Unraveling the Connection between Morphological Awareness and Vocabulary Development in Learners with Developmental Disorders

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Abstract: This study investigates the relationship between morphological awareness and vocabulary development in learners with developmental disorders. It delves into how morphological awareness influences the acquisition and expansion of vocabulary in individuals facing developmental challenges. Given that learners with developmental disorders often face challenges in these areas, the primary aim of this study is to explore the extent to which morphological awareness contributes to vocabulary development in learners with developmental disorders. By investigating this connection, the research aims to shed light on potential interventions and educational strategies that can be tailored to improve language skills in this population. The study employs a mixed approach, combining qualitative semi-structured interviews and standardized assessments of morphological awareness conducted alongside quantitative analysis of linguistic patterns and comprehension strategies in children diagnosed with specific developmental disorders. Participants included 40 learners aged 6-12 years who were diagnosed with various developmental disorders at Mambilima Special School in Mwense District, Zambia. Data collected through standardized tests and semi-structured interviews were analyzed thematically and descriptively. The findings reveal a significant correlation between morphological awareness and vocabulary development in learners with developmental disorders. Individuals demonstrating higher levels of morphological awareness exhibit greater vocabulary breadth and depth. Moreover, the qualitative analysis uncovers specific morphological strategies employed by these learners to decode unfamiliar words and derive meaning from context. The findings underscore the critical role of morphological awareness in supporting language learning and suggest targeted interventions to foster vocabulary growth in individuals with developmental disorders.
Keywords: Awareness, development, developmental disorders, morphology, vocabulary.

Research Paper

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How to Cite this Paper: Nkandu Musonda & Pethias Siame (2025). Unraveling the Connection Between Morphological Awareness and Vocabulary Development in Learners with Developmental Disorders. *Middle East Res J Linguist Lit, 5*(3): 52-57.

1. INTRODUCTION

Vocabulary development plays a pivotal role in a child's academic success and overall cognitive growth. Carlisle (2000) posits that the ability to analyze word parts provides a framework for understanding both the meaning of complex words and their grammatical functions. However, for learners with developmental disorders, such as dyslexia or specific language impairment (SLI), acquiring and expanding vocabulary can present unique challenges. In recent years, researchers have increasingly turned their attention to the role of morphological awareness in understanding and supporting vocabulary development in these populations.

Morphological awareness refers to the ability to recognize and manipulate the smallest units of meaning in language, known as morphemes. These morphemes include prefixes, suffixes, and root words, and understanding their structure and function is crucial for deciphering the meaning of words and constructing new ones. It can be argued that for learners with developmental disorders, such as dyslexia or SLI, morphological awareness deficits can significantly impede vocabulary acquisition and comprehension.

Peer Review Process: The Journal "Middle East Research Journal of Linguistics and Literature" abides by a double-blind peer review process such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).

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Research indicates a delicate interplay between morphological awareness and vocabulary development in typically developing children. According to Apel & Lawrence (2011), the morphological knowledge to children which contributes to reading and spelling success, thereby providing vital tools for communication. However, for learners with developmental disorders, this relationship between morphology and vocabulary becomes even more pronounced given their unique linguistic profiles.

Therefore, this study problematizes the intricate relationship between morphological awareness and vocabulary development in learners with developmental disorders. The paper aims to provide evidence-based insights that shed light on the importance of this connection and its implications for educational interventions.

2. LITERATURE REVIEW

Morphological awareness is crucial for vocabulary development, particularly in children, directly influencing a child's capacity to communicate, learn, and engage in social interactions. Morphological awareness which is the understanding of the structure and meaning of words via their morphemes, has garnered significant attention in linguistic and educational research due to its profound implications for vocabulary development. Studies indicate that learners with strong morphological awareness tend to have larger vocabularies. Kuo & Anderson (2006) argue that students with higher morphological awareness exhibit advanced vocabulary skills and better reading comprehension. By recognizing common morphemes, they can derive the meanings of new words rather than relying solely on rote memorization. For learners with developmental disorders, this process is often fraught with challenges. Research conducted by Conti-Ramsden & Durkin (2012) indicates that children with developmental language disorders (DLD demonstrate lower levels of morphological awareness compared to their typically developing peers. This deficit can subsequently hinder their vocabulary development and overall language skills. Understanding these challenges is essential for creating effective interventions tailored to their needs.

Morphological awareness refers to the ability to recognize and understand the structure of words. Rasinski & Padak (2005) argue that for learners with developmental disorders, this awareness is often limited, leading to difficulties in identifying and using morphemes. Nicolson (2014) opines that learners with developmental disorders often face specific challenges in language acquisition, including difficulties in morphological processing. Apel *et al*. (2004) conducted a study involving preschool children and found that explicit instruction in morphological awareness led to enhanced vocabulary acquisition. This aligns with findings from the National Reading Panel (2000), which highlighted the importance of morphological instruction as a component of effective reading programs. These results suggest that fostering morphological awareness can be a crucial strategy in supporting vocabulary development across various age groups. The lack of morphological awareness often results in simplified language use, where learners may rely on basic word forms, further limiting their linguistic expression and comprehension. The consequences are particularly evident in academic settings, where a higher level of language proficiency is required.

Morphological awareness, which involves recognizing and understanding the structure of words, including prefixes, suffixes, and root words, is crucial for vocabulary development, especially in learners with developmental disorders. This skill is foundational for decoding and generating new words, and it has a significant impact on vocabulary acquisition and use. Apel *et al*. (2013) highlight this connection by demonstrating that children with strong morphological awareness tend to have larger vocabularies. Their research shows that morphological awareness enables learners to understand and utilize complex words more effectively, suggesting that these skills are closely linked. Apel *et al*. (2013) argue that morphological awareness is a key predictor of vocabulary knowledge, as it allows children to understand and generate new words based on their morphological structure. By grasping the components of words, children can infer meanings and integrate new vocabulary into their language use.

For learners with developmental disorders, the ability to manipulate and comprehend morphemes profoundly influences their vocabulary development. Enhanced morphological awareness helps these learners decode complex words and understand their meanings, leading to improved vocabulary acquisition. According to Beck *et al*. (2013), vocabulary knowledge by the learners is foundational for understanding new concepts and is correlated with reading success. This, in turn, supports broader language development, including reading comprehension and expressive communication, which are critical for academic success.

In educational settings, this understanding can be applied by incorporating targeted instruction on morphemes and word formation into the curriculum. Additionally, promoting strategies that leverage morphological knowledge to infer meanings of new words can be beneficial. By enhancing morphological awareness, educators can support learners in expanding their vocabularies and improving their overall language

skills, thereby contributing to their academic and communicative success. Bowers & Kirby (2010) suggest that educators should prioritize morphological instruction as part of a comprehensive language intervention strategy, particularly for learners with developmental disorders who may struggle with other aspects of language development. This finding aligns well with the objectives of the current undertaking.

3. Theoretical Framework

The theoretical framework of this research is anchored on the morphological theory (Carlisle, 2000). Morphological theory posits that the understanding and manipulation of morphemes, the smallest units of meaning in language play a crucial role in language acquisition and literacy development. This theory provides a framework for examining how morphological awareness affects vocabulary development, especially among learners with developmental disorders.

According to Carlisle (2000), "Morphological awareness is the ability to recognize and manipulate the structure of words, including the identification of roots, prefixes, and suffixes, which is essential for vocabulary development." This ability allows individuals to deconstruct complex words into their constituent parts, facilitating not only comprehension but also the formation of new words, thus expanding their vocabulary. Research demonstrates that morphological awareness is significantly linked to reading achievement and vocabulary growth.

Kuo & Anderson (2006) assert that children who are more adaptive to morphemes tend to have larger vocabulary and perform better in reading tasks. This relationship emphasizes the importance of integrating morphological instruction into educational practices, particularly for students with developmental disorders, who may struggle with conventional vocabulary acquisition methods.

Therefore, this theory will guide the analysis of the unraveling relationship between morphological awareness and vocabulary development among learners with developmental disorders.

4. METHODOLOGY

The methodology of this study integrates both qualitative and quantitative data to provide a comprehensive understanding of the impact of morphological awareness on language development among learners with developmental disorders. The mixed method approach can triangulate data from different sources, enhancing the validity and reliability of the findings. Creswell & Plano Clark (2017) suggest that this approach is particularly useful in educational research, where the complexity of human behavior and learning processes often requires multiple perspectives and methodologies to capture the full picture."

Considering the specific constraints of the study, purposive sampling was used and a sample size comprising 40 learners aged between 6-12 years with developmental disorders enrolled at Mambilima Special School was selected. The 40 participants aged 6–12 years were diagnosed with three main developmental disorders: Specific Learning Disorders (SLD), autism spectrum disorder (ASD), and Intellectual Disabilities (ID). This method of sample selection allows the researcher to handpick participants who meet the inclusion criteria and have the necessary data available for the study. Cochran (1977) opines that purposive sampling involves selecting individuals known to meet certain clear criteria. Therefore, parents and guardians of the learners who participated in the study also provided insights into the learner's morphological abilities and challenges. This gesture enriched the conceptualization of the study by the researchers.

Qualitative data which were collected through semi-structured interviews with learners, guardians, and teachers were thematically analyzed. This was achieved by identifying common patterns related to the impact of morphology on language development among learners with developmental disorders. Nowell *et al*. (2017) state that thematic analysis is a widely used qualitative analysis method that emphasizes the identification and interpretation of themes within qualitative data.

On the other hand, quantitative data were collected using standardized tests. The tests were analyzed descriptively to measure the extent of the impact that morphological awareness has on language development among learners with developmental disorders.

5. FINDINGS AND DISCUSSION

The findings of the study are presented using a pie chart and bar graph to illustrate the key data. The results focus on the relationship between morphological awareness and vocabulary development among learners with developmental disorders, followed by an in-depth discussion of the implications for educational practices.

5.1 Vocabulary Development in Children with Developmental Disorders

The study involved 40 participants aged 6–12 years, diagnosed with three main developmental disorders: Specific Learning Disorders (SLD), autism spectrum disorder (ASD), and Intellectual Disabilities (ID). Demographic and performance data are presented below to illustrate the correlation between vocabulary development and morphological awareness across the three groups under study.
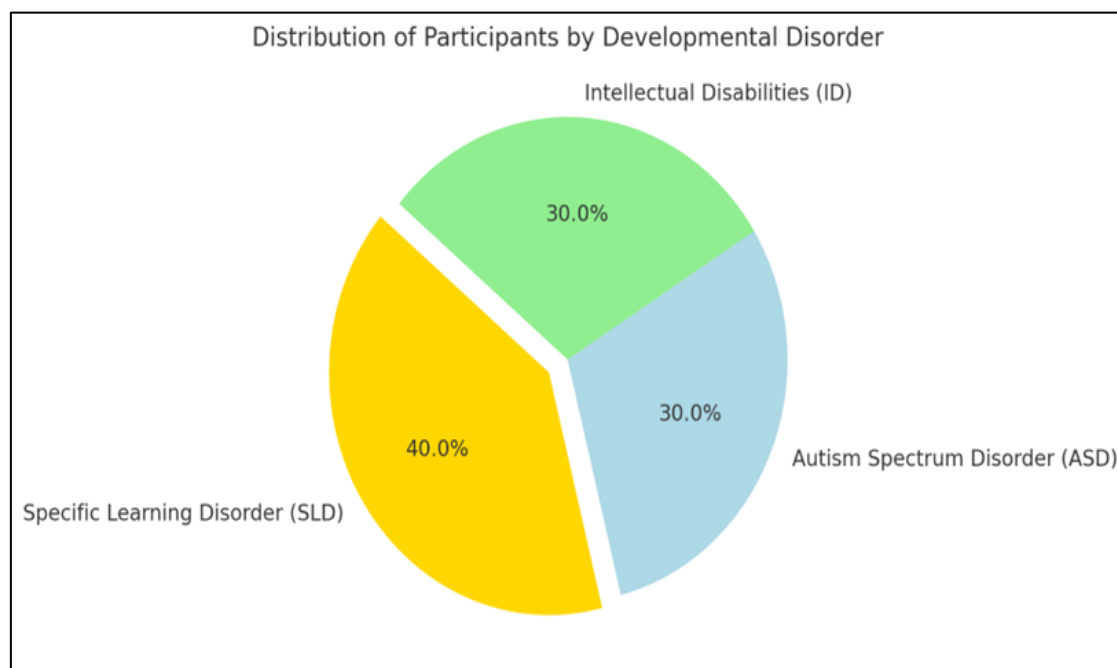
Figure 1: Vocabulary development by developmental disorder

The majority of the participants in the study representing 40% were learners with SLD, while learners with ASD and ID each accounted for 30% of the sample. This distribution ensured a balanced representation of different developmental disorders and allowed meaningful comparisons.

The distribution of participants highlights the diversity of learners studied, with SLD being the most prevalent disorder in the sample (40%). This may reflect the widespread diagnosis of learning disorders compared to ASD and ID. The equal representation of learners with ASD and ID (30% each) ensures that comparisons are not biased by sample size disparities.

The strong performance of learners with SLD is consistent with previous studies (e.g., Carlisle, 2003), which emphasize that targeted instruction in morphology can significantly enhance vocabulary development in this group. Despite their relatively high scores, learners still face challenges with more complex morphological tasks. To alleviate the above vocabulary challenges for children with developmental disorders, teachers should incorporate explicit instruction on morphemes, prefixes, and suffixes to further develop vocabulary. Interactive methods, such as word-building games and group discussions can enhance retention and application of vocabulary.

Learners with ASD demonstrated basic proficiency but encountered challenges with abstract morphological concepts. These difficulties are consistent with previous studies such as Diehl *et al*. (2014) which link ASD to struggles with higher-order language processing. The study reveals that visual supports, such as diagrams and color-coded word parts, can improve understanding. Structured and predictable routines for language activities can reduce cognitive overload and improve performance.

The limited scores of learners with ID reflect significant struggles with basic morphological tasks, supporting findings by McBride-Chang *et al*. (2005). These learners require highly scaffolded instruction to develop even foundational skills. Simplified language tasks, such as identifying common word parts in familiar words, should be prioritized. Multisensory approaches, such as using physical objects to represent morphemes, can engage learners and enhance understanding.

5.2 Morphological Awareness by Children with Developmental Disorders
The bar graph below demonstrates clear differences among the three groups of learners with developmental disorders in terms of morphological awareness:
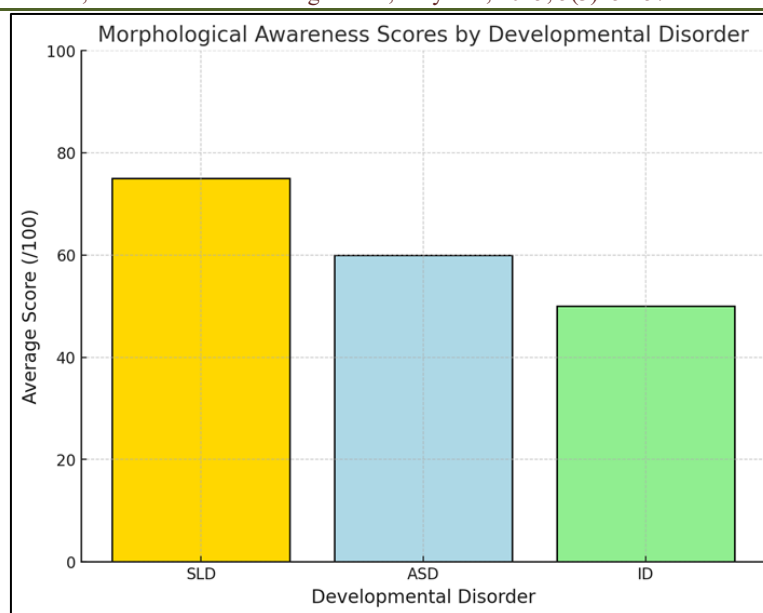
Figure 2: Morphological Awareness Scores by Disorder

Figure 2 above reveals that learners with SLD achieved the highest average score 75/100, indicating moderate proficiency. This was followed by learners with ASD who scored 60/100, reflecting basic proficiency but with notable challenges in certain areas. On the other hand, learners with ID scored the lowest, that is, 50/100, highlighting significant struggles with morphological tasks.

These results reveal that the highest scores were recorded for learners with SLD (75%), suggesting that these learners benefit more from targeted language interventions. The learners demonstrated an ability to identify and manipulate word structures, although gaps in advanced morphological skills remain.

Learners with ASD scored 60%, showing moderate challenges in grasping abstract morphological concepts such as affixes and compound words. Their performance reflects the potential for improvement with tailored instructional strategies. Learners with ID scored 50%, revealing significant limitations in understanding and applying morphological rules. These learners struggled even with basic word structures, underlining the need for foundational interventions.

5.3 Factors Influencing Morphological Awareness
Interviews with teachers, parents, and learners highlighted additional factors that influence morphological awareness as illustrated below:

5.3.1   Teacher Strategies and Challenges
Teachers reported using repetitive exercises and storytelling as primary methods for teaching word structures. However, they also identified a need for more training and resources tailored to learners with developmental disorders.

5.3.2   Parental Support
Parents of learners with higher scores (particularly those with SLD) reported engaging in home-based language activities. Conversely, limited parental involvement was noted among learners with lower scores, largely due to socioeconomic constraints.

5.3.3   Behavioral Barriers
Behavioral challenges, particularly among learners with ASD and ID were identified as significant obstacles to consistent language learning. Based on the above factors, it can be argued that learners with SLD demonstrated relatively better performance in morphological tasks, suggesting that interventions targeting morphological skills may yield positive outcomes for this group. The lower scores among learners with ASD and ID highlight the need for tailored teaching strategies to enhance their morphological and vocabulary development. For instance, visual aids, repetitive exercises, and structured language interventions could be beneficial.

The findings align with prior research emphasizing the relationship between morphological awareness and vocabulary acquisition. Customized interventions for learners with developmental disorders should focus on addressing specific morphological challenges and vocabulary deficits. Regular assessment of morphological awareness and vocabulary growth can help tailor these interventions to better meet the needs of these learners. Developing these skills is crucial for learners with developmental disorders to improve

language comprehension and communication abilities. The visual representation of data through charts provides a comprehensive overview of the findings, supporting educators and policymakers in designing effective interventions.

6. CONCLUSION

The study has provided an in-depth investigation of the intricate relationship between morphological awareness and vocabulary development among learners with developmental disorders. This relationship is a crucial point in understanding and supporting learners with developmental disorders. As illuminated through this study, fostering morphological skills not only enhances vocabulary acquisition but also empowers these learners to navigate the complexities of language more effectively. By implementing targeted interventions that emphasize morphological awareness, educators and caregivers can provide these individuals with the tools required for them to improve their communication skills and boost their confidence in both academic and social settings. The findings reveal that learners with developmental disorders need tailored educational approaches that recognize the unique challenges faced by learners with developmental disorders. Investing in research and practical strategies that bridge morphological understanding and vocabulary development ultimately contributes to more inclusive and effective educational practices.

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