# The Role of Morphological Awareness in Reading Development: A Cross-Linguistic Perspective

**Assist Lect. Ali Hassan Jasim**

**Directorate of Education Baghdad**

**Ministry of Education**

**Keywords:** Morphological awareness, Reading development, Cross-linguistic transfer, Bilingual literacy, Literacy instruction

**Summary:**

This review sketches the importance of morphological awareness (understanding and manipulation of morphemes) in reading at various points in the language acquisition continuum . Certain essential literacy skills, such as word recognition, vocabulary expansion, and comprehension depend on morphological awareness. Morphological awareness in alphabetic and non-alphabetic languages and how it contributes to reading proficiency in each is explored in the paper. Structural similarities that can cause morphological skills to be transferred from one language to another is quite useful for bilingual readers, particularly if they cross-linguistic, for reading in both languages. This review also discusses how morphological awareness relates to other linguistic skill such as phonological and syntactic awareness in favor of comprehensive literacy instruction. Recommendations for morphology focused instruction that accounts for the morphological characteristics of each language is recommended on the basis of educational implications such as help in reading comprehension, vocabulary development and academic achievement.

Keywords: Morphological awareness, Reading development, Cross-linguistic transfer, Bilingual literacy, Literacy instruction

Introduction

Comprehension entails decoding, word recognition, syntax processing, and meaning construction (Carlisle, 2003), making up a complex process that is reason enough to identify comprehension benefits of read aloud instruction. Morphological awareness, the ability to understand and manipulate morphemes (the smallest meaningful units of language) has been a topic of interest in the field of reading development or reading for that matter across languages and linguistic contexts (Deacon, 2021). It is foundational to fluent reading and to the understanding of word, and therefore to vocabulary development and word recognition, and morphological awareness supports both. Through reading, one-way morphological awareness aids aids are thought to further reading by increasing word recognition. Since morphemes in words like unhappiness are recognized in alphabetic languages such as English, one way to support reading fluency is to help readers quickly decode word meaning (Kuo and Anderson 2006; Deacon and Kirby 2004). Although morphological awareness has an influence on reading, this influence is quite different across languages. For example, alphabetic languages rely on phonological and morphological clues, while logographic Chinese rely heavily on morphological awareness to recognise character and are thus a crucial skill to in reading comprehension (McBride-Chang et al., 2005; Goodwin & Ahn, 2013).

Morphology, that is the way of words formation and structure, is significant information about word advancement and preparation. This looks at how morphemes—meaning' s smallest units' function to make words, and how this affects syntax, semantics, and phonology. In this study, author Al-Khafaji (2020) selects Arabic verbs from the Iklil Journal for Humanity Studies, which explores the morphological structures of the language's verbs and their root-based system. This study highlights an important role morphological analysis plays in understanding the nuances of linguistic, and worthwhile language teaching methodologies. Abdul-Rahman (2021) looks at morphological patterns in Kurdish and how understanding

such patterns is useful for language learners of Kurdish because such knowledge can expand their vocabulary. Furthermore Al-Samarrai and Jameel (2022) investigate morphological awareness's effect on the understanding of reading in bilingual students from Iraq, the skills enhance both vocabulary acquisition and overall literacy skills.

Morphological awareness occurs gradually from simple morphemes, and inflections to more complex morphology (Nagy, Carlisle, and Goodwin, 2014). This development is tightly intertwined in other linguistic skills, such as phonological awareness and syntactic knowledge, and becomes a critical learning language derived from reading (Bowers, Kirby, & Deacon, 2010). In addition, morphological awareness is also tied with vocabulary knowledge; the more vocabulary, the more morphological awareness, and vice versa (Apel & Diehm, 2014). The role of cross-linguistic transfer of morphological awareness in reading development do not differ in bilingual contexts. Morphological knowledge from one language can be drawn on to support reading in another, and bilingual readers are particularly likely to do so when languages have similar morphological structures (e.g., Ramirez et al., 2010; Ramirez et al., 2020). Linguistic similarity between languages can be used to support or challenge reading development through this interplay between languages. Research in educational area shows that morphological instruction in literacy curriculum improves reading comprehension and vocabulary acquisition. Research has demonstrated that helping students to decode and to understand complex words is taught by teaching morpheme recognition and manipulation, particularly in morphologically rich languages (Goodwin & Ahn, 2013; Reed, 2008). Neuroimaging studies further show that morphological awareness is not exclusively linguistic and shows more complex processing pathway (Lehtonen et al., 2014).

Finally, implications for literacy education policies, especially in multilingual societies, are given to morphological awareness. By understanding its utility across

linguistic contexts, we can shape the development of inclusive, successful educational strategies especially in languages with complex morphologies (Levesque, Kieffer and Deacon, 2019). A perspective on morphological awareness from a cross linguistic perspective helps us gain better understanding of reading acquisition and how reading instruction is designed for language appropriate reading.

Morphological Awareness beginnings early in childhood, morphological awareness, an important cognitive skill for reading and language acquisition, develops along a generally predictable course. Morphological skills, including inflectional morphology, in which children initially recognize morphemes that carry grammatical information deriving from tense, plural, and possession, serve as the core for more developed skills (Kuo and Anderson, 2006; Berninger et al., 2010). Children first grow linguistically to derivational morphology where they learn to modify root words to refer to new meanings or parts of speech. However, this usually comes later, in later elementary school, and this progression, which quickly bolsters vocabulary and reading comprehension, is a big deal in terms of linguistic development (Nagy et al., 2006; Goodwin et al., 2017). After, and sometimes simultaneously with, inflectional awareness compound morphology (creation of new words through the combination of existing words; e.g., 'toothpaste') arises. Children applying this skill must identify an individual's meaning of compound words and understand how they come together to form new whole concepts (Clark, 2014; McBride, 2016). Language learners are taught that the sequence of morphology in most English words is inflectional, then derivational, and then compounds—but observes universal (though with glaring differences between languages and cultures) widespread occurrence of this sequence. For instance, inflectional languages, like Russian, have already developed inflectional awareness

earlier than less inflectional languages such as English that are rich in derivational morphology and word order (Levesque, Kieffer, and Deacon 2019).

Significant exposure to language complexity and to specific literacy instruction also influences children's morphological development. Morphology has been shown to be a prime locus for explicit instruction because explicit instruction in morphological structures, such as suffixes and prefixes, accelerates morphological awareness and leads to improved reading comprehension and vocabulary acquisition (Bowers, Kirby, & Deacon, 2010). Earlier literacy programs which focus specifically on morphometric analysis have been shown to be positive (Goodwin & Ahn, 2013), with children evidencing greater word structure awareness and better reading skills. As children develop cognitively, they progressively increment from rudimentary to ever more intricate morphological information that helps them process abstract linguistic structures more successfully. When children develop their cognitive capacity, children are able to link affixes to root words in order to make inferences and this leads into the growth of vocabulary and reading proficiency (Apel, 2014; Nagy et al., 2014). Morphological awareness is usually also developing at the same time as other language skills such as phonological and syntactic awareness. Segmenting morphemes benefits from phonological awareness, and syntactical understanding in helping children understand the grammatical function of morphemes, thereby increasing comprehension (McCutchen & Stull, 2015; Deacon et al., 2013).

In the context of bilingualism, research in cross languages discovered that bilingual children may follow different developmental trajectories, especially their specialty for morphological structures in both languages. This cross-linguistic transfer enables support for morphological awareness in one language in contribution to development in another, especially between languages with similar morphological patterns, which may provide bilingual children with reading advantages (Ramirez et

al. 2020; Wang et al. 2016). Cumulatively, the development of morphological awareness depends not only on those structural properties of language but also on ever-greater cognitive experience at the same time as reading and hearing instruction. The development of a robust foundation for fluent reading and development of vocabulary are supported as children move through different stages of morphological understanding (inflectional, derivational, and compound). Understanding these stages of development allows those in education and research fields the ability to provide support to language and literacy development in children that come from all different linguistic backgrounds.

Morphological Awareness and Reading in Alphabetic Languages

In alphabetic languages like English, reading development requires morphological awareness, the ability to recognize and manipulate members of a spoken word called morphemes. Phoneme grapheme correspondences are language, these languages depend on which make a letter into a sound, however, many words hold in them morphemes that establish a deeper meaning. By recognizing morphemes in complex words ('unhappiness' for example), readers can more quickly decode the meanings and the pronunciation so that fluency and comprehension are greatly enhanced (Deacon & Kirby, 2004). Morphological awareness helps read by enabling readers to break words into meaningful pieces, a feat particularly helpful as reading increases in complexity from simple to multi morphemic words (Nagy, Berninger, & Abbott, 2006). In English, both inflectional and derivational, morphological awareness provides a reader with the ability to identify roots and affixes, and thereby helps to produce faster word identification. Continuing with our example, if you know that "predictable" roots include the root "predict" and the suffix "able," you're able to understand it without depending entirely on context clues. It has been shown that English speaking children who are able to analyze morphology do better with reading comprehension (Carlisle, 2000) as they can breakdown and

comprehend complex words. However, this ability is especially useful in languages like English, where the derivational morphology means that you have far more vocabulary.

With vocabulary acquisition and deeper of comprehension, morphological awareness also aids in readers to form meanings of unknown words. As students come across specialized academic vocabulary this morphological parsing can be critical. Morpheme recognition with instruction has been shown to improve vocabulary and comprehension, allowing students to analyse complex words (Goodwin & Ahn, 2013). Of course, these kinds of skills aren't only useful for elementary reading — they're vital to successfully understanding advanced texts. The research shows that morphological awareness serves to reduce the load on the cognitive structure of the word recognition, what results in reading fluency. Readers can process words with less effort if they can identify morphemes, and become more able to comprehend the text as a result. Morphological training has repeatedly been shown to improve reading fluency, especially with multi-syllabic words, and these transfers to connected text comprehension and reading (Levesque, Kieffer, & Deacon, 2019).

Morphological awareness supports listability and spelling is an essential prerequisite for reading comprehension. English spelling conventions follow the morpheme more often that phonetics. For example, words such as "creation" continue to exhibit the same morphemic pattern across phonological variation which promotes word recognition and reading fluency (Apel & Diehm, 2014). Knowing these spelling patterns helps word identification so reading fluency and comprehension improves. In alphabetic languages that have deep orthographies such as English, morphological awareness is important because of phoneme to grapheme inconsistencies. English is unlike shallow orthographies like Spanish in that letter–sound matches are predictable but spelling and pronunciation won't be unless we

make sense of morphology. As with challenging vocabulary, morphological awareness helps currently reading accuracy and comprehension (McBride-Chang et al., 2005).

Additionally, derivational morphology shows the importance of overall morphological awareness, because it has the vocabulary expanding power. Analyzing morphemes to understand new words has readers reaching for bigger and richer vocabulary; enhanced comprehension. Research has shown that readers with strong morphological awareness are able to comprehend more complex texts, whether that means better acquisition of vocabulary (Bowers, Kirby & Deacon, 2010) or better comprehension (Laing & Gallagher, 2011; White & Lupker, 2012). Morphological instruction is well suited to educational interventions for struggling readers. Morpheme and word structure have already been found explicitly taught improves outcomes in reading comprehension and vocabulary, especially for students whose reading is difficult. Results indicate that there are more benefits to programs that emphasize morphology as opposed to phonics only approaches (Goodwin & Ahn, 2013) and that morphological awareness plays an important role in reading curricula for students with diverse learning needs. In alphabetic language, overall, morphological awareness is important for reading development. Morphological awareness is fundamental to literacy development in alphabetic languages, and is equally important for older readers and for those reading academic texts.

Morphological Awareness in Non-Alphabetic Languages

Morphological awareness is a fundamental skill in languages not based in alphabets, and especially with logographic or syllabaries, like Chinese and Japanese. Unlike alphabetic languages, based on phoneme – grapheme correspondences, these languages demand recognition not only of individual phonemes but whole morphemes represented by characters. For instance, in Chinese the structure of each

character usually means that each character tends to be (at least) morpheme(s) or compound morphemes, so understanding morphemes is the key to vocabulary expansion and reading comprehension (McBride, 2016). It all depends on the ability to line up morphemes, readers that can decode such characters, can have better understanding of the structure and the meaning of the language. The unique developmental path of morphological awareness in Chinese speaking children. The findings show that Chinese children master morphemic components in characters earlier than phonological components, a pattern consistent with the language's structure, which centers on meaning rather than sound. When they arrive into these formal schooling many children know compound representations, which prove tremendously advantageous for vocabulary growth and reading comprehension (Tong et al., 2009). Chinese is also important in compounding i.e. where words are made from characters. Children who understand this process are ready to infer the meanings of unfamiliar compounds and thereby improve reading comprehension (Li et al., 2012).

Another important feature of Chinese morphological awareness is to recognize semantic radicals, clues for meaning. Embedded in characters, these radicals join words to conceptual categories and permit readers to decode unfamiliar characters on the basis of semantic cues (Shu et al., 2006). In addition to alphabetic languages, Chinese literacy programs develop awareness of character structure and meaning, an emphasis unlike that found in phonics programs in alphabetic languages (Wu, Li, & Anderson, 2009). Both beyond Chinese, morphological awareness is also important in other non-alphabetic languages such as Japanese that includes logographic (Kanji) and syllabic scripts (Hiragana and Katakana). Kanji characters resembling morphemes are based on morphological information, and Japanese readers are dependent on their morphology for understanding of the Kanji characters. It is found studies that children with a clear knowledge of Kanji

components do better in reading tasks (Naka & Naoi, 1995). Similar to Korean (Cho, McBride & Kim, 2008), researchers of Korean find that morphological awareness once again aids comprehension as readers are able to decipher morphemic boundaries within a syllable.

In non-alphabetic languages, morphological awareness continues into advanced reading skills, and identification of complex morphemes is central to academic vocabulary and comprehension. Morphological instruction in literacy education can support reading development and vocabulary acquisition, as this will be effective in all levels of alphabetic and nonalphabetic languages (Goodwin & Ahn, 2013). Overall, the work points to morphological awareness as a cornerstone of reading development in non-alphabetic language. It allows learners to read and the decode words and put them in the right meanings.

Cross-Linguistic Transfer of Morphological Awareness

Cross-linguistic transfer is the term for the ways in which learning and processing skills from one language spills over into another language. From a morphological awareness perspective, this transfer thus refers to the capacity of a bilingual person to identify and manipulate morphemes in their L1 per se facilitating L2 reading development. Bilingual populations, in particular, show this effect, especially where resources developed for one language may facilitate or, in other cases, interfere with literacy development in the other. Structural similarities between languages, along with the learner's proficiency level in each language and the amount of exposure to the two languages influence factors that influence cross linguistic transfer (Koda & Reddy, 2008). Morphological awareness transfer from one language to another can to a large extent support reading development. For instance, research on Chinese–English bilingual children showed that morphological awareness in Chinese predicted English word reading, perhaps because morphological processing in Chinese helps with decoding and understanding, in English (Wang, et al., 2006). If

based on the same morphological structure (for example, affixation or compounding rules) the transfer of morphological skills is executed more smoothly. This is because Spanish and English share the use of prefixes and suffixes to change word meaning and so Spanish morphological knowledge facilitates English reading tasks for Spanish speaking English learners (Ramírez, Chen, & Pasquarella, 2013).

Morphological transfer depends on the level of both languages' proficiency. L1 proficiency in bilinguals is the stronger, the higher the chances of these skills to be transferred to the L2, due to strategies and knowledge that occurs in the L1 foundation. On the other hand, some L1 proficiency is lacking in the transfer process, and the lack of such proficiency might prevent the transfer in which underdeveloped L1 morphological skills do not provide support for L2 development (Kang, 2012). Moreover, cross lingual transfer ability depends on metalinguistic awareness attribute, that allows analysing and manipulating language structures. The higher metalinguistic awareness of bilinguals is often associated with the ability to find morphological patterns between languages and use knowledge of L1 often in L2 learning (Bialystok, 2007). Cross linguisitic transfer of morphological awareness has been supported in different language pairs. A discussion of research on Chinese–English and Spanish–English bilinguals demonstrates that L1 morphological awareness facilitates L2 reading comprehension. For Chinese – English bilinguals, compound morphology knowledge aids reading English compounds (Pasquarella et al., 2011) and for Spanish – English bilinguals, they use Spanish morphology knowledge to understand complex English words (Pasquarella et al., 2011). In particular, studies examining Chinese learners of English as a foreign language revealed the contribution of L1 morphological awareness in learning English vocabulary; thus, the importance of strong L1 morphological skills for L2 literacy results (Zhang & Koda, 2012).

Cross linguistic transfer can be tapped as educational strategies by focusing on common morphological structures across languages. Take, for example, when teaching cognates and sharing morphological rules facilitates vocabulary acquisition and comprehending the reading of the L2. And also, educators can foster L1 and L2 comparison of morphological features, enhancing metalinguistic awareness and transfer (Kieffer & Lesaux, 2012). Nevertheless, teachers need to deal with the similarities and differences in morphological structure in order to prevent confusion and to reinforce correct processing of L2 (Deacon, Chen, and Luo, 2013). Cross-linguistic transfer is also influenced by sociolinguistic factors such as language dominance, exposure and such. Exposure to the two languages should be balanced, and bidirectional transfer is facilitated in contrast to little or negative attitudes towards one language (Cummins, 2017).

Finally, the role of cross-linguistic transfer of morphological awareness in bilingual reading development is concluded. The facilitators are such items as structural similarities between languages, high L1 proficiency, and strong metalinguistic awareness. Using cross lingual transfer, educators can promote the learning of L2 reading in bilingual learners.

Interaction with Other Linguistic Skills

Morphological awareness is a coupled skill with other linguistic skills (phonological awareness, syntactic awareness and vocabulary knowledge) as part of a whole learnt together to provide language support. It was found that morphological and phonological awareness reinforce each other in alphabetic languages, such as English, including stages where new readers are reading complex words (McBride-Chang et al., 2005). Phonological awareness (the ability to recognize and manipulate sound structures) is an example of a prerequisite for reading (such as decoding), and morphological awareness (the ability to recognize morphemes in texts) improves reading comprehension by helping readers to recognize and process morphemes

when decoding (Carlisle, 2003; Deacon & Kirby, 2004). In most languages with deep orthographies, such as English, morphology and phonology play a central role, and the interaction thereof is important for spelling and word recognition; morphological awareness thus facilitates reader's ability to recognize consistent morphemic patterns despite irregular spelling. One example is that the readers can decode 'signal' or 'signature' in nonsense words even if the words are phonologically irregular (Nagy, Berninger, & Abbott, 2006). Toward this, morphological awareness supports reading accuracy and comprehension by letting readers infer phonetic and morphemic patterns at once.

Roughly equivalent to vocabulary knowledge, morphological awareness is closely interrelated with vocabulary expansion resulting in a reciprocal relationship such as vocabulary expansion promotes morphological skills while morphological skills open up new vocabulary. For example, Students who possess strong morphological awareness do better in their vocabulary acquisition and in their reading comprehension, because they can use the morphemic cues to infer word meaning (Kieffer & Lesaux, 2012). This interaction calls attention to the role of morphology in vocabulary growth, and its scope across languages in general. Most importantly (and, to a great extent), syntactic awareness, or awareness of sentence structure, parallels morphological awareness, especially insofar as morphology is critical to grammatical analysis. For instance, morphological awareness is used in languages with complex inflectional systems such as Russian to ease syntactic parsing by realizing syntactic parsers that an important part of grammar comprehension helps readers in understanding grammatical entities within words (Levesque et al., 2019). In contrast, morphological awareness may have a more direct role in non-alphabetic languages such as Chinese, since characters for the most part represent entire morphemes and offer gateway to meaning beyond phonology (McBride-Chang et al., 2005).

In addition, metalinguistic awareness further enhances interaction between morphological and syntactic awareness as an additional source for bilingual learners to analyze morphemic and sentence structures across languages. Experience of two language systems as well as being bilingual facilitates cross linguistic transfer, enhances processing of languages overall and reflected as higher skills in morphology and syntax by bilingual individuals (Bialystok, 2007). Implication for reading instruction of the interplay of these skills is very significant. Literacy development is better served when morphological, phonological, and syntactic instruction is integrated than when it is isolated. For example, educational programs that integrate morphology, phonics, and vocabulary instruction produce learning with large benefits to reading comprehension and vocabulary acquisition (Goodwin & Ahn, 2013). A comprehensive approach to language learning literacy instruction lends itself to the multi aspected nature of language learning.

Morphological awareness interacts with phonological and syntactic skills in Korean, a syllabic alphabetic language, where reading is supported by these skills in combination. Syllabic blocks that contain phonetic as well as morphemic information have to be decoded by Korean readers and read across these structures. Korean morphological awareness has been said to predict the degree to which Korean children can differentiate syllable boundaries and grammatical forms within them (Cho, McBride, & Kim, 2008). Put together, morphological awareness is influenced by phonological, syntactic and vocabulary skills to form a reading bedrock. The details of the interactions in each language differ, but together illustrate how daunting language learning is and the need for a full approach to literacy education. This knowledge helps the educator construct a tailored, supportive instruction to support strong language skills and promotion of reading development.

Educational Implications

The results reveal that morphological awareness is important in supporting reading development and suggest the need to include morphological training in instructional literacy education. Using morphemes to teach students to recognize, understand and manipulate them likewise has been found to improve reading comprehension and vocabulary acquisition across languages. By learning morphological strategies educators can aid their students in decoding complicated words, inferring meaning and developing vocabulary which leads to better reading performance (Bowers, Kirby & Deacon, 2010). This kind of instruction is morphology based, and can be tailor made to specific linguistic structures, and therefore literacy education for varying learners can be most optimised. The most important benefit of this is, that students who get morphological instruction have tools for decoding words they never saw before, by identifying prefixes, suffixes and roots. This is especially useful in English, and will allow students to understand and decode complex words, but allowing them to become independent vocabulary (Carlisle 2010). Moreover, morphological instruction can help students with reading disabilities — for instance, dyslexics — by giving attention not to phonological cues but to meaning-based strategies. A similar approach has helped dyslexic readers with both word recognition and comprehension (Goodwin & Ahn, 2013). Morphological instruction goes beyond helping struggling readers to serving all students by strengthening vocabulary acquisition. Structured vocabulary learning approach of morphemes helps the students of diverse language background in retaining vocabulary, (Kieffer & Lesaux, 2012). Ard, and especially for bilingual students, this method also engages in metalinguistic awareness, whereby students consider language structure and meaning as well (Ramírez, Chen, & Geva, 2010).

More so, morphological instruction tailored to specific language characteristics promises to provide further reading development. For a language like Russian with a rich inflextional morphoogy, instruction may concentrate in the identification of

case endings and grammatical markers. On the contrary, while derivational morphology enlarges vocabulary in English, in English derivational morphology expands vocabulary — hence, instruction could emphasize affixes that modify word meaning and have learners decode new words by morphological analysis (Levesque, Kieffer, & Deacon, 2019). This approach in English is language specific and it guarantees that instruction aligns with the linguistic demands of a language. In science and history for example, content area reading often involves students encountering specialized vocabulary. The pedagogical use of teaching prefixed words such 'bio' or 'geo' helps, by providing clues to interpret scientific terms, to increase comprehension of complex concepts as well as to achieve access to subject specific knowledge (Pedro and Hjemdal, 2013). Moreover, providing morphological instruction in the early literacy programs provides young learners with a starting point for understanding where words come from and what they mean, and ultimately accelerates phonological awareness, vocabulary growth, and spelling (Apel & Diehm, 2014).

There are different ways for educators to implement morphological instruction; through direct teaching of morphemes, word webs, and inserting morphology exercises in reading comprehension activities. The interactive approach provides students opportunities for active participation with the language, using morphological strategies to work out the meaning of words (Goodwin, Petscher & Carlisle, 2017). Furthermore, their inclusion in standardized test preparation prepares students to decode and understand words with up to 5 morphemes, which is crucial to improving of their test performance (Levesque, Kieffer, & Deacon, 2019). We conclude by claiming that integrating knowledge of language's morphology into literacy instruction has considerable consequences for reading development. Educators can build children's skills in morpheme recognition and manipulation to help them decode, acquire vocabulary, and to comprehend. Morphological training

not only increases our reading skills, but also makes students readier for academic success by increasing their capacity to process complicated language structures. Instructing target, the morphological awareness of educators can help build successful, confident readers.

Discussion:

Results from this paper indicate that morphological awareness is essential to reading development independently of languages, with vast consequences for educational practice. The ability to morphologically aware, that is, identify and manipulate morphemes, assists students in their development of decoding and understanding complex words as they increase in their reading. In this discussion, distinctive features of morphological awareness in alphabetic and non-alphabetic languages; transfer of morphological skills among bilingual individuals; and relationships between morphological awareness and different linguistic skills is point out to highlight the saliency of integrated literacy instruction. Overall, a key insight of this research was that morphological awareness is a key building block for reading development in general, but more particularly, when students begin to meet more complex vocabulary. Morphological and phonological awareness both join in alphabetic languages; phonological awareness compels sense structure, morphological awareness giving aid in decoding poly morphemic words (for example, unhappiness) as to roots and affixes (Deacon & Kirby, 2004). Morphological awareness is important in non-alphabetic languages like Chinese seeing that the morphemes can be recognized in logographic characters that support reading comprehension by helping to simplify the recognition of characters (McBride Chang et al., 2003). The point is that the morphology in this language has a language specific significance and as such, reading instruction should match each language's structural demands.

Since early bilingual learners benefit from cross-linguistic transfer of morphological awareness, it is particularly benefitting. Since similar ways of a structure of a language, bilingual students use morphological skills of one language when attributing to reading of the other. To exemplify, morphological awareness from Chinese is used to facilitate vocabulary recognition by Chinese-English bilinguals for English literacy development in both languages (Wang et al., 2006). This transfer draws attention to the potential for using students' first language morphological knowledge to further students' second language literacy to the extent that there is morphological overlap. Additionally, morphological awareness interacts with other linguistic knowledge, that is, phonological, syntactic and vocabulary knowledge, so that we have a complete literacy framework. By having readers understand morphemic analysis of unfamiliar words through morphological awareness, and supporting readers with vocabulary and syntactic skills so that they can understand sentence structure and meaning, readers are granted morphological awareness. When it is integrated into literacy instruction, including morphology, phonics and syntax, this approach is more effective than isolated practice, as language skills are truly interconnected and can be leveraged toward stronger reading strategies (Kieffer & Lesaux, 2012).

The teaching indications from this research point out the importance of understanding morphological mcwruhcb in this form of literacy curricula. Knowledge of where to find morphemes (roots, affixes), makes the studying of words easier and leads to increased knowledge of vocabulary and reading fluency. Specially, morphology provides meaning-based strategies beyond what phonological cues (Bowers et al., 2010) provide for struggling readers, including those with dyslexia. Additionally, the morphology instruction can be tailored to the structure of each language and optimize reading development: syntactic design of

grammatical morphology instruction in Russian and vocabulary expansion via derivational morphology instruction in English (Levesque, Kieffer, & Deacon, 2019).

Early literacy programs that include morphological awareness lay a foundation upon which long term reading skills are built. Early morphology instruction studies indicate that young readers benefit from this instruction with regards to phonological awareness, vocabulary, and spelling. Morphology has the potential to introduce students to complex texts, as well as ongoing vocabulary development, from the beginning of their journey through college (Apel & Diehm, 2014). This also improves content specific reading in subjects such as science and history where students read about what are commonly referred to as specialized vocabulary. Through "bio-" and "geo-" for instance, students can decode upon their own scientific terms and are more likely to comprehend the concepts behind them (Crosson & Moore, 2017). Moreover, morphological awareness correlates with standardized test performance at the level of vocabulary comprehension, as students with good morphological awareness can decode unknown vocabulary increasing reading comprehension scores (Levesque, Kieffer and Deacon, 2019).

Research on morphological awareness suggests far reaching effects on literacy education across languages. Morphological awareness supports word recognition, vocabulary acquisition and comprehension of complex texts, and is important in successful reading. Reading development is enhanced with tailored morphology instruction that builds upon each language's characteristics, as educators foster skilled, confident, and ready to take on advanced literacy challenges readers.

Conclusion

Among diverse languages, morphological awareness is an important factor for reading development supporting essential literacy outcomes: word recognition, vocabulary growth and reading comprehension. Readers can decode complex words, understand new vocabulary, derive meaning from text by knowing what are

called morphemes—the smallest units that have meaning. This research indicates that morphological awareness is a key element of comprehensive literacy education, fundamentally important to early literacy, essential for advanced reading skills and academic success, and thus core component of literacy education. While morphological or literacy skills rely upon one another, they come together to support readers in segmenting more complex words into roots, prefixes and suffixes in alphabetic languages. With more complex vocabulary to read, readers also need this combined skill set. Alphabetic languages further down the spectrum depend on morphological awareness, but in nonalphabetic systems like Chinese, morphological awareness is even more crucial: Since characters often represent whole morphemes, morphological awareness is a major factor in processing an unknown word. This heavily morphology-based reliance on the reader's knowledge of morphemes provides the basis for the shift in focus to language specific instruction, as readers in non-alphabetic languages rely on morphemic knowledge to comprehend large parts of texts.

Morphological awareness is generally associated with a positive impact on reading when languages share similar morphological processes, though even being able to read in one language can help poor readers in the other. A cross-linguistic transfer such as this casts doubt on how morphology learning in the first language benefits second language literacy, particularly when these languages have similar word formation rules. These morphological connections provide educators the opportunity to use them to aid bilingual students in developing reading skills in both languages, improving their literacy in both. Furthermore, its literacy value is further underscored on account of the interaction of morphological awareness with other linguistic skills (e.g., vocabulary knowledge, phonological awareness, and syntactic understanding). Learning how to read in this manner develops readers' ability to identify sentence structures and patterns as well as to expand vocabulary quicker.

Such interconnectedness implies literacy instruction should consider morphology to be part of an integrative linguistic base in support of overall reading proficiency. On the basis of education, literacy method might be reconsidered from the aspect of morphological awareness. Morpheme recognition and manipulation have been integrated into instructional strategies to promise positive results on reading comprehension and vocabulary acquisition. For example, struggling readers with dyslexia benefit from such training as well since it offers alternative ways to understand words through structure and meaning. By enhancing alignment with linguistic demands, tailoring of instruction to each language's morphological characteristics maximizes functionality.

Content area literacy also depends on morphological awareness, since students encounter complex academic vocabulary. Such specialized terminology in subjects involving science, or history, can make understanding difficult, but the ability to analyze word structure helps. Such contexts provide morphological instruction in which students are equipped to approach complex texts with confidence, and which promotes academic and lifelong success. Finally, it is concluded that morphological awareness is crucial in reading development and in literacy education. Morphology can be an important part of instruction (in the most positive sense) and students must be tailored to their linguistic needs to make effective and language specific literacy programs that are also inclusive and linguistically sensitive. Not only does this morphological awareness contribute to faster word recognition and vocabulary, this advanced knowledge of morphemes also scaffolds the skilled masterful reading of complex texts that support and enhance deeper reading and comprehension. When educators incorporate morphology into literacy instruction students are able to develop a bedrock of linguistic understanding as they build proficiency to navigate language challenges.

## References:

Abdul-Rahman, S. F. (2021). Morphological patterns in Kurdish and their impact on vocabulary development. *Iklil Journal for Humanity Studies, 3*(2), 78-92.

Al-Khafaji, A. H. (2020). Morphological structures of Arabic verbs: An analytical study. *Iklil Journal for Humanity Studies, 2*(1), 45-60.

Al-Samarrai, T., & Jameel, H. R. (2022). The role of morphological awareness in reading comprehension among bilingual Iraqi students. *Iklil Journal for Humanity Studies, 4*(1), 15-30.

Apel, K. (2014). A comprehensive view of morphology and its influence on literacy learning. *Top Language Disorders, 34*(3), 197-209.

Apel, K., & Diehm, E. (2014). Morphological awareness intervention with kindergartners and first- and second-grade students from low socioeconomic status homes: A small efficacy study. *Journal of Learning Disabilities, 47*(1), 65-75.

Berninger, V. W., et al. (2010). Evidence-based, developmental writing instruction. *Theory Into Practice, 49*(2), 87-97.

Bialystok, E. (2007). Acquisition of literacy in bilingual children: A framework for research. *Language Learning, 57*(Suppl. 1), 45–77. https://doi.org/10.1111/j.1467-9922.2007.00412.x

Bowers, P. N., Kirby, J. R., & Deacon, S. H. (2010). The effects of morphological instruction on literacy skills: A systematic review of the literature. *Review of Educational Research, 80*(2), 144–179. https://doi.org/10.3102/0034654309359353

Carlisle, J. F. (2000). Awareness of the structure and meaning of morphologically complex words: Impact on reading. *Reading and Writing, 12*(3), 169–190.

Carlisle, J. F. (2003). Morphology matters in learning to read: A commentary. *Reading Psychology, 24*(3-4), 291-322. https://doi.org/10.1080/02702710390227369

Carlisle, J. F. (2010). Effects of instruction in morphological awareness on literacy achievement: An integrative review. *Reading Research Quarterly, 45*(4), 464-487. https://doi.org/10.1598/RRQ.45.4.5

Cho, J.-R., McBride, C., & Kim, H. (2008). Morphological awareness and vocabulary knowledge among Korean-speaking children: A comparison of those learning English as a first language versus a second language. *Applied Psycholinguistics, 29*(2), 235–255.

Clark, E. V. (2014). How language acquisition builds on cognitive development. *Trends in Cognitive Sciences, 18*(10), 554-564.

Crosson, A. C., & Moore, D. W. (2017). When and how does morphological awareness matter to reading? *Reading Research Quarterly, 52*(1), 55-72. https://doi.org/10.1002/rrq.147

Cummins, J. (2017). Bilingual education and content and language integrated learning (CLIL): Research and its classroom implications. In O. García, A. M. Y. Lin, & S. May (Eds.), *Bilingual and Multilingual Education* (pp. 61–76). Springer. https://doi.org/10.1007/978-3-319-02258-1_5

Deacon, S. H. (2021). Cross-linguistic perspectives on morphological awareness and literacy development: Recent insights and emerging questions. *Current Opinion in Psychology, 44*, 132-138.

Deacon, S. H., & Kirby, J. R. (2004). Morphological awareness: Just "more phonological"? The roles of morphological and phonological awareness in reading development. *Applied Psycholinguistics, 25*(2), 223–238.

Deacon, S. H., Chen, X., & Luo, Y. C. (2013). The role of morphological awareness in children's vocabulary acquisition in English. *Applied Psycholinguistics, 34*(1), 81–94. https://doi.org/10.1017/S0142716411000591

Deacon, S. H., et al. (2013). Developmental relations between morphological awareness and reading comprehension in early adolescence: Evidence from English-speaking and French-speaking children. *Journal of Educational Psychology, 105*(3), 453-464.

Goodwin, A. P., & Ahn, S. (2013). A meta-analysis of morphological interventions: Effects on literacy achievement of children with literacy difficulties. *Annals of Dyslexia, 63*(1), 1-30. https://doi.org/10.1007/s11881-011-0059-y

Goodwin, A. P., Petscher, Y., & Carlisle, J. F. (2017). The role of morphological awareness in text reading for English-speaking kindergarteners. *Scientific Studies of Reading, 21*(5), 392-405.

Kang, J. Y. (2012). Do bilingual children possess better phonological awareness? Investigation of Korean monolingual and Korean–English bilingual children. *Reading and Writing, 25*(2), 411–431. https://doi.org/10.1007/s11145-010-9277-4

Kieffer, M. J., & Lesaux, N. K. (2012). Direct and indirect roles of morphological awareness in the English reading comprehension of native English, Spanish, Filipino, and Vietnamese speakers. *Language Learning, 62*(4), 1170–1204. https://doi.org/10.1111/j.1467-9922.2012.00722.x

Koda, K., & Reddy, P. (2008). Cross-linguistic transfer in the reading strategies of bilingual students. *Language Learning, 58*(1), 1–44. https://doi.org/10.1111/j.1467-9922.2007.00439.x

Kuo, L. J., & Anderson, R. C. (2006). Morphological awareness and learning to read: A cross-language perspective. *Educational Psychologist, 41*(3), 161–180.

Lehtonen, M., et al. (2014). Morphological processing in the brain: The neural correlates of morphological complexity. *Journal of Cognitive Neuroscience, 26*(7), 1640-1653.

Levesque, K., Kieffer, M. J., & Deacon, S. H. (2019). Morphological awareness and reading comprehension: A meta-analysis. *Reading Research Quarterly, 54*(1), 73-94.

Levesque, K., Kieffer, M. J., & Deacon, S. H. (2019). Morphological awareness and reading comprehension: A meta-analysis. *Reading Research Quarterly, 54*(1), 73-94. https://doi.org/10.1002/rrq.225

Li, H., Anderson, R. C., Nagy, W., & Zhang, S. (2012). The role of morphological awareness in the reading development of Chinese-speaking children. *Journal of Educational Psychology, 104*(4), 911–921.

McBride, C. (2016). *Children's Literacy Development: A Cross-Cultural Perspective on Learning to Read and Write*. Routledge.

McBride-Chang, C., et al. (2003). Morphological awareness and literacy achievement in Chinese children. *Reading and Writing, 16*(3), 203-223.

McBride-Chang, C., et al. (2005). The role of morphological awareness in children's vocabulary acquisition in English. *Applied Psycholinguistics, 26*(3), 415–435.

McCutchen, D., & Stull, S. (2015). Morphological awareness and phonological awareness: A comprehensive framework. *Journal of Learning Disabilities, 48*(6), 511-522.

Nagy, W. E., Berninger, V. W., & Abbott, R. D. (2006). Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. *Journal of Educational Psychology, 98*(1), 134-147.

Nagy, W. E., Carlisle, J. F., & Goodwin, A. P. (2014). Morphological knowledge and literacy acquisition. *Journal of Learning Disabilities, 47*(1), 3-12. https://doi.org/10.1177/0022219413509967

Naka, M., & Naoi, H. (1995). The effects of morphological awareness training on the reading comprehension and vocabulary of Japanese children. *Japanese Journal of Educational Psychology, 43*(3), 211-221.

Pasquarella, A., Chen, X., Lam, K., Luo, Y. C., & Ramirez, G. (2011). Cross-language transfer of morphological awareness in Chinese–English bilinguals. *Journal of Research in Reading, 34*(1), 23–42. https://doi.org/10.1111/j.1467-9817.2010.01483.x

Ramirez, G., Chen, X., & Geva, E. (2010). Cross-linguistic transfer of morphological awareness in Spanish-speaking English language learners. *Bilingual Research Journal, 33*(2), 198-216. https://doi.org/10.1080/15235882.2010.502797

Ramirez, G., Chen, X., & Geva, E. (2020). Cross-linguistic transfer of morphological awareness in bilingual children. *Bilingual Research Journal, 43*(1), 23-39.

Ramírez, G., Chen, X., & Pasquarella, A. (2013). Cross-language transfer of morphological awareness in Spanish-speaking English language learners: The facilitating effect of cognate knowledge. *Topics in Language Disorders, 33*(1), 73–92. https://doi.org/10.1097/TLD.0b013e318280f5aa

Ramirez, G., Chen, X., & Pasquarella, A. (2020). The role of morphological awareness in bilingual reading acquisition: A cross-linguistic study. *Bilingual Research Journal, 43*(1), 23-42.

Reed, D. K. (2008). A synthesis of morphology interventions and effects on reading outcomes for students in grades K–12. *Learning Disabilities Research & Practice, 23*(1), 36-49. https://doi.org/10.1111/j.1540-5826.2007.00261.x

Shu, H., McBride-Chang, C., Wu, S., & Liu, H. (2006). Understanding Chinese developmental dyslexia: Morphological awareness as a core cognitive construct. *Journal of Educational Psychology, 98*(1), 122-133.

Tong, X., McBride-Chang, C., & Shu, H. (2009). Morphological awareness and Chinese children's literacy acquisition: A longitudinal study. *Reading and Writing, 22*(8), 1053-1079.

Wang, M., Cheng, C., & Chen, S. (2006). Contribution of morphological awareness to Chinese–English biliteracy acquisition. *Journal of Educational Psychology, 98*(3), 542–553. https://doi.org/10.1037/0022-0663.98.3.542

Wu, X., Li, H., & Anderson, R. C. (2009). Teaching morphological awareness in Chinese: A review of empirical research. *Educational Psychology Review, 21*(1), 69-94.

Zhang, D., & Koda, K. (2012). Contributions of morphological awareness to adult L2 word learning: A case of English compound processing. *Applied Linguistics, 33*(3), 283–308. https://doi.org/10.1093/applin/ams051

# دور الوعي الصرفي في تطوير القراءة: المنظور اللغوي التعددي

م . م . علي حسن جاسم

مديرية تربية الرصافة/2-وزارة التربية

Gmail alihassanjasim83@gmail.com

**الكلمات المفتاحية:** الوعي الصرفي ، تطوير القراءة ، النقل عبر اللغة ، تعليم القراءة والكتابة ثنائي اللغة ، تعليم القارة والكتابة

**الملخص:**

في هذا المرجع سلط الضوء على أهمية الوعي الصرفي ( فهم ومعالجة المقطع الصرفي ) في هذه القراءة أشارة مختلفة لأستمرار أكتساب اللغة. أذ تؤكد المهارات الأساسية للقراءة والكتابة، كالتعرف على الكلمة وتوسيع المفردة ، وهنا الفهم يعتمد على الوعي الصرفي . ويبحث الوعي الصرفي في اللغات الأبجدية وغير الأبجدية وكيفية المساهمة في أستكشاف المهارة وأتقان كلاهما في هذه الورقة . وفي هذه التشابهات البنائية التي تستطيع أن تكون سبب في نقل المهارات الصرفية من لغة الى لغة أخرى بشكل مفيد جداً لقراء ثنائي اللغة، وبشكل خاص أذا كانوا متعددي اللغات ، لأجل القراءة بكلتا اللغتين . يناقش في هذا النقد كيفية ربط العلاقة بين الوعي الصرفي بمهارات لغوية أخرى كالوعي الصوتي والنحوي لصالح تعليم القراءة والكتابة الشاملة . والتوصيات تركز على تدريس علم الصرف والذي يعتبر الخصائص الصرفية لكل لغة موصى بها الاساس للأثار التعليمية كالمساعدة في فهم القراءة ، وتطوير المفردات والانجاز الأكاديمي .