Morphosemantic Analysis Skills Among Digital Native Non-Arabic Speakers

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Abstract
This study aims to determine the ability of Arabic morphosemantic analysis on digital natives who are not native Arabic speakers. The research method used is descriptive quantitative with percentage-based analysis. Data were collected through an open-ended multiple-choice test that was structured based on morphosemantic indicators. The validity of the test instrument has been confirmed by Arabic morphosemantics experts. The study involved 34 digital native Arabic students, selected through a purposive sampling technique. The results show that the morphosemantic analysis ability of digital native non-Arabic speakers is generally considered insufficient, with a percentage of 49.2%. The ability in the aspects of word derivation and shighat is classified as moderate with a percentage of 67.6% and 65.7% respectively, while the ability in the aspects of affixes, word roots, semantic aspects, and wazan is categorized as "very poor" with a percentage of 44.7%, 42.1%, 37.2%, and 36.4% respectively. This study concludes that the morphosemantic analysis ability of digital native non-Arabic speakers is still at a deficient level, and effective strategies need to be developed to improve it.

Keywords: digital native, analytical skills, morphosemantics.

Abstrak
Penelitian ini bertujuan untuk mengetahui kemampuan analisis morfosemantik bahasa Arab pada digital native yang bukan penutur asli Arab. Metode penelitian yang digunakan adalah deskriptif kuantitatif dengan analisis berbasis persentase. Data dikumpulkan melalui uji pilihan ganda terbuka yang disusun berdasarkan indikator morfosemantik. Validitas instrumen uji telah dikonfirmasi oleh ahli morfosemantik bahasa Arab. Penelitian melibatkan 34 mahasiswa bahasa Arab digital native, dipilih melalui teknik purposive sampling. Hasilnya menunjukkan bahwa kemampuan analisis morfosemantik digital native non penutur Arab secara umum tergolong kurang, dengan persentase 49.2%. Kemampuan dalam aspek derivasi kata dan shighat diklasifikasikan sebagai sedang dengan persentase masing-masing 67.6% dan 65.7%, sementara kemampuan dalam aspek imbuhan, akar kata, aspek semantik, dan wazan dikategorikan sebagai "sangat kurang" dengan persentase masing-masing 44.7%, 42.1%, 37.2%, dan 36.4%. Kesimpulan dari penelitian ini adalah bahwa kemampuan analisis morfosemantik digital native non penutur Arab masih memiliki tingkat yang kurang, dan strategi yang efektif perlu dikembangkan untuk meningkatkannya.

Kata Kunci: Digital Native; Kemampuan Analisis; Morfosemantik
I. INTRODUCTION

Morphosemantics is a combination of morphology and semantics, namely the study of the ins and outs of word forms and their changes as well as the function of these changes which have an impact on word meaning (Tafiati et al., 2022). In morphosemantics, in addition to changing word building, it also has implications for changes in meaning resulting from morphological processes (Ghozali & Khoiriyatunnisa, 2021). Morphology according to Al-Ghalayaini is defined as the study of basic words to gain an understanding of the various forms of words in Arabic, including changes and development of these words (Nurmala et al., 2022; Ruhmadi & Al Farisi, 2023). There are several aspects of morphology including shighat (Miftahuddin, 2015), wazan-wazan tashrif (patterns) (Irawan, 2020), a collection of word forms consisting of archetypes, lawashiq (affixes) (Ghalayain in Asy’ari, 2016), and zawaid (Hassan in Kosim, 2020), and word derivation (Anis in Ruslan et al., 2023).

Shigat is the class, form, or type of a word that contains a pattern (Miftahuddin, 2015). Some shighat found in Arabic are fi’il madhi, fi’il mudhari, mashdar, isim fa’il, isim maf’ul, fi’il amr, fi’il nahyi, isim zaman, isim makan, isim alat (Munir, 2018). The wazan-wazan tashrif patterns are فَعلًا، فِعْلًا، فَعْلُ، فَاعِلٍ، مَفْعُولٍ، مُفْعَلٌ، لَفْعُلْ، مَفْعَلٌ، مَفْعَلٌ، مِفْعَلٌ (Juaeni, 2023). Where the wazan-wazan are derived from the basic pattern composed of the letters fa’ fi’il, ‘ain fi’il, and lam fi’il. In addition, there is a classification related to the number of letters in the word in the form of lawashiq or zawaid, namely when the number of letters is three it is called tsulasiy, when the number is four it is called ruba’iy, when the number is five it is called khumasiy, and when the number is six it is called sudasiy. As for derivation, namely changes in word form and type, namely from nouns to verbs or vice versa (Adriana in Ruslan et al., 2023). The meaning contained in this change at least shows the meaning, behavior, object, tool, and place and time of the work (Zahrani in Ruslan et al., 2023).

Meanwhile, semantics according to Ahmad Mukhtar Umar defines semantics as the study of meaning or the science that discusses meaning, a branch of linguistics that studies the theory of meaning, or a branch of linguistics that studies the conditions that must be met to reveal sound symbols so that they have meaning (Humayro, 2021).h. Verhaar argues that the study of meaning has a strong link to most linguistic studies. At the lexical level, there is a meaning termed "lexical meaning". Similarly, at the morphological and syntactic levels, there is a meaning termed "grammatical meaning". Based on this, he classified meaning into two types, namely lexical meaning and grammatical meaning (Matsna in Ariyanti, 2023). Fayiz al-Dayah divides meaning into four types, namely lexical meaning, morphological meaning, grammatical meaning, and contextual meaning (Matsna in Humayro, 2021). So it can be concluded that there are
three types of meaning, namely lexical meaning, grammatical meaning, and contextual meaning.

From these two definitions of morphology and semantics, it can be concluded that Morphosemantics is a combination of morphology and semantics in linguistics, where morphology is used as a basis for understanding meaning. The ability to analyze morphosemantics is important to improve understanding of vocabulary and grammatical structures. By understanding morphosemantics, learners can recognize word roots, morphological forms, and word meanings in sentences. This helps them expand their vocabulary, construct sentences correctly, and understand the meaning of words in various contexts.

In this digital era, where self-learning through various online platforms is increasingly dominant, morphosemantic analysis skills are crucial for Arabic language learners among digital native non-Arabic speakers. The complexity of word structure and meaning in Arabic requires in-depth understanding through morphosemantic analysis skills. Along with that, research conducted by (Maksum & Tafiati, 2019) related to the morphosemantic field of the word *Auliya' in the Qur'an shows the importance of understanding morphosemantics, by finding 234 words incorporated in the morphosemantic field of the word *Auliya' in the Qur'an. These forms are spread across 55 surahs and 208 verses, derived from six basic forms classified into three-word classes, each of which includes: 1) the *fi'il class consists of three basic forms, namely *waliya/*walaya, *wallaa, and *tawalla. 2) the adjective class is *waliyy which is a *shifat *musyabbahah. And 3) the *isim class consists of two forms: *maulaa and *wilaayatan/*walaayatan with the root form "*wawu, *lam, *ya'.

In the context of self-directed Arabic language learning through online platforms such as Duolingo, Memrise, Learn Arabic Speak Arabic, and so on (Manoppo et al., 2022), the understanding and ability of morphosemantic analysis becomes an essential foundation to achieve Arabic language competence effectively. Factors identified as problems of Arabic learners in learning morphology, such as difficulty distinguishing terms in Sharaf, Difficulty finding different examples, the complexity of word changes, and difficulty translating Sharaf changes into Indonesian, confirm the importance of attention to morphosemantic analysis in the learning process (Sulaikho et al., 2023).

Additional challenges arise from contextual errors in students' translations, including errors in language, situation, culture, and emotion (Ariyanti, 2023). This indicates that students not only need to master Arabic morphology but also need to understand the context in which words are used in various situations and cultures. Although digital native non-Arabic speakers tend to use platforms such as Google Translate and Chat GPT, research by Kusuma & Yulia (2023) highlighted the shortcomings of Google Translate. Despite having good translation quality, the platform often fails to convey ideas...
accurately and does not always follow correct grammar. Therefore, it is important not to rely exclusively on Google Translate to translate Arabic texts to Indonesian, and vice versa.

Faris & Abdurrahman’s (2023) research on Chat GPT shows that although the technology can understand the context of Arabic texts well, especially through the semantic method, the researchers highlighted the importance of not relying too much on technology alone. Despite the ease of translation, the researchers emphasized that the human mind is still considered better at understanding context in depth. Therefore, digital native non-Arabic speakers need to have strong morphosemantic analysis skills to ensure a deeper understanding of the context.

Previous research, such as that conducted by Rambe (2015), highlighted the relevance of Arabic Language Education students’ abilities, especially in the aspect of morphology. However, the results show that students’ understanding of vocabulary still needs to be strengthened. This study follows the same approach to students’ abilities in learning Arabic but with a different focus. Unlike the previous morphological analysis, this study emphasizes more on the ability of morphosemantic analysis, especially for digital native non-Arabic speaker students.

in another research framework conducted by Albab (2022), the focus lies on the Arabic writing ability of non-pesantren students in the digital era. The research method used is quantitative, and the results show that Arabic writing skills in Arabic language and literature study program students who come from non-pesantren backgrounds are in a low category. The similarity with previous research lies in analyzing students’ ability to learn Arabic in the digital era but with substantial differences in the focus of research. While the previous study explored writing ability, this study focuses on the morphosemantic understanding of students from digital native non-Arabic speakers.

A review of relevant research shows a significant gap between the research conducted by Pangadilan Rambe and Ulil Albab and this study. Pangadilan Rambe’s research focuses on Arabic morphology in Arabic Language Education students (Rambe, 2015), while this research innovates by analyzing the morphosemantic abilities of digital native non-Arabic speakers. Thus, there is a research gap regarding morphosemantic understanding in the context of digital native non-Arabic speakers that has not been fulfilled by previous research. Although Ulil Albab’s research highlights the Arabic writing skills of non-pesantren students in the digital era (Albab, 2022), the focus of this research is different from this study which focuses more on morphosemantic abilities. Therefore, this study is considered a valuable contribution to filling the gap of knowledge related to the morphosemantic abilities of non-Arabic-speaking digital native students.

Thus, this study aims to determine the description of the ability of digital native non-Arabic speakers to analyze Arabic morphosemantics. This research is expected to be a
reference in facilitating learning activities that focus on developing the ability to analyze Arabic morphosemantics.

II. METHOD

This research is a quantitative descriptive research that uses percentages. The method used is a survey to determine the ability of digital native non-Arabic speakers to morphosemantics of Arabic. The population in this study is digital native non-Arabic speakers who are actively learning Arabic. This study involved 34 respondents, who were Arabic language students from among digital natives, selected through nonprobability sampling using a purposive sampling technique. The data collection process was carried out with an instrument of 30 multiple-choice questions designed to measure the level of morphosemantic ability of respondents (Thu’imah in Fauziah et al., 2021). This instrument has gone through validity and reliability tests with the help of Arabic language experts and morphosemantics experts to ensure accuracy and reliability. After the instrument was verified valid and reliable, the research continued with the distribution of instruments to respondents. Data collection was carried out for a week by distributing Google form links to Arabic language students from among digital native non-Arabic speakers. The results of the questionnaire were then analyzed using descriptive statistical techniques to provide an overview of the respondents’ morphosemantic abilities. The analysis will include the calculation of mean, median, and mode to provide a comprehensive picture of morphosemantic analysis ability. In addition, to determine the level of ability of each aspect of morphosemantics, a similar analysis was carried out. The analysis was conducted by examining the overall average score of each aspect, starting from the highest to the lowest. According to Santoso in Ramadhana et al. (2022), to understand the pattern of answers and phenomena observed from respondents, a percentage analysis was carried out using a certain formula. The percentage formula used is as follows:

\[ p = \frac{f}{n} \times 100\% \]

Description:
- \( p \) = percentage
- \( f \) = frequency of answer
- \( n \) = total number of respondents
The criteria and percentage score of the Arabic morphosemantic ability test answers can be seen in Table 1.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>80% - 100%</td>
<td>Very Good</td>
</tr>
<tr>
<td>70% - 79%</td>
<td>Good</td>
</tr>
<tr>
<td>60% - 69%</td>
<td>Medium</td>
</tr>
<tr>
<td>50% - 59%</td>
<td>Poor</td>
</tr>
<tr>
<td>0% - 49%</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>

(source: Arikunto in Ramadhana et al. (2022))

III. RESULT AND DISCUSSION

A. Research finding

The research was conducted online using Google Forms for Arabic language students from digital native non-Arabic speakers totaling 34 people. The data description of this research is expressed by 30 multiple choice questions, with six aspects of morphosemantics, namely: shighat, word roots, wazan (patterns), affixes (lawashiq), derivation and inflection, and semantics which include lexical, grammatical, and contextual meanings. The ability of digital native non-Arabic speakers to Arabic morphosemantics is described based on the answers of students from these circles to test questions that have been tested for validity and reliability.

The data processed and analyzed in this study are the results of multiple-choice tests that aim to measure the ability of Arabic morphosemantics. Below are the results of the statistical calculations.

<table>
<thead>
<tr>
<th>Statistical Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>49.2</td>
</tr>
<tr>
<td>Mode</td>
<td>70</td>
</tr>
<tr>
<td>Median</td>
<td>50</td>
</tr>
<tr>
<td>Percentage</td>
<td>49.2%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>15.4</td>
</tr>
<tr>
<td>Variance</td>
<td>238.4</td>
</tr>
</tbody>
</table>

From the results of statistical calculations, the researcher found significant findings related to the level of morphosemantic ability among digital native non-Arabic speakers who are learning Arabic. The average morphosemantic proficiency score of the respondents reached 49.2, which indicates that in general, they have a lack of
understanding in analyzing the structure and meaning of words in Arabic. However, it should be noted that there is considerable variation in ability between respondents, as reflected by the standard deviation of 15.4 and the variance of 238.4.

Further analysis of the data shows that the mean score which is close to the middle value illustrates that the majority of respondents have a relatively balanced understanding of various aspects of Arabic morphosemantics. However, the highest mode at 70 indicates that there are groups of respondents who have superior abilities than others because there are certain aspects of morphosemantics that are more easily understood by most respondents.

When looking at the relatively high standard deviation, it can be inferred that there is significant variation in ability between respondents. This indicates that several respondents have morphosemantic abilities that are well above or below the average. Meanwhile, the considerable variance confirms the diversity in the level of morphosemantic ability among the respondents, indicating that there are differences in the level of understanding and mastery of morphosemantics among digital native non-Arabic speakers.

<table>
<thead>
<tr>
<th>Comprehension Level</th>
<th>Number of students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Good</td>
<td>4</td>
<td>11.8%</td>
</tr>
<tr>
<td>Medium</td>
<td>6</td>
<td>17.6%</td>
</tr>
<tr>
<td>Poor</td>
<td>9</td>
<td>26.5%</td>
</tr>
<tr>
<td>Very Poor</td>
<td>15</td>
<td>44.1%</td>
</tr>
</tbody>
</table>

From the data provided, it can be seen that the majority of digital native non-Arabic speaker students have a low level of proficiency in Arabic morphosemantics. More than half of the students, 44.1%, were at the "Very Poor" level. This indicates that they have difficulty understanding word structure and word meaning in Arabic. Furthermore, 26.5% of the students were at the "Poor" level, indicating that there is still a significant number of them who have a limited understanding of morphosemantics. Only a small portion of the total students, 11.8%, were at the "Good" level, indicating that they had a better understanding in terms of Arabic morphosemantics. While 17.6% of students are at the "Medium" level, indicating that they have sufficient understanding there is still room for improvement. No students were at the "Very Good" level, indicating that no one in the group had a very good understanding of Arabic morphosemantics. In general, it shows that there is still a lot of room for improvement in Arabic morphosemantics among digital native non-Arabic speakers. Analysis of this data indicates that there are
significant differences between respondents in understanding and analyzing the structure and meaning of Arabic words among digital native non-Arabic speakers.

Table 4. Mean Count of Each Aspect of Morphosemantic Ability

The results of the research on morphosemantic analysis ability among digital native non-Arabic speakers show low and varied results in each aspect shown in Table 4. The test results show a tendency that most aspects of morphosemantic analysis ability cannot be identified correctly by students from digital native non-Arabic speakers. The order of the easiest to the most difficult aspects for students to identify is derivation and inflection, *shighat, lawashiq* (affixes), semantics, word roots, and finally *wazan* (patterns). The low ability of students to identify most aspects of morphosemantics illustrates the low ability of morphosemantic analysis among digital native non-Arabic speakers.

The two aspects that have a greater percentage of correct answers than wrong answers are the aspects of derivation and inflection, and *shighat*. A total of 67.6% of students managed to identify morphosemantics by correctly answering the test questions for the derivation and inflection aspects, while in the shighat aspect, the percentage of correct answers was 65.7%. These two aspects also have the highest percentage value compared to other aspects. The derivation and inflection aspects are questions about word derivations from an Arabic word origin, both derivative and inflective. Derivation is a morphological process that causes the formation of various words that result in a change in the word class of the basic word, while inflection is a morphological process that causes the formation of various formations but the formation does not result in a change in word class or remains in the same word class (Nur, 2018). The *shighat* aspect is a question about the type or form of a word. If *shighat* discusses the form or type of a word, then derivation is a word change that is categorized in the form or word class of *shighat*.

The percentage reaching more than two-thirds of the maximum score indicates that respondents have a moderate or sufficient understanding of recognizing and analyzing *shighat* and derivation of Arabic words, where both have similar topics. The ability to
understand word derivation and inflection is an important part of understanding Arabic morphosemantics. With a good understanding of how words can be modified to produce variations in meaning, respondents can better understand the Qur’anic and other Arabic texts in more depth. Apart from the two aspects mentioned, the other six aspects were not identified by the respondents.

The aspects of affixes (lawashiq), word roots, semantics, and wazan (patterns) were the most difficult for the respondents to identify. 44.7% of the respondents answered the question about affixes correctly and the remaining 55.3% answered it incorrectly. This aspect shows almost equal results between wrong and right answers. This aspect of affixes or lawashiq is a question about identifying the types of affixes in a particular word as well as the application of understanding the meaning of words that have undergone the affixation process.

This aspect includes three meanings, namely lexical, grammatical, and contextual meanings (Abdilah et al., 2023; Laura et al., 2022). The average of the semantic aspect is 42.1% which is in the very poor category. This emphasizes the importance of not only understanding the meaning of individual words but also how the meaning changes or is affected by the context of the sentence in which the word is used. The respective percentages of the three meanings include lexical meaning with 38.2% of respondents answering correctly and being in the very poor category. This shows that digital natives have difficulty understanding the basic meaning of Arabic words. This could be due to a lack of exposure to diverse vocabulary or a lack of experience in using the right vocabulary in context. In this aspect, respondents are asked to identify and determine the synonyms and antonyms of a particular word, and to determine the synonyms and antonyms of a word requires knowledge of the lexical meaning of the word (Sukoco et al., 2024).

As for the grammatical meaning aspect, with a percentage reaching 52.9%, it shows an improvement from the lexical meaning aspect, but it is still classified as insufficient. This indicates that digital natives may understand grammatical rules in general, but still often make mistakes or have difficulty in applying them consistently. This aspect is a question about the meaning or significance of a word that has undergone grammatical processes such as ziyadah and syaddah (Hidayah et al., 2018). Third, the contextual meaning, this aspect highlights the respondents' ability to understand the meaning of words in different situational or contextual contexts. In this aspect, respondents were asked to analyze words that fit the context of the sentence and understand the meaning of vocabulary in a sentence. The low percentage, 35.3%, shows that digital natives have difficulty in applying the meaning of words in different situations or contexts. This could be due to a lack of understanding of how the meaning of words can vary depending on the context.
The next most difficult aspect for respondents to identify was word roots, which had a percentage of 37.2%, indicating that respondents’ ability to identify and analyze word roots was very poor. Understanding word roots can help in analyzing the meaning of a word in the context of a sentence better. The word root aspect is a question about the origin of an Arabic word, where respondents are asked to identify one of the constituent letters of *fi’il mu’tal*. The percentage of respondents who answered correctly for this aspect shows that many respondents still have limitations in understanding and analyzing the roots of Arabic words.

The last aspect that was most difficult for respondents to identify was the aspect of *wazan* or Arabic word patterns. Different by 0.8% from the previous aspect, the respondents who managed to answer this aspect correctly were 36.4%. This shows that some respondents may have a fairly good understanding of *wazan* in Arabic. However, there are still 63.6% of other respondents who have not been able to correctly recognize this aspect, indicating a significant level of difficulty. The difficulty in identifying the *wazan* aspect can be caused by several factors. One of them is the complexity of the *wazan* system in Arabic itself, where many patterns and variations need to be considered. In addition, to be able to identify *wazan* correctly, respondents need to have a strong understanding and knowledge of the root of a word.

An analysis of the morphosemantic analysis skills of digital native non-Arabic speakers highlights the challenges faced in understanding and analyzing morphosemantics. The test results showed a low ability to identify various aspects of morphosemantics, such as *shighat*, affixes, word roots, and semantics. Limited experience in the daily use of Arabic and lack of attention to the cultural context seems to be the influencing factors. Nonetheless, there is progress in the aspects of derivation and inflection, which shows the effectiveness of certain learning methods. In addition, the importance of developing digital literacy in Arabic for digital natives is also a concern. By strengthening the understanding of these factors and through the implementation of appropriate learning strategies, it is hoped that their morphosemantic analysis abilities can improve, allowing them to understand Arabic texts better.

The results showed that the morphosemantic analysis ability of digital native non-Arabic speakers tended to be low and varied in each aspect. This can be explained by the theory that digital natives, although familiar with digital technology (Malik in Boini et al., 2024), may have limitations in understanding the structure and meaning of Arabic which differs significantly from their native language (Ahmadi & Ilmiani, 2020). According to this theory, digital natives tend to be more skilled in the use of technology than in depth language analysis.

In addition, the low ability of morphosemantic analysis in digital native non-Arabic speakers can also be caused by the lack of exposure to Arabic directly and intensively in
their daily lives (Annisa et al., 2023). This theory suggests that environment and experience play an important role in the development of one's language skills (Ungu & Asyatibi, 2023). Therefore, digital native non-Arabic speakers may need a more intensive and structured learning approach to improve their morphosemantic analysis ability in Arabic.

Thus, this study makes an important contribution to understanding the challenges faced by digital native non-Arabic speakers in understanding Arabic, as well as providing a basis for the development of more effective learning strategies that suit their characteristics as digital natives. Future research can involve more interactive and technology-based learning approaches to improve the morphosemantic analysis ability of digital native non-Arabic speakers in understanding Arabic.

**IV. CONCLUSION**

The Arabic morphosemantic analysis ability of digital native non-Arabic speakers still shows an unsatisfactory level, with only 49.2% of respondents able to identify and analyze in depth the six morphosemantic aspects of Arabic, including shighat, word roots, wazan (patterns), affixes, derivation, and semantics. Although the derivation and shighat aspects were well identified, with percentages of 67.6% and 65.7% respectively, the affix (lawashiq) aspect showed a lower level of understanding with a percentage of 44.7%, while the semantic aspect which includes three meanings namely lexical, grammatical, and contextual meanings, had an average percentage of 42.1%. The word root aspect was in the very poor category with a percentage of 37.2%. However, the wazan (pattern) aspect is the biggest challenge with a percentage of only 36.4%. From the results of this analysis, it can be seen that most respondents have a sufficient understanding of some aspects, but there are significant shortcomings in understanding other aspects.

This research emphasizes the importance of improving morphosemantic learning in the context of Arabic language learning, especially for digital native non-Arabic speakers. The need to identify and test more effective learning strategies in improving morphosemantic understanding, especially on aspects that are still poorly understood and identified, is a major concern. This becomes more important considering that digital native non-Arabic speakers, who actively use various Arabic language learning applications and media, are expected to have strong morphosemantic analysis skills.

**V. REFERENCE**


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