Teaching Implication of Meaning Construction at Morphological Level of Affixation in a Complex Indonesian Verb Formation

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Abstract
A tension exists between rationalists and empiricists regarding the nature of knowledge: innate then activated/discovered (rationalists) or constructed then invented (empiricists). The assumption is that, to a certain extent, basic knowledge seems to be innate in our mind and develops through experience by thinking processes to construct meanings. This meaning construction (thinking), mainly using language, is to make sense of and interpret the world. Meanings should be the primary motivation underlying linguistic constructions at all levels. This paper investigates meaning constructions at the lexical level of affixation by focusing on semantic behaviours of verbs in a complex word formation as an attempt: 1) to find out the semantic patterns of verb-based complex word formation, 2) to reveal if there is an iconic relationship of a sign (signifier) and its meaning (signified), and 3) to suggest for its teaching. Using semantic classes of verbs, based on situation types in deriving complex words, this study attempts to find out semantic patterns of such complex word formation and the possibility of revealing its iconicity. Using Antconc software, this study scrutinized linguistic expressions involving related verbs of state, event, and action in a corpus to reveal meaning construction at that level. The findings show several semantic patterns of verb-based complex word formation and an indication of the iconicity of signs. The paper also offers suggestions for teaching affixation.

Keywords: Rationalists; empiricists; verb semantic classes; affixation; iconic; roots

Introduction

The development of modern linguistics shows that the study of meaning in language was often neglected by linguists, focusing more on the structure of the linguistic system (see McEntee-

Atalianis & Vessey 2024, p. 359; and Halliday, 2023, p. 4). This perspective continued until the 1950s, particularly in the United States, when structural linguistics dominated. Structural linguists at that time conceptualized that meaning was constructed in a mentalistic process. This process was difficult to empirically disclose, and thus, linguistics was deemed unready to deconstruct meaning explicitly (Ayudhya, 2021, p. 139). In response to this, in 1961, Gleason identified two components of linguistic signs: content and expression (Rashid et al., 2022, p. 44; Alharbi, 2023, p. 148). Gleason's conception of meaning has been recently restated to indicate that there is no clear idea of the basic units of meaning, showing challenges in investigating meaning (Broden, 2021).

However, attempts were made to address meaning in language. During the early modern linguistics, in the late 19th and early 20th centuries, both in Europe and America, linguists paid attention to the conceptions of meaning (see Beltrama, 2020, p. 2). In Europe, from 1906 to 1911, Ferdinand de Saussure introduced important concepts of linguistic signs in his lectures, focusing on the dyadic relationships between the signifier (sound image) and the signified (concept) in the mind, and emphasizing that meaning is a mental process (Dweich & Al Ghabra, 2020; and Bagherian & Yaghoobi-Derabi, 2022). Concurrently in America, Charles Sanders Peirce (1839-1914) explored the nature of signs with a triadic model involving the representamen (signifier), object (referent), and interpretant (concept) (Nöth, 2024). Peirce categorized signs into symbols (arbitrary), icons (resembling their referents), and indices (indicating a cause-and-effect relationship). In 1993, Bloomfield created a situational theory to describe meaning in language. Inspired by empiricism, Bloomfield proposed that context determines the meaning of a language used in the interaction, showing how situational context and reaction shape meaning (Levelt, 2020).

Further, the nature and origin of meaning and knowledge have long been debated, attracting philosophers and psychologists. The demise of materialism and behaviorism, which denied the role of the human mind, gave rise to two main camps within mentalism: empiricists and rationalists (Shirvani & Shirvani, 2023, p. 210; and Aziz, 2023, p. 209.). Empiricists agree that people learn from their experiences, including how people make meaning in language (Karatsiori, 2023; Sternberg et al., 2023). In contrast, rationalists believe that basic knowledge is "innate and activated through reasoning and relevant experiences" (Pardede, 2023, p. 29). The rationalists' perspective is relevant to the concept of language as a system of knowledge (Gleitman & Gleitman, 2022; and Mandavilli, 2023). This perspective believes that the properties of the brain allow for the development of intellectual processing powers to construct meaning from environmental inputs using sign systems Klimova & Pikhart, 2020; and Tahir, 2024).

At a small scale of understanding meaning, affixation in the Indonesian language showcases how meaning is generated. Affixation is a productive process in constructing meaning at the morphological level. Kridalaksana identifies 89 forms of affixes in Indonesian language with 274 potential meanings (Bunau, 2022, p. 78.). Using the Indonesian-Leipzig Corpora Collection (ILCC), Nugraha (2024c) reveals that Indonesian language relies heavily on affixation to create complex word forms. Given its importance, calls for further study of affixation in Indonesian language (based on dissertation of Sudana entitled in *Semantic and Pedagogical Aspects of Affixation in Indonesian language,* 2005, Deakin University).

Emphasizing the significant role of affixation in making sense of meaning, recent studies have explored various aspects, including productivity, semantic roles, and iconicity (Novianti & Lestari, 2024; Rahmawati & Amin, 2024; Johansson, 2024; Basuki & Raharja, 2024). However, derivational morphology was not much explored in those studies. Meanwhile, it plays a significant

role in the process of affixation (Nugraha, 2024c). Lieber and Plag (2022, p. 309) also noted that derivational semantics has been neglected over the last three decades due to the complexities of semantic description.

This study focuses on the semantic behaviors of the prefix {meN-} and its combinations with the suffixes {-kan} and {-i} to construct complex verbs. It also explores the potential iconicity between signifier and signified. Recent practical applications of morphological studies in teaching Indonesian language, such as Harahap & Sembiring (2023) and Laksono & Utami (2024), highlight the challenges learners face. To provide more implications for educating language, Sudana (2005) developed and tested teaching materials that significantly improved learners' mastery of affixation, aligning with the mentalism perspective of knowledge as constructed by inherent intellectual processing powers. This study aims to investigate a number of important issues regarding the semantic behaviors of affixation in Indonesian language. Its first goal is to uncover whether the construction of complicated verbs from verb roots follows any observable semantic patterns. It also inspects possible iconic links between the signified (meaning of the word) and signifier (word form). Lastly, the study is expected to provide a detailed description of the Indonesian language that can be utilized to improve and enlighten affixation training for Indonesian language learners.

Literature review

An understanding on the consequences of morphological formations, particularly affixation in Indonesian verb formation, is very essential. The significance of morphology in improving language proficiency and providing comprehension of the structure and operation of language has been discussed in some recent studies.

Over the last five years, some studies concentrated on the instructional applications of morphological constructs in Indonesian verb development. For example, Nugraha (2024) found that derivational morphology in Indonesian verbs highlighted the methodical function of affixation patterns in meaning construction. The study shows that knowledge of various affixes may help language learners to better understand the intricacies of verb forms in Indonesian and enhance their linguistic proficiency and instructional techniques. Previously, Nugraha (2020) conducted a study comparing the syntactic characteristics of denominal verbs in English and Indonesian, showing the morphological processes involved in verb generation. Through a better understanding of how affixation in other languages might affect verb formation, this comparative analysis can help develop more effective teaching strategies. Nugraha (2023) also observed the morphosyntactic characteristics of the verb "membuat" (to make) in Indonesian verb formations. The study provides valuable implementations for teaching Indonesian as a second language by demonstrating the influences of affixation on verb meaning and use. In addition, Solehuddin and Gunawan (2019) also looked at Indonesian kindergarteners' awareness of morphology. They reveal that early teaching in morphological structures, including affixation, can greatly improve young learners' language and reading abilities.

Some studies have also shown the impact of morphological awareness on vocabulary enrichment. Wardana (2023) indicated that understanding affixation rules helps learners expand their vocabulary by enabling them to decode and construct new words. This has implications for teaching vocabulary acquisition strategies in language classrooms since it opens possibilities for a new approach. In terms of approaches of study, Nugraha's (2024) work on Indonesian word formation provides a thorough analysis of derivational affixes and their functions. The study has demonstrated that affixes contribute to the systematic construction of words. It is crucial for

advanced learners aiming to master the intricacies of the Indonesian language. In addition, Denistia and Baayen (2023) utilized computational modeling to study affix substitution in Indonesian. Their work demonstrates that computational tools can enhance the understanding of morphological processes, offering new paths for linguistic research and language teaching. The approaches allow for more precise analyses of affix patterns and their implications for language acquisition.

Furthermore, Tarigan and Stevani's (2020) work also discussed teaching vocabulary through derivational suffixes. Their study outlines effective strategies for incorporating morphological analysis into teaching practices, thereby improving students' ability to understand and use complex word forms. The study can provide practical guidelines for educators on how to integrate morphological instruction into their curricula. On the other hand, some studies have also covered morphological features in academic writing. For example, Rozelin et al. (2020) studied the use of affixation in secondary school students' writing. The work emphasizes the need for explicit instruction in morphological rules to enhance students' writing skills and linguistic accuracy. It highlights the importance of teaching morphological analysis to help students produce grammatically correct and stylistically sophisticated texts.

The above literature underscores morphological analysis's critical role in teaching and learning Indonesian, particularly affixation. Understanding and applying morphological rules can significantly enhance language acquisition and competency from early childhood education to advanced linguistic studies. This study, more specifically, focuses on exploring innovative pedagogical strategies and computational approaches to further integrate morphological analysis into language education (Mahmud et al., 2024).

Research method

This study used a descriptive-qualitative research design to address three objectives: (1) the semantic patterns of verb-based complex word formation, (2) the iconicity relationship between sign (signifier) and meaning (signified), and (3) pedagogical suggestions for teaching affixation. Since it aims to understand these aspects by observing and interpreting the semantic behaviors of affixes attached to verb roots that denote states, events, and actions, these behaviors are analyzed within a specifically prepared corpus using a concordance software.

Language corpus and collection procedures

This study used a corpus that contains precisely 25,000 words that were carefully curated. The corpus includes texts from two reputable national online newspapers, which are listed as the most accessed according to Reuters Institute for the Study of Journalism dan Universitas Oxford in 2021, dated between 2018 and 2024. The corpus was divided into three categories: economics, politics, and mixed content. The categorization of the corpus was intentional. The categorization aims to provide a diverse yet representative sample of language use in certain contexts. To mark each category, this study assigns the following codes to the three categories: (1) Politics, POL; (2) Economics, ECO; and (3) Mixed, MIX. The codes refer to the corpus category and references accordingly throughout the study.

The texts were downloaded systematically to ensure a balanced and comprehensive collection to enhance the validity and reliability of the subsequent analysis. The method ensures an almost equal distribution among the categories: (1) Political (POL): 8,355 words; (2) Economic (ECO): 8,323 words; and (3) Mixed (MIX): 8,322 words. Each category collected eight texts containing almost 1,000 words. It involved some key steps to ensure a balanced and comprehensive collection by setting parameters for the same ranges of length and publication date

and implementing keyword filters to categorize texts based on predefined keywords related to politics, economics, and mixed topics.

Instrumentation

This study employed Antconc as the primary tool for data analysis. Antconc has been used in many corpus linguistics studies (see Hassanzadeh & Tamleh, 2023; Assassi & Merghmi, 2023; and Liang & Chen 2023), making it reliable to identify and analyze the distribution of affixes attached to the three semantic classes of verb roots. The software allows this study to conduct detailed the data examinations and visualizations. It also enables the identification of patterns and trends in affix usage. Antconc also has comprehensive suite of features that enables treatment and examination of large text corpora to uncover nuanced linguistic phenomena.

Data analysis procedures

The data analysis process consisted of some procedures to ensure a thorough and accurate interpretation of the corpus (cf. Van Enschot et al., 2024). First, Antconc was used to scan the corpus and identify all instances of affixation involving the three semantic types of verb roots: state, event, and action. This step is important to figure out the distribution of affixes across various verb types. Subsequently, these affix occurrences were systematically recorded and categorized according to the predefined semantic frameworks.

Next, the distribution data was plotted onto the constructed semantic frameworks. This mapping process helped to determine the relationships and patterns of affix usage, providing a clear and structured way to interpret the data. Comparing the distribution across the various verb types enabled this study to identify common patterns, anomalies, and significant trends in how affixes are used to form complex verbs.

The final step consisted of the interpretation of the mapped data to draw conclusions about the semantic patterns of verb-based complex word formation. This interpretation is based on the objective of uncovering the iconicity relationships between signifiers (affixes) and signifieds (meanings). The study also considered the implications of these findings for teaching affixation, to generate practical suggestions based on the observed patterns and behaviors.

Results and discussion

Based on Jackson's observation (1990), there are three big areas of meaning construction using verbs by relating it to three situation types: talking about things that happen (*events*), talking about what people do (*actions*), and talking about the way people or things are (*states*). What follows are the findings of the semantic behaviors of verb roots based on situation types in forming complex verbs, attaching to the three targeted affixes when being used to construct meaning extracted from a corpus of the size of about 25000 words. These findings may reveal patterns of complex verb formation in constructing meaning based on their semantic behaviors through the morphological process of affixation. The findings may also reflect the phenomena of iconicity in the signification process at this morphological level and may provide suggestions for its teaching.

Semantic patterns

As an attempt to identify potential semantic patterns of complex verb formation, this study used Antconc. It closely examined a corpus of about 25,000 words, the distribution of the three targeted affixes, and their combinations with the three different types of verb roots in the

morphological process of affixation. An overall distribution of the three targeted affixes attached to the verb roots of states, events, and actions is shown in Table 1.

Table 1. Distribution of the targeted affixes attaching to verb root types

Verb Root Types	Types of Affixes			Number of Tokens
	{meN-}	{meN- + -kan}	{meN- + i}	
States	31	21	5	57
Even	18	7	7	32
Action	94	11	3	108
Number of Tokens	143	39	15	197

As indicated in Table 1, verb roots with a total number of 143 tokens have attached to the prefix {meN-}; the total number of 39 tokens to the combination of affixes {meN- + -kan}, and the total number of 15 tokens to the combination of affixes {meN- + -i}. So, the total number of verb roots identified in the corpus is 197 tokens of various semantic types. Each of those tokens, then, needs to be grouped and mapped into different semantic categories of verb roots based on the three types of situations: states, events, and actions.

Verbs of states

According to Jackson (1990), "states" refers to *"the way people or things are, what they are like, the condition they are in, where they are, the position they have taken up, and the like"* (p. 9). There are four types of state verbs: quality, temporary state, private state, and stance. Private states include intellectual, emotion, perception, and bodily sensation. The corpus provides the total number of 57 tokens of verb roots of state attaching to the target affixes. Out of those 57 tokens of verb roots of state, 31 tokens are attached to the prefix {meN-}, 21 tokens are attached to the combination of affixes {meN- + -kan}, and 5 tokens are attached to the combination of affixes {meN- + -i}. The following tables, Tables 2 to 4, present the distribution of the 55 tokens of verb roots of states attaching to the three targeted affixes.

Prefix {meN-}

The total number of the morphological process of affixation involving the prefix {meN-} with the verb roots of states found in the corpus is 31 out of 57 tokens (54,38%), as shown in Table 2. The table presents a semantic framework of affixation using the combination of affixes {meN-} for state verbs in Indonesian language. It categorizes verbs into various types of states, including stance, quality, temporary state, and private states (intellectual, emotion, perception, and bodily sensation), listing specific verb roots under each category and indicating the total number of tokens found for each type. This table displays the distribution of the prefix {meN-} when attached to state verbs in Indonesian language. The total number of tokens in the corpus involving {meN-} is 31. The prefix predominantly attaches to verbs expressing long-term *qualities* of states (35,5%), such as 'jadi' (become), 'tahan' (resist), and 'jebol' (break). "*A 'quality' is a more-or-less permanent characteristics of someone or something"* (Jackson, 1990, p. 10). This indicates a preference for using {meN-} in contexts that denote enduring or stable states, such as illustrated by the following data from the corpus:

> *… dari yang sudah ada sebelumnya* **menjadi** *lebih baik. Apalagi, dalam…*
> *(… from the previous one)* **(to become)** *better. Moreover, in…*

Excerpt 1, ECO, Text 1

*.... otomatis bagian lapak di sebelahnya **menjadi**   lebih kecil. "Jadi,…*
*(…automatically the stalls next to it)   **(to become)** smaller. "So…*

Excerpt 2, MIX, Text 3

Additionally, verbs like 'muat' (fit), 'tembus' (penetrate), and 'serap' (absorb) further support this tendency, demonstrating how {meN-} functions to express persistent or inherent qualities.

Table 2. The semantic framework of affixation with prefix {meN-} for state verbs in Indonesian language

AFFIXES	VERB ROOTS						
	STATES						
	Quality	Temporary State	Private				Stance
			Intellect	Emotion	Perception	Bodily Sensation	
{meN-}	*jadi* (become), *tahan* (hold), *jebol* (break), *belah* (split), *muat* (fit), *tembus* (penetrate), *serap* (absorb), *turut* (follow), *lepas* (release), *akomodir* (accommodate), *topang* (support) 4o	*jabat* (shake-hand), *tampung* (contain), *alir* (flow), *kelola* (manage), *sangkut* (stick), *limpah* (overflow)	(consider), *ingat* (remember), *imbau* (urge)	*bantah* (deny), *tentang* (oppose), *gubris* (heed), *tuduh* (accuse), *sangka* (suspect)	*lihat* (see), *tonton* (watch), *kenal* (know)	*kandung* (contain), *dengar* (hear)	*Tinggal* (stay)
Token Number	11	6	3	5	3	2	1
Total Number of Token				31			

The prefix {meN-} also equally attaches to the totality of the private state (41,9%) with its 4 subtypes in which the subtype of *emotion* appears most, such as 'tuduh' (accuse), 'bantah' (deny), and 'sangka' (think), as illustrated in Excerpts 3 & 4.

*… Di samping itu, dirinya pun **membantah**   dengan tegas bahkan bersumpah…*
*(… Besides that, he) **(denied)**   (firmly even swearing…)*

Excerpt 3, POL, Text 1

*… sambung dia. Belakangan, Budi Arie **(membantah)** melakukan stereotipe gender*
*…He continued. Later, Budi Arie **(Denied)**   (Doing gender stereotype)*

The application of {meN-} is less frequent in verbs related to the position of someone or something, indicating a linguistic pattern where certain affixes are reserved for specific semantic purposes. The data only provides one token of state of *stance*, 'tinggal' (stay). This detailed categorization and token distribution provide insights into how affixation with the {meN-} prefix functions semantically in the Indonesian language, reflecting possibly deeper cognitive or cultural patterns in the language's use of state verbs.

Combination of affixes {meN- + -kan}

The total number of the morphological process of affixation involving the prefix {meN- + -kan} with the verb roots of states found in the corpus is 21 tokens out of 57 tokens (36,84%) as displayed in Table 3.

Table 3. Semantic framework of affixation with combination of affixes {meN- + -kan} for state verbs in Bahasa Indonesia

AFFIXES	VERB ROOTS						
	STATES						
			Private				Stance
	Quality	Temporary State	Intellectual	Emotion	Perception	Bodily Sensation	
{meN- + -kan}	*dapat* (get), *putus* (break), *butuh* (need), *siap* (ready), *kabul* (grant), *hidup* (live), *selesai* (finish), *takluk* (surrender), *pulih* (recover), *takjub* (amazed), *menang* (win)	*kembang* (develop), *libat* (involve)	*cipta* (create), *ingat* (remember), *beber* (reveal), *pikir* (think)	*ingin* (want)	*terbit* (rise)	*gerak* (move)	*Tetap* (stay)
Token Number	11	2	4	1	1	1	1
Total Number of Token			21				

The most important feature of the data, as displayed in Table 3, is the distribution and usage patterns of the {meN- + -kan} affix combination with different state verbs. It is evident that this affix combination is predominantly used with state verbs of quality, followed by verbs of intellectual. Temporary state, perception, and bodily sensation verbs are less frequently affixed with {meN- + -kan}. The table shows that the {meN- + -kan} combination attaches to state verbs of quality, with a total of 11 tokens. Examples include 'dapat' (get), 'putus' (break off), 'butuh' (need), 'siap' (ready), 'kabul' (grant), 'hidup' (live), 'selesai' (finish), 'takluk' (surrender), 'pulih' (recover), 'takjub' (amaze), and 'menang' (win). The following excerpts from the data illustrate that phenomenon.

...Habiburokhman menganggap warga DKI Jakarta **membutuhkan** *figur pemimpin baru. Ia*
... Habiburokhman considers the citizens of DKI Jakarta **need** *to need a new leader figure. He...*
Excerpt 5, POL, Text 4

...Jika masyarakat menemukan kendala maupun **membutuhkan** *informasi lebih lanjut*
... if people find obstacles or **need** *further information*
Excerpt 6, ECO, Text 2

... sudah dapat terwujud. Apabila PBB **memutuskan** *untuk mengirim pasukan*
... it can be realized. If the United Nations **decide** *to send troops*
Excerpt 7, MIX, Text 2

...Retno, sama seperti saat PBB **memutuskan** *untuk mengirim pasukan*
... Retno, just like when the United Nations **Decided** *to send troops*
Excerpt 8, MIX, Text 2

This suggests that the affix combination is commonly used to denote permanent characteristic of someone or something. For temporary state verbs, there are 2 tokens with the {meN- + -kan} affix combination, represented by 'kembang' (develop) and 'libat' (involve). This indicates a less frequent but significant use in expressing less permanent types of situations. The data indicates 4 tokens for verbs of intellect, including 'cipta' (create) and 'ingat' (remember) 'pikir' (think) and 'beber' (explain), highlighting a notable use of the affix combination in intellectual actions or states. There is 1 token for emotion verbs with 'ingin' (want), reflecting a specific but limited use in emotional states. Perception verbs are represented by 1 token, 'terbit' (appear), suggesting occasional use in perceptual states. Similarly, bodily sensation verbs are represented by 1 token, 'gerak' (move), indicating rare use in physical states.

The private state verb roots provide 7 tokens, with the intellectual private state verb roots appear the most common; that is, 4 out of 7 tokens. This indicates that the combination of affixes {meN- + -kan} is important as a tool to think, as illustrated by the following excerpts.

...itu dapat dikatakan sebagai inovasi, **menciptakan** *sebuah alternatif dari yang...*
... it can be said to be an innovation, **creating** an alternative from that ...
Excerpt 9, ECO, Text 5

...panorama langit yang cerah berawan **menciptakan** *visual yang menakjubkan. Baca...*
...panorama of cloudy bright sky **creates** amazing visuals.
Excerpt 10, MIX, Text 4

Combination of affixes {meN- + -i}

The total number of the morphological process of affixation involving the prefix {meN- + -i} with the verb roots of states found in the corpus is 5 tokens out of 57 tokens (8,77%) as displayed in Table 4.

Table 4. Semantic framework of affixation with combination of affixes {meN- + -i} for state verbs in Indonesian language

A F F I X E S	VERB ROOTS						
	STATES						
			Private				
	Quality	Temporary State	Intellectual	Emotion	Perception	Bodily Sensation	Stance
{meN- + -i}	*saing* (compete)	*punya* (have),	*tanggap* (respond), *renung* (reflect)				*duduk* (sit)
Token Number	1	1	2				1
Total Number of Token				5			

The table above shows a detailed semantic framework of affixation using the combination of affixes {meN- + -i} for state verbs in the Indonesian language. The most notable feature is the limited but focused use of the {meN- + -i} affix combination with state verbs. The data reveals that this combination is applied selectively, with the majority of tokens appearing in private state verbs, particularly those related to intellect and temporary state verbs. The overall number of tokens is relatively low, suggesting a specialized application of this affix combination. Based on the table, only one token for quality state verbs with the {meN- + -i} affix combination, represented by the verb 'saing' (compete). This limited use implies that {meN- + -i} is not commonly used to express quality state verbs, which generally denote stable or ongoing states. Similarly, there is only one token for temporary state verbs with 'punya' (have), indicating that the {meN- + -i} combination is rarely applied to verbs expressing less permanent situations.

For intellectual state verbs, there are two tokens, including 'tanggap' (respond) and 'renung' (ponder). This shows a slightly higher but still limited use, suggesting that {meN- + -i} is occasionally used for verbs denoting thinking processes. Notably, the data indicates no tokens for verbs of emotion, perception, or bodily sensation, suggesting that the {meN- + -i} combination is not typically used for these types of private states. The table illustrates that the {meN- + -i} affix combination is most prominently applied to intellectual private state verbs. Its overall use is rare compared to other affix combinations, highlighting its specific and limited application in expressing certain types of states.

The minimal use of {meN- + -i} in stance and quality verbs is significant. For stance verbs, represented by 'saing' (compete), the affix combination suggests a competitive state but is not widely used, indicating its specificity. In temporary state verbs, the presence of 'punya' (have) reflects a similar trend, where the affix combination is applied selectively. The slightly higher number of tokens in intellectual state verbs indicates a more notable but still limited application. Verbs like 'tanggap' (respond) and 'renung' (ponder) show that {meN- + -i} is useful for expressing

mental activities that are reflective. This suggests that while the affix combination is not broadly used, it serves an essential function in specific contexts.

The absence of tokens for verbs related to emotion, perception, and bodily sensation underscores the affix combination's selective nature. This absence suggests that {meN- + -i} is not suitable for or typically used in these semantic fields, reflecting its specialized application. The selective and specialized use of the {meN- + -i} affix combination in the Indonesian language. While its overall application is limited, it plays a significant role in expressing temporary states and intellectual actions. The distribution across different types of state verbs underscores its specific function within the language, providing valuable insights into the nuanced use of morphological processes in Indonesian.

Verbs of events

Jackson (1990) stated that "*Events refer to things that happen. There is no stated human or other animate instigator or agent for an event: they simply occur*" (p. 12). Accordingly, there are four types of verbs related to an event: *goings-on, process, momentary event,* and *transitional event.* The corpus provides the total number of 32 tokens of verb roots of event attaching to the target affixes. Out of those 32 tokens of verb roots of event, 18 tokens are attached to the prefix {meN-}, 7 tokens are attached to the combination of affixes {meN- + -kan}, and 7 tokens are attached to the combination of affixes {meN- + -i}. The following tables, Table 5 to Table 7, present the distribution of the 32 tokens of verb roots of event attaching to the three targeted affixes.

Prefix {meN-}

The total number of the morphological process of affixation involving the prefix {meN-} with the verb roots of the event found in the corpus is 18 tokens out of 32 tokens (56,25%), as displayed in Table 5. The table outlines the use of the prefix {meN-} in forming complex verbs from event verb roots in the Indonesian language. The data reveals that the total number of tokens involving the {meN-} prefix is 18 out of 32 tokens. The prefix is prominently used with verbs that denote events, categorized into four types: goings-on, process, momentary event, and transitional event.

The table displays that the prefix {meN-} is mostly used with verb roots of event, followed by verb roots of momentary event. Process Events: Verbs like 'jelang' (approach), 'turun' (descend), 'dulang' (wash), 'tempa' (forge), 'hibur' (entertain), 'jual' (sell), 'tunggu' (wait), 'sasar' (miss), and 'sewa' (rent) suggest actions with a defined process, representing 9 tokens. Momentary Events: Verbs such as 'lintas' (cross), 'dadak' (sudden), 'adu' (fight), 'tinjau' (review), 'langgar' (violate), and 'luncur' (slide) depict brief, instantaneous actions, totaling 6 tokens. An excerpt from the data illustrates the use of this affixes with process event verb roots.

…Pastikan Harga Pangan Tetap Normal **jelang** *Iduladha, Pj Bupati Cirebon…*
… Make sure the price of food remains normal **ahead of** *Iduladha, Acting Regent of Cirebon...*
Excerpt 11, ECO, Text 3

…konser sedih, tetapi ini pas **jelang** *akhir konser euforianya lebih…*
… sad concert, but this is right **ahead of** *the end of the euphorian concert is more ...*
Excerpt 12, MIX, Text 4

Table 5. Semantic framework of affixation with prefix {meN-}for event verbs in the Indonesian language

A F F I X E S	VERB ROOTS			
	EVENTS			
	Goings- on	Process	Momentary event	Transitional event
{meN-}	receive), *lambung* (propel)	*jelang* (approach), *turun* (descend), *dulang* (pan), *tempa* (forge), *hibur* (entertain), *jual* (sell), *tunggu* (wait), *sasar* (target), *sewa* (rent)	*lintas* (cross), *dadak* (surprise), *adu* (clash), *tinjau* (review), *langgar* (violate), *luncur* (slide)	*datang* (come)
Token Number	2	9	6	1
Total Number of Token		18		

The table also provides information regarding the occurrences of the affixation of {meN-} with the goings-on event verb root: Verbs such as 'terima' (receive) and 'lambung' (propel) indicate continuous or repetitive actions, accounting for 2 tokens. Meanwhile, transitional events, that is, the verb 'datang' (arrive), reflect a change in state or transition, accounting for 1 token. The distribution emphasizes the prefix {meN-}'s role in expressing various types of events, particularly processes and momentary actions, highlighting its significance in morphologically complex verb formation in Indonesian.

Combination of affixes {meN- + -kan}

The total number of the morphological process of affixation involving the prefix {meN- + -kan} with the verb roots of the event found in the corpus is 7 tokens out of 32 tokens (21,8%%), as displayed in Table 6. This table presents the combination of the prefix {meN-} with the suffix {-kan} in event verbs, resulting in a total of 7 tokens. This affix combination is used with verbs indicating various types of events: Goings-on Events. The verb 'naik' (ascend) signifies continuous actions, represented by 1 token. Process Events, such as, 'laksana' (execute), 'gelontor' (flush), and 'Jelajah' (explore), denote processes, totaling 3 tokens. Momentary Events including verbs 'luncur' (slide) and 'suguh' (serve) depict brief, instantaneous actions, accounting for 2 tokens. Transitional Events include the verb 'sampai' (arrive), indicating a transition with 1 token.

Table 6. Semantic framework of affixation with prefix {meN- + kan} for event verbs in Indonesian language

A F F I X E	VERB ROOTS			
	EVENTS			
	Goings-on	Process	Momentary event	Transitional event

S				
{meN- + -kan}	*naik* (rise)	*laksana* (implement), *gelontor* (pour), *jelajah* (explore)	*luncur* (slide), *suguh* (serve)	*sampai* (arrive)
Token Number	1	3	2	1
Total Number of Token		7		

This distribution shows the versatility of the {meN- + -kan} affix combination in expressing a range of event types, from continuous actions to transitions. The table shows the predominant appearance of the affixation of {meN- + -kan} with process event verb roots totaling 3 tokens, indicating the process change of state, as illustrated by the following data excerpt.

...Hartarto mengungkapkan, pemerintah pusat sudah	***menggelontorkan** Rp 39 triliun hingga 31 Mei...*
... Hartarto revealed, the central government had	***poured** Rp 39 trillion until May 31 ...*
	Excerpt 13, ECO, Text 7

Combination of affixes {meN- + -i}

The total number of the morphological process of affixation involving the prefix {meN- + -i} with the verb roots of the event found in the corpus is 7 tokens out of 33 tokens (21,21%), as displayed in Table 10. This table details the use of the affix combination {meN- + -i} with event verbs, amounting to 7 tokens. The combination includes Goings-on Events, such as, the verb 'alam' (experience) reflecting continuous actions, as represented by 1 token. Process Events such as verbs 'lalu' (pass), 'damping' (accompany), and 'kunjung' (visit) denote processes, totaling 3 tokens. Momentary Events such as verbs 'hadir' (attend) depicts a brief action, with 1 token. Transitional Events such as verbs 'kena' (hit) and 'lampau' (surpass) indicate transitions, with 2 tokens.

Table 7. Semantic framework of affixation with prefix {meN- + -i} for state verbs in Indonesian language

A F F I X E S	VERB ROOTS			
	EVENTS			
	Goings-on	Process	Momentary event	Transitional event
{meN- + -i}	*alam* (experience)	*lalu* (pass), *damping* (accompany), *kunjung* (visit)	*hadir* (attend)	*kena* (hit), *lampau* (exceed)
Token Number	1	3	1	2
Total Number		7		

of Token

The use of {meN- + -i} in these contexts highlights its role in expressing nuanced event types, particularly in processes and transitions. Again, the process type of event verb roots mostly appears in the corpus totaling 3 tokens, indicating the process change of state taking place, such as illustrated by the following data excerpt.

...Kompas.com, 4 April 2024, usai Prabowo **mengunjungi** *China dan Jepang. TNI...*
... Kompas.com, April 4, 2024, after Prabowo **visited**   China and Japan. TNI…
Excerpt 14, POL, Text 5

Verbs of actions
"*Actions do not just happen. Actions are usually performed by human, or at least animate, agents or instigators. They are normally the result of the exercise of a will or intention on the part of the agent*" (Jackson,1990: 13). There are four types of verbs related to the situation types of action: *activity*, *accomplishment*, *momentary act*, and *transitional act*. The corpus provides the total number of 108 tokens of verb roots of action attaching to the target affixes. Out of those 108 tokens of verb roots of action, 94 tokens are attached to the prefix {meN-}, 11 tokens are attached to the combination of affixes {meN- + -kan}, and 3 tokens are attached to the combination of affixes {meN- + -i}. The following tables, Tables 8 to 10, present the distribution of the 108 tokens of verb roots of action attaching to the three targeted affixes.

Prefix {meN-}
The total number of the morphological process of affixation involving the prefix {meN-} with the verb roots of action found in the corpus is 94 tokens out of 108 tokens (87,04%) as displayed in Table 8. This table presents the detailed distribution of the prefix {meN-} attached to action verbs, revealing various semantic roles played by these affixes in complex verb formations. The total number of tokens involving {meN-} is 94 out of 108, signifying its extensive use in action verbs. The verbs are categorized into four types: activities, accomplishments, momentary acts, and transitional acts.

Table 8. Semantic framework of affixation with prefix {meN-} for action verbs in Indonesian language

AFFIXES	VERB ROOTS			
	ACTIONS			
	Activity	Accomplishment	Momentary act	Transitional act
{meN-}	*dukung* (support), *gelar* (hold), *sebut* (mention), *jaga* (guard), *usung* (carry), *lawan* (oppose), *cari* (search), *coba*	*capai* (reach), *bantu* (help), *tahan* (hold), *bahas* (discuss), *catat* (note), *raih* (achieve), *revisi* (revise), *lukis*	*pimpin* (lead), *goda* (tempt), *kritik* (criticize), *balas* (reply),	*minta* (ask), *tuju* (aim), *ambil* (take), *bawa* (bring), *pilih* (choose), *tarik* (pull), *bayar* (pay), *beli* (buy), *raup* (scoop), *beri* (give), *atur* (arrange), *kirim* (send), *sambut* (welcome), *bunuh* (kill), *cabut* (withdraw), *dongkrak* (jack), *kejar* (chase), *tutup* (close), *langkah* (step), *lantik* (inaugurate), *pegang*

(try), *baca* (read), *simpan* (keep), *pakai* (use), *pantau* (monitor), *bina* (foster), *rawat* (care), *makan* (eat), *tawar* (offer), *cegah* (prevent), *tuntut* (demand), *serang* (attack), *sisir* (comb), *paksa* (force), *pelihara* (maintain), *tantang* (challenge), *desak* (urge), *gandeng* (partner), *genjot* (boost), *gugat* (sue), *kubur* (bury), *tunda* (postpone)	(paint), *buka* (open), *angkat* (lift), *angkut* (transport), *urus* (manage), *jamin* (guarantee), *ramu* (mix), *lalap* (devour), *bahas* (discuss), *berantas* (eradicate), *pinjam* (borrow), *kontrol* (control), *samber* (strike),*susun* (arrange)	*ajak* (invite), *tolak* (reject)	(hold), *petik* (pluck), *tampar* (slap), *daftar* (register), *tepis* (deflect), *akuisisi* (acquire), *kerek* (crank), *geser* (shift), *ubah* (change), *ulang* (repeat), *kupas* (peel), *kutip* (quote), *tunduk* (submit), *cicil* (installment), *singgung* (mention), *susul* (follow), *siram* (pour), *dorong* (push)
Token Number	29	21	6	38
Total Number of Token			94	

Activities: The prefix {meN-} is used with verbs that denote ongoing or habitual actions. Examples include 'dukung' (support), 'gelar' (hold), 'sebut' (mention), 'jaga' (guard), 'usung' (carry), 'lawan' (fight), 'cari' (search), 'coba' (try), 'baca' (read), 'simpan' (save), 'pakai' (use), 'pantau' (monitor), 'bina' (build), 'rawat' (care), 'makan' (eat), 'tawar' (offer), 'cegah' (prevent), 'tuntut' (demand), 'serang' (attack), 'sisir' (comb), 'paksa' (force), 'pelihara' (maintain), 'tantang' (challenge), 'desak' (urge), 'gandeng' (hold), 'genjot' (boost), 'gugat' (sue), 'kubur' (bury), and 'tunda' (postpone). This category accounts for 29 tokens. Some examples from the corpus are as follows.

...lebih 6 bulan. Adapun eksportir yang	***menyimpan***	*DHE dalam rupiah akan ...*
... more than 6 months. The exporters who	**store**	DHE in rupiah will ...
		Excerpt 15, ECO, Text 4
...ove Scenario" dan meminta penonton	***menyimpan***	*ponsel mereka. Ambar dan ...*
... Ove Scenario "and ask the audience	**to keep**	their cellphones. Ambar and ...
		Excerpt 16, MIX, Text 4
...Kemenangan lebih dari 50 persen itu	***menyimpan***	*600 ribu suara pendukung...*
... The victory of more than 50 percent	***stores***	*600 thousand supporting votes ...*
		Excerpt 17, POL, Text 7

Accomplishments: Verbs like 'capai' (achieve), 'bantu' (help), 'tahan' (hold), 'bahas' (discuss), 'catat' (note), 'raih' (reach), 'revisi' (revise), 'lukis' (paint), 'buka' (open), 'angkat' (lift), 'angkut' (transport), 'urus' (manage), 'jamin' (guarantee), 'ramu' (mix), 'lalap' (devour), 'berantas' (eradicate), 'pinjam' (borrow), 'kontrol' (control), 'samber' (grab), and 'susun' (arrange) demonstrate actions leading to a completed state, representing 21 tokens, as illustrated.

… Persib Bandung kembali	***meraih***	*hasil minor dalam lanjutan…*
… Persib Bandung again	***achieved***	*minor results in the continuation …*
		Excerpt 18, MIX, Text 6
… Mereka kemudian	***meraih***	*popularitas dan mungkin sekarang…*
… they then	***gained***	*popularity and maybe now …*
		Excerpt 19, MIX, Text 4

Momentary Acts: This category includes brief, instantaneous actions such as 'pimpin' (lead), 'goda' (tease), 'kritik' (criticize), 'balas' (reply), 'ajak' (invite), and 'tolak' (reject), totaling 6 tokens.

Transitional Acts: Actions that denote a change in state or transition include 'minta' (request), 'tuju' (aim), 'ambil' (take), 'bawa' (bring), 'pilih' (choose), 'tarik' (pull), 'bayar' (pay), 'beli' (buy), 'raup' (scoop), 'beri' (give), 'atur' (arrange), 'kirim' (send), 'sambut' (welcome), 'bunuh' (kill), 'cabut' (revoke), 'dongkrak' (jack up), 'kejar' (chase), 'tutup' (close), 'langkah' (step), 'lantik' (appoint), 'pegang' (hold), 'petik' (pluck), 'tampar' (slap), 'daftar' (register), 'tepis' (fend off), 'akuisisi' (acquire), 'kerek' (hoist), 'geser' (shift), 'ubah' (change), 'ulang' (repeat), 'kupas' (peel), 'kutip' (quote), 'tunjuk' (point), 'cicil' (installment), 'singgung' (touch), 'susul' (follow), 'siram' (pour), and 'dorong' (push), contributing to 38 tokens, as illustrated in Excerpts 20 and 21.

… Persib Bandung yang tengah mencoba	***mengejar***	*ketertinggalan harus menjalani pertandingan…*
... Persib Bandung who is trying	**to catch up**	with the game ...
		Excerpt 20, MIX, Text 7
…para pemain Persib Bandung untuk	***mengejar***	*ketertinggalan, hingga wasit menipu…*
.. Persib Bandung players to	**catch up,**	until the referee blows ...
		Excerpt 21, MIX, Text 8

The extensive usage of {meN-} in these contexts highlights its critical role in the morphological construction of action verbs, reflecting diverse semantic functions that range from ongoing actions to completed processes and transitions.

Combination of affixes {meN- + -kan}
The total number of the morphological process of affixation involving the prefix {meN- + -kan} with the verb roots of action found in the corpus is 11 tokens out of 108 tokens (10,18%) as displayed in Table 9. This table presents the combination of the prefix {meN-} with the suffix {-kan} in action verbs, resulting in a total of 11 tokens. This affix combination is used with verbs

indicating various types of actions. Activity: Verbs like 'tunjuk' (point), 'tutur' (speak), 'lapor' (report), 'tawar' (offer), 'tanya' (ask), 'aju' (propose), and 'kerah' (mobilize) signify continuous or habitual actions, represented by 7 tokens.Accomplishment: Verbs such as 'beri' (give) and 'ungkap' (reveal) denote actions leading to a completed state, accounting for 2 tokens. Momentary Act: Verbs like 'sebut' (mention) and 'ucap' (utter) depict brief, instantaneous actions, totaling 2 tokens. Excerpts 22 and 23 provide some illustrations.

> *...telah bersiap untuk turun gunung* **memberikan** *dukungan untuk Prabowo Subianto.*
> ... Has prepared to go down the mountain **to provide** support for Prabowo Subianto.
>
> *Excerpt 22, POL, Text 8*

> *...bersiap untuk turun gunung* **memberikan** *dukungan untuk Prabowo Subianto.*
> … Preparing to go down the mountain **provides** support for Prabowo Subianto.
> \
> *Excerpt 23, POL, Text 7*

Table 9. Semantic framework of affixation with prefix {meN- + -kan} for action verbs in Indonesian language

A F F I X E S	VERB ROOTS			
	ACTIONS			
	Activity	Accomplishment	Momentary act	Transitional act
{meN- + -kan}	*tunjuk* (point), *tutur* (say), *lapor* (report), *tawar* (offer), *taya* (ask), *aju* (propose), *kerah* (mobilize)	*beri* (give), *ungkap* (reveal)	*sebut* (mention), *ucap* (say)	
Token Number	7	2	2	
Total Number of Token		11		

The distribution shows the versatility of the {meN- + -kan} affix combination in expressing a range of action types, from continuous actions to completed processes and momentary acts. This highlights its significance in the morphological construction of action verbs in Indonesian, reflecting diverse semantic functions.

The combination of the prefix {meN-} with the suffix {-kan} in action verbs indicates a flexible and multifaceted usage in the Indonesian language. This flexibility is evident in the variety of actions it covers, from continuous activities to accomplishments and momentary acts.

Combination of affixes {meN- + -i}

The total number of the morphological process of affixation involving the prefix {meN- + -i} with the verb roots of action found in the corpus is 3 tokens out of 108 tokens (10,18%) as

displayed in Table 10. This table details the use of the affix combination {meN- + -i} with action verbs, amounting to 3 tokens out of 108. The combination is used as follows: Activity- Verbs such as 'ikut' (join) and 'layan' (serve) reflect continuous actions, represented by 2 tokens; Accomplishment -The verb 'liput' (cover) indicates an action leading to a completed state, accounting for 1 token.

Table 10. Semantic framework of affixation with prefix {meN- + -i} for action verbs in Indonesian language

A F F I X E S	VERB ROOTS			
	ACTIONS			
	Activity	Accomplishment	Momentary act	Transitional act
{meN- + -i}	*ikut* (join), *layan* (serve)	*liput* (cover)		
Token Number	2	1		
Total Number of Token			3	

The distribution shows a limited but focused application of the {meN- + -i} combination, highlighting its role in expressing specific types of actions. This affix combination appears less frequently compared to others, yet it serves essential functions in the morphological construction of action verbs in Indonesian. The combination of the prefix {meN-} with the suffix {-i} for action verbs, as shown in Table 10, reveals a nuanced but significant pattern in the morphological structure of Indonesian. The limited number of tokens (3 out of 108) suggests that while this combination is not as widely used as others, it occupies a critical semantic space within the language. The affix combination {meN- + -i} thus serves a dual function: it can express both the continuity of actions and the completion of tasks. This dual capability makes it a versatile morphological tool, albeit one used selectively within the language. Its application in specific verbs suggests a strategic deployment where the semantic nuances of continuity and completion are particularly relevant (see Excerpt 24).

> *... Pertamina berkomitmen dan selalu siap* **melayani** *kebutuhan BBM dan LPG...*
> *... Pertamina is committed and always ready* **to serve** *the needs of fuel and LPG ...*
> *Excerpt 24, ECO, Text 6*

Suggestion for teaching

One valuable insight from this study is to confirm further the tendency of a close relationship between linguistic systems and cognitive processes of meaning construction. The process of meaning-making verbally could be traceable from the nature of the semantic type of verbal roots in the process of word formation through affixation. It may suggest its teaching and learning, particularly for learners of the Indonesian language as a foreign language. As mentioned earlier, mastering this word formation is quite challenging for these learners. One of the ways of

helping learners develop competence in deriving and mastering words to enrich their vocabulary range is to prepare and implement teaching material that encourages them to find and construct their own rules, leading to the mastery of the target grammar.

Emphasizing the semantic roles and patterns identified in this study can benefit teaching affixation in the Indonesian language. Educators should adopt a multifaceted approach that combines theoretical knowledge with practical application for effective learning.

- Contextual Learning: Use real-life examples and contexts where different affixes are used. This helps learners understand not just the form but the function and meaning of affixes. For instance, presenting sentences from news articles, literature, or daily conversations that highlight the use of affixes can make learning more relatable and engaging. Useful and relevant data extracted by Concordance software provide learners with real language use to explore. Contextual learning bridges the gap between theoretical knowledge and practical usage, allowing students to see the relevance of affixation in everyday communication.

- Interactive Exercises: Implement activities that involve identifying and creating sentences with various affixes to reinforce their usage and meaning. Interactive exercises such as matching games, sentence construction tasks, and group discussions can make the learning process dynamic and enjoyable. These activities encourage active participation and provide immediate feedback, which is crucial for reinforcing understanding and retention of affixation patterns.

- Visual Aids: Use diagrams and semantic maps to illustrate the relationships between verb roots and affixes, making abstract concepts more tangible. Visual aids like flowcharts, mind maps, and infographics can help students visualize the morphological processes and understand the semantic connections between different affixes and verb roots. These tools can simplify complex concepts and aid in the retention of information.

- Focused Practice: Provide exercises that focus on one affix at a time before combining them, allowing learners to build a solid understanding of each element. Students can develop a deeper understanding of each component by isolating individual affixes and exploring their specific functions and meanings. Gradually introducing more complex combinations can then build on this foundational knowledge, enabling students to confidently handle more sophisticated linguistic structures.

- Role-Playing and Simulation: Engage students in role-playing activities and simulations where they must use specific affixes in dialogues or narratives. This immersive approach encourages learners to apply their knowledge in simulated real-world scenarios, enhancing their ability to use affixes accurately and creatively in spontaneous speech.

- Digital Resources and Online Platforms: Utilize digital resources and online platforms that offer interactive exercises, quizzes, and games focused on affixation. These tools can provide additional practice opportunities outside the classroom, allowing students to reinforce their learning at their own pace.

- Collaborative Learning: Encourage collaborative learning through group projects and peer teaching activities. Working in groups allows students to learn from each other, discuss different perspectives, and collectively solve problems related to affixation. Peer teaching activities, where students explain affixation rules and patterns to their classmates, can also reinforce their own understanding.

Feedback and Assessment: Regularly assess students' understanding through quizzes, tests, and written assignments. Provide constructive feedback that highlights their strengths and areas for improvement. Assessment measures progress and helps identify any misconceptions or gaps in knowledge that need to be addressed.

Conclusion

The study reveals significant semantic patterns in the use of affixes in Indonesian language, highlighting the importance of these morphological processes in meaning construction. The findings indicate that the prefix {meN-} and its combinations with {kan} and {i} are used in distinct semantic contexts, often reflecting an iconic relationship between form and meaning. These insights can enhance the teaching and learning of Indonesian affixation, effectively providing a structured approach to understanding and using these morphological tools .

The integration of these findings into language teaching is expected to help learners achieve a deeper comprehension of the complexities of Indonesian verb formation. Learners will understand the semantic behaviors of affixes to construct meaningful and grammatically accurate sentences, improving both their linguistic competence and their ability to communicate effectively in the Indonesian language. Furthermore, knowledge of the iconic relationships in affixation can make the learning process more intuitive and accessible. It can foster a more natural acquisition of language skills.

In conclusion, the study's comprehensive analysis of affixation patterns provides valuable contributions to linguistic theory and practical language teaching. The detailed exploration of semantic frameworks and iconicity in verb-based complex word formation offers a richer understanding of the cognitive and cultural underpinnings of Indonesian language. These insights advance academic knowledge and have practical implications for language educators and learners, paving the way for more effective and engaging approaches to teaching Indonesian morphology.

Declaration of conflicting interest
The authors declare that there is no conflict of interest in this work.

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