

Comprehending Polysemous Words in Context: A Mixed-Methods Study of EFL Students' Performance, Difficulties, and Comprehension Strategies

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Abstract

This study investigated Indonesian senior high school EFL students' performance in comprehending polysemous words in context, the difficulties they encountered, and the strategies they employed to infer contextually appropriate meanings. An explanatory sequential mixed-methods design was adopted involving 107 eleventh-grade students. Quantitative data were collected through a 28-item contextual polysemous vocabulary test developed from authentic contexts found in two official English textbooks, *Bahasa Inggris for Change* and *Bahasa Inggris Tingkat Lanjut*. Qualitative data were subsequently obtained through semi-structured interviews with students representing high, moderate, and low-performing groups to explain the quantitative findings. The quantitative results showed that students demonstrated moderate overall performance ($M = 60.15$), with 47.7% of the participants categorized as low and very low performers. Item-level analysis revealed considerable variation in students' comprehension across individual polysemous words. Based on the types of polysemy, students showed slightly better performance on regular than on irregular polysemous words. Nevertheless, the difference was not statistically significant ($p = .056$), indicating comparable comprehension across the two types of polysemy. The qualitative findings identified five major sources of difficulty: unfamiliarity with polysemous words, overreliance on dominant meanings, first language interference, limited exposure to multiple meanings, and difficulty distinguishing semantic nuances among answer options. Students employed five principal strategies to overcome these challenges: dictionary use, context analysis, pair discussion, answer-choice analysis, and guessing, with dictionary use emerging as the most frequently reported strategy. These findings underscore the importance of explicit instruction on polysemy and contextual meaning inference to strengthen students' semantic competence and vocabulary learning in EFL classrooms.



Keywords: Polysemous words, Contextual vocabulary, EFL students, comprehension strategies, Semantic competence.

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1. Introduction

Vocabulary learning is a fundamental component of foreign language acquisition because it enables learners to understand, interpret, and communicate meaning effectively. Vocabulary mastery extends beyond memorizing isolated words; it requires learners to understand how words function across different contexts and how their meanings vary depending on language use (Schmitt, 2010). Empirical evidence also demonstrates that vocabulary knowledge contributes significantly to learners' reading comprehension. Purwati (2022) reported that vocabulary mastery has a significant effect on students' reading comprehension, while Sudarman et al. (2022) emphasized that limited vocabulary knowledge, particularly vocabulary depth, remains a major challenge for Indonesian EFL learners. These findings indicate that developing comprehensive vocabulary knowledge is essential for successful language learning.

One of the most challenging aspects of vocabulary learning is lexical ambiguity, particularly polysemy. Polysemy refers to the phenomenon in which a single lexical item conveys multiple but semantically related meanings (Palmer, 1981; Ullmann, 1962). Unlike words with a single meaning, polysemous words require learners to identify the contextually appropriate sense among several related meanings, making lexical processing more demanding (Saeed, 2016). Consequently, learners frequently experience difficulty interpreting polysemous words in different contexts, which may lead to misunderstanding during language comprehension. Recent studies further suggest that polysemy remains a major challenge for EFL learners because they often rely on the most familiar meaning of a word rather than interpreting its context-dependent meaning accurately (Liu, 2025).

Although native speakers generally rely on contextual cues to determine the intended meaning of polysemous words, English as a Foreign Language (EFL) learners often experience greater difficulty due to limited vocabulary breadth and depth (Laufer & Goldstein, 2004; Nation, 2001). As a result, learners tend to overgeneralize the primary meaning of a word while overlooking other contextually appropriate meanings. Alkhonini (2025) found that learners frequently depended on primary meanings and encountered difficulties interpreting secondary meanings during contextual language tasks. Such limitations may negatively affect learners' reading comprehension, written communication, and overall language performance (Brinton & Traugott, 2005; Ramadhianti & Somba, 2023).

Previous studies have consistently reported that Indonesian EFL learners encounter considerable difficulties in comprehending polysemous words. Amaliah et al. (2025) found that limited awareness of polysemous meanings reduced learners' linguistic accuracy,

particularly when interpreting words with multiple semantic extensions. Similarly, Dinana (2024) reported that Indonesian learners frequently relied on the primary meaning of polysemous words during translation tasks, resulting in contextually inappropriate interpretations. Despite these findings, previous research has primarily focused on learners' performance and translation outcomes, while relatively little attention has been given to the specific difficulties learners encounter when interpreting polysemous words and the strategies they employ to resolve those difficulties in contextual vocabulary tasks.

Therefore, this study aims to investigate EFL learners' comprehension of polysemous words through a contextual vocabulary test. Specifically, it examines students' ability to comprehend polysemous words, identify the difficulties they encounter when answering polysemous word questions, and explore the strategies they employ to determine contextually appropriate meanings. By integrating quantitative and qualitative data through an explanatory sequential mixed-methods design, this study is expected to provide a more comprehensive understanding of EFL learners' comprehension of polysemous words and to offer pedagogical insights for vocabulary instruction.

1.1 Research Question

Based on the introduction, this study addresses the following research questions:

- a. How do EFL students perform in comprehending polysemous words in context?
- b. What difficulties do EFL students encounter when comprehending polysemous words in context?
- c. What strategies do EFL students employ to comprehend polysemous words in context?

1.2 Theoretical Framework

In the framework of foreign language acquisition, vocabulary knowledge is evaluated not only by its breadth, referring to the number of words learners know, but also by its depth, which reflects how well learners understand and use those words across different contexts. According to Nation (2001), vocabulary knowledge involves knowledge of word form, meaning, and use, while Read (2000) emphasizes that vocabulary depth includes learners' ability to recognize multiple meanings and contextual variations of lexical items. Such knowledge is fundamental because successful language comprehension depends not only on knowing a word but also on selecting its appropriate meaning in a particular context. Supporting this view, Purwati (2022) reported that vocabulary mastery contributes significantly to students' reading comprehension, indicating that insufficient lexical knowledge may hinder learners' ability to interpret academic texts accurately. Therefore, developing vocabulary depth becomes an essential prerequisite for understanding more complex lexical phenomena, including polysemy.

Polysemy represents one of the most important dimensions of vocabulary depth. It refers to a lexical-semantic phenomenon in which a single word possesses multiple but semantically related meanings (Palmer, 1981; Ullmann, 1962). Unlike words with a single meaning, polysemous words require learners to identify the intended meaning based on contextual information rather than relying solely on dictionary definitions or previously learned meanings. Consequently, interpreting polysemous words involves more complex lexical processing

because learners must evaluate several related meanings before selecting the one that best fits the context (Saeed, 2016). Recent studies further suggest that processing polysemous words requires considerable cognitive effort, making contextual interpretation particularly challenging for EFL learners (Liu, 2025). Therefore, successful comprehension of polysemous vocabulary depends not only on vocabulary size but also on learners' ability to integrate contextual information with their existing lexical knowledge.

Previous studies have consistently shown that EFL learners experience considerable difficulties when interpreting polysemous words in context. Learners frequently rely on the primary or most familiar meaning of a word while overlooking other contextually appropriate meanings, resulting in misunderstanding and inaccurate interpretations. Alkhonini (2025) found that learners often struggled to interpret secondary meanings during contextual language tasks, whereas Dinana (2024) reported that Indonesian EFL learners consistently depended on primary meanings when completing translation activities. Similarly, Amaliah et al. (2025) demonstrated that limited semantic awareness reduced learners' linguistic accuracy, particularly when interpreting words with multiple semantic extensions. These findings indicate that difficulties in comprehending polysemous words are closely related to limitations in vocabulary depth, contextual interpretation, and semantic awareness.

To overcome these difficulties, learners employ various strategies when interpreting polysemous words. Nation (2001) explains that contextual clues play a central role in vocabulary learning, enabling learners to infer unfamiliar meanings from surrounding linguistic information. Likewise, Read (2000) argues that successful vocabulary comprehension requires learners to evaluate multiple possible meanings before selecting the interpretation that best fits the context. Supporting these perspectives, Hammad (2023) emphasizes that repeated contextual exposure helps learners develop more flexible semantic understanding and improves their ability to interpret ambiguous vocabulary appropriately. Furthermore, Purwati (2022) highlights the importance of vocabulary mastery in supporting reading comprehension, while Pratama et al. (2024) demonstrate that contextual learning activities facilitate students' comprehension by encouraging active processing of contextual information. Taken together, these perspectives suggest that comprehending polysemous words requires learners to combine vocabulary knowledge with contextual interpretation strategies. Therefore, examining both the difficulties learners encounter and the strategies they employ is essential for understanding how EFL learners comprehend polysemous words in contextual vocabulary tasks.

2. Method

This study employs a mixed-methods approach, specifically utilizing the explanatory sequential design adapted from Creswell and Creswell (2018). The investigation was conducted chronologically at SMAN 1 Kec. Suliki during the academic year of 2025/2026. The target population was focused on eleventh-grade students enrolled in the science specialization (Classes XI-F1 to XI-F5), selected based on pedagogical recommendations from English teachers regarding their active language engagement. By combining purposive and total sampling techniques, one class (XI-F2, 30 students) was designated for the instrument try-out (pilot test) phase, while the remaining four parallel classes (XI-F1, XI-F3, XI-F4, and XI-F5),

consisting of 107 students, served as the main sample for the primary quantitative data collection.

The research instruments comprised a diagnostic multiple-choice vocabulary test and semi-structured interviews. The test items, covering both regular and irregular polysemy, were constructed based on contextual sentences extracted from two eleventh-grade textbooks: 'English for Change' and '*Bahasa Inggris Tingkat Lanjut*'. Before the main study, a pilot test evaluated the instrument's item validity and reliability using the product-moment correlation formula. The trial resulted in 18 valid items, 10 revised items to improve sentence readability, and 7 invalid items with negative correlation, which were completely removed. Following the quantitative test session, a nested sample of 9 students was purposefully selected as qualitative informants using extreme and typical case sampling across three strata: high-achieving (3 students), low-achieving (3 students), and average-achieving (3 students). Face-to-face interviews were administered in a quiet school setting using a stimulated recall technique, prompting informants to reconstruct their cognitive strategies by reviewing their corrected test sheets during 10-to-15-minute recorded sessions. Data trustworthiness was maintained through prolonged classroom engagement to build rapport and method triangulation by cross-checking test scores with verbal interview explanations.

Quantitative data from the 107 diagnostic test sheets were graded using a binary scoring system (1 for correct, 0 for incorrect) and transformed into a standardized 100-point scale based on the 28 finalized items. Descriptive statistical measurements, including mean ($\bar{X}$), median (Me), mode (Mo), and score ranges, were computed using automated Microsoft Excel functions. Concurrently, qualitative data from the 9 interview recordings were processed using the qualitative data analysis model by Miles, Huberman, and Saldaña (2014). This analysis involved data condensation through verbatim transcription and line-by-line coding of comprehension difficulties and lexical strategies, followed by data display using structured narrative text and clustered categories supported by direct quotes. Conclusions and strategic patterns were drawn and continuously verified against the original transcripts to ensure descriptive validity.

3. Findings and Discussion

3.1 Findings

3.1.1. EFL Students' Performance in Comprehending Polysemous Words in Context

3.1.1.1. Overall Performance

The primary objective of the quantitative phase was to baseline the overall ability of eleventh-grade students in interpreting polysemous words within explicit contexts. Based on the descriptive statistical analysis of the 107 participants, the general distribution of students' performance is summarized in Table 1.

Table 1. *Descriptive Statistics of Students' Performance on the Contextual Polysemous Vocabulary Test Scores (N=107)*

Statistics	Value
N	107
Mean	60.15
Median	60.71
Standard Deviation (SD)	18.99
Minimum	21.43
Maximum	100.00
Range	78.57

Table 1 shows that the 107 participants obtained a mean score of 60.15 (SD = 18.99) on the contextual polysemous vocabulary test. The median score (60.71) was close to the mean, indicating that the central tendency of the score distribution was relatively balanced. Scores ranged from 21.43 to 100.00, yielding of 78.57, which reflects substantial variability in students' performance.

Table 2. *Distribution of Students' Performance Levels in Comprehending Polysemous Words in Context*

Performance Level	Frequency (n)	Percentage (%)
Very Low	23	21.5
Low	28	26.2
Moderate	21	19.6
High	20	18.7
Very High	15	14.0
Total	107	100.0

Table 2 presents the distribution of students' performance levels in comprehending polysemous words in context. The largest proportion of students was classified into the low-performance category (n = 28, 26.2%), followed by the very-low category (n = 23, 21.5%). A total of 21 students (19.6%) demonstrated moderate performance, whereas 20 students (18.7%) and 15 students (14.0%) were categorized as high and very high, respectively. Overall, 47.7% of the students were classified as low- and very-low performers, while only 32.7% achieved high- and very-high performance. These results indicate that a considerable proportion of participants had difficulty comprehending polysemous words in context.

3.1.1.2. Item-level Performance

While the descriptive statistics and performance categories provide an overview of students' overall achievement, they do not reveal how students performed on individual polysemous words. To obtain a more detailed understanding of students' comprehension, an item-level analysis was conducted by calculating the percentage of correct responses for each test item. Ranking the items according to their correct response rates allows the identification of polysemous words that were relatively easy or difficult for students to interpret in context, which will be presented in Table 3.

Table 3. *Item-Level Performance on the Contextual Polysemous Vocabulary Test (Rank by Correct Response Rate)*

Rank	Item	Target Polysemous Words	Correct (n)	Correct (%)	Difficulty Level
1	8	blow up (v)	94	87.9	Easy
2	3	platforms (n)	92	86.0	Easy
3	10	entries (n)	90	84.1	Easy
4	5	spaces (n)	87	81.3	Easy
5	12	driving (adj)	87	81.3	Easy
6	21	version (n)	82	76.6	Moderate
7	15	issue (n)	78	72.9	Moderate
8	26	key (n)	75	70.1	Moderate
9	16	figure (n)	73	68.2	Moderate
10	19	course (n)	73	68.2	Moderate
11	14	run (v)	70	65.4	Moderate
12	28	way (n)	65	60.7	Moderate
13	7	shift (n)	63	58.9	Moderate
14	20	actions (n)	62	57.9	Moderate
15	27	right (adj)	62	57.9	Moderate
16	2	material (n)	60	56.1	Moderate
17	9	chair (n)	59	55.1	Moderate
18	4	expression (n)	58	54.2	Moderate
19	1	brief (adj)	57	53.3	Moderate
20	17	poor (adj)	56	52.3	Moderate
21	23	features (n)	56	52.3	Moderate

Rank	Item	Target Polysemous Words	Correct (n)	Correct (%)	Difficulty Level
22	6	stress (n)	53	49.5	Moderate
23	22	content (n)	53	49.5	Moderate
24	25	spell (n)	48	44.9	Moderate
25	24	match (n)	43	40.2	Moderate
26	18	powerful (adj)	39	36.4	Moderate
27	13	adopted (adj)	38	35.5	Moderate
28	11	strong (adj)	29	27.1	Difficult

Table 3 presents students' performance on each item of the use of contextual polysemous vocabulary test, ranked according to the percentage of correct responses. The results indicate considerable variation in students' success in interpreting individual polysemous words. Correct response rates ranged from 27.1% to 87.9%, demonstrating substantial differences in the level of difficulty across the test items.

Among the 28 items, five items were classified as easy, with a correct response rate exceeding 80%. The highest correct response rate was obtained for *blow up* (v), with 94 students (87.9%) answering correctly, followed by *platform* (n) (86.0%), *entries* (n) (84.1%), *spaces* (n) (81.3%), and *driving* (adj), (81.3%). These findings suggest that the contextual meanings of these polysemous words were relatively accessible to most participants.

The majority of the test items (22 out of 28) fell into the moderate to difficult category, with correct response rates ranging from 35.5% to 76.6%. This pattern indicates that although students were generally able to infer the meanings of many polysemous words, their performance varied considerably depending on the lexical item and its contextual usage. In contrast, the polysemous adjective "*strong*" (adj.) recorded the lowest correct response rate (27.1%), indicating that students experienced substantial difficulty in identifying its intended contextual meaning.

3.1.1.3. Performance by Types of Polysemy (Regular vs. Irregular)

Beyond the overall and item-level analysis, students' performance was further examined according to the type of polysemy represented in the test items. Because regular and irregular polysemous words differ in the semantic relationships among their multiple senses, comparing these two categories provides additional insights into whether semantic types influence students' contextual comprehension. Table 4 presents the descriptive statistics for each type of polysemy, whereas Table 5 reports the results of the paired-sample *t-test* comparing students' performance across the two categories.

Table 4. *Comparison of Students' Performance on Regular and Irregular Polysemous Words*

Types of Polysemy	N	Mean	SD
Regular	107	61.52	21.55
Irregular	107	58.03	20.31

To examine students' performance across different types of polysemy, descriptive statistics were computed for regular and irregular polysemous words. As presented in Table 4, students obtained a mean score of 61.52 (SD = 21.55) on regular polysemous words, whereas the mean score for irregular polysemous words was 58.03 (SD = 20.31). Both sets of scores were based on responses from 107 participants.

The descriptive results indicate that students performed slightly better on regular polysemous words than on irregular polysemous words, with an average difference of approximately 3.49 percentage points. In addition, the standard deviations for both categories were relatively similar (21.55 vs. 20.31), suggesting that the variability in students' performance was comparable across the two types of polysemy.

Table 5. *Paired-Sample t-Test Comparing Students' Performance on Regular and Irregular Polysemous Words*

Comparison	Mean Difference	t	df	p
Regular-Irregular	3.49	1.928	106	.056

To determine whether students' performance differed by the type of polysemy, a paired-samples t-test was conducted to compare their scores on regular and irregular polysemous words. The results indicated that students obtained slightly higher scores on regular polysemous words than on irregular polysemous words, with a mean difference of 3.49 percentage points. However, this difference did not reach statistical significance, $t(106) = 1.928$, $p = .056$. The 95% confidence interval for the mean difference ranged from -0.10 to 7.07, crossing zero and indicating that the observed difference may have occurred by chance. Although students showed a slight tendency to perform better on regular polysemous words, the difference was not statistically significant. Therefore, the findings do not provide sufficient evidence to conclude that the type of polysemy significantly affected students' contextual comprehension.

3.1.2. *Difficulties Encountered by EFL Students in Comprehending Polysemous Words in Context*

Although the item-level analysis identifies which polysemous words were relatively easy or difficult to interpret, it does not explain why students experienced difficulty with particular lexical items. Quantitative results alone are insufficient to reveal the underlying cognitive and

linguistic factors influencing students' comprehension of polysemous words. Therefore, to address the second research question, qualitative interview data were analyzed to explore the specific difficulties encountered by students when interpreting polysemous words in context. The analysis revealed five major themes: (1) limited familiarity with polysemous words, (2) overreliance on a single multiple word meaning, (3) first language (L1) interference, (4) limited exposure to multiple word meanings, and (5) difficulty in distinguishing semantic nuances among answer choices.

3.1.2.1. Limited familiarity with polysemous words

The interviews revealed that unfamiliar vocabulary was one of the most frequently reported difficulties experienced by the participants. Several students explained that they were unable to understand some words appearing in both the reading passages and the answer options, making it difficult to interpret the intended meaning. As expressed by Informant 4:

“Agak susah soalnya jarang liat atau baca kata-katanya miss, bahkan soalnya pun ada yang ga aku tau artinya miss”

[It's a bit difficult because I rarely see or read the words, miss, and there are even questions that I don't know the meaning of, miss] (Informant 4).

This finding indicates that limited vocabulary knowledge became an initial barrier to comprehending polysemous words.

3.1.2.2. Overreliance on a single dominant meaning

Another difficulty identified from the interviews was students' tendency to rely on the primary meaning of a word when answering contextual vocabulary questions. Several participants admitted that once they recognized a familiar meaning, they rarely considered alternative meanings that might better fit the context. Informant 6 stated:

“Iya miss, aku inget kok, cuma aku kaya udah ketemu aja gitu jawabannya soalnya aku tau artinya... iya begitu [bergantung dengan satu arti] kayanya miss.”

[Yes, Miss, I remember. It's just that I feel like I've already found the answer because I know the meaning... yeah, that's how it is—relying on just one meaning, I think, Miss.]

This tendency caused students to overlook contextually appropriate meanings of polysemous words.

3.1.2.3. First Language (L1) Influence

The interviews also indicated that first language (L1) influence affected students' interpretation of polysemous words. Some participants interpreted English vocabulary based on meanings commonly associated with similar words in Indonesian, resulting in inaccurate answers. This can be seen in Informant 4's explanation when discussing the word 'material':

“Aku kan jawab b ya miss fabric, kan material itu banyaknya di pabrik miss... Bukan pabrik miss? Terus material kaya semen pasir gitu miss?”

[B1: I answered “b,” Miss, “fabric.” There's a lot of that material in the factory, Miss... Not a factory, Miss? And materials like cement and sand, Miss?] (Informant 4).

In the Indonesian context, the loanword '*material*' is heavily associated strictly with building supplies, which blinded the student from recognizing its academic meaning in the target language text.

3.1.2.4. *Limited exposure to multiple word meanings*

Another challenge identified from the interviews was students' limited exposure to English. Several participants reported that they rarely read English texts or encountered English vocabulary outside the classroom, making it more difficult to recognize different meanings of words in context. As stated by Informant 7:

“P: Apakah kamu sering baca-baca bacaan dalam bahasa inggris? Di buku ataupun di sosial media? C1: Engga miss. P: Okay, jadi bisa miss bilang kamu engga terbiasa dengan bahasa inggris? C1: Iya miss.”

[P: Do you often read English? In books or on social media? C1: No, Miss. P: Okay, so can you say you're not used to English? C1: Yes, Miss.] (Informant 7).

This finding indicates that limited exposure to English reduced students' familiarity with vocabulary and its contextual variations.

3.1.2.5. *Difficulty in distinguishing semantic nuances among answer choices*

The final difficulty identified from the interviews was students' inability to distinguish subtle differences in meaning among multiple-choice options. Participants reported that several answer choices appeared very similar, making it difficult to determine which meaning best matched the context. Informant 1 commented:

“Iya itu, kadang di pilihannya tuh mirip semua jawabannya miss, jadi ragu mau jawab yang mana, terus lagi ada beberapa kata tuh saya gatau artinya miss”

[Yes, sometimes the choices are all similar, Miss, so I'm unsure which one to answer. And then there are some words I don't know the meaning of, Miss.] (Informant 1)

This finding suggests that distinguishing subtle semantic differences among similar answer choices remained challenging for many participants.

3.1.3. *Comprehension Strategies Employed by EFL Students in Comprehending Polysemous Words in Context*

Following the analysis of students' difficulties in comprehending polysemous words, the third research question examined the strategies students employed to infer contextually appropriate meanings. Analysis of the interview data revealed that students adopted multiple and complementary strategies rather than relying on a single approach. These strategies reflected their attempts to resolve lexical ambiguity by drawing on lexical resources, contextual

information, peer interaction, and test-taking techniques. Five recurring strategies emerged from the data: (1) dictionary use, (2) pair discussion, (3) context analysis, (4) answer-choice analysis, and (5) guessing. The following sections describe each strategy and illustrate how students applied it when interpreting polysemous words in context. These strategies are presented and discussed in the following sections.

3.1.3.1. Dictionary Use

The first and most spontaneous and consistent strategy used by informants to overcome difficulties with unfamiliar vocabulary or ambiguous meanings is using a dictionary. Using this tool, is considered the quickest solution for independently verifying meaning without always having to rely on teacher explanations. As Informant 5 explained regarding his spontaneous actions when reading text:

“Aku cari di kamus aja miss artinya”

[I just looked it up in the dictionary and found the meaning] (Informant 5).

This finding indicates that dictionaries served as an immediate source of information when students experienced vocabulary difficulties.

3.1.3.2. Pair Discussion

Another strategy employed by the participants was discussing difficult questions with classmates. Students explained that exchanging ideas with peers helped them clarify meanings and make decisions when they were uncertain. As described by Informant 1:

“Nanya temen miss, eh tapi aku ga nyontek ya miss, kita itu berdiskusi”

[Asking my friend, miss, but I didn't cheat, miss, we were discussing] (Informant 1).

This finding shows that peer discussion became one of the strategies students used to solve vocabulary-related problems during the task.

3.1.3.3. Context Analysis

The interviews also revealed that some participants attempted to determine word meanings by examining the surrounding context instead of translating individual words. Students considered the topic of the sentence or paragraph before selecting an answer. Informant 1 explained:

P: “Iya, explode artinya meledak juga, kenapa kamu ga jawab explode aja? A1: Karena jawabannya bukan meledak kan miss? Nih kalimatnya aja tentang Instagram post miss, jadi kalau diinstagram kan pake kata viral miss, miss kemaren kan bilang kaya kepala sekolah sama kepala manusia, nah sama kaya gini juga”

[P: “Yes, explode means to explode too, why don't you just answer explode? A1: Because the answer isn't explode, right miss? Here's just a sentence about Instagram posts, miss,

so if you are talking about Instagram, so you use the word viral miss, yesterday you said it was like a school principal and a human head, well, it's the same as this too] (Informant 1).

This finding indicates that some students relied on contextual information to identify the most appropriate meaning of polysemous words

3.1.3.4. Answer-choice Analysis

Another strategy identified from the interviews was analyzing the available answer choices before making a decision. Students explained that they compared each option and eliminated those they considered less appropriate based on the sentence. Informant 3 stated:

“Nah kan yang tiga lainnya itu sama aja miss, kaya pintu kunci, terus kalau post kan beda sendiri dia miss, terus juga nyambung kalau di taro kata post disitu miss.”

[As you can see, Miss, the other three choices are essentially identical, similar to 'door' and 'key'. However, 'post' stands out as different, and it fits the context perfectly if we place it there.] (Informant 3).

This finding suggests that students used elimination techniques to identify the answer they considered most suitable.

3.1.3.5. Guessing

The final strategy reported by the participants was guessing. When students were unable to determine the correct meaning after considering the available information, they selected the answer they believed was most likely to be correct. As explained by Informant 4:

“P: Nah, terus untuk jawab soal-soal ini, gimana cara kamu memutuskan mana yang betul dan mana yang salah? B1: Tebak aja miss hehe”

[How do you choose the right answer and eliminate the wrong ones for these questions? I just guess it miss.] (Informant 4).

This finding indicates that guessing became an alternative strategy when students could not confidently determine the intended meaning of a polysemous word.

3.2 Discussion

The quantitative findings indicate that the eleventh-grade students demonstrated an average-to-low level of ability in comprehending polysemous words, as reflected by the mean standardized score of 60.15. Although several students were able to identify the appropriate meanings of polysemous words in certain contexts, the overall results suggest that many participants experienced difficulty interpreting words whose meanings shifted according to context. This finding implies that recognizing the basic meaning of a lexical item does not necessarily enable learners to comprehend its context-specific meaning. In other words, the

participants possessed a certain degree of vocabulary knowledge, yet their ability to flexibly interpret semantic variations remained limited.

This finding can be explained through the concept of vocabulary depth, which emphasizes that vocabulary mastery involves more than simply knowing a word's basic meaning. Nation (2001) argues that comprehensive vocabulary knowledge includes understanding various aspects of a word, including its multiple meanings, contextual usage, and semantic relationships. Similarly, Read (2000) emphasizes that vocabulary knowledge should be evaluated based not only on the number of words learners know but also on their ability to interpret those words appropriately across different contexts. From this perspective, the students' average performance indicates that many participants had not yet developed sufficient vocabulary depth to process polysemous words accurately. Instead, they appeared to rely primarily on familiar meanings while experiencing difficulty adapting their interpretations to contextual demands.

The present findings also support Purwati (2022), who reported that vocabulary mastery contributes substantially to students' reading comprehension. Students with stronger vocabulary knowledge generally demonstrate greater success in understanding written texts because they are able to construct meaning beyond isolated lexical items. Likewise, Liu (2025) explains that interpreting polysemous words requires learners to activate multiple related meanings simultaneously before selecting the interpretation that best fits the surrounding context. Such processing places greater cognitive demands on learners than recognizing single-meaning words because they must continuously evaluate contextual information while suppressing inappropriate interpretations. The present findings are also consistent with Liu (2025), who argues that successful reading comprehension depends not only on vocabulary knowledge but also on pragmatic awareness. Learners who fail to interpret contextual meaning often struggle to identify the speaker's intended message, resulting in misunderstanding despite recognizing individual lexical items. Therefore, the moderate achievement demonstrated by the participants suggests that limited vocabulary depth and contextual processing skills remain important obstacles in comprehending polysemous words.

Further analysis of the students' performance revealed a more detailed distribution across different performance levels. The findings indicate that students' performance in comprehending polysemous words in context remains relatively low, with nearly half of the participants (47.7%) falling into the Low and Very Low categories, while only 32.7% achieved High and Very High performance. This distribution suggests that difficulty in comprehending polysemous is not limited to a small subset of students but constitutes a fairly widespread challenge among the participants of this study.

This distributional pattern lends support to the notion that comprehending polysemous words in context reflects a relatively stable, individual-level competence rather than a uniform difficulty shared equally by all learners at a given grade level. This interpretation is consistent with Karlsson (2013), who found a clear correlation between students' individual performance in their L1 and L2 mastery of polysemous words: learners who scored above the mean in one language tended to score above the mean in the other, and vice versa. Karlsson (2013) interpreted this as evidence that the depth and richness of an individual's mental lexicon, rather

than exposure to a specific language alone substantially shapes one's capacity to resolve lexical ambiguity, a competence that appears to generalize across languages and, by extension, across learners with varying degrees of underlying lexical network development.

This distribution also resonates with Qu (2023), who found that overall productive competence in polysemous words did not differ significantly between high- and low-proficiency learners, except in the most demanding condition (periphery meaning paired with a non-dominant L1 equivalent). This suggests that general language proficiency alone does not guarantee strong performance in resolving polysemous ambiguity, and that comprehension of polysemous words may depend on a distinct, more specific dimension of lexical competence—namely, vocabulary depth (Nation, 2001; Read, 2000)—that develops somewhat independently of general proficiency gains. This may help explain why, despite being drawn from the same grade level and presumably comparable general English instruction, participants in the present study were nonetheless stratified into markedly different performance categories, with nearly half struggling considerably to interpret polysemous words in context.

The results in Table 3 reveal considerable variation in students' success across individual polysemous items, with correct response rates ranging from 27.1% to 87.9%. This wide range indicates that the difficulty of comprehending polysemous words is not uniform but is strongly influenced by the specific lexical item and its contextual meaning. This finding is consistent with Karlsson (2013), who similarly found substantial variation in advanced learners' mastery of individual polysemous words, with some items answered correctly by all participants, while others were answered correctly by none. Karlsson's (2013) results further indicated that this variation was primarily determined by the number of competing senses a word carries rather than by the word's overall frequency, suggesting that lexical items with more numerous or more closely related senses impose a greater processing burden on learners.

This pattern can also be explained through the distinction between core and periphery meanings proposed by Qu (2023). According to Qu (2023), core meanings being more frequent, more salient, and more strongly represented in the learner's mental lexicon are consistently produced and comprehended with greater accuracy than periphery meanings, which require learners to override a more readily activated core sense in favor of a less dominant, context-dependent interpretation. This may explain why items such as "*blow-up*" (*v*), "*platform*," and "*entries*" (*n*) were comprehended with high accuracy, as their tested meanings were likely closely aligned with their most salient or core senses. In contrast, the notably low accuracy for *strong* (*adj*) (27.1%) suggests that the tested meaning of this item required students to access a more peripheral or less prototypical sense, which, according to Qu (2023), carries a higher activation threshold and is therefore more prone to misinterpretation, particularly when it competes with a more dominant, contextually inappropriate sense.

Furthermore, this finding aligns with Jamito and Simene (2026), who identified issue, claim, and record as the most persistently difficult polysemous words among their participants due to their high sense entropy, that is, the presence of multiple competing senses of comparable salience. Taken together, these converging findings from Karlsson (2013), Qu (2023), and Jamito and Simene (2026) suggest that the item-level variability observed in the

present study is not incidental but reflects a broader, cross-context pattern in which words with more numerous, more closely competing, or less core-aligned senses pose significantly greater comprehension challenges for learners, regardless of their first language background or proficiency level.

Regular polysemy refers to a systematic and predictable pattern of sense extension in which the multiple meanings of a word are derived from a common core sense through recurrent, rule-governed processes such as metaphor, metonymy, or generalization (Apresjan, 1974). Such extensions recur productively across a class of words rather than being confined to a single lexical item—for instance, the systematic extension from a physical container to its contents (e.g., bottle, glass, cup)—which, according to Lyons (1977) and Cruse (1986), reflects an underlying conceptual regularity in the lexicon that in principle makes extended meanings more transparent and inferable in context. Irregular polysemy, by contrast, refers to sense extensions that are comparatively idiosyncratic and lexically specific rather than following a broadly generalizable pattern; because such senses do not recur systematically across other words, they cannot be inferred through analogy and must instead be acquired largely as separate, item-specific pieces of lexical knowledge.

The descriptive results presented in Table 4 show that students achieved a slightly higher mean score on regular polysemous words ($M = 61.52$, $SD = 21.55$) than on irregular polysemous words ($M = 58.03$, $SD = 20.31$), with comparable variability across the two categories. On the surface, this pattern aligns with the theoretical expectation outlined above: Because regular polysemous words exhibit systematic, conceptually motivated extensions from a core meaning, they should, in principle, be comparatively easier for learners to interpret more irregular polysemous words, whose extended senses follow less predictable or less conceptually transparent patterns.

This modest advantage for regular polysemy is broadly consistent with Verspoor and Lowie (2003, as cited in Karlsson, 2013), who demonstrated that providing learners with a word's core sense facilitated the comprehension and long-term retention of its more figurative, chained extensions. Since regular polysemous words by definition exhibit clearer conceptual chaining between their core and extended senses, it is plausible that students were able to draw on partial knowledge of a word's core meaning to infer its contextual sense more successfully than they could for irregular polysemous words, whose senses are less systematically related. However, given that the observed difference was relatively modest (approximately 3.49 percentage points), this advantage does not appear to be substantial enough to be considered a major differentiating factor in students' overall comprehension performance.

Although students demonstrated a slight tendency to perform better on regular polysemous words, a paired-samples *t*-test indicated that this difference was not statistically significant, $t(106) = 1.928$, $p = .056$, with the 95% confidence interval for the mean difference crossing zero. This result suggests that, contrary to the theoretical expectation discussed in the previous point, the systematicity of a word's sense-extension pattern does not, in itself, constitute a significant determinant of students' ability to comprehend its contextual meaning.

This null result can be productively explained through Qu's (2023) findings regarding the factors that most strongly influence learners' processing of polysemous words. Qu (2023)

demonstrated that the primary determinant of comprehension and production accuracy was not the conceptual relationship between a word's senses, but rather whether the specific sense being tested corresponded to a core or peripheral meaning and whether it aligned with the learner's most dominant lexical representation. Applied to the present findings, this suggests that a word's difficulty is governed less by the abstract regularity of its sense-extension pattern and more by the relative salience, frequency, and activation threshold of the specific sense being tested in context—factors that can vary considerably within both regular and irregular polysemous words alike. In other words, a regular polysemous word may still pose considerable difficulty if the tested sense happens to be peripheral and weakly represented in the learner's mental lexicon, while an irregular polysemous word may be comprehended with relative ease if its tested sense happens to be highly salient or frequently encountered. This may explain why, despite the theoretically motivated expectation of an advantage for regular polysemy, the present study did not find a statistically significant difference between the two categories.

This interpretation is also consistent with the vocabulary depth framework underlying Finding 1 (Nation, 2001; Read, 2000), which emphasizes that word knowledge is multidimensional and cannot be reduced to a single structural property such as the regularity of sense extension. Rather, comprehending a polysemous word in context appears to depend on the interaction of multiple factors, including sense salience, contextual support, and the learner's individual lexical network of which the regular/irregular distinction represents only one, and evidently not the most decisive, dimension.

The qualitative findings provide further explanation for this overall performance by revealing several interconnected factors that influenced students' comprehension of polysemous words. Rather than representing isolated problems, the reported difficulties can be grouped into three broader categories: lexical limitations, semantic processing difficulties, and contextual decision-making. Together, these categories illustrate that students' challenges extended beyond vocabulary size and involved complex cognitive processes during meaning construction.

The first category concerns lexical limitations, which include unfamiliar vocabulary and limited exposure to English. Many participants admitted that they encountered words they had rarely seen before and that they were not accustomed to reading English texts outside the classroom. Limited exposure restricts opportunities for learners to encounter words in different contexts, reducing their ability to build flexible semantic representations. This finding is consistent with Hammad (2023), who emphasizes that repeated contextual exposure plays a crucial role in helping learners develop richer semantic knowledge and improve contextual interpretation. Similarly, Amaliah et al. (2025) argue that insufficient semantic awareness negatively affects learners' language accuracy because students struggle to recognize semantic extensions of familiar words. Consequently, limited vocabulary exposure may prevent learners from expanding their lexical knowledge beyond literal definitions.

The second category relates to semantic processing difficulties, particularly students' tendency to rely on a single familiar meaning and the influence of their first language during interpretation. Several participants explained that they immediately selected the first meaning

that came to mind without considering whether it matched the context. Others interpreted English words according to meanings commonly associated with similar expressions in Indonesian. These findings closely correspond with Dinana (2024), who reported that Indonesian EFL learners frequently depended on primary meanings when interpreting vocabulary in contextual tasks. Likewise, Amaliah et al. (2025) found that insufficient semantic awareness often results in inaccurate language use because learners fail to recognize contextually appropriate semantic extensions. Similar evidence was reported by Rushdi (2024), who explained that polysemous words frequently lead to pragmatic failure because learners lack sufficient linguistic and pragmatic competence to determine which meaning is intended in a particular context. As a result, learners often interpret familiar words literally even when contextual information clearly suggests an alternative meaning. These findings suggest that successful comprehension of polysemous words requires learners to move beyond literal interpretation and develop greater flexibility in semantic processing.

The final category involves contextual decision-making, represented by students' difficulty distinguishing subtle differences among similar answer choices. Although many participants understood the general topic of a sentence, they often struggled to determine which option most accurately reflected the intended meaning. This finding suggests that interpreting polysemous words requires learners not only to recognize vocabulary but also to evaluate semantic nuances among closely related alternatives. According to Read (2000), vocabulary assessment involves the ability to discriminate among different meanings and select the most appropriate interpretation in context. Therefore, the participants' uncertainty when choosing among similar options reflects limitations in contextual vocabulary knowledge rather than merely insufficient vocabulary size.

Despite these difficulties, the interview findings demonstrate that students actively employed various strategies to overcome comprehension problems. These strategies may be broadly categorized into resource-based, social, and cognitive strategies, indicating that learners attempted to compensate for their limitations through different forms of problem-solving rather than remaining passive when encountering unfamiliar vocabulary.

The first category, resource-based strategies, is represented by students' frequent use of dictionaries to verify unfamiliar words. Dictionaries served as an immediate source of information that enabled learners to access possible meanings before making decisions. Nation (2001) acknowledges that dictionaries are valuable learning resources because they provide opportunities for independent vocabulary learning and help learners confirm unfamiliar lexical items. However, dictionary use alone may not always resolve difficulties involving polysemy because learners must still determine which meaning is appropriate within a particular context.

The second category consists of social strategies, particularly pair discussion with classmates. Students reported exchanging ideas and confirming interpretations before selecting answers, suggesting that collaborative interaction supported their meaning-making process. Peer discussion provided opportunities to compare different interpretations and reduce uncertainty when multiple meanings appeared possible. Although this strategy did not always guarantee correct answers, it enabled learners to negotiate meaning and develop greater confidence in their decisions.

Finally, students also employed several cognitive strategies, including analyzing contextual clues, evaluating answer choices through elimination, and guessing when they were unable to determine the correct interpretation. Among these strategies, contextual analysis appeared to be the most productive because learners consciously examined surrounding sentences before deciding on the intended meaning. This finding supports Hammad (2023), who emphasizes that contextual exposure encourages learners to infer meaning by integrating surrounding linguistic information. Likewise, Pratama et al. (2024) reported that contextual learning activities promote active meaning construction by encouraging learners to process contextual information rather than relying solely on isolated vocabulary knowledge. These findings suggest that successful comprehension of polysemous words depends not only on vocabulary knowledge itself but also on learners' ability to use contextual information strategically during interpretation.

Taken together, the findings indicate that students' difficulties in comprehending polysemous words arise from the interaction between limited vocabulary depth, insufficient semantic flexibility, and challenges in contextual interpretation. At the same time, the strategies reported by the participants demonstrate that learners actively attempt to compensate for these limitations through independent, collaborative, and cognitive approaches. These findings highlight the importance of providing EFL learners with greater opportunities to encounter vocabulary in authentic contexts while explicitly developing semantic awareness and contextual interpretation skills. Such instructional practices may better prepare students to understand polysemous words as they naturally occur in academic reading and everyday communication.

4. Conclusion

This study examined eleventh-grade students' ability to comprehend polysemous words in context. Overall, students' performance was at an average-to-low level, with nearly half of the participants classified as Low or Very Low performers, indicating that many learners struggled to move beyond a word's familiar meaning to interpret it appropriately in context. This suggests that students' vocabulary knowledge remains largely surface-level, lacking the depth needed to flexibly reinterpret words across different contextual senses.

Performance also varied considerably across individual test items, ranging from 27.1% to 87.9% correct responses. This variation appears to be driven less by a word's overall frequency and more by whether the tested sense corresponded to a core, dominant meaning or a more peripheral, less salient one. Similarly, although students scored slightly higher on regular than irregular polysemous words, this difference was not statistically significant, suggesting that the systematicity of a word's sense-extension pattern is not, by itself, a decisive factor in comprehension difficulty.

The study also found that students' comprehension was influenced by several interconnected difficulties, including unfamiliar vocabulary, reliance on primary meanings, first language influence, limited exposure to English, and difficulty distinguishing subtle semantic differences among answer choices. To overcome these challenges, students employed various strategies, such as using dictionaries, discussing answers with peers, analyzing contextual clues, evaluating answer choices, and making guesses when necessary.

Taken together, these findings suggest that comprehending polysemous words in context depends more on vocabulary depth and the salience of specific word senses than on surface-level properties such as word frequency or sense-extension regularity. Pedagogically, this highlights the need for vocabulary instruction that explicitly addresses the peripheral meanings of high-frequency polysemous words, rather than relying solely on core definitions, along with instructional approaches that anchor new senses to a word's core meaning to support more meaningful semantic connections. Therefore, English vocabulary instruction should provide learners with greater opportunities to explore multiple meanings of words in authentic contexts to strengthen their vocabulary depth and semantic awareness.

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