

Analyzing Sense and Reference in Students' Descriptive Writing Based on Emojis and Hashtags on Instagram

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ABSTRACT

This study investigates how ninth-grade students interpret and apply sense and reference through the use of emojis and hashtags in their descriptive writing on Instagram. As social media has become an integral part of students' daily communication, emojis and hashtags function not only as digital symbols but also as important resources for constructing meaning in written interaction. Despite their widespread use among students, limited research has explored how these symbols contribute to the construction of sense and reference in descriptive writing. Using a qualitative descriptive approach, this study involved 30 ninth-grade students from SMP Shafiyatul Amaliyyah Medan. The data consisted of students' Instagram posts containing emojis and hashtags in descriptive contexts and semi-structured interview responses. The data were analyzed through qualitative content analysis to examine how emojis and hashtags conveyed meanings and referred to particular emotions, experiences, and topics. The findings revealed that emojis were primarily used to express emotions and enhance visual descriptions, while hashtags were used to categorize themes and provide contextual references. Most students (73%) used emojis and hashtags effectively to support meaning construction, whereas 27% misused or overused these symbols, resulting in unclear or inappropriate references. The study concludes that emojis and hashtags can effectively support the construction of sense and reference in descriptive writing when used appropriately and contextually. These findings highlight the importance of integrating multimodal literacy into writing instruction to help students communicate more effectively in digital environments.

Keywords: *Emojis, Hashtags, Descriptive Writing, Sense and Reference, Multimodal Literacy.*

ABSTRAK

Penelitian ini bertujuan untuk mengkaji bagaimana siswa kelas IX menafsirkan dan menerapkan konsep sense dan reference melalui penggunaan emoji dan hashtag dalam tulisan deskriptif mereka di Instagram. Seiring dengan semakin meningkatnya penggunaan media sosial sebagai sarana komunikasi sehari-hari, emoji dan hashtag tidak hanya berfungsi sebagai simbol digital, tetapi juga sebagai sarana penting dalam membangun makna dalam komunikasi tertulis. Meskipun penggunaannya sangat luas di kalangan siswa, penelitian yang mengkaji kontribusi simbol-simbol tersebut terhadap pembentukan sense dan reference dalam tulisan deskriptif masih terbatas. Penelitian ini menggunakan pendekatan deskriptif kualitatif yang melibatkan 30 siswa kelas IX SMP Shafiyatul Amaliyyah Medan. Data penelitian berupa unggahan Instagram siswa yang memuat emoji dan hashtag dalam konteks deskriptif serta hasil wawancara semi-terstruktur. Data dianalisis menggunakan analisis isi kualitatif untuk mengkaji bagaimana emoji dan hashtag digunakan dalam menyampaikan makna serta merujuk pada emosi, pengalaman, dan topik tertentu. Hasil penelitian menunjukkan bahwa emoji terutama digunakan untuk mengekspresikan emosi dan memperkaya deskripsi visual, sedangkan hashtag digunakan untuk mengelompokkan tema dan memberikan referensi kontekstual. Sebagian besar siswa (73%) menggunakan emoji dan hashtag secara efektif dalam mendukung pembentukan makna, sementara 27% lainnya menggunakan simbol-simbol tersebut secara kurang tepat atau berlebihan sehingga menghasilkan

referensi yang kurang jelas. Penelitian ini menyimpulkan bahwa emoji dan hashtag dapat mendukung pembentukan sense dan reference dalam tulisan deskriptif apabila digunakan secara tepat dan sesuai konteks. Temuan ini menegaskan pentingnya pengintegrasian literasi multimodal dalam pembelajaran menulis guna membantu siswa berkomunikasi secara lebih efektif di lingkungan digital.

Kata Kunci: *Emoji, Hashtag, Tulisan Deskriptif, Sense dan Reference, Literasi Multimodal.*

A. Introduction

In the digital age, social media platforms have become an integral part of daily communication, particularly among adolescents and young learners. Among various social networking applications, Instagram has emerged as one of the most popular platforms for sharing experiences, ideas, and personal expressions. Its visual-oriented design enables users to communicate not only through written texts but also through images, emojis, hashtags, and other multimodal elements. As a result, communication on Instagram often combines verbal and visual modes, creating new ways of constructing and interpreting meaning. This development has significantly influenced students' writing practices, including how they express thoughts, emotions, and experiences in descriptive texts.

Descriptive writing is an important component of language learning because it enables students to communicate detailed information about people, places, objects, and experiences. Traditionally, descriptive writing emphasizes clarity, coherence, and the effective use of language to create vivid representations for readers. However, the emergence of digital communication has transformed the nature of writing. On social media platforms such as Instagram, students frequently combine written language with visual symbols such as emojis and hashtags. These symbols often complement or even replace words, creating a multimodal form of communication that differs from conventional academic writing.

Emojis and hashtags have become essential features of online communication. Emojis are visual symbols used to represent

emotions, attitudes, ideas, and experiences, while hashtags function as markers that categorize content and connect it to broader themes or communities. Their use allows individuals to communicate meanings more efficiently and creatively. For instance, a smiling-face emoji may express happiness, friendliness, or satisfaction, while a hashtag such as #vacation may immediately signal the topic of a post. Through these functions, emojis and hashtags contribute significantly to how meaning is conveyed and interpreted in digital environments.

Despite their widespread use, the meanings of emojis and hashtags are not always straightforward. A particular emoji may convey different meanings depending on the context in which it is used, the relationship between communicators, and the cultural background of users. Similarly, hashtags can carry multiple references and associations that extend beyond their literal meanings. For example, the hashtag #love may refer to romantic relationships, family affection, self-acceptance, or broader social movements. Therefore, understanding how students interpret and apply these digital symbols requires a theoretical framework that explains the relationship between meaning and reference.

One relevant framework for examining this phenomenon is Gottlob Frege's theory of sense and reference. According to Frege (1892), the sense of an expression refers to the way in which meaning is presented or understood, whereas the reference refers to the actual object, concept, or entity to which the expression points. Although Frege originally developed this theory for linguistic expressions, the concepts of sense and reference can also be applied to digital symbols such as emojis and hashtags. In

Instagram communication, emojis and hashtags may evoke particular meanings, emotions, and associations while simultaneously referring to specific experiences, situations, or cultural concepts. Consequently, Frege's framework provides a useful lens for examining how students construct meaning through multimodal elements in digital writing.

Recent studies have highlighted the growing importance of emojis and hashtags in digital communication. Van Leeuwen (2020) argues that the interpretation of digital symbols is strongly influenced by social and contextual factors. Likewise, Kress and van Leeuwen (2022) emphasize that meaning in contemporary communication is produced through the interaction of multiple semiotic modes, including text, images, and symbols. Their work suggests that understanding digital communication requires attention not only to language but also to visual and symbolic resources that contribute to meaning-making.

Further support comes from Yus (2019), who explains that emojis can function both as carriers of meaning and as references to particular emotional or conceptual states. Similarly, Zaltman and Coulter (2020) note that hashtags often serve as markers of identity and cultural affiliation, linking individual expressions to broader social narratives. These findings indicate that emojis and hashtags play a significant role in shaping how messages are interpreted and understood within digital environments. However, their functions may vary according to context, making their interpretation more complex than that of conventional linguistic expressions.

Although previous studies have examined emojis, hashtags, and multimodal communication in social media contexts, limited attention has been given to how junior high school students interpret and apply the concepts of sense and reference through these digital symbols in descriptive writing. Most existing studies focus on digital communication in general or explore

the social functions of emojis and hashtags without specifically investigating their contribution to students' writing practices. Furthermore, little research has examined whether students use these symbols effectively to construct meaning while maintaining the clarity and coherence expected in descriptive writing. This gap indicates the need for further investigation into students' understanding and application of sense and reference in multimodal writing contexts.

Based on this gap, the present study addresses two research questions. First, how do students interpret the sense and reference of emojis and hashtags in their descriptive writing on Instagram? Second, how effectively do students apply sense and reference through emojis and hashtags in their descriptive texts? These questions are intended to explore the role of digital symbols in shaping students' meaning-making processes and their ability to communicate ideas through multimodal forms of writing.

Accordingly, this study aims to investigate how ninth-grade students interpret and apply sense and reference through the use of emojis and hashtags in descriptive writing on Instagram. By examining students' Instagram posts and their interpretations of these digital symbols, the study seeks to contribute to a deeper understanding of multimodal literacy and digital communication. The findings are expected to provide both theoretical insights into the application of Frege's theory in digital contexts and practical implications for educators who seek to develop students' writing skills in increasingly multimodal learning environments.

B. Research Method

This study adopts a qualitative descriptive research design to explore how 9th-grade students interpret and apply the sense and reference of emojis and hashtags in their descriptive writing on Instagram. The aim is to understand the role of digital symbols, specifically emojis and hashtags, in

students' writing and how they contribute to the sense (meaning) and reference (real-world object or situation) in the context of their descriptive posts.

Qualitative research methods were chosen as they allow for a deep exploration of students' interpretations and the meanings they attach to these symbols in their writing, making it suitable for capturing the complexity of how emojis and hashtags are used in social media texts. The research questions guiding this study are: how do students interpret the sense and reference of emojis and hashtags in their descriptive writing, and how effectively do they apply sense and reference in their texts expressed through emojis and hashtags?

The participants of this study are 30 9th-grade students from SMP Shafiyatul Amaliyyah in Medan, Indonesia, purposively selected based on their active use of Instagram and frequent inclusion of emojis and hashtags in their posts. The students, aged between 14 and 15, are represented by a balanced gender sample to capture diverse perspectives on the use of these digital symbols. Data were collected through two main methods: the collection of Instagram posts and semi-structured interviews.

Data were collected through document analysis and semi-structured interviews. The document analysis focused on students' Instagram posts containing emojis and hashtags in descriptive contexts. Each of the 30 participants provided five recent Instagram posts, resulting in a total of 150 posts for analysis. The selected posts focused on themes such as personal experiences, emotions, and places and were taken from the previous month to reflect the students' current communication practices. In addition, semi-structured interviews were conducted with ten purposively selected participants to gain deeper insights into how they interpreted and used emojis and hashtags in their writing.

In addition to the Instagram posts, semi-structured interviews were conducted with 10 participants to gather insights into

their interpretations of emojis and hashtags. The interviews allowed the researcher to explore how students perceive the sense and reference of the symbols they use in their posts. Questions such as, "How do you choose the emojis and hashtags for your posts?" and "What role do emojis and hashtags play in your descriptions?" helped the researcher understand the students' decision-making processes and their awareness of how these symbols enhance their writing.

The data were analyzed using qualitative content analysis. The analysis was conducted in several stages. First, all Instagram posts were collected and organized for examination. Second, emojis and hashtags appearing in the posts were identified and coded according to their meanings and communicative functions. Third, the identified symbols were categorized based on Frege's concepts of sense and reference. Sense was analyzed as the meaning or concept conveyed by the emoji or hashtag, while reference was analyzed as the object, experience, emotion, or situation to which the symbol referred. Fourth, patterns of emoji and hashtag usage were interpreted to determine how students constructed meaning in their descriptive writing. Finally, the findings from the content analysis were compared with interview responses to strengthen the credibility and trustworthiness of the interpretation.

To enrich the analysis, the researcher also draws on recent studies in the field of social media communication and multimodal discourse. One relevant theory comes from Tufekci (2019), who discusses the increasing role of symbols like emojis in digital communication. According to Tufekci, emojis serve as a form of "visual punctuation," which helps convey emotions, tone, and context in ways that words alone might not. In line with this, Barton et al. (2020) explores how hashtags organize and categorize information in online texts, giving them a dual function of providing a sense (the concept or theme) and a reference (linking to a specific topic or event). These

studies provide a foundation for understanding how emojis and hashtags work together to create meaningful, multimodal messages in social media writing.

Additionally, Marques and Loureiro (2021) emphasize the role of multimodal literacy in understanding how different modes—such as text, image, and symbol—interact in modern communication. They argue that students' ability to navigate these multimodal texts, such as those on Instagram, can be crucial for understanding the complex meanings that emerge from the combination of text, emojis, and hashtags. This perspective aligns with the research focus of examining how students effectively combine emojis, hashtags, and descriptive writing to communicate more effectively in their posts.

The researcher categorized the emojis and hashtags used in students' posts into different functional groups, which included emotional emojis representing emotions, such as 😊 (happiness) or 😞 (sadness); thematic hashtags that provide a broader theme or topic for the post, such as #vacation or #family; and contextual emojis and hashtags that describe specific places, activities, or objects, such as 🏖️ for a beach or #trip.

The analysis of the posts focused on how these symbols contributed to the students' writing by enhancing the sense and reference of the descriptive text. Additionally, the researcher examined whether the students applied these symbols effectively to make their texts clearer and more engaging. Effectiveness was assessed by considering the emotional depth, clarity, and relevance of the text in relation to the symbols used.

This research methodology provides a comprehensive approach to investigating the role of emojis and hashtags in 9th-grade students' descriptive writing. By combining Instagram post analysis with semi-structured interviews, this study offers a detailed understanding of how these symbols influence the sense and reference in

students' writing, and how effectively students apply them to enhance their textual meaning. The application of contemporary theories on digital communication and multimodal literacy further enriches the analysis, allowing for a deeper exploration of students' use of digital symbols in social media contexts.

C. Result and Discussion

Result

Interpretation of Sense and Reference of Emojis and Hashtags in Descriptive Writing

This study involved 30 9th-grade students from SMP Shafiyatul Amaliyyah in analyzing the use of emojis and hashtags in their descriptive writing on Instagram. The data analysis revealed that most students used emojis primarily to convey emotions or visually describe concepts. The most frequently used emojis were those representing emotions such as happiness (😊) and love (❤️), with 67% and 50% of students using them, respectively. Other emojis like 🌅 (sunset) and 🌸 (beauty) were used to enhance descriptions of nature and beauty.

Table 1: The frequency and context of emoji usage:

Emoji	Description	Number of Students	Percentage (%)
😊	Happiness	20	67%
❤️	Love	15	50%
🌅	Sunset	10	33%
🌸	Beauty	8	27%

This table shows the most frequently used emojis by the students, with a focus on those representing emotions and descriptive elements of nature. The emojis like 😊 (happiness) and ❤️ (love) were primarily used to express emotional states, while 🌅 (sunset) and 🌸 (beauty) were used to enhance descriptions of specific scenes or concepts. For example, one student wrote: "So happy to be with family today 😊"

#familytime #grateful". Here, the 😊 emoji reinforced the feeling of happiness, making the emotion in the text more vivid. Another student mentioned in an interview, "I use the 😊 emoji so people know I'm really happy. It makes my feelings clearer than just using words."

However, there were also instances where emojis were misused. One student posted: "Had the best dinner tonight 🍕😎🍷" The 😎 emoji did not match the context of food or dinner, giving the impression that the student was trying to appear "cool" rather than describing the meal. One student noted, "Sometimes I use an emoji that doesn't fit. Like when I talk about rain, I use the 😊 emoji, but it doesn't match."

Hashtags were primarily used by students to categorize their posts and provide context. The majority of students (80%) used hashtags to give additional information about the theme or topic they were discussing. The most common hashtags were #vacation, #family, and #trip, used by 60%, 40%, and 30% of students, respectively.

Table 2: A summary of using Hastags

Hashtag	Description	Number of Students	Percentage (%)
#vacation	Used to describe vacations or trips	18	60%
#family	Used to mark posts related to family	12	40%
#trip	Used to describe travel experiences	9	30%

This table shows the most commonly used hashtags by students, which were mainly employed to describe personal experiences, such as vacations, family events, or travel. The #vacation hashtag was

the most widely used, indicating that students commonly share experiences related to travel. For example, a student wrote: "Had an amazing vacation in Bali 🌴 #vacation #sunshine". The #vacation hashtag clearly added context, indicating the post was about a holiday. However, some students misused hashtags. One post read: "Had a nice lunch with my friends 🍷 #love #friends". The hashtag #love didn't seem directly relevant to lunch or friends, making the meaning somewhat unclear. In interviews, one student explained, "I use #friends in every post about friends, but sometimes it's not really appropriate because not every post about friends needs that hashtag."

Application of Sense and Reference in Descriptive Writing

The study found that 22 out of 30 students (73%) successfully integrated emojis into their descriptive writing, using them to clarify meanings or emotions. For instance, one student wrote: "The beach looks beautiful today! 🌊🌟 Feeling so blessed to be here."

The emojis 🌊 (ocean) and 🌟 (beautiful) provided a clear visualization of the beach scene, enhancing the overall mood of the text. One student shared in an interview, "Emojis like 🌊 help people understand the vibe of what I'm describing. It makes my writing more visual."

However, 8 students (27%) struggled with the appropriate use of emojis. For example, one student wrote: "The birthday party yesterday was so fun 🎂🍰🍷 but I couldn't enjoy it fully because of the rain 😞"

The 😞 emoji was not fitting for the situation of rain, as it implies dizziness or discomfort, rather than the disappointment caused by the rain. One student noted, "I sometimes use the wrong emoji, like when I talk about rain, I use the 😞 emoji, which doesn't fit."

In terms of hashtags, most students (87%) used them to clarify references to places, emotions, or topics in their writing. For

example: "Had an amazing day with friends at the beach 🏖️ #beach #friends". The hashtag #beach added more context to the location, while #friends clarified the social relationship, helping readers grasp the essence of the post.

However, 4 students (13%) misused hashtags. For example: "Reading my new book so much fun 📖 #love #bookworm". The hashtag #love was ambiguous in this context, as it did not clearly connect to the topic of the book or reading experience. One student said, "I put #love in almost everything, even when it doesn't match, like when I'm talking about reading. It doesn't really make sense."

DISCUSSION

Role of Emojis and Hashtags in Sense and Reference

Emojis serve as visual elements that reinforce or clarify the emotions and concepts expressed in writing. For instance, the 🏖️ emoji used to describe a beach scene enhances the reader's understanding of the mood being conveyed, providing a richer sensory experience. Hashtags, on the other hand, function as markers or labels that help categorize or point to specific themes, adding clarity to the reference in the text. Hashtags like #vacation or #family guide the reader to particular topics and help define the context of the writing.

The findings indicate that emojis and hashtags play a crucial role in enhancing the meaning and reference in students' descriptive writing. Emojis add emotional depth, while hashtags guide the reader to understand the broader context of the post.

Multimodal Use in Descriptive Writing

The majority of students (73%) demonstrated a strong ability to integrate emojis and hashtags into their writing effectively. This shows their understanding of how to use multimodal elements to enhance meaning in digital communication. However, 27% of the students faced difficulties in using these elements appropriately. Some students overused

emojis or selected irrelevant ones, which detracted from the clarity of their writing. For example, using emojis like 😊 or 😞 in contexts where they were not fitting caused confusion in interpreting the intended meaning.

This aligns with previous research on the multimodal nature of digital texts, where emojis and hashtags, when used appropriately, add emotional depth and clarity to the message. However, overuse or misuse can lead to ambiguity and reduce the effectiveness of the communication.

Implications for Learning

This study suggests that students are capable of using emojis and hashtags to enhance their descriptive writing. However, there are challenges in using these elements appropriately according to context. In writing lessons, educators can guide students on how to effectively integrate multimodal elements to enrich their descriptions. Teaching students how and when to use emojis and hashtags in ways that are both meaningful and contextually appropriate can significantly improve their writing skills, particularly in the digital age.

Teachers should emphasize the importance of matching emojis and hashtags with the context of the writing to ensure that they enhance rather than detract from the clarity and meaning of the text. This will help students develop stronger multimodal literacy, which is essential for effective communication in the digital world.

D. Conclusion and Suggestion

This study explored how 9th-grade students from SMP Shafiyatul Amaliyyah interpret and apply the sense and reference of emojis and hashtags in their descriptive writing on Instagram. Through a detailed analysis of their Instagram posts and interviews, several key findings were revealed, which address the two central research questions: how students interpret the sense and reference of emojis and hashtags, and how effectively they apply these concepts in their writing.

Interpretation of Sense and Reference in Emojis and Hashtags

The data show that students generally understand emojis and hashtags as symbolic elements that convey emotions, themes, or ideas in a digital context. This aligns with Frege's theory of sense and reference, where the "sense" of a word refers to the mental representation or concept it evokes, and the "reference" refers to the actual object or situation the symbol points to in the world. Emojis, as visual symbols, were found to convey emotional states and concepts, while hashtags acted as broader thematic markers that grouped content into specific social or cultural contexts.

For instance, emojis like 😊 (happiness) and 🏖️ (beach) were commonly used by students to enhance the emotional or sensory quality of their descriptive texts. Students used these emojis to represent the "sense" of the emotions they were feeling or the context they were describing. The emoji 😊, for example, expressed happiness in a post about spending time with family, while 🏖️ referred to a specific vacation destination. The "reference" here is tied to the physical or conceptual entity that the emoji points to—whether it's a real-world event (a family gathering) or a real-world location (a beach).

Similarly, hashtags like #vacation and #family served as reference markers, linking the posts to specific themes or cultural narratives. Hashtags functioned as markers of social identity, shaping the meaning of the text by connecting it to broader topics. For example, #vacation not only indicated a personal experience but also referenced the larger social and cultural practice of taking time off to relax. This aligns with the theory proposed by Yus (2019), which suggests that emojis and hashtags are context-dependent symbols whose meanings shift depending on the surrounding text and the cultural backdrop.

However, the use of emojis and hashtags was not always precise. Some students struggled with the correct application of these symbols, sometimes

leading to confusion. For example, using the 😊 emoji in a post about a family gathering or the #love hashtag in a post about a school trip did not align with the emotional or thematic content of the post, leading to a mismatch between the "sense" and "reference." This reflects Frege's notion that the sense of a symbol should correspond to its reference; when this relationship is disrupted, the meaning of the message becomes unclear.

Effectiveness in Applying Sense and Reference

In terms of how effectively students applied the concepts of sense and reference in their descriptive writing, the findings reveal a mixed picture. While many students were successful in using emojis and hashtags to enhance the clarity and emotional depth of their descriptions, some struggled with overuse or incorrect use of these symbols. For example, while the emoji 🌸 effectively conveyed the theme of beauty in a post about flowers, some students used emojis that were too ambiguous or disconnected from the context, like 😊 in a post about a family vacation, which could confuse the reader about the intended meaning.

The effectiveness of hashtags also varied. Hashtags like #family and #vacation were used appropriately to reference specific themes and activities, but some students misapplied hashtags, using them in ways that seemed forced or irrelevant to the text. For instance, hashtags like #blessed or #livingmybestlife were overused, often not adding any substantial meaning to the post, thus diluting their reference. This aligns with the idea that, as argued by Tufekci (2019), emojis and hashtags act as forms of "visual punctuation" that can help convey emotional tone and context. However, when used indiscriminately or out of context, they can detract from the clarity and meaning of the post.

Despite these challenges, students were able to successfully navigate the multimodal nature of Instagram writing, as noted by Kress and van Leeuwen (2022),

who emphasize the importance of multimodal literacy in the digital age. This study found that most students were able to integrate text, emojis, and hashtags in a way that enhanced their writing and communicated meaning in a contextually relevant way. However, a few students demonstrated a lack of understanding of the interplay between text and symbols, leading to less effective integration of these elements.

Implications for Teaching and Future Research

The findings from this study suggest that while emojis and hashtags are useful tools for enhancing descriptive writing in a digital context, there is a need for more structured guidance in their use, particularly in academic settings. Educators should provide clearer frameworks for how students can integrate emojis and hashtags effectively into their academic writing, ensuring that these symbols enhance rather than distort the clarity of their message. This could involve teaching students how to match the "sense" of an emoji or hashtag with the "reference" in their descriptive texts, aligning with the traditional goals of academic writing—clarity, coherence, and meaning.

Further research is needed to explore how different types of emojis and hashtags affect the sense and reference in writing across various genres, not just descriptive texts. Additionally, research could investigate the cultural differences in the interpretation and application of emojis and hashtags, as these symbols often carry diverse meanings across different social groups.

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