



Taste Metaphors for Food Description as a Creative Effort by Indonesian Food Vloggers

Adam Muhammad Nur¹, R. Dian Dia-an Muniroh², Rusdiansyah³

^{1,2,3}Linguistik, Universitas Pendidikan Indonesia, Bandung, Jawa Barat

E-mail: adammnr@upi.edu¹, ddmuniroh@upi.edu², rusdiansyah@upi.edu³

Received: 2024-12-05 Accepted: 2025-05-20

DOI: 10.24256/ideas.v13i1.5919

Abstract

This study aims to investigate the use of metaphors in the conventional language employed by Indonesian food vloggers when describing food, claiming it as a form of linguistic creativity influenced by their cognitive abilities. Traditionally, metaphors have been understood as a literary style often used in poetry, novels, or drama. However, in reality, humans are inseparable from metaphors, and cognitively, people use metaphors to facilitate understanding by associating one concept with another in language. The data source for this research consists of several videos from Indonesian famous food vloggers, specifically 4 videos each from Anak Kuliner, Boengkoes Network, Mamank Kuliner, and Nex Carlos. These four food vloggers are widely known in Indonesia and have a large number of subscribers. This study employs a qualitative descriptive method, which allows for a comprehensive explanation of the phenomena found in the data. The research findings indicate that there are 53 metaphors were identified across all videos, with the number dominated by structural metaphors, which appeared 26 times. This finding shows that equating the domain of food taste with other domains structurally makes it easier to convey and understand abstract taste experiences through the shared experiences of the vloggers and their audiences.

Keywords: *Cognitive, Metaphor, Semantics*

Introduction

Language is the primary tool humans use to express thoughts. With creativity, humans can produce language tailored to their communicative goals. One key communication objective is to provide detailed information to the interlocutor. Often, understanding the information shared by a speaker requires the interlocutor to have a similar knowledge background. This shared knowledge includes linguistic and cognitive understanding, which facilitates effective

communication. This hypothesis aligns with the cognitive linguistics theory (Saeed, 2003), suggesting that human language ability correlates with their cognitive capacity.

In other words, effective language use requires well-developed cognition, as the cognitive and linguistic processes in the human mind are interconnected. This hypothesis is supported by the emergence of cognitive semantics, which demonstrates that human language reflects cognitive processes. Humans associate terms or terminologies in language based on their cognitive knowledge. In formal semantics, language is perceived as a concept with references or referents (Kroeger, 2023).

Generally, human language corresponds to real-world references. For example, the word "fall" in formal semantics refers to a situation where an entity, such as a person, animal, or object, quickly moves from a higher to a lower position (KBBI, 2024). However, cognitive semantics allows "fall" to be associated with contexts unrelated to its formal semantic concept. When associated with "love," for instance, the word "fall" shifts its reference from physical injury to a profound emotional experience, categorized as spatial/orientational metaphor in cognitive semantics.

Lakoff and Johnson (2003) argue that humans live within metaphors. As previously mentioned, human cognitive language processing can be observed through metaphorical language use. Metaphors, traditionally viewed as literary devices (Saeed, 2003; Lakoff and Johnson, 2003), are often perceived as aesthetic language forms. However, metaphors permeate everyday language use. In debates, for instance, the phrase "debate is war" metaphorically associates debating with actual war, illustrating a common metaphorical framework. The previous studies, such as research by Cao et al. (2024), highlight how metaphors in language help understand abstract concepts through concrete experiences.

Their study, *The Neural Mechanisms of the Impact of Emoji Spatial Metaphors on Emotional Perception*, investigates cognitive semantics theory, showing that humans use spatial metaphors to convey positive and negative cognition. For instance, "up" denotes positive expressions, while "down" represents negative ones. Their findings reveal how emojis with spatial metaphors influence emotional perception in communication.

This study investigates the realization of cognitive semantic metaphors in contemporary contexts. In today's digital age, platforms like YouTube offer a wealth of linguistic data, particularly in visual and verbal discourses. One notable genre is food vlogging, where content creators review various foods, restaurants, and culinary experiences. Food vloggers rely heavily on sensory descriptions, emotions, and social interactions, making their content a fascinating subject for cognitive linguistic analysis. Food vloggers utilize language not only to inform but also to create sensory and emotional experiences for their audiences. This research seeks to understand how they construct meaning through language in food

reviews: how food descriptions, cooking processes, and dining experiences are conveyed linguistically. It explores how cognitive structures and sensory experiences influence word choice and language construction in culinary reviews.

Based on the explanation above, this study tends to examine how verbal interactions in food vlogging provide a unique cognitive context. This allows researchers to explore how meaning is constructed through the use of metaphors in language. Therefore, a cognitive linguistic analysis of food vloggers' data on YouTube can offer new insights into how humans process and express sensory experiences through language, particularly in culinary contexts. This research is relevant not only to the development of cognitive linguistics theory but also to practical applications, such as understanding communication strategies in food marketing and digital culinary culture.

With the increasing popularity of food vlogging on YouTube, discourses on food, culture, and taste have become an integral part of how people interact and shape their culinary identities online. Therefore, this study aims to analyze the language used by food vloggers on YouTube, focusing on how linguistic and cognitive elements shape the sensory experiences conveyed to audiences.

Method

Food is a primary commodity consumed by humans for survival, much like time. Time is a valuable commodity for humans, illustrated through systematic metaphorical concepts such as the phrases *time is money* or *you are wasting my time* (Lakoff and Johnson, 2003). This indicates that humans systematically use metaphorical concepts to explain various phenomena, including the taste of food—a primary human commodity. This phenomenon is evident in how food vloggers represent food flavours to their viewers, enabling them to understand the concepts and flavours of the food presented in videos.

Through the use of metaphors, abstract concepts about food flavours are conceptually projected to viewers, allowing the conveyed messages to be understood effectively. According to Lakoff (2003), the conceptualization of metaphors can generally be divided into two categories: conventional metaphors and new metaphors. Conventional metaphors are further divided into three types: structural metaphors, orientational metaphors, and ontological metaphors. Meanwhile, new metaphors represent a distinct category.

Structural metaphors involve explaining or describing abstract concepts in more concrete terms (Lakoff and Johnson, 2003; Arimi, 2015; Akbar and Rahman, 2016). This conceptualization uses metaphors to make utterances comprehensible by describing a domain. These metaphors are interpreted as "conceptual domain (A) is conceptual domain (B)." The term *conceptual domain* refers to the categories or conceptual fields used to understand or express experiences or ideas, as explained in conceptual metaphor theory by Lakoff and Johnson (Phyo, Nikolov,

and Hodi, 2023).

Oriental metaphors are related to spatial concepts associated with human physical experiences. For instance, metaphors involving *up* and *down* or *inside* and *outside* (Dessiliona and Nur, 2018) illustrate this category. Ontological metaphors conceptualize abstract domains by attributing human-like characteristics to them, effectively personifying these concepts. This approach allows people to understand abstract ideas by associating them with physical characteristics of humans. Lakoff also identifies new metaphors as a distinct category. While similar to structural metaphors, new metaphors differ significantly in that they create new meanings by equating one conceptual domain with another unrelated domain. For example, the phrase *Seni menikmati Secangir Kopi* (Tashandra and Anna in Pradianti, 2023) shifts the meaning of *art/seni* from its traditional association with creative works to a process or method of doing something. This significant shift in meaning exemplifies the creation of new metaphors.

To analyze and investigate cognitive language use, particularly in the context of metaphors, this study employs a qualitative research method. Qualitative methods are considered the most suitable for describing linguistic phenomena. This approach enables a more descriptive depiction of phenomena (Sugiyono, 2014), relying on non-numeric analysis (Cresswell, 2014). The data for this research comes from YouTube videos uploaded by food vloggers with over one million subscribers. The sources include: Four videos from the YouTube channel *Nex Carlos* (5.05 million subscribers).

Four videos from *Anak Kuliner* (1.68 million subscribers). Four videos from *Mamank Kuliner* (968,000 subscribers). Four videos from *Boengkoes* (1.27 million subscribers). In total, 16 videos were analyzed. The data analyzed consists of transcripts of each video. The transcription is taken digitally from youtube and they were analyzed one by one to see the occurrences of metaphors. Utterances demonstrating metaphorical concepts in food descriptions were extracted. These metaphors were then classified and explained in detail to provide clear and comprehensive interpretations of their meanings and functions.

Results

Through the analysis process, metaphorical conceptualizations were found to emerge when Indonesian food vloggers described the taste of the food they consumed. These descriptions aim to portray the taste of the reviewed food in a way that their audience can clearly understand. As Lakoff explains, a concept is equated with another concept to make it comprehensible in concrete terms. To illustrate the realization of these metaphors, refer to the table below.

Table 1. General Findings of Metaphors in Food Vlogger Videos

MS: Structural Metaphors **MO:** Orientational Metaphors **MOT:** Ontological Metaphors **MB:** New Metaphors

Metafora Data	MS	MO	MOT	MB	Total
Anak Kuliner	4	1	3	3	11
Boengkos	5	2	7	3	17
Mamank Kuliner	10	2	4	1	17
Nex Carlos	7	0	0	1	8
Total	26	5	14	8	53

From the general findings table above, an initial conclusion that can be drawn is that all four food vloggers used metaphors in every description of the food flavors they reviewed. Almost all categories and types of metaphors were employed and appeared in their reviews. Let us examine the detailed findings further. In the four videos by *Anak Kuliner*, the use of metaphors was dominated by structural metaphors, with 4 occurrences. This was followed by ontological metaphors and new metaphors, each appearing 3 times. The least frequent metaphor was the orientational metaphor, appearing only once.

In *Boengkos'* video, the use of metaphors was dominated by ontological metaphors, with 7 occurrences, followed by structural metaphors with 5 occurrences. New metaphors appeared 3 times, and orientational metaphors were the least frequent, with 2 occurrences. In *Mamank Kuliner's* video, the use of structural metaphors significantly dominated, with 10 occurrences. This was followed by ontological metaphors with 4 occurrences, while orientational and new metaphors appeared 2 and 1 times, respectively. In *Nex Carlos'* video, structural metaphors appeared most frequently, with 7 occurrences, followed by new metaphors with 1 occurrence. Ontological and orientational metaphors did not appear in Nex Carlos' video.

Discussion

Structural Metaphors

From the analysis above, it can be concluded that to help viewers better understand and imagine the taste of the food being reviewed by food vloggers, structural metaphors are more frequently used. This is because they have a shared domain of understanding between the food reviewers and their audience.

Structural metaphors refer to understanding something based on the user's experience. Essentially, a structural metaphor associates one thing with another as if they share the same meaning and function. Some examples of structural metaphor findings are illustrated as follows:

Example from *Anak Kuliner*

*inilah kelebihan dari seblak Bunda Na kualitas topping-topingnya tuh berkualitas bagus-bagus semua fresh selain dari rasanya yang enak dan pedasnya yang **menggelegar**.*
(Video anak Kuliner)

In the statement above, *Anak Kuliner* uses the word "menggelegar" to describe the spicy sensation when reviewing the taste of the seblak they are eating. This indicates that the spicy sensation is perceived as something that can make a loud and startling sound. According to the Indonesian Dictionary (*KBBI*), "menggelegar" means "a roaring sound (like the sound of cannons, bombs or thunder)." The concept of "menggelegar" can only be defined by the sense of hearing as it relates to sound. However, in this case, the word "menggelegar" is used to describe a spicy taste, which is actually experienced by the sense of taste (the tongue). This metaphor phenomenon is used by *Anak Kuliner* to illustrate the spicy domain using the word "menggelegar."

Example from *Mamank Kuliner*

*"Hmmm rasanya tuh asem asem gurih ada **sekelebatan** rasa manisnya kalau kalian pernah makan topoki ada rasa pasta gocujanggocujang kayak gitu ya rasanya* (Video Mamank Kuliner)

In the statement from *Mamank Kuliner*, the structural metaphor is seen in the word "sekelebatan." In this context, a food taste is perceived as something that can move. According to *KBBI*, "sekelebatan" means "very brief; a glimpse." Generally, it can be concluded that "sekelebatan" describes a sweet taste that briefly appears when *Mamank Kuliner* eats the tteokpokki. Both examples demonstrate how structural metaphors are used to associate taste with another domain, making the description more concrete for the audience.

Oriental Metaphors

Oriental metaphors illustrate how a domain is associated with direction or spatial concepts. The analysis identified several orientational metaphors used by food vloggers to describe the taste of food.

*Ini bumbunya agak lebih **ke arah** rempah gurih pedas* (Video Boengkos)

In the statement above, the orientational metaphor is indicated by the phrase "*ke arah*" ("towards"). Generally, the meaning of "*ke arah*" in the Indonesian Dictionary (KBBI) can be understood as a description that points to the position of something. The word "*ke*" functions as a preposition, used specifically to indicate purpose or direction, while "*arah*" is a noun referring to a goal, orientation, or intent. In the context of the statement, the taste of food is conceptualized as having a purpose or being located in a specific position. The phrase "*ke arah*" serves as a pointer to the orientation of the taste.

The flavors described in the statement lean towards a savory and spicy seasoning profile. To simplify understanding and provide a clearer depiction of the taste, the YouTube channel *Boengkos* uses the phrase "*ke arah*" to give the audience a more vivid sense of the intended taste orientation. Another example of the use of orientational metaphors in describing food flavors can be seen in the following statement:

*Emang sumpah ya bikin uh orang-orang pilek ngiler lihatin
nih y Cobain dulu pedasnya lebih **keluar** Habis dikasih itu
(video Mamank Kuliner)*

The orientational metaphor in the statement above is demonstrated by the use of the word *keluar* ("come out"). According to the Indonesian Dictionary (KBBI), *keluar* means "to move from the inside to the outside; to appear or emerge." Typically, the word *keluar* is used to describe an action or a preposition related to movement or position. However, in the context of *Mamank Kuliner's* statement, *keluar* is used to indicate the emergence of a spicy flavor, which is not physically related to movement. The sensation of spiciness felt by the tongue is metaphorically associated with a physical object that visibly appears.

In reality, *Mamank Kuliner* uses the word *keluar* to describe the sharp sensation of spiciness that becomes noticeable after chili is added—transforming an initially subtle flavor into one that is distinctly perceptible. Thus, the word *keluar* can be understood as being used to represent an orientational concept. This is because the description of the flavor is treated as if it exists within a physical domain, where its position and movement can be observed.

Ontological Metaphor

The use of ontological metaphors in human speech tends to personify a domain, treating it as if it were a living entity. By employing ontological metaphors, the description of a domain becomes more relatable to the audience, as it closely aligns with experiences commonly felt by individuals.

*menurut gua black pepper saus-nya **fail** sih, sad food Parah ini
black pepper sauce sumpah walaupun bukan tipikal yang di
muntahin tapi **ngelawak** Anjir bumbunya (mamank kuliner)*

In the statement made by Mamank Kuliner above, two forms of ontological metaphors are identified: the words *fail* and *ngelawak*. The word *fail* refers to the taste of the black pepper sauce, which is deemed to have "failed" or fallen short, while *ngelawak* is used to describe the flavor of the seasoning used in the black pepper sauce. The term *fail* originates from English, meaning "unsuccessful" or "failure." In the Indonesian dictionary (KBBI), *gagal* is defined as "unsuccessful" or "unachieved." Generally, failure is associated with human activities, but in this context, *fail* refers to the black pepper sauce's inability to deliver a delicious flavor, as perceived by the food reviewer.

Similarly, the word *ngelawak* (making jokes) is also closely linked to human behavior, as only humans can perform the activity of joking or being humorous. In KBBI, *melawak* means "to create humor or to be funny," which here suggests that the seasoning in the dish leaves an impression of humor or absurdity due to its unpleasant taste. Additionally, ontological metaphors are also found in the following statement:

*cabe goreng ini tumis digoreng kita coba ya kali ini jeruknya
kebanyakan itu juga pedasnya tuh enggak yang sampai **nyelekit**
gitu (Video anak Kuliner)*

In the statement above, the use of the word *nyelekit* falls within the context of an ontological metaphor. According to the KBBI, *nyelekit* refers to a feeling of pain experienced by humans due to a remark or statement. In the utterance made by Anak Kuliner, the word *nyelekit* is used to describe the spiciness of sambal (chili sauce). While sambal, as an inanimate object, cannot speak or convey words, its spiciness can only be experienced through taste buds. Anak Kuliner uses the term *nyelekit* to illustrate the level of spiciness of the sambal. The phrase *Pedasnya tuh enggak sampai nyelekit* indicates that the sambal is not excessively spicy.

This depiction of *nyelekit* is relatable to the audience because the term strongly connects to human emotional experiences, particularly the pain or sadness caused by hurtful words. In this context, the sensation of *nyelekit* is metaphorically associated with the taste of sambal, making the description more vivid and engaging for the viewers.

New Metaphors

Metaphors found in the statements made by food vloggers in their videos include new metaphors. Unlike the three previously identified types, new metaphors stand apart as they do not fit into the category of conventional

metaphors. New metaphors represent a conceptual metaphor aimed at describing a domain in a novel way, articulated through more conventional linguistic codes (Pradianti, 2024). Generally, new metaphors resemble structural metaphors in that they equate one domain with another, but the equality in new metaphors carries a distinct concept. For clarity, examples illustrating new metaphors can be observed in the following statements.

*Lodeh sayur lodeh gua pesan tambahannya terpisah kita cobain masukin aja hwa ini banget cuy ini rasanya menurut gua Walaupun dia di Jogja tapi rasanya enggak yang manis rasanya gurih tasty banget dan sekali lagi gua bilang nih Kayak masakan rumahan banget ini **comfort food** banget* (video Boengkoes)

In the statement above, the phrase *comfort food* can be considered a new metaphor. The word *comfort*, which in Indonesian means *nyaman* (comfortable), is paired with *food*, which means *makanan* (food). If interpreted literally, *comfort food* would mean *makanan nyaman* (comfortable food), but this literal translation does not convey its true essence. *Comfort food* carries a more contextual and broader meaning. In the context of the statement by the Boengkoes account, *comfort food* refers to food that brings a sense of comfort and deliciousness. On a deeper level, *comfort food* has an emotional connotation because it relates to home-cooked meals. This association stems from the idea that *comfort food* often reminds people of dishes made at home, typically prepared by loved ones with care and affection.

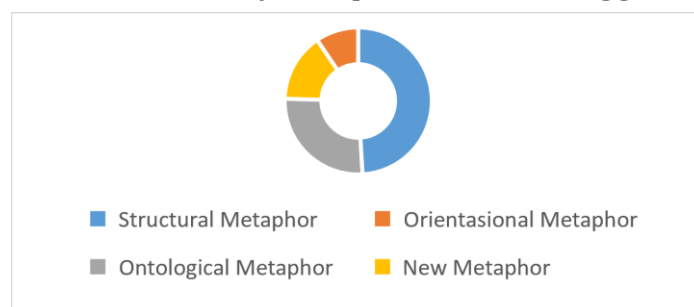
*menurut gua black pepper saus-nya fail sih **sad food** Parah ini black pepper* (mamank Kuliner)

In the statement made by Mamank Kuliner, the new metaphor can be observed in the phrase *sad food*. The word *sad*, which means *sedih* (sad) in Indonesian, is paired with *food*, which means *makanan* (food). The concept of *sad food* is similar to the process behind the metaphor *comfort food* mentioned earlier by the Boengkoes account. If interpreted literally, *sad food* would mean *makanan yang sedih* (sad food), but this literal translation does not capture its contextual meaning. Instead, *sad food* can be understood as food that is unpleasant or unworthy of being eaten. Mamank Kuliner uses the term *sad food* to describe the taste of black pepper sauce that is unpalatable and poorly made. The sauce's seasoning is deemed a failure, which leads to the black pepper sauce being referred to as *sad food*.

Conclusion

In general, to illustrate and describe food flavours, food vloggers predominantly use structural metaphors (SM), which appear 26 times in total. The second most frequently used type of metaphor is ontological metaphors, with 14 occurrences. In third place are new metaphors, appearing 8 times, while the least used metaphors are orientational metaphors, which occur only 5 times overall. To gain a deeper understanding of how these findings represent the use of metaphors by food vloggers in describing food flavours, refer to the descriptive explanations of the metaphor findings below.

Figure 1. Distribution of Metaphors in Food Vlogger Videos



References

- Arimi, Sailal. (2015). *Linguistik Kognitif*. Yogyakarta: A. Com Advertising Yogyakarta.
- Akbar, M. R., & Rahman, Y. (2016). Metafora Lakoff dan Johnson Dalam Surat Kabar Bild. *Program Studi Sastra Jerman Fakultas Bahasa dan Seni Universitas Negeri Surabaya, Vol 5(No 3), 14*.
<https://ejournal.unesa.ac.id/index.php/identitaet/article/view/16775>
- Cao et al. (2024). The Neural Mechanisms of The Impact of Emoji Spatial Metaphors on Emotional Perception. *Neuroscience, Volume 560, Pages 191-197, ISSN 0306-4522*. <https://doi.org/10.1016/j.neuroscience.2024.09.035>
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Dessiliona, & Nur. (2018). Metafora Konseptual Dalam Lirik Lagu Band Revolverheld Album in Farbe. *Jurnal Sawerigading, Vol. 24, No. 2, Desember 2018*.
- Jackendoff, R., & Aaron, L. (1991). Review of *More than Cool Reason: A Field Guide to Poetic Metaphor* by Lakoff and Turner. *Language, Vol. 67, No. 2 (Jun. 1991), pp. 320-338*. Published by: Linguistic Society of America. Stable URL: <http://www.jstor.org/stable/415109>. Accessed: 30-06-2016 16:35 UTC.
- Kamus Besar Bahasa Indonesia. [Online]. Available at: kbbi.kemdikbud.go.id/entri/jatuh. Accessed: 15 November 2024.

- Kamus Besar Bahasa Indonesia. [Online]. Available at:
kbbi.kemdikbud.go.id/entri/menggelegar. Accessed: 17 November 2024.
- Kamus Besar Bahasa Indonesia. [Online]. Available at:
kbbi.kemdikbud.go.id/entri/sekelebatan. Accessed: 21 November 2024.
- Kamus Besar Bahasa Indonesia. [Online]. Available at:
kbbi.kemdikbud.go.id/entri/arrah. Accessed: 21 November 2024.
- Kamus Besar Bahasa Indonesia. [Online]. Available at:
kbbi.kemdikbud.go.id/entri/keluar. Accessed: 21 November 2024.
- Kamus Besar Bahasa Indonesia. [Online]. Available at:
kbbi.kemdikbud.go.id/entri/nyelekit. Accessed: 21 November 2024.
- Kroeger, P. (2019). *An Introduction to Semantics and Pragmatics*. Berlin: Language Science Press.
- Lakoff, G., & Johnson, M. (2003). *Metaphor We Live By*. London: The Chicago University Press.
- Lestari, U., & Prayogi, R. (2019). Metafora Konseptual pada Teks Negosiasi Karya Peserta Didik. *Journal for Lesson and Learning Studies Vol. 2 No. 3, Oktober 2019 P-ISSN: 2615-6148, E-ISSN: 2615-7330*.
- Langi, N. T. (2024). Using Picture of Luwu Culture Activity for Teaching Vocabulary. *English Language Teaching Methodology*, 4(3), 482-488.
- Masruddin, M., Amir, F., Langaji, A., & Rusdiansyah, R. (2023). Conceptualizing linguistic politeness in light of age. *International Journal of Society, Culture & Language*, 11(3), 41-55.
<https://doi.org/10.22034/ijscsl.2023.2001556.3018>
- Madehang, M., Masruddin, M., & Iksan, M. (2024). Reflecting on the Implementation of Online English Learning in Islamic Higher Education: Lecturers and Students' Perspectives. *International Journal of Asian Education*, 5(3), 183-197. <https://doi.org/10.46966/ijae.v5i3.426>
- Masruddin, Hartina, S., Arifin, M. A., & Langaji, A. (2024). Flipped learning: facilitating student engagement through repeated instruction and direct feedback. *Cogent Education*, 11(1), 2412500.
<https://doi.org/10.1080/2331186X.2024.2412500>
- Phyo, N., Nikolov, M., & Hodi, M. (2023). Doctoral Students' English Academic Writing Experiences Through Metaphor Analysis. *Heliyon*, Vol. 9.
<https://doi.org/10.1016/j.heliyon.2023.e13293>.
- Pradianti, K. (2023). Konseptualisasi Metafora dalam Ulasan Parfum Pada Media Sosial Tiktok. *Jurnal Sastra Indonesia Universitas Pamulang*, Vol. 11 No. 02.
- Saeed, J. I. (2003). *Semantics*. Oxford: Blackwell Publishing Ltd.
- Sudaryanto, P. (2014). *Metode dan Aneka Teknik Analisis Bahasa*. Sanata Dharma University Press.

- Saripudin, A., Syam, A. T., Muin, F. R., & Said, Y. R. (2024). The Analysis of Lyrics in Indonesian Folksong as Local Traditional Music. *Linguistics Initiative*, 4(1), 121-131.
- Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Yahya, A., Husnaini, H., & Putri, N. I. W. (2024). Developing Common Expressions Book in Indonesian Traditional Market in Three Languages (English-Indonesian-Mandarin). *Language Circle: Journal of Language and Literature*, 18(2), 288-295.