REVISTA KRONOS

Morphological awareness for the development of the lexical competence of the English language

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ABSTRACT This study centers on second language English learners and their limited vocabulary proficiency. Morphological awareness is acknowledged as crucial for developing lexical competence. This review explores the implications of morphological awareness (structure, analysis, and decoding) on lexical competence (vocabulary breadth, depth, and organization). The methodology employed is socio-educational, bibliographic, descriptive, and documentary. The transfer technique facilitated gathering and analyzing relevant bibliographic records. Databases such as ERIC, Scopus, Wiley Online Library, ABELL, Google Scholar, university repositories, and international journals were utilized, in turn, manual filters and keywords enhanced information gathering. Findings demonstrate that morphological awareness significantly enhances lexical proficiency in English across all dimensions. Grasping inflectional, derivational, and compounded forms enhances vocabulary breadth, depth, and organization. This awareness aids word recognition, comprehension, relationships, nuances, and meanings. Appreciating morphological patterns assists in word classification and arrangement and its pivotal role in increasing lexical proficiency benefits vocabulary organization, depth, and breadth. Educators can implement effective teaching techniques, emphasizing inflection, derivation, and lexical compounding, to enhance students' lexical competence and English proficiency, leveraging the scope of morphological awareness.

KEY WORDS Morphological awareness, lexical competence, inflection, derivation, lexical compounding, vocabulary breadth, vocabulary depth, vocabulary organization, language learning.

Conciencia morfológica para el desarrollo de la competencia léxica del idioma inglés

RESUMEN Este estudio se centra en los estudiantes de inglés como segunda lengua y su limitado dominio del vocabulario. Se reconoce que la conciencia morfológica es crucial para el desarrollo de la competencia léxica. Esta revisión explora las implicaciones de la conciencia morfológica (estructura, análisis y decodificación) en la competencia lexical (amplitud, profundidad y organización del vocabulario). La metodología empleada es socioeducativa, bibliográfica, descriptiva y documental. La técnica de transferencia facilitó la recopilación y el análisis de los registros bibliográficos pertinentes. Se utilizaron bases de datos como ERIC, Scopus, Wiley Online Library, ABELL, Google Scholar, repositorios universitarios y revistas internacionales; a su vez, los filtros manuales y las palabras clave mejoraron la recopilación de información. Los resultados demuestran que la conciencia morfológica mejora significativamente la competencia léxica en inglés en todas sus dimensiones. La comprensión de las formas flexivas, derivativas y compuestas aumenta la amplitud, profundidad y organización del vocabulario. Este conocimiento facilita el reconocimiento, la comprensión, las relaciones, los matices y los significados de las palabras. Apreciar los patrones morfológicos ayuda a clasificar y ordenar las palabras, y su papel fundamental en el aumento de la competencia léxica favorece la organización, la profundidad y la amplitud del vocabulario. Los educadores pueden aplicar técnicas de enseñanza eficaces, haciendo hincapié en la inflexión, la derivación y la composición léxica, para mejorar la competencia léxica de los estudiantes y su dominio del inglés, aprovechando el alcance de la conciencia morfológica.

PALABRAS CLAVE Genetic Conciencia morfológica, competencia léxica, flexión, derivación, composición léxica, amplitud de vocabulario, profundidad de vocabulario, organización del vocabulario, aprendizaje de idiomas.

MORPHOLOGICAL AWARENESS

As a linguistic awareness skill, morphological awareness refers to the capacity to identify and comprehend the smallest elements of meaning in language (Apel, 2014). This ability is often seen as a sort of metalinguistic awareness, which entails the capacity to consider language as a system, according to research (Li & Wu, 2015). Students learning English as a second language benefit from discerning complex English expressions (Newton, 2018), improving vocabulary, reading, writing, and overall communication.

The term «ability» here alludes to a metalinguistic capacity to comprehend, consider, and change morphemic qualities, which enables one to expand words into more intricate and nuanced forms. In contrast to morphological awareness, which involves a more comprehensive grasp of morphemic aspects in words (Carlisle *et al.*, 2010), morphological knowledge includes an explicit understanding of the meaning of a root word (Pacheco & Goodwin, 2013). Students that possess morphological awareness abilities can identify distinctions in meaning between words that have the same root but various affixes (such as help, helpful, helpless, and unhelpful). Numerous research supports the idea that morphological awareness is crucial for vocabulary learning, teaching, and general reading competency.

ASPECTS OF MORPHOLOGICAL AWARENESS

Research has delved into three aspects of morphological awareness, namely structure, analysis, and decoding (Deacon *et al.*, 2017; Kuo & Anderson, 2006; Levesque *et al.*, 2021; MacKay *et al.*, 2017), which offer a basis for comprehending how learners acquire knowledge about the organization and purpose of English language, especially in relation to reading and expanding their vocabulary.

The structure aspect involves understanding the complexity of the writing system and how spelling affects inflection, derivation, and lexical compounding (Berg *et al.*, 2014). Analysis, the second aspect, involves dissecting unfamiliar words into free and bound morphemes (Wagner *et al.*, 2007). Decoding, the third aspect, entails identifying morphemic units in words, pronouncing them, and blending them, combining orthographical and phonological features in word reading (Levesque & Deacon, 2022; Deacon *et al.*, 2017; MacKay *et al.*, 2017). Language teachers can gain a better grasp of the facets of morphological awareness and how they affect the learning of the English language through the study of these aspects.

Structure

English writing is influenced by morphological information, aiding readers in understanding the writing system (Levesque & Deacon, 2022). Research emphasizes studying word formation processes, like inflection, derivation, and compounds, as part of morphological awareness (W. Choi *et al.*, 2018). It involves recognizing morphemes as units of meaning (Varga *et al.*, 2020), crucial for lexical competence (McCutchen *et al.*, 2022). Lack of understanding can lead to vocabulary mistakes (Apel, 2014; Brandes & McMaster, 2017). Recognizing word structure helps correct vocabulary errors, leading to a richer vocabulary (Lubliner & Hiebert, 2011). Morphological awareness is especially beneficial for bilingual students (Lubliner & Hiebert, 2011). Understanding word processes facilitates effective communication and vocabulary acquisition (Varga *et al.*, 2020). This knowledge

contributes to their overall morphological awareness, facilitating effective language communication and vocabulary acquisition.

Inflection. Comprehending word structure and meaning is essential (Carlisle, 2000). Inflection adds morphemes to a word's root for tense, number, or degree in English (Berns & Brown, 2010). Understanding English inflection is crucial for morphological awareness (Hurrel, 2019). It leads to better vocabulary and reading comprehension (Deacon *et al.*, 2007). Inflectional morphemes change word form and definition, like regular verbs with tense (e. g., call-called, work-worked) and nouns with plurality (e. g., dog-dogs). Reading ability correlates with morphological competence (Deacon *et al.*, 2007). Inflectional morphological awareness affects word reading and comprehension (Müller & Brady, 2001; Rothou & Padeliadu, 2015). Derivational morphology links to decoding and comprehension. Lack of inflection knowledge leads to errors in sentence structure and meaning.

Derivation. Derivation is vital for morphological awareness (Ke *et al.*, 2021), forming new words by modifying the base lexeme (e. g., walk, walk-er). It involves adding prefixes and suffixes to base words (Oz, 2014), strengthening word arrangement and connections. Derivational morphology aims to create new words with related meanings, being lexical and less influenced by grammatical context (Deng *et al.*, 2016). Exposure to words like actuality, typical, and dehumanization enhances morphological knowledge (Kieffer & Box, 2013), allowing learners to deduce meaning by identifying constituent morphemes. Derivational morphology in Spanish and English is similar but lacks research in L2 theory (Deng *et al.*, 2016). Learners must grasp relational, syntactic, and distributional knowledge. Relational morphology recognizes shared morphemes and meanings, while syntactic morphology identifies suffixes' syntactic categories (e. g., -th in «length») (Wu & Juffs, 2022). Distributional morphology involves stem-suffix combinations (e. g., -er in «player») (Wu & Juffs, 2022).

Errors may occur in vocabulary usage, such as word form confusion and affix misuse (Kusumawardhani, 2018). Empowering learners with morphological awareness aids EFL instruction (Badawi, 2019), enhancing vocabulary depth and establishing a solid foundation for lexical competence and English language comprehension.

Lexical compounding. Morphemes are small language units with distinct meanings. Comprehending their combination and rules is crucial for morphological awareness (X. Sun *et al.*, 2022). Lexical compounding combines words to form new ones (Berns & Brown, 2010). It's a common method in many languages, categorized into open, hyphenated, and closed compounds (Berg *et al.*, 2014).

Compounds fall into endocentric and exocentric types (Ten Hacken, 2017). Endocentric compounds have a clear head word (e. g., darkroom), while exocentric ones don't (e. g., skinhead) (Ten Hacken, 2017). Lexical compounding aids vocabulary development. It helps understand unfamiliar words and read accurately (Carlisle, 2000; P. D. Liu & McBride-Chang, 2010). Errors may occur in word combinations or identifying compounds. Learning compounding rules enhances language flexibility and expression. Knowing compound patterns improves overall vocabulary usage.

Analysis

Analysis is vital for breaking down lexical items into free and bound morphemes to deduce meanings (Deacon *et al.*, 2017). Morphological analysis aids vocabulary development, improving writing and speech expression (Nagy, 2014). Lexical categories (open-class) and functional categories (closed-class) are crucial components of the theory (Kaplan, n.d.). Students can determine unfamiliar word meanings based on relevant stems and suffixes (McCutchen & Logan, 2011), enhancing language production through building semantic networks. English has two main morpheme types: free and bound (Brown *et al.*, 2010).

Free morphemes stand alone with distinct meanings (e. g., «dog», «run»), while bound morphemes require attachment (e. g., «re-» in «rearrange», «-ful» in «successful») (Brown *et al.*, 2010). Analyzing words into their constituent morphemes, free and bound (Wagner *et al.*, 2007), helps language learners see how structural variations result in changes in meaning, producing lexical units that share a similar one.

Free morphemes. The English morpheme boundaries may have an impact on grapheme-phoneme mappings (Levesque & Deacon, 2022). In the words «father» and «fathead», for instance, the letters «t» and «h» represent one phoneme in the former and two in the latter, making it easier to recognize the terms. The identification of word class through theknowledge of free morphemes plays a crucial role in word formation and lexical competence (Goodwin *et al.*, 2017). «A free base (often called a free morpheme) can stand on its own».

Free morphemes stand alone, classified into open-classed (nouns, verbs, adjectives, adverbs) and closed-class (conjunctions, prepositions, determiners) (Coch *et al.*, 2020). Knowing free morphemes helps form new words by combining them meaningfully (Henry, 2019). Interaction with bound morphemes creates new lexical items, enriching English vocabulary (Henry, 2019). Understanding word class characteristics expands learners' vocabulary and language skills (Berninger *et al.*, 2010). Analyzing these morphemes allows predicting new words and inferring meanings (Coch *et al.*, 2020).

Bound morphemes. Bound morphemes are essential for word formation but cannot function independently (Brown *et al.*, 2010). They are divided into affixes (inflectional and derivational) and roots. Inflectional morphemes change grammatical category (e. g., 'run' to 'ran' or 'running') (Carlisle, 2000), while derivational morphemes create new words with altered class or meaning (Coch *et al.*, 2020). Understanding their role aids vocabulary expansion and effective communication.

The analysis of bound morphemes is crucial for enhancing vocabulary development inEnglish as a second language (Henry, 2019). By analysing the meaning and function of bound morphemes, language learners can more easily recognize the meaning of lexical items, which can in turn help expand their vocabulary. Additionally, the knowledge of boundmorphemes can help learners to predict the meaning of unfamiliar words and to identify wordrelationships and patterns, which can be beneficial for their reading comprehension skills. In this sense, in accordance with Pastizzo and Feldman (2004) «Morphologically complex words are composed of multiple morphemes; therefore, some researchers have proposed that in the course of recognition, a lexical "processor" parses complex words into constituent morphemes, and that lexical access then proceeds via the stem» (p. 31). Thus, the analysis of bound morphemes can lead to a more sophisticated understanding of English language and facilitate its learning.

DECODING

Decoding is vital for morphological awareness, using word structure to accurately pronounce words (Levesque *et al.*, 2017). It aids learners in reading complex lexical items through written symbol manipulation and identifying phonological patterns (Levesque *et al.*, 2017). Phonological and orthographic metrics (Deacon *et al.*, 2017; MacKay *et al.*, 2017) assess word reading progress, forming the referential framework for morphological awareness (Levesque & Deacon, 2022). To improve decoding abilities, teachers should provide tools like transcription, syllabic segmentation, and text-to-speech software (Deacon *et al.*, 2017; MacKay *et al.*, 2017).

Children may read more slowly in complex orthographies like English due to challenging decoding (Varga *et al.*, 2020). Deep orthographies require morphological knowl-

edge, while shallow orthographies like Spanish have clear spelling-sound links (Varga *et al.*, 2020). Learners use sound-letter correspondence and morphological structure to decode words. Phonology and orthography are crucial in decoding (Berninger *et al.*, 2010; Deacon *et al.*, 2017). Phonological features involve language sound patterns, while orthographical features refer to word spelling (Berninger *et al.*, 2010). Decoding aids accurate and fluent reading, improving vocabulary acquisition and comprehension, building a strong foundation for English language proficiency and lexical competence (Berninger *et al.*, 2010).

Phonological features. English is a morphophonemic language, meaning that the sound of words is influenced by the presence or absence of certain morphemic units. In other words, English spelling and pronunciation can change based on morphological awareness factors, such as the knowledge of affixes or word roots (Kuo & Anderson, 2006). Phonological features play a crucial role in morphological awareness, especially in the aspect of decoding in English, which is a morphophonemic language. The sound of words can be influenced by the presence or absence of certain morphemic units, such as affixes or word roots (Kuo & Anderson, 2006). Phonological features refer to the sounds of speech, including phonemes, syllables, stress, and intonation (Berns & Brown, 2010). When learners decode words at the morpheme level, phonological processes come into play. Stress patterns, syllable sounds, and speech intonation can all impact how words are pronounced (Berninger *et al.*, 2010). Additionally, phonological processes like assimilation and deletion can influence word pronunciation, making it challenging for learners to decode complex words accurately (Berns & Brown, 2010).

For English, being an alphabetic language, mastering alphabetic orthography involves creating a graphic model of the phonological system and mapping graphemes to phonemes (Schiff & Calif, 2007). Understanding how phonological processes work and applying them correctly is crucial for effective decoding of morphologically complex words (MacKay *et al.*, 2017). Learners who lack decoding skills may make phonological mistakes, struggle to recognize syllable boundaries, blend sounds, or stress syllables correctly (Berninger *et al.*, 2010). This can lead to mispronunciations of words and hinder their reading comprehension and overall vocabulary development.

Orthographical features. An orthographic feature refers to a specific aspect of spelling, such as letter arrangement, vowel sounds, or stress patterns (Berns & Brown, 2010). These features can be understood as the graphical representation of the sounds (graphemes) and their combinations are crucial to understanding why spelling in English may differ from pronunciation (Kuo & Anderson, 2006). An example of orthographic features in English is the representation of vowel sounds such as «a», «e», «i», «o», «u», and «y», as well as consonant combinations like «th», «sh», «ch», and «ph».

Learners who struggle with decoding may find it challenging to identify and comprehend orthographic features, leading to spelling errors (Levesque *et al.*, 2021). For instance, they might misspell words by omitting or replacing certain letters, such as writing «diference» instead of «difference» or «separate» instead of «separate». These mistakes are often a result of not recognizing the specific letter combinations that make up the morphemes in words. By learning and recognizing common spelling patterns and orthographic features (Spalding, 2002), non-native English speakers can better predict how words will be spelled, leading to more successful decoding and comprehension.

WORD READING

When it comes to morphological awareness, word reading refers to the ability to read unfamiliar words by sounding out the letters and blending the sounds together (Tong *et al.*, 2017). The process of sight word reading is characterized by the formation of systematic

visual-phonological connections between spellings and pronunciations of words in memory, facilitated by the knowledge of letter-sound relations (Tong *et al.*, 2017). It enables readers to recognize words quickly, without the need for decoding, unless the word is new to them (Ehri, 2017; Menard & Wilson, 2014). This process is essential in English, as it is a morphophonemic language where the spelling of words can be quite different from their pronunciation (Kuo & Anderson, 2006). This skill becomes even more important as the learner encounters more complex words that contain multiple morphemes, such as «uncomfortably» or «unpredictable».

LEXICAL COMPETENCE

The term «lexical competence» refers to one's ability to use and understand language effectively (Rychka & Lisovska, 2022). It encompasses understanding the meaning of words, their appropriate usage in different contexts, and their interactions within the language (Zhou & Dai, 2016). Lexical incompetence may lead to misunderstandings and ineffective communication (Polatovna & Qizi, 2020). Enhancing English lexical competence involves recognizing and comprehending the form and meaning of words, known as morphological awareness (Spencer *et al.*, 2015). This metalinguistic skill also aids EFL learners in pronouncing complex words correctly, using grapheme-phoneme correspondences in morphemic units (morphological decoding) (Spencer *et al.*, 2015).

DIMENSIONS OF LEXICAL COMPETENCE

Among three to four dimensions of lexical competency have been posed in the overarching literature (Chapelle, 1999; Nation, 2001; Qian, 2002; Zareva *et al.*, 2005); however, this study will only comprise the most important three: vocabulary breadth, vocabulary depth, and vocabulary organization. The range and diversity of words' form, meaning and usage that a student is familiar with is referred to as vocabulary breadth (Rashidi & Khosravi, 2010), whereas vocabulary depth refers to the amount of understanding of each lexical unit, including its many syntactic, semantic, collocational properties, etc. (Rychka & Lisovska, 2022). The final dimension, vocabulary organization, is how lexical items are stored, connected, and retrieved in the learner's mind (Webb, 2020). Knowing these factors can aid in the methodical development of lexical competence in learners as well as the construction of more effective teaching methods by teachers.

Vocabulary breadth

Vocabulary breadth involves more than word quantity; it encompasses form, meaning, and usage (Harkio & Pietilä, 2016; Kezhen, 2015; Ordóñez *et al.*, 2002; Rashidi & Khosravi, 2010). Learners with a wide vocabulary can accurately express thoughts on diverse topics (Qian, 2002; Kezhen, 2015). Expanding vocabulary involves understanding word implications, collocations, and word games (Rashidi & Khosravi, 2010).

Developing a wide vocabulary requires extensive practice and morpheme manipulation (Rashidi & Khosravi, 2010). Learners need to comprehend form-meaning connections and contextual usage (Schmitt, 2014). Morpheme manipulation aids word inference and relationship identification, improving language proficiency (Harkio & Pietilä, 2016).

Word form. Word form knowledge encompasses understanding the morphological and orthographic characteristics of words (Hong *et al.*, 2011). Vocabulary breadth involves

more than mere memorization; it includes knowledge of both written and spoken forms, surface meanings, and everyday usage (Leonard & Deevy, 2020). A large vocabulary is beneficial, but comprehension of word forms and their common applications is critical for reading fluency, spelling precision, and listening comprehension (Kezhen, 2015).

The aspect of structure in morphological awareness is essential in determining word forms through the addition of prefixes and suffixes to base words, altering their appearance and indicating grammatical information (Manolitsis *et al.*, 2017). For example, the suffix «-s» pluralizes nouns, while the prefix «un-» creates antonyms (e. g., «happy» to «unhappy»). The acquisition of word form knowledge is influenced by frequency, regularity, transparency, and exposure to lexical units (Leonard & Deevy, 2020). Technology-enhanced and multimodal learning materials, along with explicit and implicit instruction, feedback, and practice (Chapelle & Sauro, 2017), can aid learners.

Word meaning. Word meaning is crucial in Vocabulary Breadth, encompassing semantic and pragmatic properties like denotations, connotations, collocations, and figurative uses (Eguchi *et al.*, 2022). A deep understanding of word meaning enables precise communication, comprehension, and interpretation in different contexts (Webb, 2020). Breaking down words into morphemes aids in understanding their structure and meaning derivation (Mussar *et al.*, 2020). Morphological analysis identifies how morphemes combine to form the word's overall meaning and reveals relationships between words with shared morphemes.

Various factors influence word meaning acquisition, including word frequency, complexity, learners' prior knowledge, exposure, and motivation (I. S. P. Nation, 2001). Language educators can promote word meaning knowledge through pedagogical activities like word maps, semantic gradients, word associations, and semantic clusters (Eguchi *et al.*, 2022). Providing feedback and encouraging learners to use new words in their communication and writing further enhances their word meaning knowledge and vocabulary breadth.

Word usage. Word usage, a crucial aspect of Vocabulary Breadth, involves effective and appropriate use of words in various contexts and genres (Caro & Mendinueta, 2017). It encompasses knowledge of collocations, idioms, phrasal verbs, and multi-word units, along with linguistic characteristics like grammar, syntax, discourse, and register (I. S. P. Nation, 2001).

Morphological analysis and accurate pronunciation of morpho-phonemic correspondences enhance language proficiency, enabling learners to use lexical items effectively in English (Webb, 2020). This is especially valuable for second language learners facing unfamiliar words and structures. Word usage proficiency can be developed through exposure to real-world language input, explicit instruction, feedback, practice, and reflection (Zhou & Dai, 2016). Language teachers can use various techniques like communicative activities (Loewen & Sato, 2017), task-based learning, and corpus-based analysis to encourage learners' word usage and vocabulary diversity.

Vocabulary depth knowledge

Vocabulary depth, a crucial dimension of lexical competence, involves a deep understanding of a lexical unit, encompassing its meaning, pronunciation, spelling, frequency, and morphological, syntactic, and collocational features (Rashidi & Khosravi, 2010; Qian, 2002). Learners with a broad vocabulary are aware of all aspects of a word, including its multiple meanings and relationships with other terms in the language, enabling them to use it accurately in various situations.

Morphological awareness plays a vital role in developing vocabulary depth. Understanding word structure and formation helps learners acquire new words and expand their vocabulary (Rychka & Lisovska, 2022). Familiarity with roots and affixes allows learners

to break down words and deduce their meanings, thereby enhancing word comprehension. To fully increase vocabulary depth knowledge, it is essential to examine phonemic, graphemic, morphemic, syntactic, semantic, and collocational features of lexical units (H.-Y. Choi, 2013; Qian, 2002). These features can be categorized into two groups (Zareva *et al.*, 2005): the micro level, which includes phonemic, graphemic, and morphemic features, and the macro level, covering syntactic, semantic, and collocational features.

Phonemic features. Language learners' vocabulary depth is significantly influenced by phonemic elements. The ability to understand spoken language accurately and recognize word variations like plurals, verb tenses, and word endings, which can dramatically impact a word's meaning, depends on the capacity to differentiate between different sounds in words. Phonological features pertain to the individual sounds and sound characteristics of words, while lexical features involve the holistic combination of sounds in words and their resemblance to other words (Farquharson *et al.*, 2014).

Graphemic features. Graphemic elements play a significant role in learners' acquisition of a deeper understanding of words, contributing to vocabulary depth. As Venezky (2011) highlights, there are complexities in the spelling units beyond the basic twenty-six graphemes. Learning to detect and decode words using graphemes, the visual representations of written language, proves beneficial when encountering new terms. Understanding graphemic aspects allows learners to identify spelling patterns, leading to the development of a larger vocabulary. For example, recognizing common suffixes or prefixes helps students determine the meaning of novel words, enhancing both depth and breadth of vocabulary (Cleary, 2014). This knowledge enables learners to swiftly grasp and effectively use new vocabulary (Spencer *et al.*, 2015), enhancing their comprehension of the reading they engage in.

Morphemic features. Morphemic characteristics play a fundamental role in vocabulary depth knowledge, providing the ability to understand the detailed meaning and structure of words. Morphemes, being the smallest units of meaning in language, allow students to comprehend more than just the spelling-to-sound relationship; they also aid in identifying morpheme boundaries (Hurrel, 2019; Venezky, 2011). Understanding the meaning of prefixes, suffixes, and roots, and how they combine to create new words, is facilitated by a working knowledge of morphemic characteristics.

Syntactic features. Vocabulary depth knowledge of lexical units is significantly influenced by understanding syntactic features, which govern the arrangement and combination of words to form sentences (Wu & Juffs, 2022). By grasping how words function in context and how their meanings can change based on sentence structure, learners can develop a deeper understanding of syntax and enhance their vocabulary depth knowledge (Farrow *et al.*, 2020).

Semantic features. The development of vocabulary depth is influenced by the semantic properties of words, which describe their meaning, category, properties, and relationships to other words (Robert & Rico Duarte, 2016). Understanding semantic features allows individuals to communicate ideas more effectively and with greater variety in their writing, which is especially beneficial for language learners.

Collocational features. Collocations play a crucial role in developing a solid vocabulary depth knowledge of the English language. They are expressions of words that frequently occur together and significantly influence the meaning of sentences (Nesselhauf, 2006). Collocations are characterized by fixedness and commutability, with transparency and commutability being two key features. Transparency refers to whether the combination's elements and the combination itself have a literal or non-literal meaning, while commutability pertains to whether the substitution of the elements is restricted (Nesselhauf, 2006).

Vocabulary organization

The systematic storage and representation of words and morphemes in the learner's brain through vocabulary organization is a crucial component of English lexical competence. Some scholars define lexical competence as the organization of lexical units based on the degree of familiarity (Sevara *et al.*, 2021). Learners with high vocabulary proficiency are assumed to have dense and more organized networks of words and morphemes, allowing them to quickly locate words and understand word relationships, thus enhancing their communicative skills (Choudhury, 2015).

Morphology greatly influences the structure of English vocabulary. Morphological knowledge enables learners to recognize morphemes and understand how they combine to form new words. This understanding allows learners to systematically classify, and store words based on their morphological components, leading to more effective and precise word recall (Schmitt, 2014). For example, knowing the morpheme «-ness» helps learners grasp the relationship of deadjectival nominalization (e. g., happy-happiness, sad-sadness).

Storage, connection and retrieval. Examining the storage, connection, and retrieval of lexical items provides a deeper comprehension of vocabulary organization (Chapelle, 1999; Qian, 2002; Rashidi & Khosravi, 2010). Storage pertains to how words are stored in the mental lexicon, considering usage frequency, word relationships, and the strength of these connections (Webb, 2020). Connection refers to the arrangement of words in the mind's lexicon, involving associations and relationships (Webb, 2020). Retrieval is the ability to recall words quickly and accurately from memory (Webb, 2020). Examining these elements helps researchers understand the intricate network of word and morpheme relationships in the mental lexicon, influencing vocabulary organization and lexical competence.

Storage. Word storage involves mentally representing and organizing lexical units, creating semantic networks where words connect based on shared characteristics (Ferrer-Xipell, 2020). Relationships among morphological, semantic, and syntactic components influence this organization (Ferrer-Xipell, 2020). The quantity and accessibility of links in the semantic network influence the mental lexicon's arrangement (Holmström *et al.*, 2016). Word frequency, familiarity, and personal experience impact word organization and storage. High-frequency words are stored more effectively and accessed faster than low-frequency words.

Morphological awareness is crucial for word storage as affixes, roots, and stems are part of a word's mental representation (Farahian, 2011). Learners aware of morphological norms can efficiently infer new word meanings and store them (Gabryś-Barker, 2005). Vocabulary organization differences affect lexical access precision and speed (Pranoto & Afrilita, 2019). Some rely on holistic storage, while others use an analytical approach, breaking words down. Individual storage strategies play a role in vocabulary organization.

Connection. To comprehend word connection and its role in vocabulary organization, semantic networks play a crucial role (Sevara B. *et al.*, 2021). These networks consist of linked words and ideas in the mind's vocabulary (Sevara B. *et al.*, 2021). Word associations are formed based on shared meaning or grammatical characteristics, strengthened through exposure and use (Ferrer-Xipell, 2020). Students' cognitive development involves transitioning from simpler syntagmatic associations to more complex paradigmatic connections.

Morphological awareness strengthens word connections in the mental lexicon by recognizing the morphological structure of words (Gabryś-Barker, 2005). For example, knowing that «act» denotes action enables understanding words like «action», «actor», and «react». Recognizing morphological similarities builds a network of related lexical units, facilitating retrieval and use in spoken and written language (Embick *et al.*, 2021).

Words with similar meanings or frequent use are more tightly connected, enabling quicker access from the mental lexicon (Choi, 2013). A well-connected vocabulary network allows rapid word access in various contexts, while a poorly linked network may

lead to slower retrieval and production. Associations are influenced by usage, similarity, and frequency (Pranoto & Afrilita, 2019). High-frequency words are strongly associated with others. The exposure to language and how learners interact with lexical forms and structures influence word connections in the mental lexicon (Holmström *et al.*, 2016). The strength of relationships between lexical units and ideas depends on the speaker's proficiency in both first and second languages.

Retrieval. Word retrieval involves recalling information from the mental lexicon when encountering a word (Qian, 2002). To enable retrieval, students activate related terms in the semantic network, starting with word recognition and followed by retrieval (Gabryś-Barker, 2005). Characteristics such as word frequency, familiarity, and contextual information can impact retrieval speed and accuracy (Cui, 2009). Phonologically-based linkages in the mental lexicon can hinder fast word retrieval in natural conversation, leading to non-native-like vocabulary usage. Restructuring the L2 mental lexicon based on semantic or conceptual associations is crucial to improve retrieval. Interference from other words or concepts can also affect retrieval (Navarrete *et al.*, 2014). Multiple meanings of a word may create interference, slowing down retrieval (Webb, 2020).

Context influences word retrieval. A sentence's context can activate and recall words syntactically or semantically related to the target word. Morphological awareness aids in recalling words with similar structures and meanings (Palmovi & Marii, 2008). Efficient word retrieval is essential for lexical competence, enabling quick and accurate access to words in various contexts (Ferrer-Xipell, 2020). Vocabulary instruction with word retrieval strategies improves retention and usage (Nation, 2015). Understanding the processes and factors influencing word retrieval is vital for effective vocabulary training and enhancing lexical competence in EFL learners.

DISCUSSION AND RECOMMENDATIONS

The literature review on morphological awareness and English lexical competency produced numerous significant findings. To begin with, morphological awareness can be explained through three distinctive aspects: structure, analysis and decoding (Deacon *et al.*, 2017; Levesque & Deacon, 2022; MacKay *et al.*, 2017). This framework serves for a fundamental understanding of the relationship between lexical competence and morphological awareness. Besides, the aspects in which this variable has been circumscribed account for both production (analysis and decoding) and reception (structure and analysis).

Furthermore, Morphological Awareness and English lexical proficiency consistently showed a good cross-linguistic association in students' biliteracy (S. (Echo) Ke *et al.*, 2021).For instance, one study discovered that children who got specific instruction in morphology fared better than their classmates on vocabulary exams (Brandes & McMaster, 2017). Similarly, a different study by Varga *et al.* (2020) discovered that morphological knowledge positively predicted reading comprehension in both English native speakers and English as a Second Language (ESL) students. Second, consciousness of morphemes might have a stronger impact on word reading in English. According to one study, children who got education in morphology enhanced their English vocabulary more than older children who received the same instruction (Levesque *et al.*, 2021). Besides, explicit teaching in morphemes may help second language learners. A meta-analysis conducted by Ke *et al.* (2021) revealed that morphological trainingincreased ESL students' reading comprehension and vocabulary development.

Although the results were generally encouraging, there were some contradictions inthe literature. For instance, some research discovered that English native speaker's morphological awareness outperforms that of non-natives, yet a study conducted on L2

learners from a morphologically more complicated L1 unveiled that even with much lesser ability in the target language, they could exceed native speakers in their understanding of relational morphology (Wu & Juffs, 2022). Different studies employed different tasks to test knowledge on word formation knowledge; some used morpheme isolation tasks and others utilized inflectional tasks (McBride–Chang *et al.*, 2005; Sparks & Deacon, 2015). The methods employed to measure English lexical proficiency varied as well, with some research employing vocabulary tests and others using reading comprehension exams. Morphological analysis and decoding was found to be more strongly associated to middle school pupils' reading comprehension than word knowledge in some studies (Deacon *et al.*, 2017; MacKay *et al.*, 2017). These discrepancies indicate that additional study is required to fully understand the connection between word structure knowledge and English lexical competence, taking into consideration various age groups, task kinds, and vocabulary measures. The results of this research study have major implications for teaching languages.

First, teachers ought to think about include explicit teaching in morpheme consciousness in their curricula (Alsaeedi, 2017; Hurrel, 2019). The link between English lexical proficiency and morphological analysis is favourable, indicating that education in this area may improve students' vocabulary breadth and word reading comprehension abilities (Azad & Ahmadian, 2021). Second, teachers should be mindful that training along the different dimensions of morphology may be more beneficial for students. Therefore, while developing and implementing teaching on morpheme knowledge, greater consideration should be given to learners (Henry, 2019). Lastly, the results imply that specific morphological decoding instruction is something that educators should think about doing given the rising number of ESL students in classrooms throughout the world.

There are numerous limitations on the literature review. It is challenging to demonstrate a causal link between morphological awareness and English lexical proficiency because many of the research examined were correlational. Further limiting the generalizability of the results are some of the studies' limited sample sizes or concentration on certain populations. Last but not least, the majority of the studies were carried out in academic contexts, which might not accurately represent language use in everyday life.

The research review on the relationship between morphological awareness and English lexical competence concludes by highlighting the significance of knowledge on morphemes in lexical competence in English and reading overall (Ibrahim Rabadi, 2019; Spencer *et al.*, 2015). The results imply that morphological structure, analysis, and decoding are crucial skills when it comes to teaching and may increase vocabulary learning and reading comprehension abilities (Deacon *et al.*, 2017; Levesque & Deacon, 2022; MacKay *et al.*, 2017). Nonetheless, further research is required to fully comprehend the connection between morphological awareness and English lexical competence, especially when different age groups, task kinds, and measures of English lexical competence are considered.

CONCLUSIONS

The inclusion of morphological awareness in language teaching can facilitate and hasten language learning. It is possible to learn and practice morphological analysis techniques to increase one's capacity for novel word recognition and analysis, word formation, and vocabulary development. By looking at the structure of unfamiliar lexical units, educators can also urge children to use their morphological abilities to improve reading comprehension. EFL students can improve their lexical competence and gain a deeper grasp of the subtleties of the English language by means of the development of these skills.

Comprehension of the internal structure of words can greatly increase vocabulary depth knowledge in a variety of ways. First of all, learners can guess the meaning of ex-

pressions they don't know by studying the internal structure of them. Second, it enables students to identify and evaluate various word forms, which aids in their deeper and more accurate apprehension of their meaning and usage. Thirdly, word connections, understanding word relationships, and word collocations are all made possible by morphological awareness. An individual's vocabulary depth knowledge and language command can be greatly improved by all of these elements. As a result, learners are better able to detect and produce a wider variety of words when they have a solid understanding of morphological structure, which includes rules and patterns for word construction such prefixes, suffixes, and compounding.

By creating meaningful links and paradigms based on morphological relations, morphological structure also helps students organize their vocabulary. For example, realizing that «-er» creates nouns denoting «someone who does something» enables the creation of words like «teacher», «writer», or «driver», while the understanding that «un-» signifies negation can provide insight into words such as «unhappy», «clear», or «unfair».

Morphological analysis can enhance vocabulary knowledge in a variety of ways. At first glance, by delving into the inner workings of lexical units, it can aid in identifying and comprehending less frequent lexical items. They will be able to recognize and comprehend words they may not have come across before, broadening their vocabulary in the process. Inferring the meaning of unfamiliar terms using morphological analysis, instead, enables students to acquire new expressions more rapidly and with less effort. A deeper knowledge of word form, meaning, and usage in a variety of contexts is facilitated by this ability. Learners can infer the meaning of words like «impossible» by breaking them down into their individual morphemes, «im-», «possible», and «-ble». The fact that «happiness» is made up of the morphemes «happy» and «-ness» also aids students in understanding that it refers to «the state of being happy».

For EFL learners who have difficulty reading and spelling, morphological decoding can be especially helpful. It can boost recognition, retrieval effectiveness, discrimination, vocabulary accuracy, and reading fluency; in turn, this aspect enables students to employ morphological hints to determine the pronunciation of unknown words, especially in languages with complicated spelling as English proves to be. This ability is extremely useful for enhancing word reading and reading comprehension by making use of the particular phonological and orthographical features. Understanding the structure of morphologically complex lexical items helps pupils read more quickly and effectively, discriminate between terms that appear similar but have distinct meanings, organize and retrieve morphemes more effectively in their mental lexicon, and recognize and understand lexical units more readily.

According to the analysis presented, it has been proved feasible the relationship between Morphological Awareness and Lexical Competence of the English language through a set of aspects (structure, analysis, and decoding) in the case of MA, and dimensions (vocabulary breadth, depth and organization) for LC. Morphological awareness plays a vital role in enhancing lexical competence by expanding vocabulary breadth and depth, improving word recognition, comprehension, and organization, and promoting effective reading strategies. The acquisition of morphological awareness equips learners with a valuable set of skills that unlock the potential for a richer and more nuanced understanding of the English language.

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