The participants received instruction for each part only on the day the particular test was done and they were allowed to complete the tests in two hours on each test day.

3.4. Data Analysis

To answer research question 1, which investigates the vocabulary size of the participants and compares the difference between groups, the results of the VLT were summarized by mean frequency and standard deviation across the three different levels (2000, 3000 and 5000). The scores obtained were added to get the total scores of the three levels. In order to highlight the differences in the vocabulary knowledge that was employed by each group of participants, the results of all the participants in total and the separate results of each group (Social Science and Natural Science) were compared. Also,

a one-way ANOVA was performed to see if there is a statistical difference between the vocabulary size of students from the Social and Natural Science programs.

The results of the morphological awareness test were also analysed for the mean and standard deviation for the two parts (Morpheme Identification and Morphological Structure) and the group as the whole. Independent group t-tests were carried out to see if the groups mean differences were significant. The data were then analysed to emphasize the difference between the two parts in light of research question 2. In order to ensure reliability, all tests were scored twice, once by the researcher and once by a colleague.

In light of research question 3, for each participant, the correlations between both the VLT total score and Morpheme Identification and the VLT total score and Morphological Structure were analysed. These correlations highlight the relationship between the vocabulary size and the morphological knowledge of each participant.

Moreover, the answers to the perception survey were analysed to investigate the participants' perception of the Morphological Awareness test as well as their interest in applying these strategies for their future English vocabulary learning.

CHAPTER 4

Results

4.1. Performance on the Vocabulary Levels Test (VLT)

The VLT was administered to 98 students from the two different study programs. Each level of the vocabulary test consisted of 30 questions. The scores of each level were analysed, as were the total scores across the three levels of the test.

4.1.1. Results of the VLT

Initially, in order to know that the data obtained for answering the research question was interpretable, it was necessary to obtain a reliability score for the VLT used in this study. Test reliability for the VLT was assessed using Cronbach's alpha (Brown, 2001). The reliability of the total test, containing 90 questions, was .94. In detail, each level of the VLT (2000, 3000 and 5000) also indicates high reliability. At the 2000 level, the alpha was .85, whereas at the 3000 and 5000 levels, the alphas were .84 and .88 respectively. This indicates that the scores obtained were highly reliable.

Table 1 shows the results of each level of the test. Participants showed the best performance in level 2000 where they know on average 19 words out of 30. In contrast, at the 3000 and 5000 levels, students knew on average only 12 words out of 30. For the overall result of the three test levels, the students knew approximately 43 words out of the 90 words tested.

Table 1

Mean Score, Percentage Correct and Standard Deviation in Different Levels of the Vocabulary Levels Test (VLT)

| Level | Mean (% correct) | Standard Deviation |
|-------|------------------|--------------------|
| 2000 | 18.62 (62%) | 6.07 |
| 3000 | 12.25 (41%) | 5.75 |
| 5000 | 12.14 (41%) | 6.95 |
| Total | 43.01 (48%) | 16.76 |

Note. There are 30 questions in each level and 90 questions in total. N = 98.

4.1.2. Results of the VLT across the Two Programs

The vocabulary size scores were also compared by the two groups, Social Science and Natural Science. As shown in Table 2, on average there was little difference on all levels individually. However, the two groups showed the same results when the total score for the three levels was combined. They answered 48% correct answers out the 90 questions and one student from each program obtained the highest score, 80%.

Table 2

Mean Frequency, Standard Deviation, Maximum and Minimum Scores in Different Levels of the Vocabulary Levels Test (VLT) by Each Study Program

| Program | Social Science (N = 49) | | | | Natural Science (N = 49) | | | |
|---------|-------------------------|-------|----------|-----|--------------------------|-------|----------|-----|
| | Level | Mean | Std. dev | Max | Min | Mean | Std. dev | Max |
| 2000 | 19.14 | 4.17 | 27 | 4 | 18.10 | 7.53 | 30 | 7 |
| 3000 | 12.55 | 6.60 | 24 | 1 | 11.94 | 4.80 | 22 | 4 |
| 5000 | 11.25 | 8.00 | 27 | 0 | 13.04 | 5.65 | 21 | 4 |
| Total | 42.93 | 16.90 | 72 | 6 | 43.01 | 16.80 | 72 | 19 |

Note. There are 30 questions in each level and 90 questions in the total.

Table 3 shows that a one-way ANOVA revealed no statistically significant difference between the VLT scores of students from Social Science and Natural Science programs at the three test levels as well as in the test as a whole.

Table 3

Analysis of Variance for Groups of Social Science (N= 49) and Natural Science (N=49)

| Source | f | | | | P | | | |
|--------|------|------|-------|-------|------|------|------|-------|
| | 2 | 3 | 5 | Total | 2 | 3 | 5 | Total |
| groups | .716 | .276 | 1.647 | .002 | .399 | .601 | .203 | .967 |

Note. df = 1, 2 = VLT2000, 3 = VLT3000, 5 = VLT5000, Total = VLT total

4.2. Performance on the Morphological Awareness Tasks

The second part of the study assessed the degree of English morphological awareness possessed by the participants in the study. Means, standard deviations, maximum and minimum scores of the two tasks are first reported. Then students' perceptions on vocabulary learning and morphological concepts are provided in the section following. The responses are presented in percentages to get the average judgment from all of the participants.

4.2.1. Results of Morphological Awareness Test

Table 4 shows a Morpheme Identification score of close to 5 for each group, indicating that the students had reached the ceiling on this task. There were 22 and 31 students who obtained the maximum 100%, from the Social Science and Natural Science program respectively. On the other hand, scores on the Morphological Structure task showed a greater range. In total, the students averaged between 11 and 13 correct answers (out of 20), for the Social Science and Natural Science groups, respectively.

Table 4

Mean Frequency, Standard Deviation, Maximum and Minimum Scores in Different Levels of the Vocabulary Levels Test (VLT) by Social Science (N= 49) and Natural Science (N=49) groups

| Programs | Morphological Identification | | | | Morphological Structure | | | |
|------------|------------------------------|-----|-----|-----|-------------------------|------|-----|-----|
| | MN | SD | Min | Max | MN | SD | Min | Max |
| Social Sc | 4.45 | .50 | 4 | 5 | 10.80 | 3.59 | 0 | 16 |
| Natural Sc | 4.51 | .74 | 2 | 5 | 13.47 | 3.32 | 3 | 18 |
| Total | 4.48 | .63 | 2 | 5 | 12.13 | 3.69 | 0 | 18 |

Note. Morpheme Identification (5 items), Morphological Structure (20 items).

Independent group t-tests revealed that for the Morpheme Identification scores, $t(96) = .48$, so is not significant. For the Morphological Structure scores, $t(96) = 3.83$, $p = .000$ (two-tailed). This shows that the Natural Science students performed significantly better on the Morphological Structure test.

4.2.2. Students' Perceptions of the Morphological Awareness Test

To judge the students' perception on the morphological awareness, there were two questions asking their opinions about 1). The difficulty level of the two types of the tests, and 2). Their preferences for one of the two types. These perceptions give insight into the relative difficulty of the two types of morphological awareness.

As shown in Table 5, more than one-third of the students considered that the Morpheme Identification test was neither difficult nor easy. In addition, there were approximately 3% more students who considered this task easy compared with students

who found it a difficult test. On the other hand, approximately 39% of the students thought that the Morphological Structure test was a difficult test. Approximately 65% of the students preferred the Morpheme Identification to the Morphological Structure test. These findings are consistent with the ceiling effect evident in the results of Morpheme Identification test.

Table 5

The Percentages of Students' Perceptions on the Difficulty of the Two Types of Morphological Awareness Test

| | Difficulty of the test | | | | | Pref |
|-------------------------|------------------------|-------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 | |
| Morpheme Identification | 11.34 | 25.77 | 37.11 | 11.34 | 14.43 | 64.58 |
| Morphological Structure | 3.16 | 35.79 | 29.47 | 12.63 | 18.95 | 35.42 |

Note. Scale for difficulty of the test: 1 = very difficult, 2 = difficult, 3 = moderate,

4= easy, 5= very easy, Pref = students preference in the two task types, N = 98.

4.3. The Relationship of the VLT to the Morphological Awareness Test

The third question concerned the relationship between the English morphological awareness and the vocabulary knowledge of the EFL learners in the study. The mean scores of the VLT and the two Morphological Awareness tasks for the whole group (98 participants) were correlated to assess the strength of association between the tests. Also, the correlation of the 2 groups' performances (Social Science and Natural Science) in the VLT and the two Morphological Awareness tasks was analysed.

4.3.1. The Intercorrelations between the VLT and Morphological Awareness Test

For the group as a whole, both Morpheme Identification and Morphological Structure tasks were significantly correlated with the VLT, although the strength of association was not high. The correlation of the Morpheme Identification test and VLT scores was comparatively higher compared than that of the Morphological Structure test and the VLT results (Pearson r are .388 and .376 respectively at $p < .01$, all tests two-tailed). In addition, there was a small but significant association between the two morphological awareness tests (Pearson r is .234, $p < .05$), indicating the two measured different kinds of morphological knowledge. Of course, these correlations must be interpreted with caution, due to the uniformly high scores obtained in the Morpheme Identification task.

However, the results show a different association pattern between the two groups (Social Science and Natural Science). As shown in Table 6, the Morpheme Identification scores obtained by the students from the program of Social Science were significantly correlated with the scores of their VLT. However, their scores in Morphological Structure test were only slightly associated with their scores in the VLT. On the other hand, the Natural Science students' scores in the VLT were strongly correlated to their Morphological Structure scores, but not to the scores in Morpheme Identification test.

Table 6

Intercorrelations between the VLT and Morphological Awareness Test across the Groups

| | | Morpheme Identification | | Morphological Structure | |
|----------|------------|-------------------------|------------|-------------------------|------------|
| | | Social Sc | Natural Sc | Social Sc | Natural Sc |
| Nation's | Social Sc | .707** | -- | .214 | -- |
| VLT | Natural Sc | -- | .183 | -- | .607** |

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

The pattern of results is difficult to explain. The Social Science group scores on the Morpheme Identification test correlated ($r = .71$) with the VLT performance, but the Morphological Structure scores did not. The opposite result was obtained for the Natural Science group. The ceiling effect in the Morpheme Identification test and the similar scores on the VLT for both groups makes the correlation for the Social Science group difficult to interpret.

CHAPTER 5

Discussion

5.1. English Vocabulary Size

The first research question concerned the size of the English vocabularies of Indonesian senior high school students in the study, as reflected in their performance on the VLT, and whether there was a difference between the Social Science and Natural Science groups. The vocabulary size score was assumed to highlight the students' vocabulary proficiency after studying English for almost 5 years. The results revealed that the students performed better in doing the vocabulary test at the 2000 level than at the 3000 and 5000 levels of the VLT. This indicates a better result compared with the previous study by Nurweni and Read (1999, as cited in Nur, 2004), who found that the average first year Indonesian university student only masters about 1226 English words. This conclusion is based on two considerations:

1. Simply referring to Zimmerman (2005), the scores on the VLT test can be used to provide a rough estimate of the vocabulary size. For example, if a participant can answer correctly 9 items out of 18 items in 1000 level, it can be assumed that he/she knows roughly 500 out of the 1000 words families from that level. Thus, in the present study, on average the students obtained the score 62%. It can be calculated then that they know approximately 1240 words.
2. The participants in the current study are assumed to learn English in a shorter term compared to the participants in the previous study. The first year Indonesian university students in the former study are in

general assumed to have already learnt English for six years, while the grade 12 students of senior high school in the latter study are generally assumed to have studied English for five years.

Beside the two considerations, it is also interesting to evaluate the vocabulary threshold level for senior high school students (4000- 5000 words) confirmed by Nurweni and Read (1999, as cited in Nur, 2004). Nagy and Anderson (1984) found that there was a lack of agreement among the researchers about an absolute vocabulary size for any given age or development level. Similarly, Zechmeister, et al. (1993) stated that there are many apparent logical inconsistencies in vocabulary-size literature. In addition, most of the thresholds proposed are intended for English L1 users, not ESL or EFL learners.

Therefore, it is interesting to consider a discussion in Nagy and Anderson (1984) about getting the real picture of the students' vocabulary size through the number of words they have to deal with in school reading. Hence, information on the amount and type of reading done by the students in and out of school is required to reanalyze the vocabulary size by grade level. Nagy and Anderson (1984) considered the pages of texts the students read at school per day, as well as the speed of the words they read per minute to estimate the vocabulary size that the students should have. Applying this calculation into the Indonesian context, the threshold confirmed by the previous study could be unrealistic because of some limitations in Indonesian senior high schools. First, English is taught for four and/or six hours meeting (one hour meeting is approximately 40 minutes). During that time, all four skills - listening, reading, writing and speaking - are taught to the students, not only reading. Second, most of the students get the reading sources only at school, not at their home environment. Therefore, on average the English passage the

students read each day will be very limited with a low word-reading rate as well. Thus, in this present study, the judgement on the vocabulary threshold level of the senior high school in Indonesia is not provided. However, it can be a consideration for the research in the future.

The one-way ANOVA test across the two groups of participants, Social Science and Natural Science, did not show a significant difference on the vocabulary measure. This may go against a common perception, especially in Indonesia, about Natural Science students, who are usually assumed to have better performance in language tests than students from the Social Science program. This result also revealed that there is no significant difference between the two groups in their performance on VLT, even though they had different results in their general English proficiency (as indicated by the average scores in the semester's summative test).

5.2. Morphological Awareness

The second question addressed in the study concerns the level of morphological awareness possessed by the participants in the study. As in the first question, there was also interest in how the two groups compared. For the Morpheme Identification test, the results show that the students could perform well in choosing one target picture as the one that best corresponded to the meaning of the morpheme intended. However, the results also show the appearance of a ceiling effect, which is consistent with the previous study by Chang et al. (2005). The students answered the questions very well and more than 50% of the participants obtained the maximal score, 100%. This ceiling effect is assumed to cause the test items to be less reliable (the analyses of the test reliability

resulted an alpha coefficient of .03.). The limited number of questions had been assumed the main cause for this effect. The appearance of the ceiling effect may be also because the items in the Morpheme Identification tasks were modified in this study, different from the previous study by Chang et al. (2005).

Unlike the Morpheme Identification measure, the Morphological Structure results were of satisfactory reliability (the analyses of the test reliability ensured that with an alpha coefficient of .79.). The resulting *t*-tests showed a significant difference between the performance of students from Social Science and Natural Science in this Morphological Structure test, but not on the Morpheme Identification test. On the Morphological Structure test, the mean for the Social Science group was 10.80 (SD = 3.59), somewhat less than the Natural Science group 13.47 (SD = 3.32). In addition, the range of Social Science students' scores is also larger than the score range of Natural Science students, showing greater variability in responses by the Social Science students.

An analysis of the Morphological Structure items shows the students performed approximately 14% better in compounding words than using their syntax knowledge to create new words (the mean frequency of the former and the latter are approximately 64% and 50% respectively).

Other patterns were found in a further analysis of each item in the Morphological Structure test. In forming new compounds by stringing together other words, the participants show better performance when the target words were in the same grammatical category such as noun + noun, such as in *milk glass* (item 5) and *tea cup* (item 4). However, none of the students answered correctly when they were asked to create *donut tree* (item 6) after they were given *apple tree* as a compound word from

apples and *tree* (see appendix, Morphological Structure test, question 6). This could be linked to the different features of the two target words, one is plural (*apples* and *donuts*), another is singular (*tree*). The participants could not apply their syntactic knowledge about the importance of deleting *-s* ending from *donuts* to form the compound *donut tree*. Similarly, the participants could not perform well in compounds formed with a preposition. There were only 11 students who answered *over-ground train* (item 12) correctly after being given example in the same category, *under-ground train* to indicate *train that runs over the ground* (see appendix, Morphological Structure test, question 12). Most of the students did not exclude the verb *runs* from their answer, thus most of the answers were *runs over ground train*.

In the second part of the Morphological Structure test, using inflectional morphology to understand novel words, some trends emerge in the participants' performance. The students show better performance in applying the *-ed* and *-ing* suffixes as the marker for past and present participle (see appendix, Morphological Structure test, question 15, 18, and 19) with 81%, 60% and 66% correct answer respectively. However, they seem to have problem in using the *-ing* suffix for making *frogging* from *frogs* as an association to the example of *raindrops* and *raining* (see appendix, Morphological Structure test, question 20). Moreover, the students obtained a low mean average in applying the *-es* suffix as the marker for plurality. There are only 10% of the students answered correctly for *huxes* (item 17), even though they performed better in applying *-s* suffix for *wugs* (item 16) with 56% correct answers.

In a previous study, Lytinen and Lytinen (2004) suggest that early identification of grammatical markers is important for children because the markers may

persist and influence the children's following language development. Noun inflections were acquired early; followed by verb inflections; and finally verb and adjective inflections at the following age. The results of the present study do not support this result. The participants here performed better in understanding verb inflections than noun inflections. Thus, an alternative explanation suggested by Adams and Huggins (1985, as cited in Wysocki and Jenkins 1987) can be taken into consideration. The ability to use contextual information to identify words depended not on age or development level, but mainly on the familiarity with the target words. This may also explain the result of the present study.

Next, analyzing the students' perception of their performance on the two morphological awareness tasks, their comments on the Morpheme Identification test suggests that this task may have tapped semantic association knowledge by its use of pictures. However, it is assumed that pictures were needed to represent two homophones since the tests were given in written form, not in an oral one. Most of the students choosing the Morpheme Identification to be their preference commented that the pictures made it easier for them to guess the target words. On the other hand, most of the students choosing the Morphological Structure test to be their preference wrote that they liked this test because they could apply their analysis of the example given to get the target words. This point is consistent with the previous study by Chang et al. (2005). In their study, they argued that through the Morphological Structure test, the children were asked to combine morphemes in new ways. Noticing similarities across words, the children could build on their morphological knowledge, and it was more efficient for them to learn new

words. With knowledge of morphemes, children found it easier to understand new vocabulary by generalizing the morphemes to new contexts.

5.3. The Relationship between Morphological Awareness and English Vocabulary Knowledge

The third research question concerned the possible relationship between performance on the VLT vocabulary measure and the morphological awareness test, and whether there are differences between the Social Science and Natural Science groups in this regard.

Consistent with the previous study by Chang et al. (2005), the results for the group as a whole reveal that there is a significant association between these two variables, vocabulary size and morphological awareness. However, because this is a correlational study, the causal relationship among them cannot be predicted. In addition, when the two morphological awareness measures were correlated there was a low correlation coefficient, indicating that they were measuring different kinds of knowledge, at least to some degree.

However, when analyzing the correlation both between the VLT and Morpheme Identification task and between the VLT and Morphological Structure task for the two groups (Social Science and Natural Science) separately, the results were partly inconsistent (refer Table 6). The Social Science group showed a significant correlation between the VLT and Morpheme Identification, however, the Natural Science group showed the opposite result – a significant correlation between the VLT and Morphological Structure test. This unusual result is difficult to fully explain.

The strong correlation between the Social Science students' scores in the VLT and the Morpheme Identification task may be linked to the easy level of the questions in this task and the fact that there were only five questions. Also, the fact that the researcher modified this task from the one used by Chang et al. (2005) may affect the results. On the other hand, the Social Science students did not have good results in Morphological Structure. This could be because Bahasa Indonesia and English have a lack of similarities in their morphological features.

In contrast, the students from the Natural Science program performed significantly better in the Morphological Structure measure. One possible reason for this result may be linked to the average of their general English proficiency. As stated before, the students from this program performed better in their semester summative test than the students from Social Science. Another reason may relate to the nature of the Natural Science program. The main subjects in this program are mathematics and sciences, which deal mostly with applying patterns and rules in solving problems. This background may help the students from the Natural Science program to build knowledge in Morphological Structure better than the students from the Social Science program, who may not study subjects that have as much focus on problem solving. When the Natural Science students noticed similarities across words, they are building on their morphological knowledge. Also, as they acquire new vocabulary, they can analyze vocabulary items into sublexical components such as morphemes more easily. Further research is needed on this issue.

Supporting the results of the correlational analysis, most of the students also wrote about their interest in applying the concept of morphological awareness to their vocabulary learning. The interest is sparked by the willingness in applying the patterns

they found in the examples to learn new words. This interest made the students more motivated and realized that learning English and English vocabulary was interesting.

Some students wrote in their comments about this morphological awareness test:

I can easily imitate the examples (student 52)

I like doing this test because it is interesting and enjoyable (student 37)

Doing this test encourages my interest to find the words' meaning (student 57)

I like this test because, in my opinion, it will be easy for me to memorize the words by remembering the examples (student 18)

I like the test because it makes me think about applying the concept in the examples given to find the target word (student 62).

I like this test because I need to think more when I try to find the target words, it is not simply guessing (student 93)

I like this test because it is enjoyable and motivating me to study more about English and English vocabulary (student 6)

I do not know what the morphological awareness is, but after doing the test, I feel curious and want to try another test (student 21)

In addition, concerning the strategies the participants used in learning English vocabulary, none of the students wrote about learning English vocabulary by inferring the meaning from morphological knowledge (Anglin, 1993). Thus, the result of this study may suggest to the students a new method that they can use in their vocabulary learning.

Finally, the responses to the survey questions show that the students organized their vocabulary learning strategies into stages (e.g. student 23 wrote *Reading English text, then finding the meaning by using dictionary and finally making notes at a board in*

my room). Therefore, the result of this study may suggest to students to also include morphological analyses as one of their stages in vocabulary learning.

CHAPTER 6

Conclusion

6.1. Summary of the Study

To sum up, the current study investigated the vocabulary size of the senior high school students in Indonesia, the nature of their morphological awareness and the relation of morphological awareness to building the learners' English vocabulary. The findings revealed that the students had better performance at the 2000 level of Nation's Vocabulary Levels Test, than at the higher levels. The one-way ANOVA test confirmed that there is no significant difference in the performance of the students from the Social Science and Natural Science programs in doing the VLT. However, the correlations between the VLT and the two aspects of the morphological awareness tasks may be a significant predictor of the vocabulary knowledge for senior high school students. The results of the Morpheme Identification measure approach the ceiling. The results of the students from the Natural Science program were significantly better than the Social Science students in the Morphological Structure test, which was confirmed by the Independent group t-tests done. In addition, the current study also found that there was a significant association between morphological awareness and vocabulary size. Finally, the participants wrote about the methods they used to develop their vocabulary. Also, they indicated their interest in building morphological knowledge and applying it to their English vocabulary learning.

6.2. Pedagogical Implications

The findings for the first question indicated a need to give more attention to the building and development of English vocabulary for EFL senior high school students in Indonesia. Next, the findings on the morphological awareness tasks revealed the aspects of morphological knowledge that may contribute to vocabulary learning. This suggests teachers should introduce aspects of morphological knowledge to the students. Initially, teacher should give explicit instruction and then gradually the learners can apply their morphological awareness automatically when faced with new vocabulary that has the possibility of morphological analysis. Finally, the significant correlation of morphological awareness to vocabulary size may suggest the need to apply this strategy for English vocabulary learning for the students. In addition, the students themselves confirmed their interest to use this method in their learning. Therefore, the concept of using morphological knowledge as a vocabulary-building tool is necessary for inclusion in the curriculum.

6.3. Limitations of the Study and Suggestions for Further Research

The current study revealed some insightful findings in and for the development of English vocabulary learning in Indonesia, however, there are also weaknesses that should be looked at for future study. The main problem was the appearance of the ceiling effect in the results of the Morpheme Identification task that limited the reliability of that test. This problem might occur because of some modifications to the test from the original study. In the previous study by Chang et al., (2005), a problem arose because the test was done through oral presentation. This meant it could not solely test morphological

awareness, as, due to the oral presentation, phonological awareness was a factor too. Therefore, for the current study, the researcher modified the test by presenting the scenarios in written form and by using pictures. Unfortunately, there were only five questions developed due to the limited time for preparing the test items. Also, the lack of time meant no trial of the test took place.

The school chosen for this study may not represent all schools in Indonesia. The performance scores obtained by the students may have been different if the participants were chosen from other schools, for example public senior high schools. The participants in the current study use a different curriculum, and also differ in the number of lessons taught compared with public schools. They have Islamic curriculum, therefore, they have more lessons on religious subjects, for example Arabic, which may influence their language learning, too. The results of the participants in this study may also differ from those of other students because of their environment. They live in a rural area that may limit them to have access to English in their surroundings. The result could be very different if the participants were from schools in big cities in Indonesia.

Finally, future studies should focus on controlling for previous vocabulary knowledge, ensuring that the test results are based on morphological analysis rather than the ability to memorize vocabulary. In addition, it is necessary to focus on the five separate components of morphological knowledge more systematically, for example, by clearly dividing the morphological awareness task into separate sections covering root words, inflected words, derived words, literal compounds and idioms. This separation will show whether participants can perform equally for each part and hopefully these modifications will give a truer result.

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Appendix A
TESTS ON VOCABULARY LEVEL AND MORPHOLOGICAL AWARENESS
(translated - Indonesian Version)

Nomor : _____
Tanggal : _____ **Agustus 2007**

TES KOSA KATA DAN MORFOLOGI

Petunjuk Umum:

Kami berharap kamu bersedia untuk berpartisipasi dalam penelitian ini dengan mengerjakan tes untuk mengetahui level kosakata yang saat ini telah kamu miliki serta mengisi kuisisioner tentang cara belajar kosakata Bahasa Inggris. Penelitian ini adalah salah satu bagian program MA, School of Languages and Comparative Cultural Studies, Universitas Queensland. Hasil penelitian ini diharapkan dapat memberikan gambaran tentang peranan morfologi dalam pembelajaran kosakata Bahasa Inggris untuk siswa SMA di Indonesia. Data yang diperoleh hanya akan dipakai untuk penelitian yang dimaksud, tidak akan digunakan sebagai penilaian. Karena itu diharapkan kamu dapat menjawab pertanyaan-pertanyaan ini dengan jujur, mencerminkan kemampuan kamu sendiri. Diharapkan setelah melakukan tes ini kamu akan bisa mengetahui tingkat kosakata yang telah kamu miliki. Kami mohon kamu bekerja sendiri-sendiri sehingga hasilnya benar-benar bisa memperlihatkan kemampuan masing-masing. Terima kasih.

A. Vocabulary Level Test

Bagian 1: Nation's Levels Tests (2001)

Instruksi

Ini adalah tes kosakata. Pilihlah arti kata yang paling tepat untuk kata-kata disebelah kanan dengan cara memilih dan menuliskan nomor kata disebelah kiri.

Contoh soal

1. business
2. clock _____ part of a house .
3. horse _____ animal with four legs
4. pencil _____ something used for writing
5. shoe
6. wall

Cara menjawab

- | | |
|-------------|------------------------------|
| 1. business | |
| 2. clock | 6 part of a house |
| 3. horse | 3 animal with four legs |
| 4. pencil | 4 something used for writing |
| 5. shoe | |
| 6. wall | |

Penjelasan

Dari nomor 1 sampai 6, kata yang paling benar sebagai *part of a house* adalah kata nomor 6 (*wall*), untuk *animal with four legs* adalah nomor 3 (*horse*), dan untuk *something used for writing* adalah nomor 4 (*pencil*).

Untuk mengetahui level atau tingkat kosakata kamu, tes ini terdiri dari tiga level yaitu level 2.000, 3.000 dan 5.000. Tingkat kesulitan tes ini bertambah seiring dengan peningkatan levelnya. Kamu tidak mesti menemukan arti setiap kata. Jika kamu tidak mengetahui arti suatu kata, **jangan asal tebak. Jawablah sesuai dengan apa yang kamu ketahui supaya tingkat/level kosakata kamu dapat ditentukan.**

Version 1: The 2,000-word level

- | | |
|--------------|------------------|
| 1. birth | |
| 2. dust | _____ game |
| 3. operation | _____ winning |
| 4. row | _____ being born |
| 5. sport | |
| 6. victory | |

1. choice
2. crop _____ heat
3. flesh _____ meat
4. salary _____ money paid regularly for doing a job
5. secret
6. temperature

1. cap
2. education _____ teaching and learning
3. journey _____ numbers to measure with
4. parent _____ going to a far place
5. scale
6. trick

1. attack
2. charm _____ gold and silver
3. lack _____ pleasing quality
4. pen _____ not having something
5. shadow
6. treasure

1. cream
2. factory _____ part of milk
3. nail _____ a lot of money
4. pupil _____ person who is studying
5. sacrifice
6. wealth

1. adopt
2. climb _____ go up
3. examine _____ look at closely
4. pour _____ be on every side
5. satisfy
6. surround

1. bake
2. connect _____ join together
3. inquire _____ walk without purpose
4. limit _____ keep within a certain size
5. recognize
6. wander

1. burst
2. concern _____ break open
3. deliver _____ make better
4. fold _____ take something to someone

5. improve
6. urge

1. original
2. private _____ first
3. royal _____ not public
4. slow _____ all added together
5. sorry
6. total

1. brave
2. electric _____ commonly done
3. firm _____ wanting food
4. hungry _____ having no fear
5. local
6. usual

Version 1: The 3,000-word level

1. belt
2. climate _____ idea
3. executive _____ inner surface of your hand
4. notion _____ strip of leather worn around the waist
5. palm
6. victim

1. acid
2. bishop _____ cold feeling
3. chill _____ farm animal
4. ox _____ organization or framework
5. ridge
6. structure

1. bench
2. charity _____ long seat
3. jar _____ help to the poor
4. mate _____ part of a country
5. mirror
6. province

1. boot
2. device _____ army officer
3. lieutenant _____ a kind of stone
4. marble _____ tube through which blood flows
5. phrase
6. vein

1. apartment
2. candle _____ a place to live
3. draft _____ chance of something happening
4. horror _____ first rough form of something written
5. prospect
6. timber

1. betray
2. dispose _____ frighten
3. embrace _____ say publicly
4. injure _____ hurt seriously
5. proclaim
6. scare

1. encounter
2. illustrate _____ meet
3. inspire _____ beg for help
4. plead _____ close completely
5. seal
6. shift

1. assist
2. bother _____ help
3. condemn _____ cut neatly
4. erect _____ spin around quickly
5. trim
6. whirl

1. annual
2. concealed _____ wild
3. definite _____ clear and certain
4. mental _____ happening once a year
5. previous
6. savage

1. dim
2. junior _____ strange
3. magnificent _____ wonderful
4. maternal _____ not clearly lit
5. odd
6. weary

Version 1: The 5,000-word level

1. balloon
2. federation _____ bucket
3. novelty _____ unusual interesting thing
4. pail rubber _____ bag that is filled with air
5. veteran
6. ward

1. alcohol
2. apron _____ stage of development
3. hip _____ state of untidiness or dirtiness
4. lure _____ cloth worn in front to protect your clothes
5. mess
6. phase

1. apparatus
2. compliment _____ expression of admiration
3. ledge _____ set of instruments or machinery
4. revenue _____ money received by the government
5. scrap
6. tile

1. bulb
2. document _____ female horse
3. legion _____ large group of soldiers or people
4. mare _____ a paper that provides information
5. pulse
6. tub

1. concrete
2. era _____ circular shape
3. fiber _____ top of a mountain
4. loop _____ a long period of time
5. plank
6. summit

1. blend
2. devise _____ mix together
3. hug _____ plan or invent
4. lease _____ hold tightly in your arms
5. plague
6. reject

1. abolish
2. drip _____ bring to an end by law

- 3. insert _____ guess about the future
- 4. predict _____ calm or comfort someone
- 5. soothe
- 6. thrive

- 1. bleed
- 2. collapse _____ come before
- 3. precede _____ fall down suddenly
- 4. reject _____ move with quick steps and jumps
- 5. skip
- 6. tease

- 1. casual
- 2. desolate _____ sweet-smelling
- 3. fragrant _____ only one of its kind
- 4. radical _____ good for your health
- 5. unique
- 6. wholesome

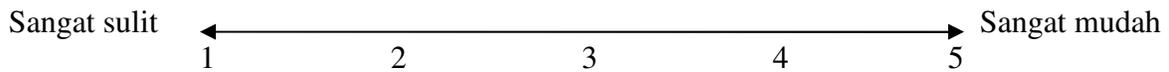
- 1. gloomy
- 2. gross _____ empty
- 3. infinite _____ dark or sad
- 4. limp _____ without end
- 5. slim
- 6. vacant

Bagian 2: Pertanyaan

Instruksi

Kamu telah menyelesaikan tes kosakata, sekarang jawablah pertanyaan dibawah ini dengan cara melingkari nomor yang kamu anggap paling sesuai, serta tambahkanlah komentar di tempat yang disediakan.

1. Apa pendapatmu tentang tes kosakata diatas?



Komentar:

2. Setelah melakukan tes kosakata diatas, bagaimana pendapatmu tentang jumlah kosakata mu?

Sangat sedikit ← 1 2 3 4 5 → Sangat banyak

Komentar:

B. Morphological Structure Test

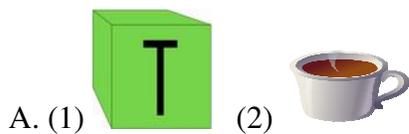
Bagian 1: Morpheme Identification Test

Instruksi

Dalam tes ini, ada satu soal sebagai contoh dan lima lainnya sebagai soal untuk kamu kerjakan. Pada setiap soal, kamu akan menemukan dua gambar. Lihatlah masing-masing gambar tersebut dan cobalah cari artinya dan jawablah pertanyaan yang diberikan dengan cara memilih gambar yang paling tepat mengandung arti dari kata yang ditanyakan.

Contoh

There are two pictures for this trial item, which means “the letter T” and a “teacup,” respectively.



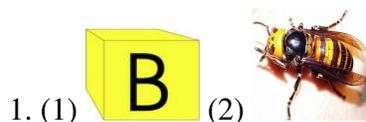
Which contains the meaning of the “tea” in “tealeaf”?

Penjelasan

Kamu bisa menjawab pertanyaan ini dengan memilih gambar nomor 2, karena ‘teh’ dalam “tealeaf” adalah ‘tea’ seperti gambar nomor 2.

Soal

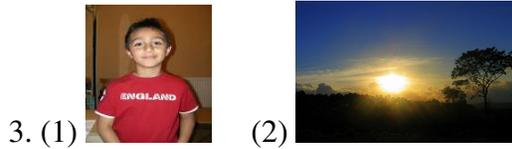
Sekarang pilihlah gambar yang tepat untuk arti kata-kata dalam soal berikut:



Which contains the meaning of the “bee” in “beehive”? _____



Which contains the meaning of the “eye” in “eyebrow”? _____



Which contains the meaning of the “son” in “grandson”? _____



Which contains the meaning of the “right” in “right hand side”? _____



Which contains the meaning of the “sea” in “seahorse”? _____

Bagian 2: Morphological Structure Test

Instruksi

Ada obyek-obyek yang bisa kita lihat secara langsung dalam kehidupan kita sehari-hari, dan ada pula obyek-obyek lain yang kadang jarang kita lihat. Dalam tes berikut, berikanlah nama untuk obyek-obyek dimaksud berdasarkan ilustrasi yang diberikan.

Contoh

There is a ballpoint pen that is blue in color. We call that **blue ballpoint pen**.
There is a ballpoint pen that is red in color; we call that **red ballpoint pen**.

Penjelasan

Ada *pena* yang berwarna *biru*, kita menyebutnya dalam Bahasa Inggris, ***blue ballpoint pen***.
Ada *pena* yang berwarna *merah*, kita menyebutnya, ***red ballpoint pen***.

Soal

1. There's a flower that is **big and red**, we call that a **big red flower**.
There's a flower that is **big and purple**, what do we call it?

2. We call a cat that is **white and big** a **big white cat**.
What do we call a cat that is **black and big**? _____

3. There's an animal that lives in the **sea** and **looks like a star**. It's called a **seastar**.
There's an animal which lives in the **sea** and **looks like a horse**. What do we call it?

4. A cup that is used to hold **coffee** is called a **coffee cup**.
What do we call a cup that is used to hold **tea**? _____

5. A glass that is used to hold **wine** is called a **wine glass**.
What do we call a glass that is used to hold **milk**? _____

6. A tree that grows **apples** is called an **apple tree**.
What do we call a tree that grows **donuts**? _____

7. Some people wear rings on their **ears**, they are called **earrings**.
Some people wear rings on their **nose**, what should we call that? _____

8. Many people wear laces on their **neck** called a **necklace**. Some people wear laces on their **foot**,
what should we call that? _____

9. The metal shoes that are put on **horses** are called **horseshoes**.
If we put metal shoes on **pigs**, what do we call them? _____

10. Early in the morning, we can see the **sun rising**. This is called a **sunrise**.
At night, we might also see the **moon rising**. What could we call this?

11. Some buildings are built very **high**, and we call them **high-rise buildings**.
Some buildings are built very **low**, what do we call that?

12. There is a kind of train that runs **under the ground**. We call that an **underground train**. There is another kind of train that **runs over the ground**. What do we call that?

13. **Basketball** is a game where you throw a **ball through a basket**. Tim made up a new game where he throws a **ball into a bucket**. What should he call the game?

14. A **box** used to store mail is called a **mailbox**. Some people use a **tray** to store mail. What should we call that? _____

Instruksi

Untuk soal 15–20, tuliskanlah kata baru yang ditanya berdasarkan *clue* yang diberikan,

15. Look at John. John is **stotting**. Yesterday he did this. What did he do yesterday? Yesterday, he _____

16. This animal is called a **wug**. There are four of them. There are four _____

17. This is a musical instrument called a **hux**. Now we have three of them. We have three _____

18. Joe knows how to **fleamp**. He is **fleamping** something. He did the same thing yesterday. What did he do yesterday? Yesterday he _____

19. This is a **krest**; it's used on letters. This letter has been **krested**. The postman is _____ the letters.

20. Sometimes the **raindrops** fall from the sky and we call that **raining**. Very rarely, **frogs** fall from the sky, we call that _____

Adapted from:

Chang, C. M., Wagner, R.K., Muse, A., Chow, B.W-Y, Shu, H. (2005). The role of morphological awareness in children's vocabulary acquisition in English. *Applied Psycholinguistics* 26, 415–435.

Bagian 3: Pertanyaan

Instruksi

Kamu telah mengerjakan dua tes dalam Morphological Awareness Test, **Bagian 1** dan **Bagian 2**, sekarang jawablah pertanyaan dibawah ini dengan cara melingkari nomor atau jawaban yang kamu anggap paling sesuai, serta tuliskanlah tambahan komentarmu di tempat yang disediakan.

1. Apa pendapatmu tentang **Morpheme Identification Test** yang kamu kerjakan pada bagian 1?

Sangat sulit ←—————→ Sangat mudah
1 2 3 4 5

Komentar:

2. Setelah melakukan tes di bagian 1, bagaimana pendapatmu tentang jumlah kosakatamu?

Sangat sedikit ←—————→ Sangat banyak
1 2 3 4 5

Komentar :

3. Apa pendapatmu tentang **Morphological Structure Test** yang kamu kerjakan pada bagian 2?

Sangat sulit ←—————→ Sangat mudah
1 2 3 4 5

Komentar:

4. Setelah melakukan tes di bagian 2, bagaimana pendapatmu tentang jumlah kosakatamu?

Sangat sedikit ←—————→ Sangat banyak
1 2 3 4 5

Komentar:

5. Jika kamu bandingkan kedua tes diatas, manakah yang kamu anggap lebih mudah?

Morpheme Identification Test (Bagian 1)

Morphological Structure Test (Bagian 2)

Komentar:

C. Pertanyaan Lanjutan

Instruksi

Kamu telah mengerjakan dua tes, Nation's Level Test (A) dan Morphological Awareness Test (B). Sekarang jawablah pertanyaan dibawah ini dengan cara melingkari jawaban yang kamu anggap paling sesuai, serta tuliskanlah tambahan komentarmu di tempat yang disediakan.

1. Jika kamu membandingkan Nation's Level Test (A) dan dua tes di Morphological Awareness Test (B), manakah yang kamu anggap lebih mudah?

Nation's Level Test (1)

Morphological Awareness Test (2)

Kenapa?

2. Apakah kamu ingin belajar kosakata baru Bahasa Inggris dengan menggunakan Morphological Awareness seperti yang digunakan dalam Morphological Awareness Test (B)?

Ya (1)

Tidak (2)

Kenapa?

3. Tuliskanlah cara kamu belajar kosakata bahasa Inggris selama ini. Bagaimana kamu melakukannya? Apakah kamu merasa puas dengan cara tersebut? Apakah kamu ingin belajar kosakata bahasa Inggris dengan cara yang lain?

4. Silakan tuliskan nilai Bahasa Inggrismu semester kemarin.

Kognitif : _____
Afektif : _____
Psikomotor : _____

This is the end of the tests and questionnaire.

Thank you very much for your kind help. Good luck for your study at grade XII!



Appendix B
TESTS ON VOCABULARY LEVEL AND MORPHOLOGICAL AWARENESS
(English Version)

Number : _____
Date of Test : _____ **August 2007**

TESTS ON VOCABULARY LEVEL AND MORPHOLOGICAL AWARENESS

General Instruction:

We would like to ask you to help us by doing the following tests and answering the questions concerning English vocabulary learning. This survey is conducted by an MA candidate, School of Languages and Comparative Cultural Studies, The University of Queensland to better understand the role of Morphological Awareness in learning English vocabulary by Senior High School students in Indonesia. The test does not affect your grades in any sense, and you do not even have to write your name on the test paper. Please answer honestly, as only this will guarantee the success of the investigation. Thank you very much for your kind help.

A. Vocabulary Level Test

Part 1: Nation's Levels Tests (2001)

This is a vocabulary test. You must choose the right word to go with each meaning. Write the number of that word next to its meaning. Here is an example.

1. business
2. clock _____ part of a house .
3. horse _____ animal with four legs
4. pencil _____ something used for writing
5. shoe
6. wall

You answer it in the following way.

1. business
2. clock 6 part of a house
3. horse 3 animal with four legs
4. pencil 4 something used for writing
5. shoe
6. wall

Some words are in the test to make it more difficult. You do not have to find a meaning for these words. In the example above, these words are business, clock, and shoe. If you have no idea about the meaning of a word, do not guess. But if you think you might know the meaning, then you should try to find the answer.

Version 1: The 2,000-word level

1. birth
2. dust _____ game
3. operation _____ winning
4. row _____ being born
5. sport
6. victory

1. choice
2. crop _____ heat
3. flesh _____ meat
4. salary _____ money paid regularly for doing a job
5. secret
6. temperature

1. cap
2. education _____ teaching and learning
3. journey _____ numbers to measure with

4. parent _____ going to a far place
5. scale
6. trick

1. attack
2. charm _____ gold and silver
3. lack _____ pleasing quality
4. pen _____ not having something
5. shadow
6. treasure

1. cream
2. factory _____ part of milk
3. nail _____ a lot of money
4. pupil _____ person who is studying
5. sacrifice
6. wealth

1. adopt
2. climb _____ go up
3. examine _____ look at closely
4. pour _____ be on every side
5. satisfy
6. surround

1. bake
2. connect _____ join together
3. inquire _____ walk without purpose
4. limit _____ keep within a certain size
5. recognize
6. wander

1. burst
2. concern _____ break open
3. deliver _____ make better
4. fold _____ take something to someone
5. improve
6. urge

1. original
2. private _____ first
3. royal _____ not public
4. slow _____ all added together
5. sorry
6. total

1. brave
2. electric _____ commonly done
3. firm _____ wanting food
4. hungry _____ having no fear
5. local
6. usual

Version 1: The 3,000-word level

1. belt
2. climate _____ idea
3. executive _____ inner surface of your hand
4. notion _____ strip of leather worn around the waist
5. palm
6. victim

1. acid
2. bishop _____ cold feeling
3. chill _____ farm animal
4. ox _____ organization or framework
5. ridge
6. structure

1. bench
2. charity _____ long seat
3. jar _____ help to the poor
4. mate _____ part of a country
5. mirror
6. province

1. boot
2. device _____ army officer
3. lieutenant _____ a kind of stone
4. marble _____ tube through which blood flows
5. phrase
6. vein

1. apartment
2. candle _____ a place to live
3. draft _____ chance of something happening
4. horror _____ first rough form of something written
5. prospect
6. timber

1. betray
2. dispose _____ frighten
3. embrace _____ say publicly
4. injure _____ hurt seriously
5. proclaim
6. scare

1. encounter
2. illustrate _____ meet
3. inspire _____ beg for help
4. plead _____ close completely
5. seal
6. shift

1. assist
2. bother _____ help
3. condemn _____ cut neatly
4. erect _____ spin around quickly
5. trim
6. whirl

1. annual
2. concealed _____ wild
3. definite _____ clear and certain
4. mental _____ happening once a year
5. previous
6. savage

1. dim
2. junior _____ strange
3. magnificent _____ wonderful
4. maternal _____ not clearly lit
5. Odd
6. weary

Version 1: The 5,000-word level

1. balloon
2. federation _____ bucket
3. novelty _____ unusual interesting thing
4. pail rubber _____ bag that is filled with air
5. veteran
6. ward

1. alcohol
2. apron _____ stage of development

- 3. hip _____ state of untidiness or dirtiness
- 4. lure _____ cloth worn in front to protect your clothes
- 5. mess
- 6. phase

- 1. apparatus
- 2. compliment _____ expression of admiration
- 3. ledge _____ set of instruments or machinery
- 4. revenue _____ money received by the government
- 5. scrap
- 6. tile

- 1. bulb
- 2. document _____ female horse
- 3. legion _____ large group of soldiers or people
- 4. mare _____ a paper that provides information
- 5. pulse
- 6. tub

- 1. concrete
- 2. era _____ circular shape
- 3. fiber _____ top of a mountain
- 4. loop _____ a long period of time
- 5. plank
- 6. summit

- 1. blend
- 2. devise _____ mix together
- 3. hug _____ plan or invent
- 4. lease _____ hold tightly in your arms
- 5. plague
- 6. reject

- 1. abolish
- 2. drip _____ bring to an end by law
- 3 insert _____ guess about the future
- 4. predict _____ calm or comfort someone
- 5. Soothe
- 6. thrive

- 1. bleed
- 2. collapse _____ come before
- 3. precede _____ fall down suddenly
- 4. reject _____ move with quick steps and jumps
- 5. skip
- 6. tease

B. Morphological Awareness Test

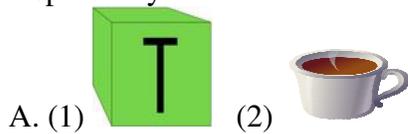
Part 1: Morpheme Identification Test

Instruction

There is one example item and five test items. All the items have two pictures. Look at the pictures and then answer the question by choosing the correct picture containing the meaning of the target word.

Example:

There are two pictures for the example item, which means “the letter T” and a “teacup,” respectively.

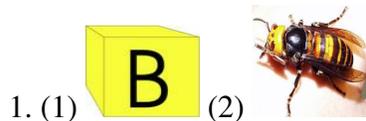


Which contains the meaning of the “tea” in “tealeaf”?

From the pictures, you can choose number (2) as something meaning ‘tea’ in ‘tealeaf’.

Test items

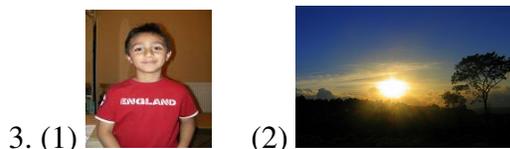
Choose the correct picture for the sentence immediately below.



Which contains the meaning of the “bee” in “beehive”? _____



Which contains the meaning of the “eye” in “eyebrow”? _____



Which contains the meaning of the “son” in “grandson”? _____



Which contains the meaning of the “right” in “right hand side”? _____



5. (1) _____ (2) _____
 Which contains the meaning of the “sea” in “seahorse”? _____

Part 2: Morphological Structure Test

Instructions

There are some objects which can be seen in our daily life, and there are also some which we have not seen before but might be possible. I want you to try to come up with names for those objects based on the names of daily objects given.

For example, there is a ballpoint pen that is blue in color. We call that **blue ballpoint pen**.

There is a ballpoint pen that is red in color; we call that **red ballpoint pen**.

There is a sun that is big and red in color. We call that **big red sun**.

Notes:

Correct=1 Incorrect=0

Please go through all the test items.

Example:

A. There’s a paper that is **white** in color, we call that **white paper**.

There’s a paper that is **red** in color, what do we call it? _____ (red paper)

B. There’s a pair of socks that is **red** in color, we call them **red socks**.

There are socks that are **blue** in color, what do we call them?

_____ (blue socks)

Test items

1. There’s a flower that is **big and red**, we call that a **big red flower**.

Now there’s a flower that is **big and purple**, what do we call it?

2. We call a cat that is **white and big** a **big white cat**.

What do we call a cat that is **black and big**? _____

3. There’s an animal that lives in the **sea** and **looks like a star**. It’s called a **seastar**.

There’s an animal which lives in the **sea** and **looks like a horse**. What do we call it?

4. A cup that is used to hold **coffee** is called a **coffee cup**.

What do we call a cup that is used to hold **tea**? _____

5. A glass that is used to hold **wine** is called a **wine glass**.
What do we call a glass that is used to hold **milk**? _____
6. A tree that grows **apples** is called an **apple tree**.
What do we call a tree that grows **donuts**? _____
7. Some people wear rings on their **ears**, they are called **earrings**.
Some people wear rings on their **nose**, what should we call that? _____
8. Many people wear laces on their **neck** called a **necklace**. Some people wear laces on their **foot**,
what should we call that? _____
9. The metal shoes that are put on **horses** are called **horseshoes**.
If we put metal shoes on **pigs**, what do we call them? _____
10. Early in the morning, we can see the **sun rising**. This is called a **sunrise**.
At night, we might also see the **moon rising**. What could we call this?

11. Some buildings are built very **high**, and we call them **high-rise buildings**.
Some buildings are built very **low**, what do we call that?

12. There is a kind of train that runs **under the ground**. We call that an **underground train**.
There is another kind of train that **runs over the ground**. What do we call that?

13. **Basketball** is a game where you throw a **ball through a basket**. Tim made up a new
game where he throws a **ball into a bucket**. What should he call the game?

14. A **box** used to store mail is called a **mailbox**. Some people use a **tray** to store mail. What
should we call that? _____

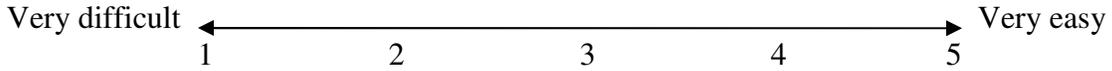
Instructions

Items 15–20 ask you to give new word forms.

15. Look at John. John is **stotting**. Yesterday he did this. What did he do yesterday?
Yesterday, he _____
16. This animal is called a **wug**. There are four of them. There are four

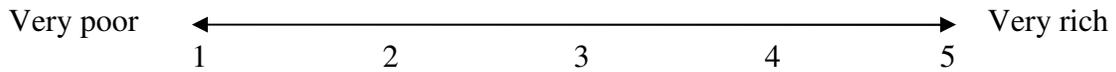
3. Please rate the Morphological Structure Test you have just completed in Part 2

It is



Additional comments:

4. What do you think about your English vocabulary level?



Additional comments:

5. Which do you find easier?

Morpheme Identification Test (Part 1)

Morphological Structure Test (Part 2)

Additional comments:

C. General Questions

Instructions

You have finished Nation's level test and morphological awareness test. Please answer the following questions or statements. You can circle the one right answer and give additional comments on the space provided. Please use pen.

1. If you compare test in Nation's Level Test (Section A) and tests in Morphological Awareness Test (Section B), which do you find easier?

Test in Section A (1)

Test in Section B (2)

Why?

2. Do you want to learn new English vocabulary using the morphological awareness technique like that used in way in the Morphological Awareness Test in Section B?

Yes (1)

No (2)

Why?

3. Please describe your experience studying English vocabulary. How do you study English vocabulary? Do you feel satisfied with your English vocabulary learning so far?

4. Please write your English grade for the last semester.

Cognitive : _____

Psychomotor : _____

Affective : _____

This is the end of the tests and questionnaire.

Thank you very much for your kind help. Good luck for your study at grade XII!

