

A Syntactic Ambiguity Analysis of EFL Students' Recount Text Using Syntactic Tree Diagrams

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ABSTRACT

This research aims to analyze the syntactic ambiguity in EFL students' recount texts by identifying the types and patterns of ambiguity and examining how differences in sentence structure can lead to various interpretations of meaning. A descriptive qualitative design was employed to identify results, with data consisting of ambiguous sentences taken from ten recount texts written by ten fourth-semester students in the English Language Education Program at Gorontalo State University. Data were collected through documentation. The results of the study showed that there are 16 sentences containing syntactic ambiguity. These ambiguities are classified into four types: noun phrase ambiguity, prepositional phrase ambiguity, adverbial ambiguity, and relative clause ambiguity, with 6 patterns of ambiguity occurring, such as (Adj+N+N), (Adj+N+conj+N), (VP+VP+AdvC), (V+NP+PP), (NP+NP+PP), and (NP+NP+RelC). The most dominant type found is prepositional phrase ambiguity. The analysis indicates that syntactic ambiguity arises because the grammatical arrangement of sentence elements allows for more than one possible structural interpretation. Furthermore, syntactic tree diagrams effectively reveal how differences between surface structure and deep structure produce multiple interpretations in students' writing.

Keywords: *Syntactic Ambiguity, Syntax, Recount Text, Syntactic Tree Diagram, EFL Students Writing, Grammatical Structure*

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INTRODUCTION

One phenomenon in linguistic studies that reflects the complexity and flexibility of human language is ambiguity. In linguistic terms, ambiguity is defined as a condition in which a word, phrase, or sentence can be interpreted in more than one meaning (Fortuny & Payrató, 2024). In the study of ambiguity in linguistics, syntactic ambiguity is considered one of the most complex forms of ambiguity because it arises not from the meaning of individual words, but from the structure of the sentence itself. Syntactic or structural ambiguity occurs when the grammatical arrangement of words in a sentence allows for more than one interpretation of the sentence structure (Li et al., 2023). Juliana et al. (2022) distinguish syntactic ambiguity into two main types, namely surface structure ambiguity and deep structure ambiguity.

Although interesting in theoretical terms, ambiguity also causes practical problems in communication. When a sentence structure allows for more than one interpretation, it often obscures the intended meaning and causes misunderstandings between speakers and listeners. In oral communication, ambiguity can arise when the intended meaning can be misinterpreted. However, in written communication, ambiguity cannot be resolved through direct interaction. As a result, meaning is highly dependent on sentence structure. In this context, syntactic ambiguity becomes a crucial problem, as unclear sentence structures can allow for multiple interpretations and reduce clarity in writing. As stated by MacDonald et al. (1994) ambiguity resolution is a central problem in language comprehension. More than that, ambiguity is a problem because it makes natural languages difficult to process (Fortuny &

Payrató, 2024). Therefore, ambiguity is not only a linguistic phenomenon, but also an important issue that affects the clarity, accuracy, and effectiveness of communication.

In the context of written communication, writing skills are crucial because writing skill is the ability to express opinion, and the writer delivers messages and opinions through it (Chicho, 2022). At the higher education level, students are expected to have adequate writing skills as a reflection of more advanced language competence. However, previous research explained by Setiawan (2014), shows that creating more than one interpretation is the barrier for EFL learners in making unambiguous sentences in writing assignments. This condition reinforces the view that ambiguity remains a real challenge in the academic writing of EFL students.

In fact, this phenomenon still exists among EFL students nowadays, as evidenced by the results of pre-observation conducted by the researcher on a number of students' writings, which found that there are still many sentences that contain syntactic ambiguity. This ambiguity still commonly appears in recount text, because students are required to describe past events by combining various linguistic features within longer sentence structures. According to Harahap (2020), the linguistic features of recount texts generally involve the use of participant or subject, action verb, place, time, participant, using past tense and time sequence. The complexity of structuring these grammatical elements can contribute to the occurrence of syntactic ambiguity. Furthermore, previous studies have shown that in writing recount texts, students often experience difficulties with linguistic characteristics and aspects of writing that must be considered, such as content, organization, syntax, and mechanics (Sartika et al., 2022). Supporting this view, Mustika et al. (2020) further emphasize that one of the difficulties students face when writing recount texts is sentence structure. More specifically, Sani (2017), states that some students can make some mistakes and one of the mistakes is ambiguous meaning in recount text.

For this reason, this study specifically focuses on recount texts because the linguistic features of recount texts encourage students to construct complex sentence structures through the combination of various grammatical elements in describing past experiences. The frequent use of action verbs, time expressions, and additional information within a single sentence creates a strong possibility for syntactic ambiguity to occur. Therefore, investigating syntactic ambiguity in recount texts is important because unclear grammatical structures may reduce clarity of meaning and lead to multiple interpretations of meaning in students' written texts.

However, the reader's ability to resolve ambiguity through context and common understanding does not completely remove the existence of syntactic ambiguity within a sentence. This is because syntactic ambiguity analysis primarily focuses on grammatical structure and the possibility of multiple syntactic representations rather than on contextual interpretation. Lee et al. (2025) state that syntactic ambiguity focusses to sentence structures that allow for multiple grammatical interpretations. Therefore, a sentence remains syntactically ambiguous even when readers are able to reduce the ambiguity through context or common understanding. Thus, this study focuses solely on analysing syntactic ambiguity based on grammatical structure and syntactic representation within sentences.

This shows that syntactic ambiguity analysis has indeed been extensively researched by previous researches. However, limited studies have specifically examined syntactic ambiguity in EFL students' writing by comparing surface structure and deep structure using syntactic tree diagrams. By visualizing these structural distinctions through tree diagrams, the analysis becomes more systematic and objective. Therefore, this study was conducted to fill this gap by analysing syntactic ambiguity in EFL students' writing through a comparison of surface structure and deep structure using syntactic tree diagrams, which will show that a single sentence can have two different syntactic structures with different meanings.

With these findings, this study offers significant benefits both theoretically and practically. Theoretically, this study contributes to enriching the study of syntactic ambiguity in EFL students' writing. Practically, this study is expected to provide new insights for students to become more aware of the potential for syntactic ambiguity in their writing. Thus,

this study contributes significantly to enhancing syntactic understanding, which impacts the quality of EFL students' writing skills.

METHOD

This study employed a descriptive qualitative research design to analyse syntactic ambiguity in EFL students' writing without involving statistical procedures or hypothesis testing. The data source consisted of recount texts written by fourth-semester students of the English Education Study Program at Universitas Negeri Gorontalo who had completed syntax and writing courses. The researcher selected ten recount texts produced independently by students in the classroom to ensure authenticity of the data. Data collection used purposive sampling and documentation techniques through several stages, namely collecting students' recount texts, identifying ambiguous phrases or sentences with multiple syntactic interpretations, and marking as well as documenting the selected data for further analysis. The criteria for identifying syntactic ambiguity included sentences that contained multiple interpretations and double syntactic structures. Data analysis was conducted using the interactive model proposed by Miles et al. (2014), which involved data condensation, data display, and conclusion drawing or verification. In the analysis process, ambiguous sentences were classified based on their types of syntactic ambiguity and analysed using syntactic tree diagrams to compare surface structure and deep structure in accordance with Chomsky's theory. To ensure trustworthiness, the study applied credibility, dependability, confirmability, and transferability following the framework of Lincoln & Guba (1985).

FINDINGS AND DISCUSSION

A total of 16 Syntactically of 16 syntactically ambiguous sentences were identified across 10 recount texts written by EFL students. These ambiguities are distributed into 5 instances of noun phrase ambiguity, 8 instances of prepositional phrase attachment ambiguity, 2 instances of adverbial ambiguity, and 1 instance of relative clause ambiguity. These findings highlight not only the types of syntactic ambiguity present but also reflect the structural patterns that contribute to their occurrence in students' writing, as presented in the following table:

Table 1 Types And Patterns Found		
Types of syntactic ambiguity found	Patterns of ambiguity that occurred	Sentences
Noun Phrase Ambiguity	(Adj + N + N)	<i>I bought a <u>new history book</u></i>
	(Adjv+N+conj+N)	<i>I met the <u>smart lecturer and students</u> in the hallway</i>
Adverbial Ambiguity	(VP+VP+AdvC)	<i>I <u>asked</u> my sister to <u>take</u> a photo <u>before the lights were turned off</u></i>
Prepositional Phrase Ambiguity	(V+NP+PP)	<i>We <u>saw many tourists</u> with <u>shiny sunglasses</u> near the main gate</i>
	(NP+NP+PP)	<i>The canteen and a big tree <u>in the schoolyard</u>.</i>
Attachment of Relative Clause	(NP+NP+RelC)	<i>The child of <u>my aunt</u> <u>who sells delicious fried tofu</u></i>

Following the presentation of the types and patterns, each ambiguous sentence is analyzed through two syntactic tree diagrams to compare its possible surface structures and corresponding deep structure interpretations.

Noun Phrase Ambiguity

Data 1: I bought a new history book

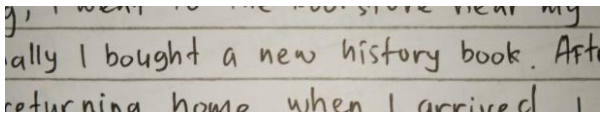


Figure 1. Data 1

This sentence is classified as noun phrase ambiguity, in which the ambiguity arises from the lack of clarity regarding which element is modified by the adjective "new."

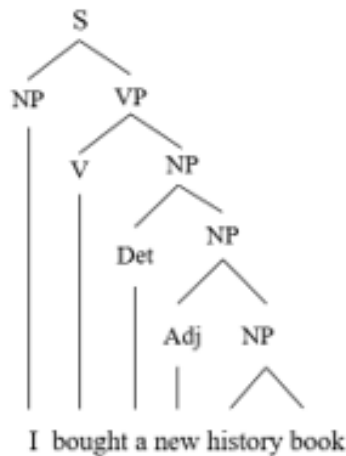


Figure 2. First Interpretation

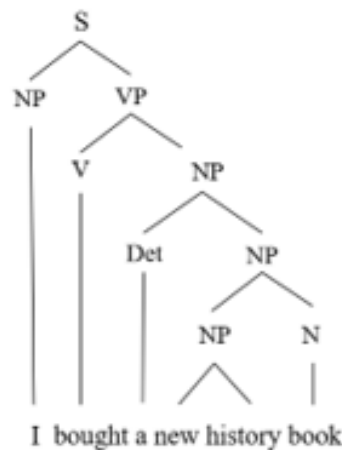


Figure 3. Second Interpretation

Based on the two trees above, the differences in interpretation can be explained as follows: a) In the first interpretation, the tree shows that the adjective (Adj) "new" is attached to the NP node "history book," which automatically applies the adjective to the two nouns below it, meaning that someone bought a history book that is new. b) In the second interpretation, the adjective (Adj) "new" no longer modifies the entire noun phrase (NP) "history book," but instead modifies only the noun (N) "history," which means that someone bought a book about new history.

Based on a comparison between surface structure and deep structure, this phenomenon reveals a pattern of ambiguity: (adjective + noun + noun) or (Adj + N + N). Ambiguity occurs when it is unclear which noun the adjective modifies, and without additional context, this systematically creates ambiguity. This proves that in writing, this pattern will create ambiguity. Theoretically, this aligns with the view Li et al. (2023) that syntactic ambiguity is defined when multiple grammatical structures are possible for a sequence of words.

Adverbial Ambiguity

Data 2: I asked my sister to take a photo before the lights were turned off

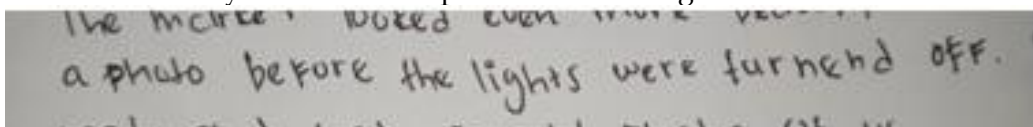


Figure 4. Data 2

This sentence contains an ambiguity of the adverbial type. The ambiguity arises because it is unclear which verb in the sentence is modified by the adverbial clause.

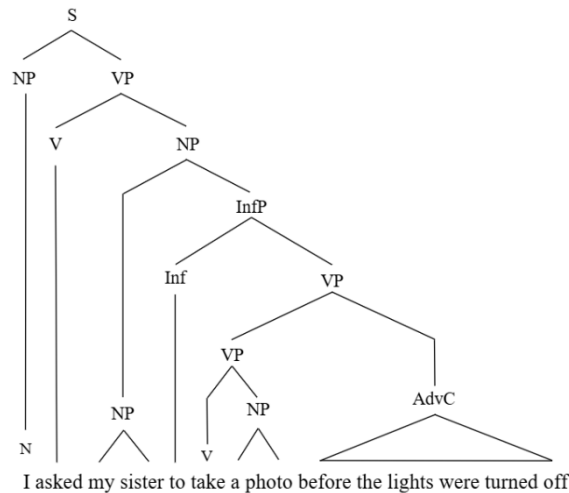


Figure 5. First Interpretation

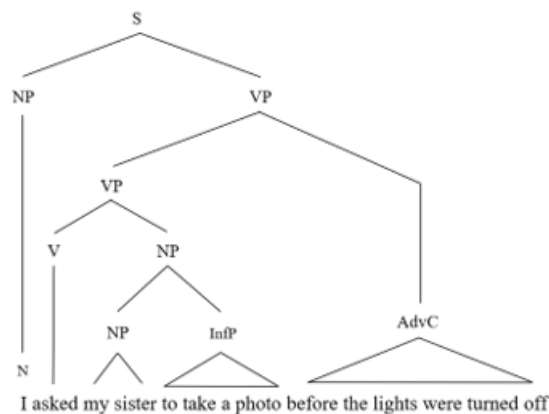


Figure 6. Second Interpretation

Based on the two trees above, the differences in interpretation can be explained as follows: a) In the first interpretation, the adverbial clause "before the lights were turned off" is directly linked to the verb "take". This indicates that the adverbial clause specifies the time of taking the photo, meaning that he asked to have his photo taken before the lights were turned off. b) In the second interpretation, the adverbial clause "before the lights were turned off" is directly attached to the verb phrase (V) "asked" which means that the act of asking the sister to take a photo happened before the lights turned off.

From this comparison, it is evident that this phenomenon indicates uncertainty and competition regarding which verb phrase (VP) receives the additional information. The presence of an adverbial clause after two verb phrases creates ambiguity with the pattern: (verb + verb phrase + adverbial clause) or (V+VP+AdvC). This pattern shows that in writing, the placement of unspecified additional information will trigger ambiguity. This finding is consistent with the results of a previous study conducted by Khawalda & Al-Saidat (2012), in which the source of ambiguity is the use of an adverb that can be attached to either the main verb or the embedded verb.

Prepositional Phrase Ambiguity

From the students' recount texts, the researcher identified nine sentences containing prepositional phrase ambiguity.

Data 3: we saw many tourists with shiny sunglasses near the main gate.

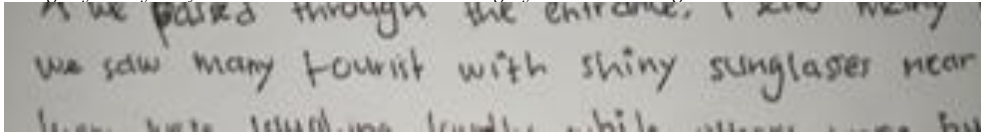


Figure 7. Data 3

This sentence contains a type of ambiguity known as prepositional phrase ambiguity. The ambiguity arises because it is unclear where the prepositional phrase “with shiny sunglasses” is attached.

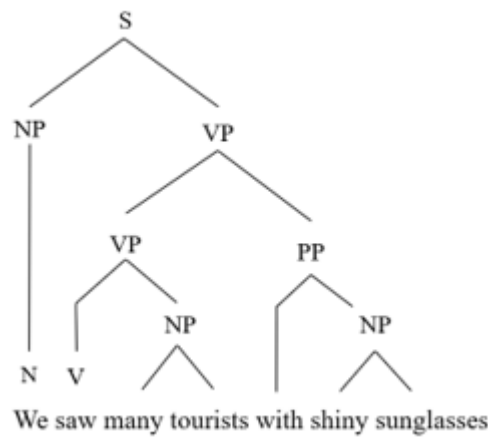


Figure 8. First Interpretation

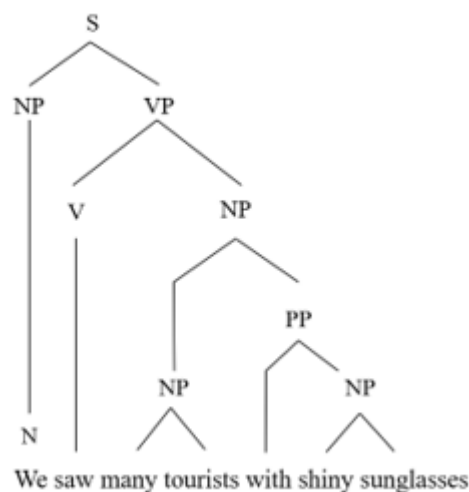


Figure 9. Second Interpretation

Based on the two trees above, the differences in interpretation can be explained as follows: a) In the first interpretation, the Preposition Phrase (PP) “with shiny sunglasses” is directly attached to the verb phrase (V) “saw” which means meaning that the act of seeing the tourists is performed by “we,” and that they are the ones wearing the shiny sunglasses. b) In the second interpretation, the Preposition Phrase (PP) “with shiny sunglasses” is directly attached to the noun phrase (NP) “many tourists” which means that the tourists they saw wearing the shiny sunglasses.

Based on the comparison, the data reveals the following ambiguity pattern: (verb + noun phrase + prepositional phrase) or (V+NP+PP). This ambiguity pattern is the most frequently found. This is consistent with the findings of previous research, such as that conducted by Demir (2020), which found that syntactic ambiguity mostly occurs due to prepositional phrases. Ambiguity arises because the presence of the prepositional phrase (PP) at the end of the sentence always creates a competition of

interpretation between the verb and the noun phrase. In this data, the PP can attach either to the verb "saw" or to the noun phrase "many tourists".

Attachment of Relative Clause

From the students' recount texts, the researcher identified one sentences containing attachment of relative clause.

Data 4: *The child of my aunt who sells delicious fried tofu*

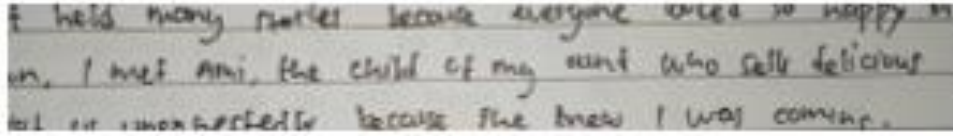


Figure 10. Data 4

This sentence contains relative clause ambiguity. This ambiguity arises because it is unclear which noun the relative clause describes.

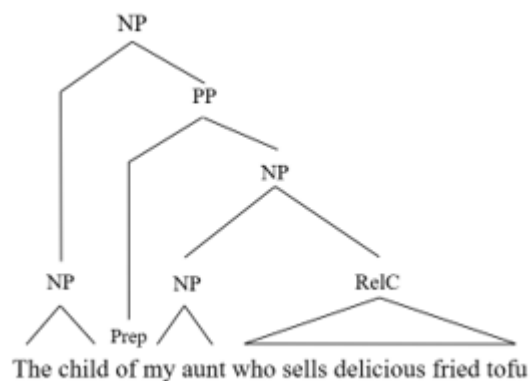


Figure 11. First Interpretation

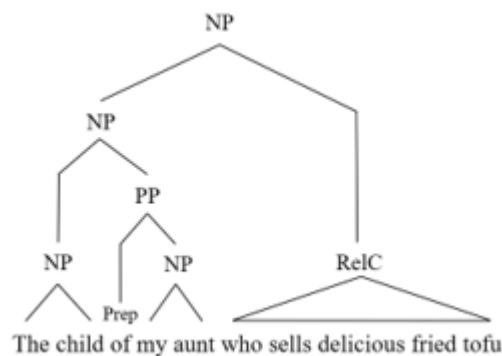


Figure 12. Second Interpretation

Based on the two trees above, the differences in interpretation can be explained as follows: a) In the first interpretation, the relative clause "who sells delicious fried thofu" is directly attached to the noun phrase (NP) "my aunt" which means that the one selling fried tofu is the aunt. b) In the first interpretation, the relative clause "who sells delicious fried tofu" is directly attached to the noun phrase (NP), indicating that the relative clause modifies the head of the entire noun phrase NP "The child of my aunt" which means that the one selling fried tofu is the child.

Although this type is very limited, based on a comparison, the data reveals a pattern of ambiguity: (noun phrase + noun phrase + relative clause) or (NP + NP + RelC). This pattern of ambiguity indicates uncertainty regarding which element is modified by the relative clause, thereby creating ambiguity. Theoretically, this aligns

with Khawalda & Al-Saidat (2012) assertion that a relative clause can be attached to more than one noun phrase in the sentence structure.

Discussion

This study shows that syntactic ambiguity remains a quite dominant phenomenon in the recount texts written by EFL students. From the 16 sentences analyzed, several types of syntactic ambiguity were identified, namely noun phrase ambiguity, prepositional phrase ambiguity, adverbial ambiguity, and relative clause ambiguity. Among these four types, prepositional phrase ambiguity was the most dominant, indicating that this type most frequently gives rise to more than one possible interpretation. This is consistent with the findings of previous research, such as that conducted by Demir (2020), which found that syntactic ambiguity mostly occurs due to prepositional phrases. Similarly, Tarihoran et al. (2025), states that structural ambiguity remains a persistent challenge in English comprehension, particularly because prepositional phrases often allow multiple interpretations. However, the results of this study clearly contrast with a study conducted by Bustam (2020), in which syntactic ambiguity was dominated by noun phrase or equivocal phrasing that is caused by the formation of phrases with stacked modifiers.

In addition, the results of this study also show that syntactic ambiguity occurs systematically through specific structural patterns within each type of ambiguity. In the case of noun ambiguity, the patterns that emerge indicate (Adj+N+N) and (Adj+N+conj+N). In adverbial ambiguity, the patterns that consistently emerge are (VP+VP+AdvC). In the types of prepositional ambiguity, the ambiguity patterns are (V+NP+PP) as the patterns that occur most frequently, and (NP+NP+PP). Additionally, in the type of relative clause ambiguity, the pattern is (NP+NP+RelC). This indicates that syntactic ambiguity consistently allows for more than one possible syntactic relationship. This is in line with Stageberg (1958), that there are many syntactic patterns prone to ambiguity. The finding that the (V + NP + PP) pattern emerged as the most dominant structure in prepositional phrase ambiguity is also supported by Shoghi et al. (2025) who explain that prepositional phrase attachment ambiguity commonly occurs in structures where a prepositional phrase may attach either to the verb or to the noun, particularly within the (V + NP + PP) pattern. This indicates that ambiguity is greatly influenced by the position and relationships between elements within a sentence.

Overall, the findings of this study indicate that syntactic ambiguity in students' writing is significantly influenced by how sentence structures are constructed. Therefore, an understanding of syntactic structure and an awareness of potential ambiguities are essential for students to produce writing that is unambiguous particularly in recount texts

CONCLUSIONS

This study aimed to identify syntactic ambiguity in recount texts written by EFL students. The findings revealed 16 instances of syntactic ambiguity across 10 recount texts, which were classified into four types: noun phrase ambiguity, prepositional phrase ambiguity, adverbial ambiguity, and relative clause ambiguity. Among these, prepositional phrase ambiguity was the most dominant, while relative clause ambiguity occurred least frequently. The ambiguities were realized through six structural patterns: (Adj+N+N), (Adj+N+conj+N), (VP+VP+AdvC), (V+NP+PP), (NP+NP+PP), and (NP+NP+RelC). These patterns emerged due to unclear attachment relationships among sentence elements, allowing multiple interpretations of the same structure. The findings indicate that syntactic ambiguity is closely related to grammatical arrangement, phrase attachment, and structural complexity in students' writing. Although this study focused only on recount texts, it provides valuable insights into how ambiguity arises in EFL writing. Theoretically, the findings support syntactic ambiguity theories, while practically they highlight the importance of clear grammatical construction to improve clarity and reduce misinterpretation in students' written communication.

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