

REFLECTING CRITICAL THINKING THROUGH CONVERSATIONAL IMPLICATURE INTERPRETATION: STUDENTS' ANALYSIS OF GRICEAN MAXIM FLOUTING

Dita Rizki Anggraini
Universitas Indo Global Mandiri
Corresponding email: ditarizki@uigm.ac.id.

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ABSTRACT

As one of the most in-demand skills in 21st-century learning, critical thinking has become a crucial skill for students. Among the various parameters for measuring critical thinking, pragmatic analysis is particularly well-suited for language learners. This study investigates students' ability to analyze short conversations containing Gricean maxim flouting to reveal their levels of critical thinking. Using a qualitative descriptive design, the study analyzed written responses from undergraduate students using a rubric adapted from Facione's (2011) critical thinking framework, focusing on four indicators: analysis, interpretation, inference, and evaluation. The findings indicate that while most students were able to correctly identify the flouted maxims, many experienced significant difficulties in inferring conversational implicature and providing deep contextual justification. High-level critical thinking was characterized by the integration of maxim identification with nuanced contextual reasoning, whereas lower-level thinking was limited to mere descriptive responses. These results suggest that pragmatic analysis of maxim flouting serves as an effective lens for examining critical thinking in EFL contexts. Furthermore, the study highlights the necessity for explicit instructional support to develop students' inferential and evaluative reasoning skills within pragmatics education.

Introduction

Resources all over the universe are now being managed to produce credible future generations for sustainability. UNESCO (2026) currently proposes education as one of the global goals in the SDGs framework. To meet the standard of a qualified education, the 6Cs formula represents the skills that students should possess in 21st-century learning. The students have to be critical, communicative, collaborative, creative, character-driven, and civic-minded. This shows that students being critical has been one of the aspects indicating the quality of education. Critical thinking becomes one of the essential skills for students to adapt to rapid technological, social, and economic changes in the modern world (OECD,

2026). In addition, not only does critical thinking enable a reflective and logical thinking process, enabling individuals to analyze, evaluate, and interpret information carefully, but it also helps them to make reasonable decisions and solve problems effectively (Dewey (1933); Facione (1990); Paul & Elder (2014); Ennis (2015)). To reach the goal, this is intended for all levels of education, starting from primary, secondary, and specifically university level.

In the context of an Indonesian university, the process of critical thinking should be integrated into the teaching and learning process. Based on the MoECRT Regulation No. 53 (2023), the competency-based learning that develops analytical and problem-solving abilities associated with critical thinking is highly encouraged as the standards of learning outcomes, curriculum, and quality assurance in higher education. Regarding the English Language Teaching (ELT) in the university, the integration of analyzing, interpreting, and inferring happens through pragmatic practices. Pragmatics deals with how speakers convey meaning beyond what is explicitly stated and how hearers interpret such meaning within specific contexts. Oswald (2023) states that pragmatics and argumentation are interconnected, as it involves reasoning and evaluating communicative intentions in discourse. Combining pragmatics with critical discourse analysis enables deeper interpretation of ideological meanings and contextual implications in communication, which requires critical analytical thinking (Wodak, 2007).

As one of the fundamental theories in this domain, Grice's Cooperative Principle includes four maxims—Quantity, Quality, Relation, and Manner—that interlocutors generally observe to achieve effective communication (Grice, 1975). Consequently, the interpretation of flouted maxims requires hearers to analyze discourse context, evaluate the speaker's intention, and infer meaning beyond the propositional content of an utterance, which later reflects the students' critical thinking.

Gricean maxim flouting has been examined in numerous linguistic studies in various discourse genres, which mostly focus on identifying types of maxims flouting and their pragmatic functions (Cutting, 2002; Dynel, 2009; Attardo, 2017). Results consistently demonstrate that rather than being a communicative failure, flouting is a purposive pragmatic strategy. Likewise, research in interlanguage pragmatics has explored learners' ability to comprehend and produce implicatures. Studies show that even advanced language learners often struggle to interpret non-literal meanings, particularly when implicature relies on sociocultural knowledge and discourse context (Kasper & Rose, 2002; Taguchi, 2011). Bardovi-Harlig (2013) further argues that pragmatic comprehension involves complex cognitive processing, including attention, inference, and evaluation.

Despite these contributions, existing studies predominantly treat learners' pragmatic performance as a matter of pragmatic competence rather than as evidence of cognitive and analytical processes. Few studies explicitly conceptualize students' analyses of maxim flouting as manifestations of critical thinking or higher-order reasoning within linguistic

analysis. From a cognitive–pragmatic perspective, interpreting conversational implicature aligns closely with theoretical models of inferential communication, such as relevance theory, which emphasizes the role of cognitive effort and contextual assumptions in meaning construction (Sperber & Wilson, 1995). This inferential dimension suggests that the analysis of maxim flouting engages analytical, interpretive, and evaluative reasoning—common processes associated with critical thinking. Within linguistics research, however, these cognitive processes are rarely operationalized using established critical thinking frameworks.

There is still a lack of studies that investigate how students’ analytical reasoning in maxim-flouting analysis reflects different levels of critical thinking. Moreover, previous research tends to focus on the correctness of maxim identification rather than on the quality of inferential reasoning underlying students’ interpretations. Coping with this gap, the present study reconceptualizes students’ written analyses of Gricean maxim flouting as linguistic evidence of critical thinking in pragmatic interpretation. By systematically examining how students identify flouted maxims, explain contextual motivations, and infer implied meanings, the study aims to clarify the cognitive–pragmatic processes involved in meaning construction. This approach contributes to pragmatics by foregrounding the role of analytical reasoning in implicature interpretation and offers a linguistically grounded account of critical thinking as manifested in discourse analysis.

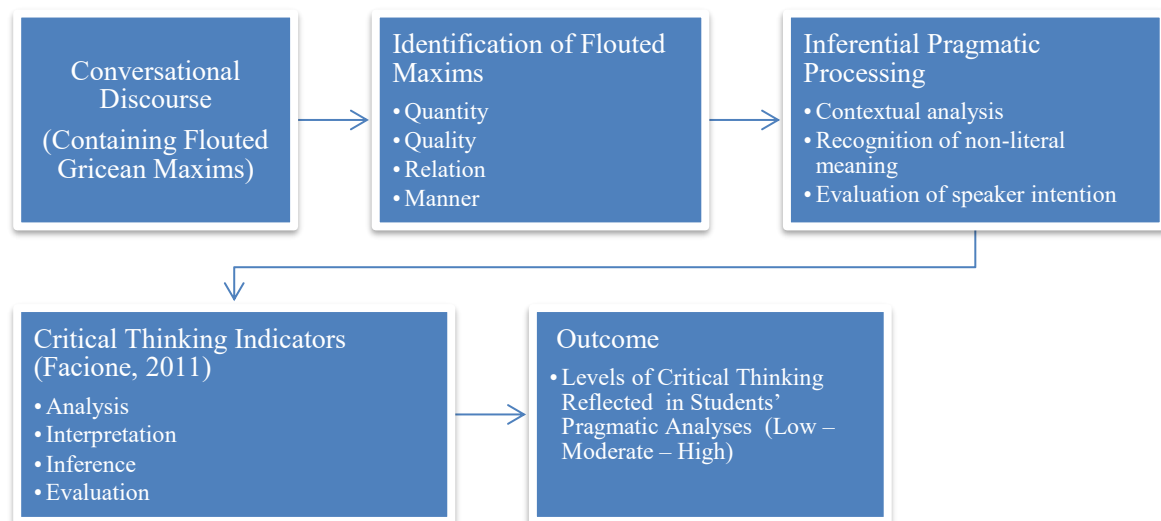


Figure 1. Conceptual Framework

The figure illustrates the conceptual framework of this study, which integrates Gricean pragmatics with cognitive models of critical thinking. The framework depicts a sequential process through which students analyze conversational discourse containing intentionally flouted Gricean maxims.

To start with, the students are required to identify the type of maxim being flouted in the conversational discourse as the foundation for interpreting conversational implicatures. After that, students proceed to an inferential process in which they analyze contextual information, recognize the intentional violation of the maxim, and determine the speaker's intended meaning beyond the literal utterance.

The inferential stage is examined through critical thinking indicators proposed by Facione (2011), including analysis, interpretation, inference, and evaluation. Students demonstrate analysis by categorizing the flouted maxims, interpretation by explaining contextual and pragmatic motivations, inference by deriving implied meanings, and evaluation by providing logical justification for their interpretations. The framework ultimately represents varied levels of critical thinking, reflected in the depth, coherence, and quality of their reasoning during pragmatic interpretation.

Overall, the framework conceptualizes maxim flouting as a cognitively demanding pragmatic phenomenon that activates higher-order reasoning processes, thereby enabling the investigation of critical thinking within linguistic discourse analysis. In line with the conceptual framework and identified research gap, this study addresses the following research questions:

1. How do students interpret and explain the flouting of Gricean maxims in relation to contextual and pragmatic factors?
2. What critical thinking processes are reflected in students' analyses of conversational implicature resulting from maxim flouting?
3. What critical thinking levels are reflected in students' analyses of conversational implicature resulting from maxim flouting?

Method

This study employed a qualitative descriptive research design grounded in pragmatic discourse analysis. Qualitative methods are particularly suitable for investigating how meaning is inferred in context and how analytic reasoning is manifested in language interpretation (Creswell, 2014; Dörnyei, 2007). Since the focus of the study is not on frequency measurement but on the quality of students' pragmatic reasoning, a qualitative approach enables an in-depth examination of the interpretive processes underlying maxim-flouting analysis, though descriptive statistics are displayed to reveal students' critical thinking processes and levels in general.

The data consist of students' written analyses of conversational excerpts that flout Gricean maxims. The participants were 21 5th-semester undergraduate students enrolled in a linguistics-related course (e.g., Pragmatics or Discourse Analysis) who were purposively sampled. They had received prior instruction on Grice's Cooperative Principle and conversational implicature. In qualitative pragmatic research, students' written responses

are considered valid data for examining inferential and analytical reasoning, as they provide explicit evidence of how meaning is interpreted and justified (Kasper & Rose, 2002; Bardovi-Harlig, 2013).

Data were collected through an analytical task in which students were required to examine selected conversational excerpts. Here are the conversations that the students had to analyze,

Librarian: (raises his eyes, looks at the student with no facial expression)
Student: Hi. Could you check for me whether I have any books to collect?
Librarian: (swipes the student's card, clears his throat, wipes his nose with a tissue, glances at the computer screen, turns to the shelf to get a book, then another book)
Student: Any more?
Librarian: (turns and gets a third book, stamps them all with the return date)
Student: Is that all?
Librarian: Are you going to borrow all the books in the library?
Student: OK . . . I see . . . thank you very much

Figure 2. Conversation 1 Containing Maxim Flout

A: Can I get six thin slices of Danish ham please?
B: Six thin slices. . . .
A: Yep.
B: They're all really thin, so. . . .

Figure 3. Conversation 2 Containing Maxim Flout

The data in this study were analyzed using qualitative thematic analysis assisted by NVivo software. The analysis focused on students' responses in interpreting maxim flouting and identifying the reflection of critical thinking in their answers. The researcher conducted several steps in analyzing the data as follows:

1. Data Preparation

The students' responses were collected through their written analyses and then organized based on each participant group.

2. Data Importing into NVivo

All the data were imported into NVivo to operate systematic coding and categorization.

3. Coding Process

Coding was conducted by identifying important statements related to maxim flouting, conversational implicature, and critical thinking indicators. Students' responses were grouped into several thematic codes.

4. Categorizing Themes

The coded data were categorized into themes such as identification of maxim flouting, implicature interpretation, critical thinking process, and level of critical thinking.

5. Interpreting the Findings

The researcher interpreted the coded data by relating the findings to Grice's Cooperative Principle theory and Facione's critical thinking framework.

6. Drawing Conclusions

The final step was drawing conclusions based on recurring themes and patterns found in students' responses.

The indicators of critical thinking used in this study included interpretation, analysis, inference, and evaluation, adapted from Facione's framework.

Table 1

Facione's Critical Thinking Indicators

Critical Thinking Skill	Analytical Indicator
Analysis	Accurate identification and categorization of flouted maxims
Interpretation	Explanation of contextual and pragmatic motivation
Inference	Derivation of implied meaning
Evaluation	Logical justification of interpretation using discourse evidence

Trustworthiness of the Study

To ensure trustworthiness, the study employed criteria of credibility and dependability (Lincoln & Guba, 1985). Credibility was enhanced through theory-based coding and repeated data examination. At the same time, dependability was ensured by maintaining a clear analytical procedure and coding framework grounded in established pragmatic and cognitive theories.

Findings and Discussion

The data were analyzed using NVivo to identify students' ability to analyze maxim flouting and to interpret conversational implicature as a reflection of critical thinking. The analysis focused on students' responses to several conversational dialogues containing maxim flouting.

The coding results below showed that most of the group accurately identified the maxim flouted in both conversations.



Figure 4. Students' Interpretation of the Flouted Maxims

Furthermore, they tend to interpret the flouted maxim into a contextual reasoning rather than a literal one. This fact points out that the students pass at least one or even some of the processes of critical thinking, that is, interpretation. In other words, indicate that students generally succeeded in identifying implied meanings from the dialogues. For instance, one group of students explained:

"Flout the maxim of relation because the answer is not relevant, and he did not want to talk about his salary."

In this response, the students successfully identified the flouting maxim, which is the relation. This shows the students' understanding of the Gricean cooperative principle. Besides, they were able to interpret the conversational implicature as well, by summing up that the speaker actually objected to talking about salary. This interpretation shows that the students not only comprehend the literal meaning but also consider the implied one.

However, a few students demonstrated incorrect interpretation, showing that they focused only on the surface meaning of the utterance without considering the implied intention. This suggests that they still relied on literal interpretation rather than contextual reasoning.

The analysis also identified several indicators of critical thinking reflected in students' responses. The results are illustrated through the following chart.

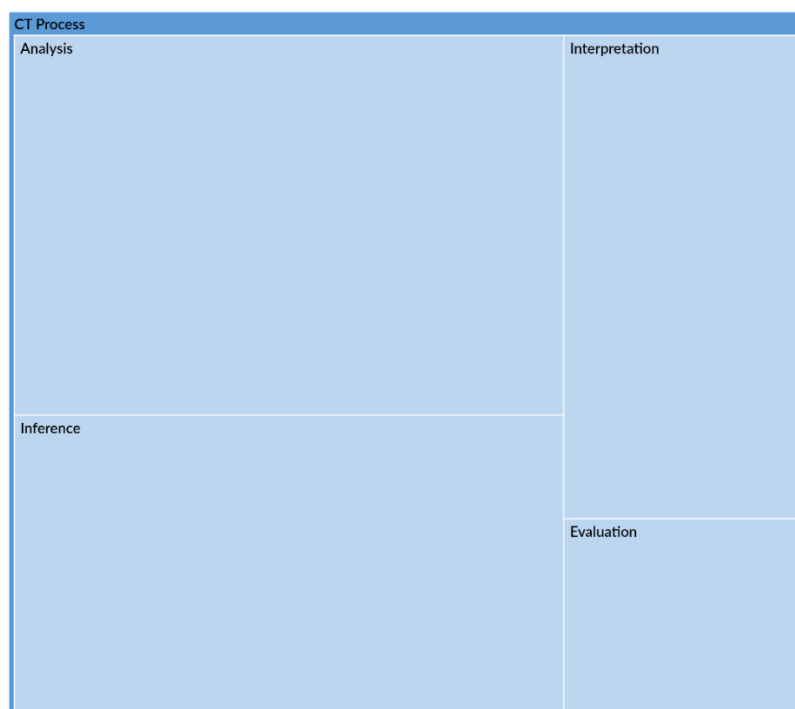


Figure 5. Students' Involvement in CT Processes

The chart, it revealed that analysis emerged as the most dominant critical thinking indicator. This indicates that students attempted to examine contextual information before concluding the speaker's intention. Inference also appeared frequently because students were required to derive implied meanings from indirect utterances. Meanwhile, evaluation appeared least frequently among all indicators. Only a few students critically assessed the effectiveness or purpose of the speaker's utterance in deeper ways. Most participants focused primarily on identifying meaning rather than evaluating communicative strategies. One of the group participants stated:

"The American student changing the topic to the Chinese student as a sign that he won't talk about his job anymore, and he is already feeling so uncomfortable and wants to walk away. So, the cooperative principle is relative because he is changing the topic."

This response demonstrates analytical thinking because the student connected the utterance with the communicative context and inferred the speaker's hidden intention. The students, in addition, understood the topic shift as the strategy to avoid the talk of salary.

The emotional implication is also delivered, that the speaker was not comfortable during the conversation and tended to stop it. Not only were the students able to understand the implied meaning, but also to consider the social and emotional context in an interaction. In this state, the students have stepped up to the evaluation process in critical thinking.

These findings align with Facione's theory of critical thinking, particularly in the aspects of analysis and inference. Students with stronger critical thinking ability tended to provide contextual explanations and logical reasoning, while weaker responses were generally more literal and lacked analytical justification. Overall, the findings demonstrate that students' ability to analyze maxim flouting contributes to the development of pragmatic understanding and critical thinking skills, especially in interpreting implied meanings and identifying communicative intentions in conversation.

Next, for the critical thinking level, most students are in the moderate category as displayed in the chart below.

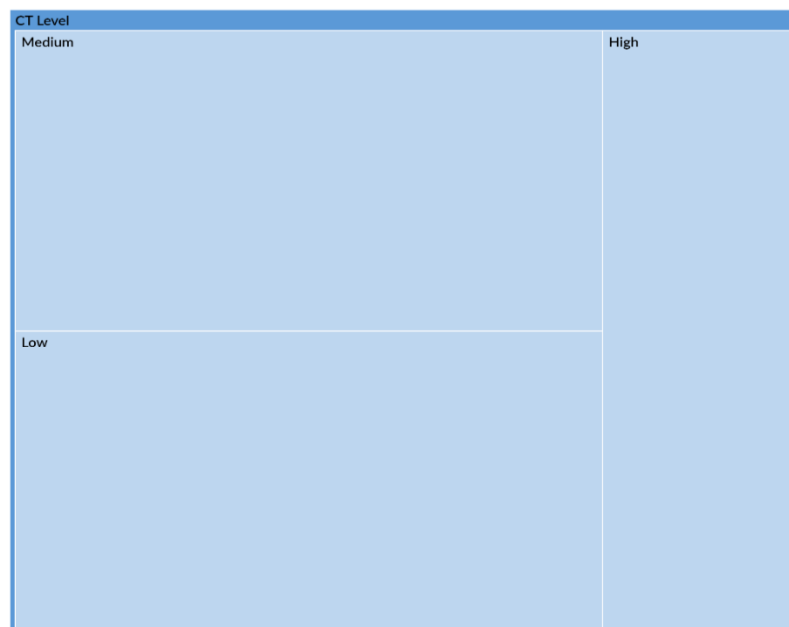


Figure 6. Students' Critical Thinking Level

The chart illustrates that most of the students belong to the moderate to low critical thinking (CT) level. Based on the CT framework by Facione, a critical thinker should at least involve four sequential processes of thinking, which are analysis, interpretation, inference, and evaluation. Thus, it can be concluded that most of the group just covers one or two processes of CT. It means that they could recognize the flouted maxim and understand the implied meanings, but failed to draw a logical conclusion beyond the utterances as well as to evaluate the speaker's intention of changing the topic.

Group-Based Analysis and Collective Critical Thinking

The use of group discussion as the unit of analysis revealed how critical thinking can emerge collaboratively. Groups that demonstrated moderate to high critical thinking often integrated multiple perspectives, combining contextual, cultural, and inferential reasoning. Conversely, groups exhibiting low critical thinking tended to converge quickly on surface-level answers without elaboration.

The results further indicate that students' critical thinking was strongly influenced by contextual clarity and intercultural salience. In Conversation 1, which foregrounded culturally sensitive topics such as salary, a majority of groups recognized the pragmatic motivation behind topic shifting. Several groups interpreted the American students' response as a strategy to maintain politeness or avoid face threat, reflecting developing socio-pragmatic competence.

However, some analyses relied on speculative assumptions (e.g., embarrassment due to low salary), suggesting that while students recognized cultural sensitivity, they did not always distinguish between textually supported inference and personal conjecture. This aligns with Thomas's (1995) distinction between pragmatic failure arising from limited socio-pragmatic knowledge versus limited pragma-linguistic precision.

Conversation 2 posed greater challenges for students, as evidenced by wider variation in maxim identification and interpretation. Unlike Conversation 1, this service encounter lacked an overt interpersonal conflict, requiring students to interpret indirectness, sarcasm, or stance from minimal linguistic cues. Groups demonstrating higher critical thinking engaged with pragmatic ambiguity by evaluating tone (e.g., sarcasm, surprise) and non-literal meaning, even when their theoretical categorization of maxims was debatable.

Between the two conversations, maxim identification alone was not a reliable indicator of higher critical thinking. Most groups successfully recognized flouting of the maxim of relation or quantity, particularly in Conversation 1, which involved an explicit interpersonal topic (salary). However, only a limited number of groups moved beyond identification to infer why the maxim was flouted and what implied meaning was generated.

This finding supports Grice's (1975) claim that flouting a maxim is meaningful only insofar as hearers engage in inferential reasoning to recover speaker intention. Groups demonstrating low critical thinking tended to treat maxim flouting as a formal classification task, focusing on surface relevance or directness without interpreting implicature. In contrast, groups demonstrating moderate to high critical thinking explicitly linked maxim flouting to sociocultural norms (e.g., privacy, face-saving) and inferred speaker stance (e.g., discomfort, avoidance).

Importantly, these findings suggest that critical thinking in pragmatics should not be equated with theoretical accuracy alone. Several groups misidentified the flouted maxim but demonstrated higher-order reasoning by evaluating the speaker's attitude, intention, and pragmatic effect. This supports the view that critical thinking involves analysis, interpretation, and evaluation rather than mere correctness (Facione, 2011).

This finding resonates with sociocultural perspectives on learning, which emphasize that reasoning and meaning-making are socially mediated. Group-based pragmatic analysis appears to offer students opportunities to negotiate interpretations, although explicit scaffolding may be necessary to guide them toward more in-depth inferential reasoning.

Pedagogical Implications

This study implies that pragmatics learning could not only improve students' language proficiency, but also develop their critical thinking skills. Activities involving flouting maxim and conversational implicature analysis push students to generate interpretation, analysis, inferences, and evaluation simultaneously. Hence, pragmatic materials are better not to be delivered through a conceptual introduction and theoretical classification, but through such activities which involve reasoning and argumentation.

Lecturers can integrate authentic dialogue, movie clips, cross-cultural conversations, or even a daily communicative case study into pragmatics learning. Through a discussion, group analysis, and critical reflection, students are trained to identify implied meaning, evaluate diction used, and consider the social context's influence on the meaning of the utterance. This approach is in line with the principle of 21st-century learning, highlighting the HOTS development through meaningful and contextual activities.

Besides, the results of this study showed how important scaffolding is in pragmatics learning. Students need sequential guidance to conceive the relation among context, implicature, and the speaker's communicative meaning. Lecturers, thus, could use stimulus questions like:

"Why do the speakers give such responses?"

"What does the speaker imply?", or

"How does context affect utterance?"

to help students widen their inferential and evaluative competence. Consequently, not only does pragmatic learning contribute to the improvement of pragmatic competence, but it also becomes an effective medium to grow students' critical thinking ability in English language learning.

Conclusion

This study investigated the students' critical thinking through group analysis of conversations with Gricean flouting maxims. The results show that most of the students

with moderate to high CT level accurately identified the flouted maxims, though the process of critical thinking dominates in their ability to interpret contextually, to understand the speaker's intention, as well as to draw inferences. Groups with low levels of critical thinking tended to only focus on surface aspects such as the relevance of answers, while groups with higher levels of critical thinking are able to analyze the speaker's intentions, sociocultural norms, and pragmatic attitudes such as avoidance, discomfort, surprise, and sarcasm.

The research findings also show that accuracy in classifying maxim types does not necessarily indicate a high level of critical thinking. Inferential abilities and evaluative interpretation are actually more important aspects of pragmatic analysis. Furthermore, conversational context also influences students' analytical performance. Interpersonal interactions involving culturally sensitive topics tend to be easier to interpret than service encounters, which require an understanding of indirectness and tone. Therefore, the use of a variety of pragmatic contexts is considered important for developing students' critical thinking skills.

However, this study still has limitations, particularly its small sample size and reliance on group responses, which may obscure students' individual thought processes. Future research is recommended to use longitudinal designs, think-aloud protocols, or mixed-methods studies to explore the relationship between pragmatic competence and the development of critical thinking in greater depth. Overall, this study concludes that analyzing flouting Gricean maxims can be an effective tool for developing both pragmatic competence and higher-order critical thinking skills in linguistics learning.

Declarations

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