The Role of Morphological Awareness in English as Second Language Acquisition

Khalil El-Saghir
kelsaghir@gmail.com

Wayne State University
April 2009

LIN 5720 - Linguistics and Education
Stephen Pobutsky
Abstract

This paper studies the role of raising metalinguistic awareness, more specifically morphological awareness, in the acquisition of English as second language by English language learners (ELLs). It briefly examines the morphological differences among world languages and the implications that they may have on ELLs’ morphological processing abilities. And it provides recommendations for the use of direct instructions to increase morphologic awareness of English learners.
Research Question

What is the role of metalinguistic awareness, more specifically morphological awareness, in second language acquisition?

Introduction

As important as metalinguistic awareness is in the acquisition of English, it is quite surprising how modestly those related skills are emphasized throughout the process. This is especially true for morphological awareness whose significance has been statistically proven by a myriad of researches throughout the last three decades. Although the majority of the studies in this field focus on mainstream elementary students, there is enough scientific evidence to suggest that morphologic awareness is just as significant in the acquisition of English as second language (ESL), or foreign language (EFL), by secondary English language learners (ELLs).

However, teaching English to ELLs is a task that is made difficult in part due to the vast phonological and morphological differences between English and most other languages. Along with highlighting those differences and their implications for ESL instruction, this paper attempts to explain the significance that morphological awareness may have on the success of English acquisition by ELLs. It also provides general instructional recommendations that may help ESL and ELA teachers raise their students’ morphological awareness.

Morphemes, Morphology, and Morphological Awareness

Morphemes are defined as the smallest meaningful linguistic units that contain no smaller meaningful units (Payne, 1997). Morphemes may be bound, that is they cannot exist on their own (e.g., <er> in teacher), or free (e.g., teach). Free morphemes can be either lexical (e.g., word, learn, go, etc.) or functional (e.g., the, to, what, etc.). There are two types of bound morphemes: inflectional and derivational. English has eight different, and very productive, inflectional morphemes that add (as suffixes only) some additional
grammatical information or inflections to a word: <s> for plural cats, for possession ‘Sue’s cats’, or for third person singular present tense ‘she loves’; <ed> for past or past participle tense of regular verbs wanted; <en> for past participle of irregular verbs spoken, <ing> for present participle ‘he is going’; <er> for comparative adjective ‘a newer car’; and <est> for superlative adjective ‘the newest car’. Inflectional morphemes do not change the meaning of the base word and often leave the base word or root phonologically intact, except for irregular verbs (e.g. write/written) (Owens, 2005). Derivational morphemes, on the other hand, are attached to stems, or bases, to create new words of particular syntactic categories, such as <ly> which generates adverbs purely, <fy> which derives verbs purify, etc. Another type of bound morphemes used in derivation is called a bound root, which is a root to which a prefix or suffix must be added in order to form a word, but the root itself never occurs alone (e.g., <cept> in concept, <vise> in supervise, etc.) (Birch, 2007, p.124). English has numerous derivational morphemes that could be bounded as prefixes or suffixes. In addition to their semantic and syntactic role, derivational morphemes may also alter the phonologic features of the bounded morphemes (opaque vs. transparent alteration). Finally, compound morphemes are created by binding two, or more, free morphemes (e.g., ‘weekend’, ‘homework’, etc.)

Morphology is a branch of linguistics which studies word structure and how words change their forms when they change grammatical function (e.g., swim - swam - swum - swimming - swimmer, etc.), thus involving both syntax and semantic expressed in a particular form. Because of this constancy of form, morphemes are fundamental in learning to read and write in many scripts that are commonly referred to as 'alphabetic', but could perhaps more appropriately be termed 'morpho-phonic' (Bryant et al, 1996, p.113).

Morphological awareness is the learner’s explicit understanding of the smallest units of meaning in the language, including free and bound morphemes and inflectional and derivational markers. Morphological awareness refers to the “conscious awareness of the morphemic structure of words and the ability to reflect on and manipulate that structure” (Carlisle, 1995, p.194).
The Significance of Morphological Awareness

Readers process morphology while reading based on the level of morphological awareness they have achieved. The greater the reader’s knowledge about prefixes, roots, and suffixes, the greater is his or her ability to see structure when looking at words (Birch, 2007, p.122-130). However, readers differ in what they know about morphology. Knowledge of derivationally suffixed English words facilitates accurate reading in the school years (Fowler & Liberman, 1995). The ability to see the derivational morphemes in English word is dependent on the knowledge that a reader has about the language, which is acquired mainly through schooling (Derwing, Smith, & Weibe, 1995). Furthermore, Levin, Ravid, and Rapaport (1999) and Byrant, Nunes, and Bindman (1999) propose that morphological awareness plays a causal role in the learning of morphological spelling patterns.

The development of morphological awareness begins as early as preschool (3-5 years). In 1958, psycholinguist Jean Berko Gleason embarked on the task of measuring children’s knowledge of and ability to manipulate morphological rules using a sentence completion task involving nonsense words (i.e., the wug test). She found that children, as young as four years of age, were successfully able to add simple plural inflections onto pseudowords. Carlisle (2003) suggested that more complex components of morphological awareness, such as the manipulation of complex derivations, begin developing in early grade school and continue developing well into adulthood.

Carlisle & Nomanbhoy (1993) theorized that during the early stages of reading development, when children are learning to decode or read single words, morphological awareness accounts for a small but significant portion of the variance in reading ability beyond that of phonological awareness. However, once readers have mastered the ability to decode and begin focusing on more advanced reading skills, such as learning vocabulary from text and text comprehension, morphological awareness may become increasingly important to literacy achievement.

Inflections, derivations, and compound words create morphologically-complex words and it is estimated that morphologically-complex words make up nearly 60% of the new words acquired by school age children within the written context (Nagy &
Anderson, 1984). Verhoeven & Carlisle (2006) hypothesized that students increase their dependence on morphological awareness during stages of lexical development. Given that written English is morphophonemic, it makes sense that learning new vocabulary in a written context may require the ability to sound out the phonemes of a word (phonology) as well as detect small indicators of meaning (morphology) (Lawrence, 2008).

Anglin (1993) conducted a study that examined children’s vocabulary knowledge in relation to morphological knowledge. Results from the study indicate that comprehension of derived words improved dramatically from 1st to 5th grade and made a significant contribution to overall vocabulary knowledge in 5th grade participants. In addition, it was found that multi-morphemic words also made a significant contribution to vocabulary knowledge of 5th grade students, in contrast to younger participants.

Furthermore, investigating a slightly older population of students, Carlisle (2000) examined the contribution of morphological awareness to word reading and reading comprehension in children with typical development enrolled in 3rd and 5th grade. Results indicated that morphological awareness was significantly related to the ability to read derived words and define morphologically-complex words in 3rd grade and 5th grade. Results also indicated that morphological awareness accounted for 43% of the variance in reading comprehension at the 5th grade level.

As evidenced by the vast linguistic and educational literature, morphological awareness clearly plays a significant role in language acquisition of native speakers of English, especially as they progress in school grades. While phonological awareness played a significant role at the preschool and first grade level, morphological awareness became more important at higher grades as the learners attempt to process more morphologically complex texts.

### ELLs and Morphological Processing

Can and do English learners use knowledge of English morphology and morphological processing strategies to decode English texts?
It is not surprising to say that word recognition via processing derivational English morphology is a challenging task, even to native speakers. It involves the ability to (1) disassemble the word into component morphemes (e.g., un/use/ful), (2) match those components with phonological, lexical, and semantic representations in the memory, and (3) reassemble them back while attempting to construct a combinational meaning that may or may not represent the sum of all pieces! (e.g., under/stand/able). At any of these steps, assuming first that the word is indeed segmentable, the reader may find the process too cumbersome and the results even more ambiguous and less recognizable!

Osburne and Mulling (2001) found that Spanish-speaking ESL students preferred not to use morphological processing, presumably because of the cognitive load, the mental work involved in the task, that morphological processing entails.

Should, thus, morphological processing be rendered an ineffective strategy for word recognition for ELLs?!

Although the research on the effective use of morphological processing strategy by ELLs is still very limited, knowledge of inflectional and derivational morphemes and the phonological changes that may occur in derivation can be very helpful to the English learner in terms of word recognition and more accurate pronunciation.

However, despite the widely observed evidence that ELLs are negatively affected by the lack or inefficient knowledge of English inflectional and derivational morphology as well as the interference of transferred linguistic skills from their native languages, the quantity and quality of the research is not as comprehensive in terms of the significance of morphological awareness for ELLs’ linguistic proficiency.

**Morphological Differences**

The literature concerning the morphological differences among languages and their implications for ELL students in processing English morphology is very limited. At present, It is unclear whether there is separate storage for L1 and L2, or whether there is one mental lexicon that serves more than one language, or whether there might be two interconnected lexicons for L1 and L2 (Birch, 2007, p.136).
Comrie (1981) devised a continuum of morphological variation in the world’s languages. He introduced the concept of two morphological dimensions, the first concerns the number of morphemes per word, and the second concerns the segmentability of words. At the four extremes of the continuum, languages were either isolating (e.g., Chinese), fusional (e.g., Spanish), polysynthetic (e.g., Tuscarora), or agglutinating (e.g., Turkish).

If the L1 writing system doesn’t encode morphological changes in words, readers may not have efficient processing strategies like separation and recombination for morphological changes in English words, such as tense, possessive, or plural. They may be relying on simple matching strategy, which is not effective unless they have a perfect match for each word in their mental lexicon. (Birch, 2007, p.139)

Even though Chinese, like English, has root words, bound roots, inflectional and derivational affixes, however, fundamental differences do exist between the two languages: (1) morphemes in Chinese are written in logoscripts rather than alphabets; (2) morphemes in Chinese are arranged non-linearly to form a word rather than linear arrangements; (3) morphemes are basic units in Chinese rather than phonemes; and (4) morphemes in Chinese are character blocks based on which new words are formed rather than changing phonological or orthographic form to create new words. (Xing, 2006).

Gender marking in languages like French and Spanish is used to determine reference between pronoun and noun phrase. In French and Spanish, all nouns are either masculine or feminine, and adjectives, determiners, and pronouns must match them. French and Spanish speakers will not be able to rely on their L1 strategy to process nouns and they may lack the strategies that English speakers develop. And while students who speak Hebrew or Arabic may have L1 processing strategies that focus more on infix morphological changes rather than on the prefixed and suffixed morphology of English, Japanese students use a system of particles (not inflections, but separate words) to indicate the functions that nouns have in sentences (subject, object, indirect object, etc.), and students from Latin- or Greek-based languages have the benefit of shared derivational morphology with English (e.g., pre-, post-, -ment, -tion,
etc.) and they may focus more exclusively on Germanic morphology (e.g., -ness, -dom, -ly, etc.). (Birch, 2007, p.139-140)

**Conclusion and Recommendations**

While phonics and syntax constitute the bulk of English instruction in ESL environment, topics related to English morphology and morphological awareness are rarely ever approached.

ESL students, for whom lack of vocabulary remains one of the major obstacles, should be equipped to utilize every word analysis strategy, including the ability to look at the morphological cues within the word in search for its meaning or part of speech. The students may very well benefit from direct instruction to learn how English words are formed.

Birch (2007, pp.139-140) recommends that as ESL and EFL students are learning words in English, they should be building up such a storage of morphemes, rimes, and syllables through direct instruction and through extensive reading practice. ESL teachers should continuously instruct and remind their students that English writing is not just phonemic but also morphemic in that the accurate representation of sound is sacrificed to maintain the semantic connection between words that can be perceived if the root morphemes are spelled consistently (e.g., silent <b> in the root morpheme ‘debt’). She concludes that the point of morphological instruction and practice with processing strategies must be to reduce the cognitive load associated with the task, so students must understand the system, practice the strategy overtly, and generalize the strategy to all of their reading.

As a high school ESL teacher, I have been working daily with 31 ELL students with diverse linguistic backgrounds: Albanian, Arabic (Iraqi dialect), Bosnian, Chinese, French (Cameroon and Gabon), Gujarati, Hindi, Polish, Punjabi, Spanish, Tagalog, Urdu, and Vernacular Liberian English. The students’ grades range from 9th through 12th. The vast range of academic and English language proficiency differences and the wide inventory of native languages within such a small group of students pose particular
challenges to any English teacher. Among those challenges is the difficulty to synchronize the modification of textbooks and other learning materials to the variable linguistic gaps (in all four domains: reading, writing, speaking, and listening) the students have, according to their latest standardized assessments (based on Michigan English Language Proficiency Standards).

Due to the interests that this course raised in me regarding phonological and morphological awareness, I started conducting a daily examination of cross-linguistic differences in the classroom. Students were asked to say (or write if possible) the translation of simple nouns and their corresponding plurals in their native languages (e.g., mother, head, chair, sun, child, etc.) Students then were instructed to identify the inflectional suffixes, prefixes, or markers for plural in their L1 and to provide a short list of their own vocabulary showing these inflections. Finally, students were asked to explain to the classroom, in English, these plural inflections in their languages.

The immediate results of this simple experiment were shocking both to the students as well as to me. None of the students seemed to have had any formal morphological processing instructions in their native languages and thus they were surprised to discover the similarities as well as the differences between English and their L1 in terms of this particular grammatical function. Furthermore, the students discovered that while English plural inflections are always suffixes, Tagalog inflections were prefixes, Arabic inflections were both infixes and suffixes, and Chinese inflections were totally separate particles (morphemes) added before the nouns. This cross-linguistic experiment has shown indeed significant degrees of morphological awareness in word recognition and the students became more motivated to conduct their own linguistic experiments!

During the last few weeks, similar experiments were conducted in the classroom, involving both inflectional and derivational morphemes. The results are just as promising and the students are now fully aware of the segmental nature of words (though they still sometimes overdo it!), which helped them become more successful in analyzing the words into morphemes and correctly predicting their spellings as well as their pronunciations. A formal and fully documented study is warranted to prove the significance of direct instruction in raising the morphological awareness of ELLs.
References


