

**THE STUDY OF THE ROLE OF  
MORPHOLOGICAL KNOWLEDGE IN EFL  
LEARNER'S VOCABULARY DEVELOPMENT**

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## ABSTRACT

This study investigates the role of morphological knowledge in EFL learners' vocabulary development. Morphological knowledge (MK) is considered an important factor in children's vocabulary growth, but this skill has scarcely been measured in EFL learners at college level. This study tested a set hypothesis for assessing MK and its relationship with vocabulary development using complex (multi-morphemic) words. Participants, 90 college students, (from four colleges of Lahore; Govt. College of Science, Govt. Islamia College Civil Lines, Govt. Girls Degree College Model Town, F.C. (Forman Christian) College University) were tested on morphological complex words and on definitions of these words. Researcher's own devised two tests (Morphological knowledge, and vocabulary score) were administered. For example, correct responses on the morphological knowledge (identification of root words and affixes) test would indicate that *presumptuous* is based on *presume* (and not *sumptuous*). Morphological knowledge test consisted of two sections (each consists of 40 items); identification of root words, and identification of prefixes and suffixes. Both tests MK and Vocabulary score comprised the same 40 morphologically complex words. The quantitative method of research was followed to investigate the correlations between MK and vocabulary, and the two aspects of morphology. Using descriptive statistics, the mean values of the tests were calculated. Participants' performance was good on both tests. Participants with better Morphological knowledge scores also had higher Vocabulary scores and greater metacognitive awareness of their own lexicons. An inadequate vocabulary is one cause of reading problems, and a method that extends MK research to an older age group allows further research into vocabulary development with implications for remedial strategies. The results show that EFL learners' vocabulary development depends upon adequate knowledge of morphology of English. The findings of this study may help academics in designing suitable syllabus and selecting appropriate methodology, in line with the morphological knowledge of the students, for vocabulary knowledge, development, growth, and English language learning at college level. The findings also have implications as to the importance of facilitating the students' morphological knowledge in English vocabulary learning for EFL college students in the province of Punjab.

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## **Chapter 1**

### **INTRODUCTION**

Language is the basic tool that we use to go beyond the limitations of our own space and time. It is the key that opens the door and allows us to look into the minds of others, to share what they have learned, and to feel what they have felt. Every language has words. Language became known first as words. Words are so pervasive in our life that we do not often stop to think about their importance and power. They open or close access to sources of information that will influence our future. So, it is absolutely impossible to underestimate the power of words.

Morphology plays a crucial role in developing vocabulary knowledge and lexicon in the L2 learner's mind. Morphemes have semantic, phonological and syntactic properties that express the role of a given word in the context. Words are organized in the mental lexicon according to their phonological properties with morphological knowledge as a framework for storing words. Morphological knowledge makes the learner more aware of the writing system. With the morphological knowledge, learners can perceive spelling and phonological irregularities.

Morphology refers to the use of or the study of morphemes, the components of words that convey meaning. The precise role of morphology varies with each language, depending on the word formation processes used in each language. It is not even certain that there is a universal role of morphology that applies to all languages (Libben & Jarema, 2004), and in this paper, the focus will be limited to English. Monomorphemic words (such as *window*, *sleep*, and *elephant*) are also called root words or basic words and must be learned individually. Multimorphemic

words, such as *autobiography*, *distrustful*, and *worthiness*, are composed of concatenated morphemes. The term *complex word* is often used in vocabulary studies as shorthand for multimorphemic word. In the words *talking*, *talkative*, *backtalk*, and *double-talk*, the root word *talk* is a shared morpheme that links the words semantically.

Root words and stems are modified by inflectional and derivational morphemes that convey syntactic and semantic details. Inflectional changes reflect grammatical functions of words, with changes of tense, person, and number. Inflections do not change a word's class, or part of speech, as in the examples *book/books*, *walk/walks/walked/walking*. Changes in derivational morphology allow a root word or stem to occupy various word classes, as in *know* (verb), *knowingly* (adverb), *knowledge* (noun), and *knowledgeable* (adjective). Derivational changes usually create longer words and are generally more complex than inflectional processes.

Morphological knowledge is defined as the ability to use the knowledge of word formation rules and the pairings between sounds and meanings. With morphological knowledge, learners are able to learn morphemes and morphemic boundaries by disassembling complex words into meaningful parts (e.g. *childhoods* = *child* + *-hood* + *-s*), learning the meanings of roots, affixes (*child*= baby, *-hood*= the state of being, *-s*= to indicate plural nouns), and reassembling the meaningful parts into new meanings (*motherhood*, *fatherhood*, *brotherhood*).

Morphological knowledge refers to children's "conscious knowledge of the morphemic structure of words and their ability to reflect on and manipulate that structure" (Carlisle, 1995). Morphemes are the smallest units of meaning within words; for example, *electricity* is made up

of two morphemes: the root *electric* and the suffix *-ity*. Experimental research by Berko (1958) suggested that children as young as 4 years of age can add certain simple inflections to certain pseudo-words.

Our working definition of morphological knowledge is *knowledge of and access to the meaning and structure of morphemes in relation to words*. Morphemes are the smallest units of meaning in language. Carlisle (1995, p. 194) similarly defines morphological awareness as, “children’s conscious awareness of the morphemic structure of words and their ability to reflect on and manipulate that structure.” Our focus is on children’s abilities to distinguish and manipulate morphemes at the word level. This broad definition allows us, theoretically, to consider children’s knowledge of both derivations and inflections in language simultaneously. Derivational morphology includes knowledge of prefixes (e.g., the *un* in *undisciplined* or the *pre* in *preoperational*), suffixes (e.g., the *ation* in *graduation* or *simulation*), and compounding (e.g., *cowboy* and *sunlight* are both compound words).

Morphological knowledge could be helpful in uncovering the meaning of single words. For example, the base and affix morphemes within *reading* and *react* provide some indication of their meaning. Morphological “problem solving” might also play an important part in constructing the meaning of a text. Further, it is possible, but somewhat less intuitive, that morphological awareness plays a role in pseudo-word reading. Although pseudo-words have been traditionally used to tap the ability to analyze words into component sounds, these words potentially have morphemic structures. For example, the pseudo-word *lagician* could be interpreted as containing a root *logic* and suffix *ian*.

Chang (2005) defined Morphological knowledge as the "knowledge of and access to the meaning and structure of morphemes in relation to word". In other words, it means the process of analyzing morphologically complex words into the morphemes that constitute them (word meaning parts including prefixes, roots, base words, and suffixes). According to Anglin (1993) "words are made of morphemes and morphemes are the minimal meaningful linguistic units that don't have any smaller meaningful linguistic unit".

Vocabulary learning plays a key role in language learning, whether the language is first, second or foreign. There is now a general agreement among vocabulary experts that lexical competence is at the center of communicative competence (Coady & Huckin 1997). This can be realized by the very fact that it is closely related to all language skills. Vocabulary learning is a central activity in the L2 classroom. One way in which vocabulary learning can be fostered is through the use of learning strategies. These strategies are consciously or unconsciously learned techniques for processing information in order to enhance learning, comprehension and retention. One potential vocabulary learning strategy is the use of morphological knowledge to learn novel vocabulary.

Vocabulary knowledge is one of the language skills important for fluent language use, and is a predictor of learners' discourse comprehension, which allows grammatical rules to be patterned in the learners' mind. Having inadequate vocabulary hampers learners' reading comprehension in a way that makes it more likely the learners will face difficulties in the path of academic achievement.

Carlisle and Stone (2003) found that morphological analysis is a commonly used vocabulary learning strategy by students to understand the meaning from words. They further mentioned that morphological structure which uses bases, prefixes and suffixes to connect large families of related words is a candidate for generative vocabulary instruction. In another study, Carlisle and Stone (2003) found that leaving morphological analysis to be discovered by students on their own means that those who are not knowledgeable in linguistics are likely to be left behind their peers in the development of vocabulary, word reading and comprehension, and spelling.

Therefore, in order to help learners to gain control over processes for managing their own lexis a number of different vocabulary learning strategies have been proposed by researchers and teachers as well. Strategies that have been proposed to help develop vocabulary learning include: Memory Strategies, Social Strategies, Cognitive Strategies, Metacognitive Strategies and Determination Strategies (Schmitt, 1997). Other researchers have also suggested that use of morphological cues for inferring meaning can help L2 learning (Morin, 2003; Schiff & Calif, 2007). Although only a limited numbers 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.

In the present study, we tested the associations of morphological structure and morpheme identification with measures of and vocabulary in graduation (B.A) final year students. In particular, we tested the extent to which each of these measures of morphological knowledge might uniquely predict vocabulary at this level. We view this as a tentative step in understanding cognitive factors underlying vocabulary. If morphological awareness is strongly predictive of vocabulary knowledge, this might suggest that tutoring in morphological structure awareness or

morpheme identification might facilitate learner's language comprehension development. This hope was the backdrop for the present correlational study.

## **1.1 STATEMENT OF THE PROBLEM**

This study sets out to investigate the role of morphological knowledge in development of vocabulary in EFL learners at graduation level. This is mainly because a little work has been done on L2 morphological knowledge\ understanding regarding vocabulary in college level students.

## **1.2 HYPOTHESES OF THE STUDY**

1. Students with higher morphological knowledge would have better vocabulary scores than those with lower morphological knowledge.
2. Students with higher root words identification test scores would be more accurate at their knowledge of vocabulary than students with lower root words identification test scores.
3. Students with higher affixes (prefixes and suffixes) identification scores would have better vocabulary scores than those with lower affixes identification scores.
4. Students with higher root words identification scores would also have better affixes (prefixes and suffixes) scores than those with lower root words scores.

### **1.3 OBJECTIVES OF THE STUDY**

The major objectives of the study are:

1. To know how morphology plays a crucial role in the development and formation of vocabulary knowledge.
2. To investigate whether knowledge of morphology predicts EFL learners' vocabulary knowledge.
3. To explore the relationship between morphology and vocabulary knowledge.
4. To see derivational morphology as a useful tool for vocabulary building.
5. To investigate the relationship between root words and the affixes (prefixes and suffixes) used in vocabulary that might have an effect on the process of accessing and acquiring word meanings.

### **1.4 DELIMITATION OF THE STUDY**

The relationship between morphology and vocabulary knowledge can be explored in different ways. However, this study is limited only to how morphological knowledge helpful toward building vocabulary knowledge. This study is confined to Lahore, the capital city of the province of Punjab, which is mainly due to the limited time frame within which this study has to be completed.

## **1.5 OVERVIEW OF THE METHODOLOGY**

### **1.5.1 Population, Sample and Sampling Technique**

The population of this study comprised all the EFL learners at graduation level in the province Punjab. In order to draw the sample from the population, stratified random sampling was applied for this study. Ninety (90) EFL learners were randomly selected from four colleges of Lahore.

### **1.5.2 Research Instruments**

The research work was descriptive in nature and data was collected through:

- ✓ Morphological Knowledge Tests
  - Identification of Root words
  - Identification of affixes (prefixes and suffixes)
- ✓ Vocabulary Development Test

### **1.5.3 Data Analysis**

This study is quantitative, so descriptive statistics and correlations are reported. Mean and standard deviation are used to summarize the results of the Morphological knowledge Test, and the Vocabulary knowledge Test. Descriptive statistics, reliability measures, frequencies, and Pearson correlation coefficients are calculated by using SPSS (Statistical Package for Social Science).

## 1.6 SIGNIFICANCE OF THE STUDY

The current study is very significant as it deals with the role of Morphological Knowledge in EFL learners' vocabulary development in Pakistani context where Urdu is L1 and English is taught as a major second and foreign language almost in all academic institutions. Knowing about the morphology of English as second language is essential for development and growth of vocabulary of English learners at high school level and college level as well.

Morphology plays an integral part in the formation and comprehension of English words. Morphemes, which include roots, stems, prefixes, and suffixes, are the smallest parts of words that carry meaning. In English, most words of Anglo-Saxon origins, and Anglo-Saxon words are usually only one or two syllables long, and these words must be learned individually, but knowledge of these words is built up incrementally. Words are actually composed of morphemes, which link sound and meaning. Being able to utilize this intermediate level of language is central to building a vigorous vocabulary and comprehending English text.

At college level, as the learner encounters more sophisticated language, big words become more common. Many big words are of Latin and Greek origins, such as *complementary*, *consequential*, *etc.* Many of these big words are formed through derivations: *act* (verb) can become *active* (adjective) or *action* (noun), and these lead to *transaction*, *activation*, *proactive*, *reactionary*, and more. The prefix *trans-* is also used in *transport*, which is related to *import*, *export*, *deportation*, and *deportment*. The suffixes *-ation* and *-ment*, while difficult to define, indicate a state or condition of something, and these two suffixes signal nouns. This sharing of morphemes among derived words creates a vast network of word relationships, and this quality means that many of these words do not have to be learned separately. In this way, learning complex words provides leverage that assists in additional vocabulary gains.

The present study focuses on L2 morphological knowledge and vocabulary development. The study correlates measures of English morphological knowledge with those of English vocabulary score to assess if, and to what extent, the factors are related. By comparing performances on morphological knowledge test and vocabulary test, we are better able to isolate the effect of morphological knowledge on vocabulary development. These data have the potential to provide a better understanding of the nature of the link between morphological knowledge and vocabulary knowledge. The findings of this research will be helpful for the teachers and syllabus designers to teach English language effectively and easily in the heterogeneous class so that the students may not face any ambiguity in the acquisition of English language.

## **1.7 ORGANIZATION OF THE THESIS**

The first chapter of this write up introduces the present study. This chapter explains the objective, hypotheses, and significance of this research. It has also highlighted the motives which triggered this study along with brief details of its methodology and data analysis. The second chapter will present the literature review related to this study which further focuses on the main points of the morphological learning of the second language regarding its vocabulary. It presents a review of some previous studies based on the concepts and ideas necessary to understand the notions of root, stem, morpheme, and affixation which effect morphological understanding, the kinds of morphology in relation with vocabulary development. The third chapter will explain in detail the research methodology used for this study. It will explain the research design that includes a discussion about the quantitative research model, hypotheses, population, sample, instruments and the procedure for the data collection and analysis used for this research. The fourth chapter discloses the analysis, interpretation, and findings of the data. Tables and graphs are displayed to summarize and conclude the research data. In the fifth and last chapter a detailed discussion is carried out regarding results of the study followed by a brief conclusion of the study, the pedagogical implication, study limitations and recommendations for further study.

The last chapter also explains the reasons why this study is pursued.

## **1.8 REASONS TO PURSUE MORPHOLOGICAL KNOWLEDGE RESEARCH**

In spite of the high stakes involved in teaching adults to read, morphological knowledge has been almost overlooked by many researchers. Particularly, no study has been examined regarding the correlation between morphological knowledge and vocabulary in college students. With the increasing attention being given to reading problems of older students, morphological knowledge warrants closer investigation. Even though a deficiency in morphology skill may not be apparent in college students, the full developmental course of morphological knowledge needs more study.

Several studies have examined both vocabulary and morphological knowledge in young students, and vocabulary knowledge has retained its crown as the key element in learning to read, with Morphological Awareness making a much smaller contribution (McBride-hang, Chow, & Shu, 2005; Nagy et al., 2006; Mahony, Singson, & Mann, 2000). Still, it is difficult to completely disentangle vocabulary from morphological knowledge, and these skills have a fair amount of overlap (McBride-Chang, et al., 2005). For example, the classic elision test leads off with easier questions such as ‘Can you say *popcorn* without the *pop*?’ The *pop* can be labeled a phonemic unit at the level of the syllable, but it is also a morpheme. It may be that morphological knowledge helps children to isolate phonemes in the speech stream, and that early morphological skill has been subsumed by some vocabulary tasks.

Although in learning to read, the critical nature of vocabulary seems unequivocal, these results do not mean that morphological knowledge is unimportant for college students. Without well-defined tasks for measuring morphological knowledge and tasks that are appropriate for college students, it is difficult to completely disentangle the vocabulary and morphological knowledge and to organize them in a chronological pattern of development.

While explicit knowledge of morphology is presumed to be valuable, this assumption seems based on an analogy to vocabulary, rather than on empirical evidence. Interest in morphology is growing, but research in this area is still relatively sparse. Some organizational frameworks for morphology and morphological knowledge have been proposed, but to date, there is no complete analysis or delineation of these skills. One contribution of the present study is that it describes a method for eliciting knowledge about specific complex derivational words. This method makes explicit some word knowledge that may normally remain implicit, and this provides a measure of morphological knowledge that is distinct from the measure of basic vocabulary knowledge.

Morphological knowledge is valuable to all students, but better measures of the skill could be helpful in identifying and remediating vocabulary learning problems. There are few published studies on vocabulary and morphology skill, and the results are not definitive. Several causes of low vocabulary size have been put forward, but the prime suspect is a morphological deficit. To some extent, it seems that a morphological deficit impedes the development of vocabulary. Morphemes are usually larger than phonemes and may be an easier unit to discern in ongoing speech. On the other hand, morphemes represent a more abstract level of language than either words or phonemes. In school, there is explicit instruction in letter-sound pairings and in writing words, but there is much less emphasis on morphemes.

Most children master inflectional morphology in the first few years of life, using oral language. Some derivational morphology is learned from speech, but the most extensive experience is gained from reading. It would be expected that adult college students would have acquired the basics of word morphology, but that advanced levels of skill would be more elusive in these learners. It would be useful to examine the abilities of adult students to better understand the clues they utilize in gaining meaning from the words they encounter in

their academic studies. This would require a finely calibrated test that assesses a clear continuum of morphology knowledge, another argument for a morphology test of adult or college levels of skill.

One education researcher has pointed out that everything needed for mathematics is taught in math classes, but that when it comes to vocabulary, students must bring their own word knowledge (Becker, 1977). Children who enter college with limited vocabularies tend to stay behind in vocabulary skill. This deficit interferes with reading and can have a detrimental effect on learning in every academic subject. With the enormous hurdles faced by educators, it is unlikely that vocabulary would be added to the curriculum as an additional subject, but promoting morphological knowledge or skill might be feasible. By calling attention to word relationships, educated adults can guide students in the recognition of morphological relationships. The fostering of these word analysis skills would give students another tool to use for building their lexicons.

Rarely taught and usually learned implicitly, morphology is beginning to receive more attention from vocabulary researchers. Vocabulary learning and development require the fluent, efficient recognition of words and their meanings, and morphology is surely crucial to this process. Knowing a word involves more than knowing its definition, and a competent learner must recognize how a complex word is related to other words. There are countless tests of word meaning, but there is no standard gauge of word difficulty in terms of morphology, and no test of this type of knowledge for adult or college. Morphology is interrelated with three areas; vocabulary, syntax, and comprehension skills, a single relatively short test of morphological knowledge might allow a quick assessment of the elements that link sounds to meaning.

Similarly, accuracy in the self-assessment of vocabulary knowledge would influence one's approach to reading. Measuring these metalinguistic skills is important for both theoretical and practical reasons. While the role of morphology in learning vocabulary is essentially indisputable, the contributions of other metalinguistic skills have been proposed. Being able to assess these skills in college students would fill a gap in the research. From a

pragmatic point of view, having a quick test of these skills could help reading teachers pinpoint the particular weaknesses of struggling adult readers. This study provides one step toward better measurement of these important skills.