

Conversational implicature comprehension strategies used by English learners in Indonesia*

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Pratama, Hendi, Fathur Rokhman, and Sri Rejeki Urip. 2019. Conversational implicature comprehension strategies used by English learners in Indonesia. *Linguistic Research* 36(3), 415-458. Comprehension of conversational implicature is relatively easy for native speakers. However, the same degree of ease does not apply to second language learners. This study aims to uncover the strategies of second language learners despite the difficulties they face. Eighteen respondents are invited to join think-aloud protocols (TAP sessions). During the TAP sessions, respondents are instructed to answer thirty written questions assessing conversational implicature and, at the same time, asked to narrate their thoughts out loud during the session. The responses during these sessions are recorded and transcribed. The data is then codified and analyzed using receptive strategy categorization developed by Vandergrift (1997). The results of the analysis lead to clues on how second language learners, in general, strategize to understand conversational implicature. This study also reveals the difference between strategies used by learners with high implicature scores and those used by learners with low implicature scores. (Universitas Negeri Semarang)

Keywords interlanguage pragmatics, second language pragmatics, implicature, strategy, comprehension

1. Introduction

In the early years of pragmatics, most of the studies have focussed on participants in a first language setting. It has only been since the late 1980s that some efforts have been made by researchers to study pragmatics in second language settings (Thomas 1983; Blum-Kulka et al. 1989; Leech 2014; Bardovi-Harlig 1999). These efforts have been recognized under the umbrella

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term of interlanguage pragmatics (ILP) (Leech 2014). Interlanguage pragmatics is a study of the use and acquisition of pragmatic knowledge of a foreign language by non-native speakers (Bardovi-Harlig 2010). It is also considered a hybrid of foreign language acquisition studies and pragmatic studies (Kasper and Blum-Kulka 1993). Interlanguage pragmatics focuses on the understanding and production of linguistic action including discourse regulation. It has the following key areas: pragmatic understanding, production of linguistic action, pragmatic transfer from first language to second language and communication effects.

Studies of ILP are parts of studies in pragmatics in general (Pratama 2015). It means that ILP can take any pragmatic themes as their focus of study as long as the setting is fitted within a second language setting. Some of the most frequently discussed themes in pragmatics are speech acts, implicature, presupposition, reference, politeness, deixis and definiteness (Horn and Ward 2006). This current study takes implicature as its main theme and expands the discussion on second language learners' comprehension of them. In-depth studies on the use of implicature for second language learners have been conducted by Bouton (1988, 1992, 1994) and Roever (2005) and investigate the gap between native and non-native speakers' comprehension of English implicature. However, these studies have not discussed comprehension strategies in detail. Smaller studies on implicature in second language settings have been conducted by Murray (2011), Kubota (1995) and Chandra (2001) but they also did not adequately address the strategies of second language learners. This study attempts to fill the gaps by explaining, in detail, the strategies second language learners use to understand conversational implicature.

Implicature is a proposition made by a speaker to deliver a different meaning from the literal forms uttered (Grice 1975). Thomas (1995) gives the example of a paramedic who has to work on Christmas Eve. His patient vomits all over him in the ambulance. The paramedic exclaims "Great, that's really great! That's made my Christmas!". The paramedic most likely feels unhappy but produces an utterance that word-for-word expresses quite the opposite. The unique point about this example is that any native speaker of English would understand the implicature made by the paramedic.

Implicatures are pragmatic features frequently used by native speakers

(Bouton 1988). For non-native speakers, however, these features are quite troublesome. Bouton (1992) has identified the fact that students coming from outside the United States struggle when they are asked to interpret implicature in English during the first year of their stay there. Roever (2005) backs up this finding. Students who study English in Germany and Japan are also facing the same degree of difficulty in understanding conversational implicature. In Indonesia, second language learners have difficulty in understanding English conversational implicature, especially the formulaic ones (Pratama et al. 2016). A follow-up study shows that there are several factors influencing the second language learners' ability to understand implicature in English including vocabulary, grammar, formal exposure and informal exposure (Pratama et al. 2017).

Most of the studies on implicature in a second language setting focus on identifying the learners' difficulties (Bouton 1988, 1992; Roever 2005; Pratama et al. 2017). Some have focused on the efficacy of explicit teaching of implicature to improve students' understanding (Kubota 1995; Bouton 1994; Murray 2011) but none have tackled receptive strategies. This study aims to go further to reveal the strategies used by second language learners in comprehending English conversational implicature.

2. Theoretical background

2.1 Conversational implicature

Levinson (1983: 97) argues that implicature is "one of the single most important ideas in pragmatics". The theory of implicature was originally presented by Paul H. Grice in 1967 during one of the William James lectures at Harvard (Lüthi 2006). It is his view that implicature is a special condition where a speaker conveys a different meaning from the surface utterance he/she expresses (Grice 1975). The mechanism of a conversational implicature is based on the Cooperative Principle (CP) which states that one shall "make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged" (Grice, 1975: 307). Conversational

implicature can be worked out if the speakers or the participants of the conversation: (1) understand the conventional meaning of words and references used in an utterance; (2) partially or fully fulfil the maxims of the CP (or at least fulfil the CP itself); (3) understand the context of the utterance; (4) understand the background or common knowledge of the utterance and (5) agree that all previous headings are taking place (Grice 1975: 310).

Table 1. Cooperative principle maxims by Grice (1975)

Cooperative Principle (CP):	
Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.	
Maxims	Sub-maxims
Quantity	Make your contribution as informative as is required Do not make your contribution more informative than is required
Quality	Do not say what you believe to be false Do not say that for which you lack adequate evidence
Relation	Be relevant
Manner	Avoid obscurity of expression Avoid ambiguity Be brief Be orderly

There are at least three mechanisms with which speakers can trigger conversational implicature using the CP. The first mechanism is to observe all maxims in the CP to generate implicature. The second mechanism is to violate a maxim; however, the violation can be explained by the supposed clash of other maxim(s). The third mechanism is when the speakers flout a maxim to imitate the effect of a figure of speech (Grice 1975: 311). The following illustration helps explain the idea of maxim-flouting in generating implicature.

Context: *Joanna has accidentally locked herself out of her house. It is winter, in the middle of the night and she is stark naked.*

Andy : Do you want a coat?

Joanna: No, I really want to stand out here in the freezing cold with no clothes on.

(Adapted from Thomas 1995)

Joanna can say 'Yes' in order to comply with all maxims and it will save some energy and time for her. However, she flouts the quality maxim and mentions untrue facts. No one wants to be outside during winter. No one wants to be naked outside the house. This triggers an implicature which reflects that she might be annoyed by Andy's question in such a situation. Most native speakers of English would comprehend this implicature.

This paper utilizes conversational implicature taxonomy used by Pratama et al. (2017). The taxonomy was adopted because it contains certain levels of practicality in classifying conversational implicature in second language settings. The basic form of the taxonomy by Pratama et al. (2017) was adopted from the taxonomy created by Bouton (1992, 1994) who specializes in non-native speakers' comprehension of implicature. Bouton divides conversational implicature into (1) formulaic and (2) idiosyncratic. Formulaic implicatures have certain linguistic, lexical and pragmatic markers or patterns. Idiosyncratic implicatures, on the other hand, are strongly bound to the at-issue context of the conversation. According to Bouton (1994), formulaic implicatures can be further divided into five subclasses: (1) POPE-Q, (2) Sequential, (3) MRR, (4) Scalar, and (5) Indirect Criticism. The explanation of idiomatic implicatures given by Bouton refers to implicatures generated by maxim flouting. There are four maxims in Grice's (1975) tradition which can be flouted or manipulated to trigger implicatures. We may call those implicatures based on the maxim being flouted: (1) quantity implicatures, (2) quality implicatures, (3) manner implicatures, and (4) relevance implicatures. It should be noted that maxim flouting is not the only mechanism to trigger implicatures but it is arguably the most observable mechanism. Pratama et al. (2017) added another subclass of implicature based on Arsenault (2014). Arsenault (2014) wrote a very convincing piece arguing that idioms or idiomatic expressions should be accounted for as implicatures on their own. The complete account of the taxonomy combining Bouton (1992, 1994), Grice (1975) and Arsenault (2014) can be seen in the following figure.

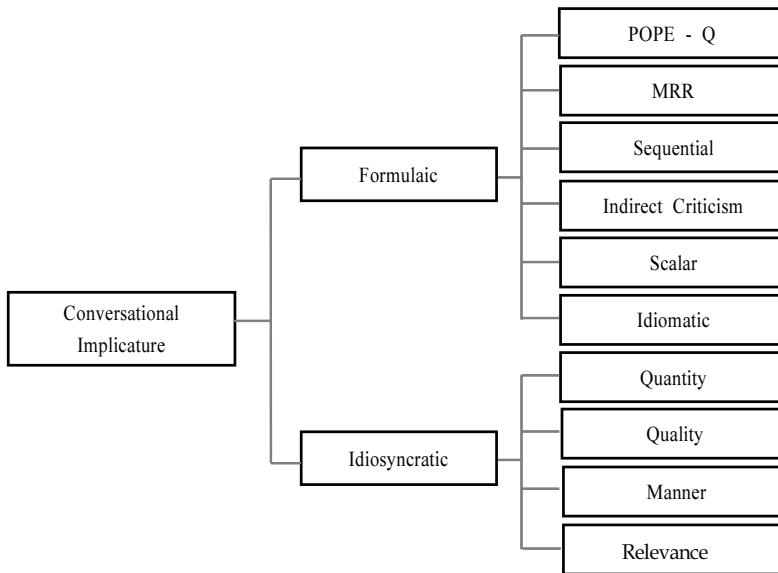


Figure 1. Conversational implicature taxonomy for second language learners (Pratama et al., 2017)

The chart in Figure 1. can be elaborated further into remarks and examples as follows:

Table 2. Summary of types of implicatures (Pratama et al. 2017)

Implicature	Remarks	Example
POPE-Q	Implicature using rhetoric question	John : Would you like to go to the beach?
Minimum Requirement Rule (MRR)	The number mentioned by the speaker implicitly means the minimum number	Arthur : Is the Pope Catholic? John : I need a place with fifty seats for my son's birthday party. Arthur : McDonald's has fifty seats.
Sequential	Implicature indicating the order of events	Skeeter : OK, how about we just take walks in the park and go to the war museum?
Indirect Criticism	Implicature indicating criticism without being too explicit	Wendy : Now you're talking. Mr. Ray : Have you finished with Mark's term paper yet? Mr. Moore : Yeah, I read it last night. Mr. Ray : What did you think of it? Mr. Moore : Well, I thought it was well typed.

Scalar	Implicature using modality	Dan : Oh really? Does he like them? Gretta : She. Yes, she seems to.
Idiomatic	Implicature using idioms and/or idiomatic expressions	John : I think I'm still buying the house for us although it's next to a toxic waste dump. Kelly : Have you lost your mind?
Quantity	Implicature relying on manipulation of quantity maxim	Tim : So what do you do? Mary : I'm a reader at a publisher.
Quality	Implicature relying on manipulation of quality maxim	Tim : No! Do you read for a living? Chuck : Hey! For the record, every time I laughed at one of your jokes, I was faking it.
Manner	Implicature relying on manipulation of manner maxim	Larry :You're a monster. Griffin : Would you marry me? Stephanie : Look, Griffin, I know it shouldn't bother me that you're a zookeeper, but it kind of does. And when we first started dating, I just assumed that you would turn into the guy that I'd always dreamed of being with. But...
Relevance	Implicature relying on manipulation of relevance maxim	Mr. Andrew : Where is my box of chocolates? Mrs. Andrew : The children were in your room this morning.

We do not include other implicature classifications such as that of Rustono (1998) who divides the implicatures into multiple categories: (1) implicatures based on maxims by Grice, (2) implicatures based on maxims that are flouted in Leech's politeness theory, and (3) implicatures based on the type of speech acts embodied by the implicature. The reason we exclude Rustono's classification is because categorizing implicatures based on speech acts has been proven to be very problematic. The number of speech acts in a language is difficult to determine. Speech acts in certain languages and cultures have an enormous number of variations (Wierzbicka 2003). Translating a speech act from one language to another is problematic. For example, the speech act of *requesting* in English can be a speech act of requesting or asking in Bahasa Indonesia. The speech act of *quipping* is almost impossible to be transferred to a speech act in Bahasa Indonesia.

The taxonomy developed by Pratama et al. (2017) has mainly been developed

from the Gricean program. Hence, implicature mechanisms which are not based on Grice, such as Sperber and Wilson (1986) cannot fit into this taxonomy. Wilson and Sperber (2012) have separated themselves from the Gricean and Neo-Gricean program by stating:

Relevance theory also departs substantially from Grice's account ... For relevance theorists, the very act of communicating raises precise and predictable expectations of relevance, which are enough on their own to guide the hearer towards the speaker's meaning. Speakers may fail to be relevant, but they cannot, if they are genuinely communicating (as opposed, say, to rehearsing a speech), produce utterances that do not convey a presumption of their own relevance. (Wilson and Sperber, 2012: 5-6)

To put it in other terms, Sperber and Wilson (1986) have "rejected some [Gricean Maxims] and swept the remainder into a maxim of Relevance" (Levinson 2000: 135). Pratama et al. (2017) have excluded the use of Levinson's (2000) implicature taxonomy because Levinson has stated that most parts of his heuristics are adopted from the Gricean program. The first (Q-) heuristic is related to Maxim of Quantity (Levinson 2000: 35). The second (I-) heuristic is related to Maxim of Quantity (Levinson 2000: 37). The third (M-) heuristic is related to Maxim of Manner (Levinson 2000: 38). Levinson's (2000) theory works better in explaining the mechanism of an implicature rather than codifying one. It makes the theory unsuitable for a taxonomy.

2.2 Non-native speakers' strategies in comprehending pragmatic features

Few studies or reference books cover non-native speakers' strategies in comprehending English implicature in detail. Generally speaking, Celce-Murcia et al. (1995) may have described the strategy of non-native speakers communicating in a foreign language. However, none directly address techniques used to understand English implicatures or any other pragmatic features, rather they focus on how to communicate in English in general. The strategy by Celce-Murcia et al. is referred to as strategic competence.

The strategic competence strategy proposed by Celce-Murcia et al. (1995) is

not applicable to this study because it is more focussed on the language production system, rather than the language receptive system. Our study focuses on strategies used by non-native speakers in the language receptive modes such as reading or listening. Because conversational implicature is concerned with interactive communication, this study uses listening strategies such as those developed by Vandergrift (1997). The strategy proposed by Vandergrift (1997) consists of metacognitive strategy, cognitive strategy, and socio-affective strategy. We cannot adopt all the categories provided by Vandergrift because they are designed for listening comprehension. We have made selective choices regarding implicature comprehension and the list is as follows.

- (1) Inferencing Techniques: using the available information in the conversation to guess the unfamiliar word.
 - 1.a. Linguistic Inferencing: using familiar words to guess the unfamiliar words.
 - 1.b. Extralinguistic Inferencing: using the relationship between speakers, other parts of the problem and other concrete situations to guess the intent of the unfamiliar words.
 - 1.c. Between Parts Inferencing: using markers connecting the speech then guessing the purpose of speech using the relationship.
- (2) Elaboration Techniques: using the existing knowledge outside the conversation and relating it to the knowledge in the conversation to determine the purpose of the conversation.
 - 2.a. Personal Elaboration: refers to personal experience.
 - 2.b. World Elaboration: refers to the general knowledge available around us.
 - 2.c. Academic Elaboration: using the knowledge gained from the academic situation.
 - 2.d. Questioning Elaboration: using chain questions to guess intent.
 - 2.e. Creative Elaboration: attempting to compose a story or taking a unique point of view to guess intent.
 - 2.f. Imagery: using mental images or visuals to represent information encoded into separate categories but can be seen as an elaboration effort.

- (3) Summarization Technique: creating a mental or written summary of the information contained in the conversation.
- (4) Translation Technique: translating the target language into a language that is word-by-word.
- (5) Transfer Technique: using the knowledge of the language in question to facilitate the understanding of the target language.
- (6) Repetition Technique: reading aloud the conversation to try to understand.
- (7) Grouping Technique: calling information based on information that has similar attributes.
- (8) Deduction/Induction Technique: consciously applying rules that have been studied or developed by the learners to understand the conversation.

3. Methods of the study

The qualitative approach is suitable for this study because this research focuses on the receptive strategy of second language learners. To investigate the receptive strategy, participants need to be interviewed. In order to minimize the effect of memory retention, the participants need to be interviewed on the spot while they are doing the implicature tests. There is a technique that suits this purpose. The *Think Aloud Protocol* (TAP) developed by Ericsson and Simon (1993) is a verbal protocol utilized for immediate reflection of participants' experiences. The TAP requires respondents to say out loud what they are thinking when they are working on questions containing implicatures. In the event of silence, the researcher elicits answers using questions. Interviewers may also clarify statements made by respondents. The respondents' answers and the elicitation questions from the interviewers are recorded. Learners' perspective is an important aspect to investigate their practices and development in language learning (Kim 2017).

To reveal the strategies used by respondents while comprehending the implicatures in English, 18 participants were invited to the TAP session. These participants were structurally selected from a previous study conducted by

Pratama et al. (2017). In the previous study, 110 people took the implicature test, but only 18 of them were invited to this new TAP session. Nine of the TAP participants were selected from participants who attained the highest implicature scores and nine participants came from the group with the lowest implicature scores. Within each group of nine participants, three came from a high formal exposure group, three from a medium formal exposure group and three from a low exposure group. The high formal exposure group were students of an English education program, the medium formal exposure group came from an international class in a non-English education program and the low formal exposure group were students from a regular accounting class.

Table 3. Summary of research respondents

Students based on implicature score	Level of formal exposure	Number of students
Students with low implicature scores	High formal exposure	3
	Medium formal exposure	3
	Low formal exposure	3
Students with high implicature scores	High formal exposure	3
	Medium formal exposure	3
	Low formal exposure	3
Total		18

The TAP session was conducted individually and took about an hour for each respondent. During each session, the researcher and the respondent's conversation was recorded, as well as the respondent's reflective monologue. The recording was transcribed using a transcription protocol designed by the University of Pennsylvania (2011). The data was then coded based on Vandergrift's (1997) strategy. All data was classified into implicature subclasses, implicature classes and speaker strategies.

The process of deciding whether a conversation contains implicature has always been very challenging. Even Grice, who pioneered research in this field, admitted that "noncontroversial examples are perhaps hard to find, since it is all too easy to treat a generalized conversational implicature as if it were a

conventional implicature" (Grice 1975: 314). However, as researchers we set certain criteria and processes to validate our implicature items. The thirty items in our implicature comprehension test were compared against the criteria of conversational implicatures proposed by Levinson (1983) and Thomas (1995). Those criteria are:

- (1) A conversational implicature is cancellable or defeasible.
- (2) A conversational implicature is non-detachable.
- (3) A conversational implicature is calculable.
- (4) A conversational implicature is non-conventional.
- (5) A conversational implicature generates multiple interpretations.

Implicatures are different from inferences. Implicatures are propositions generated by utterances in certain contexts and mechanisms. Inference is one of the stages needed in decoding implicatures. This notion is supported by Wilson and Sperber (2012) who argue that "the main role of inference in comprehension is to recover what is implicated". The Indonesian researchers involved in this study conducted a focus group discussion to ensure the thirty dialogues met the five criteria of conversational implicatures listed above. Three native speakers of English were then brought in to double-check that the implicature examples were valid and easily understood by them also.

4. Findings and discussion

Firstly, the researchers attempted to capture the general trend of the strategies used by all participants in comprehending English implicature. Secondly, we analyzed the strategies used by respondents with high and low implicature scores separately.

4.1 General strategy in comprehending conversational implicature in English

Eighteen participants were required to answer 30 questions during the TAP session. This data was then analyzed and classified into strategy taxonomy

adapted from Vandergrift (1997) that offers 15 strategies, as well as the random guessing technique. The random guessing technique was added to the list because it appeared 36 times and fulfilled a category on its own. The amount of data accumulated from the 18 participants consisted of 540 chunks, where each chunk was analyzed, coded and classified into one of the 16 strategies. A chunk was double- or triple-tagged when it contained multiple techniques.

Table 4. Recapitulation of the general strategies used by second language learners in comprehending English implicature

No	Strategies	Frequency of Occurrence	Percentage of Occurrence
1	Deduction/induction	187	28%
2	Linguistic inferencing	160	24%
3	Extralinguistic inferencing	77	11.50%
4	Creative elaboration	62	9.30%
5	Translation	54	8.10%
6	Random guessing technique	36	5.40%
7	Between-parts inferencing	26	3.90%
8	Transfer	25	3.70%
9	World elaboration	19	2.80%
10	Questioning elaboration	9	1.30%
11	Repetition	8	1.20%
12	Personal elaboration	3	0.40%
13	Imagery	2	0.30%
14	Academic elaboration	0	0%
15	Summarization	0	0%
16	Grouping technique	0	0%

Looking at Table 4, there are clearly two dominant strategies used by the participants. The deduction/induction technique is the most frequently used strategy. This shows that, in general, participants are able to utilize logical sequence in comprehending implicature. The second most frequently used technique is linguistic inferencing. With this technique, the participants use keywords or phrases to unlock other parts of the conversation in order to

comprehend English implicature. The two next most popular techniques used by the participants are extralinguistic inferencing and creative elaboration. Extralinguistic inferencing uses non-linguistic cues such as intonation and gesture to understand English implicature. The creative elaboration technique is when respondents try to create new stories or points of views from the dialogue to understand the implicature.

The above list shows the strategies used by 18 respondents from high and low implicature score groups. However, each of these two groups showed different preferences in the strategies they took. Therefore, the next section will discuss the use of these strategies in each implicature score-based group. This division will make us more familiar with the strategies used by the upper and lower groups.

4.2 Second language learners' strategies in the high implicature score group

The second language learners who scored highly in the implicature test have different strategy patterns to the learners who received lower scores on the test. The strategies used by this top group can be used as a teaching model because they have been proven to contribute to good results for the respondents involved in this study. Here is the recapitulation of the strategies used by the high implicature score group.

Table 5. Recapitulation of comprehension strategies used by the high implicature score group

No	Strategies	Frequency of Occurrence	Percentage of Occurrence
1	Deduction/induction	127	33.5%
2	Linguistic inferencing	50	13.2%
3	Extralinguistic inferencing	50	13.2%
4	Creative elaboration	49	12.9%
5	Translation	29	7.7%
6	World elaboration	19	5.0%
7	Between-parts inferencing	18	4.7%
8	Transfer	18	4.7%

9	Questioning elaboration	8	2.1%
10	Repetition	6	1.6%
11	Personal elaboration	3	0.8%
12	Imagery	2	0.5%
13	Academic elaboration	0	0%
14	Summarization	0	0%
15	Grouping	0	0%
16	Random guessing	0	0%

The elaboration and analysis of strategies used by the upper group above are explored in the following sections.

4.2.1 Deduction/induction strategy in the high implicature score group

The deduction/induction strategy emerged 127 times in the upper group during the TAP session. This phenomenon is supported by the following data:

Context: Tim and Mary are getting acquainted. They are feeling attracted to each other.

Tim : So what do you do?

Mary : I'm a reader at a publisher.

Tim : No! Do you read for a living?

Question : What is the purpose of Tim's response?

- Tim made a joke about Mary's work.
- Tim did not really hear Mary's answer.
- Tim did not like to read.

(Instrument A on Question no. 27)

INT : Ok, next! Twenty-seven!

ATOP2 : Twenty seven (0) A

INT : A! How did he make a joke?

ATOP2 : "No! do you read for a living?"

- INT : What do you mean by Tim making a joke? You can see from the context.
- ATOP2 : Because - when Tim asked Mary, "So what do you do?" He asked what her job was and Mary replied "I'm a reader at a publisher. "
- INT : Uh huh, so what is it that makes you think Tim was making a joke?
- ATOP2 : Instead of saying she worked for a publisher, she said she was a reader at a publisher. Tim then replied how could Mary read for money instead of looking for a job.
- INT : Do you think it's possible if the answer is A or B?
- ATOP2 : No.
- (ATOP2 respondent on Data 27)

In the above TAP session, ATOP2 respondent was able to apply his own pragmatic rule. When the first speaker asked a question the interlocutor responded with unexpected information, then the first speaker made a joke to develop a more intimate relationship. ATOP2 respondent was able to develop a rule that he applied himself.

4.2.2 Linguistic inference strategy in the high implicature score group

The linguistic inference strategy emerged 50 times in the top group during the TAP session. This strategy is a technique where a familiar keyword is used by respondents to comprehend the whole meaning of the implicature. Here is the data showing the linguistic inference strategy.

Context: Mrs. Ange is a nanny that Miranda hired. Miranda is a mother who has just divorced from her husband. Miranda has started dating a man.

Mrs. Ange : I hope you do not mind me being a tad rude, but ... how was he? You know, on a scale of 1 to 10?

Miranda : Well, that part was always ... okay. (With a flat tone)

Mrs. Ange : Just okay?

Question : If Miranda's response is converted into the scale that Mrs. Ange asks, what is the closest number?

- a. two
- b. nine
- c. five

(Instrument A on Question no. 4)

INT : Next is number 4.

ATOP 3: {NS} what is "tad"?

INT : "tad" is quite or slight. If you don't understand any word, just underline it.

ATOP3 : I do not understand "tad". I think the answer is 5.

INT : Why is the answer 5?

ATOP3 : Miranda says "Well, that part was always ... okay" with a flat tone. So, from the scale of 1-10, it is neither bad nor good. Moreover, Mrs. Ange says "Just okay". I guess if the scale is just standard, the answer is 5. 2 is too low and 9 is too high.

(ATOP3 respondent on Data 4)

ATOP3 respondent relied on the word 'okay' as a keyword to understand the essence of the implicature in the conversation. The TAP interview reveals that ATOP3 respondent understands that 'okay' is mediocre. Therefore, when he is asked to rate from a scale of 1 to 10, the word 'okay' is converted to number 5. ATOP3 respondent has applied the linguistic inference strategy successfully.

4.2.3 Extralinguistic inference strategy in the high implicature score group

The extralinguistic inference strategy emerged 50 times in the top group. The strategy of extralinguistic inference is when the respondent seeks relationships between speakers or other parts of the conversation as a clue to find the meaning of the implicature. Just by observing the relationships among speakers, a respondent can guess the meaning of the implicature. Here is the data that

supports this phenomenon.

Context: Chuck and Larry are best friends

Chuck : Hey! For the record, every time I laughed at one of your jokes, I was faking it.

Larry : You're a monster!

Question : What does Larry's response mean?

- a. Larry asserts that Chuck has done an evil deed.
- b. Larry asserts that Chuck looks like a monster.
- c. Larry asserts that Chuck is a good friend.

(Instrument A on Question no. 8)

INT: Next, number 8.

ATOP3 : I think the answer is C, they are good friends. Good friends usually use bad words that are not taken personally. Larry said Chuck was a "monster", the option A and the option B say that Chuck looks like a monster or Chuck did an evil thing so they are not correct. Chuck must have been laughing when Larry gave those kinds of jokes. They can be similar to "Say, thank you" {LG}.

INT : So in your opinion, "You're a monster" is like a compliment so it signifies that they are good friends, do you think?

ATOP3 : Yes, a good friend usually does things like that.

(ATOP3 respondent on Data 8)

In the above data, ATOP3 respondent relied heavily on the relationship between the speakers. ATOP3 respondent repeatedly mentioned the relationship between Chuck and Larry as good friends. Using only the relationship between speakers, ATOP3 eliminated option A because a good friend generally does not accuse his friend of being a bad person. Option B was also eliminated because according to ATOP3, option B indicates that Larry is offended because he accuses Chuck of looking like a monster. Therefore, the most plausible answer is option C. This strategy is clear even if the answer is wrong. Furthermore, the extralinguistic sign most often used by respondents is speech tone. Below is the

TAP data that supports this phenomenon.

Context: Annie and Bertha are good friends. Annie had a first date with a guy named Harry.

Bertha : What do you think of Harry?

Annie : Nothing is wrong with him. (with flat tone)

Question : What does Annie imply?

- a. Annie thinks Harry is great.
- b. Annie thinks Harry is disappointing.
- c. Annie thinks Harry is innocent.

(Instrument A on Question no. 25)

INT : Ok next, twenty-five.

CTOP1 : Disappointing.

INT : It's easy or difficult?

CTOP1 : Easy.

INT : How come you assume that Harry is disappointing? "Nothing is wrong" means he is innocent, right?

CTOP1 : There's nothing wrong with (()), but he's not that interesting, he can't meet Annie's expectations.

INT : What if "nothing is wrong" means that he is great?

CTOP1 : No, it can't be because she used a flat tone.

INT : So, it turned out that the date did not turn out as expected?

(CTOP1 respondent on Data 475)

In answering question number 25, CTOP1 respondent used the flat tone as the main clue to concluding that Harry did not meet Annie's expectations. For the respondents from the high implicature score group, the extralinguistic clues such as voice tone are adequate to be the starting point to figure out the implicature correctly.

4.2.4 Creative elaboration strategies in the high implicature score group

Creative elaboration strategy is where the respondent creates their own version of the story in order to understand the implicatures. Vandergrift (1997) claims that the creative elaboration strategy can assist learners to understand a conversation. This strategy emerged 49 times in the top group. On several occasions, some respondents attempted to reconstruct the stories based on their own comprehension to understand the implicatures. Below is the TAP data that supports this phenomenon.

Context: Miss Foote is Julian's teacher. Sonny is Julian's father. Miss Foote and Sonny meet at Julian's school. The tone of the conversation is quite serious.

Miss Foote : Julian has been displaying some odd behaviour. Last week he spilled a tube of glue on the floor and did not tell anybody. He just covered it with newspaper. And then one of our students wore rollerblades for show-and-tell.

Sonny : Yeah?

Miss Foote : And Julian tripped him with a stick.

Sonny : I've never

Miss Foote : Julian found it hilarious.

Question : What's the last incident of the event told by Miss Foote?

- a. Julian's friend fell.
- b. Julian kept on playing with the rollerblades.
- c. Julian covered his face with newspaper.

(Instrument A on Question no. 22)

BTOP2 : It's A.

INT : The option is A, what's the reason?

BTOP2 : So from this story, when he dropped the glue and covered it with tissue, his friend who would perform for "show-and-tell" brought his rollerblades. Julian "tripped him with a stick" so he fell down but Julian thought it was just...

INT : Just a joke?

- BTOP2 : Yup.
 INT : Here you have the words, yes what are the difficult words?
 BTOP2 : Tripped.
 INT : Tripped? What else? What else could it be? Do you know
 "hilarious"?
 BTOP2 : Hilarious is very funny.
 INT : "rollerblades", you know its meaning, right?
 BTOP2 : I know.
 INT : So, you know that Julian fell from Miss Foote's words?
 BTOP2 : Yes.
 (BTOP2 respondent on Data 22)

During the TAP session, despite the unfamiliar words that BTOP2 respondent encountered, he still maintained his ability to translate the implication. The story in the conversation was retold by BTOP2 in his own words. In the original conversation, there was no incident linked to tissue paper. However, in the story of the respondent's version, the incident involved the use of tissue paper. The thinking process that involves the respondent constructing their own version of the story is the application of a creative elaboration strategy.

4.2.5 Translation strategy in the high implicature score group

The translation strategy was utilised 29 times in the TAP session. This strategy is a technique used by respondents to understand implicature in English by translating it from their native language word-by-word. Here is the data which supports the phenomenon.

- Context:** Will and Nina are husband and wife. Nina has asked her husband to buy her an item she desired despite its expensive price. The tone of the conversation was quite serious.
- Will : How do you think we pay for all this?
 Nina : I'm just asking you. What do you think?
 Will : There's a money fairy that comes and slips an envelope under my

pillow every month?

Question : What did Will imply in his final remark?

- a. Will would gladly buy it for his wife.
- b. Will was unwilling to buy it for his wife.
- c. Will changed the subject by talking about the monthly envelope.

(Instrument A on Question no. 21)

ATOP2 : Will said that "There's a money fairy that comes and slips an envelope under my pillow every month?" Maybe he objects to it.

INT : Uh huh.

ATOP2 : The money is not for that, he asks if there is indeed a fairy who gives money every month?

INT : Oh so, the phrase is like an expression of rejection?

INT : Ok, are you familiar with this phrase? "The fairy that comes and slips"? Do you understand the phrase?

ATOP2 : Yes, I do.

(ATOP2 respondent on Data 21)

In the TAP session above, it was revealed that ATOP2 respondent had a tendency to translate English into Indonesian with a word-by-word approach. The clause 'There's a money fairy that comes and slips an envelope under my pillow every month?' was translated by ATOP2 into "if there is indeed a fairy who gives money every month?". Since the answer must be "no", the respondent ascertained that Will refused to buy his wife the item. By translating word-by-word, ATOP2 respondent was able to understand the implicature.

4.2.6 World elaboration strategy in the high implicature score group

World elaboration strategy appeared 19 times in the upper group. By using world elaboration strategy, learners attempt to use general knowledge of their surroundings when trying to comprehend the conversations. In this research, by linking knowledge from their surroundings, respondents detect clues which help

them comprehend implicatures in English. Here is the data that supports this phenomenon.

Context: Nigel Brown is a cattle farmer and needs to borrow money to build a new fence. When he goes to the bank, the bank officer says he has to have at least 50 cows on his farm in order to borrow money.

Banker : Do you have 50 cows, Mr. Brown?

Nigel : Yes, I do.

Question : What is the implicit meaning of Nigel's reply?

- a. Nigel has more than 50 cows.
- b. Nigel has less than 50 cows.
- c. Nigel has exactly 50 cows.

(Instrument A on Question no. 23)

ATOP3 : I think the answer is option A. Nigel has more than 50 cows. It was similar to the question about 50 seats so it had the same answer. When the bank officer asked, "Do you have 50 cows, Mr. Brown?" Nigel said, "Yes, I do." I assume he has more than 50 cows.

INT : It means that the lesser or the exact number is incorrect, right?

ATOP3 : I do not think so. I think it happens in real life {LG}.

INT : It means you compare it with real life, using logic?

ATOP3 : Yeah.

(ATOP3 respondent on Data 23)

Based on the TAP session above, ATOP3 respondent is explicitly comparing the conversation to the real world. The real world is a similar occurrence he can easily relate to in his daily life. According to ATOP3, in real life, when people say "I have 50 cows" as a condition to borrowing money from the bank, then the number of cows must be more than 50. With this strategy, ATOP3 respondent is able to answer the implicature question correctly.

4.2.7 Intersection inference strategy in the high implicature score group

The intersection inference strategy emerged 18 times in the top group. This strategy is a technique employing signs to guess the meaning of the conversation. The following data supports the phenomenon in question.

Context: Sara and Dave are friends. Both of them are at the same event.

Sara: Hey, Dave.

Dave : Hey, Sara. Fun party?

Sara: Yeah, except for Arnie Shankman being here.

Question : What can be concluded from Sara's remark?

- a. Sara really liked the party.
- b. Sara liked Arnie Shankman's presence.
- c. Sara did not like Arnie Shankman much.

(Instrument A on Question no. 5)

BTOP1: Sara said what a fun party it would be without Arnie Shankman.

INT : Which part expresses that? What is the keyword?

BTOP1 : "Except."

INT : Except.

BTOP1 : Uh-huh.

(BTOP1 respondent on Data 5)

BTOP1 tried to detect the relationship from the parts of the speech in the conversation. BTOP1 respondent identified "except" as a marker of relationship indicating the adjacent utterance has a contradictory meaning to the previous one. BTOP1 compared the expression "Fun party? Yeah" with the phrase "except for Arnie Shankman being here". By comparing the utterances through the use of "except," BTOP1 respondent was able to identify Sara's discontentment with Arnie Shankman.

4.2.8 Transfer strategy in the high implicature score group

The transfer strategy emerged 18 times in the top group. This strategy

employs the use of the respondent's knowledge of Indonesia and/or its culture to facilitate the comprehension of English conversations or implicatures. The following data shows the transfer strategy in the TAP session.

Context: Johnson is Angela's good friend. Angela is a psychologist. Johnson has brought his friend Charlie for a consultation with Angela.

Johnson : Nice to see you. Charlie, this is Angela. Angela, this is Charlie. He's my college roommate.

Angela : Nice to meet you, Charlie.

Johnson : Well, thanks for seeing us on such short notice.

Angela : Why don't you guys come in and make yourselves comfortable?

Question : What does Angela mean?

- a. Angela did not allow Johnson and Charlie to enter.
- b. Angela was surprised to see Johnson and Charlie.
- c. Angela invited Johnson and Charlie to sit down.

(Instrument A on Question no. 16)

ATOP1 : Because of Angela's statement "Come in make yourselves comfortable?" it means she let them in.

INT : But no words such as "seat" ((have a seat))

ATOP1 : It would not be "comfortable" if the guests are left standing.

INT: So, to feel comfortable, one should sit, right?

ATOP1 : Yes.

INT : Do you think we have a similar phrase in Bahasa?

ATOP1 : Come in, make yourself at home.

(ATOP1 respondent on Data 16)

ATOP1 respondent accurately transferred the knowledge from Indonesian to English. ATOP1 could understand the meaning of 'come in make yourselves comfortable' through the transfer of knowledge from the Indonesian language, 'Come in, make yourself at home'. Although there are no phrases such as 'please sit' or 'have a seat', ATOP1 respondent could still understand that Angela was inviting Johnson and Charlie to sit down.

4.2.9 Questioning elaboration strategy in the high implicature score group

The questioning elaboration strategy emerged 8 times in the top group. This strategy is a technique where respondents mentally put themselves through a series of questions to guess the meaning of the conversation. Here is the data that supports this phenomenon.

Context: Joseph and Hank are father and son.

Hank : You think there is something else after we die?

Joseph : You ask me if I believe in God?

Hank : Do you?

Joseph : I'm 72 with stage 4 cancer. What choice do I have?

Question : What is the meaning of Joseph's last remark?

- a. Joseph believes in God.
- b. Joseph does not believe in God.
- c. Joseph complains about his illness.

(Instrument A on Question no. 19)

INT : Okay, then number 19.

ATOP3 : I think the answer is A, Joseph believes in God because he says that he is 72, which I believe his age is, and he says "with stage 4 cancer" it can be cancer in stage 4 level. Then what choice does he have? He means what choice he has, knowing that he is old and he has stage 4 cancer. He has no other choice but to believe in God for a miracle. What else should he choose?

(ATOP3 respondent on Data 19)

ATOP3 respondent used self-reflection and asked himself pertinent questions. One question was connected with another question which led to an understanding of the implicature. Through these series of questions, ATOP3 respondent was able to understand the implicature and answered correctly.

4.2.10 Repetition strategy in the high implicature score group

Repetition strategy emerged six times in the top group. Respondents using this strategy read the text aloud in an attempt to understand the implicature. The following data shows that reading aloud can assist a respondent to obtain the right answer.

Context: Miss Foote is Julian's teacher. Sonny is Julian's father. Miss Foote and Sonny met at Julian's school. The tone of the conversation is quite serious.

Miss Foote: Julian has been displaying some odd behaviour. Last week he spilled a tube of glue on the floor and did not tell anybody. He just covered it with newspaper. And then one of our students wore rollerblades for show-and-tell.

Sonny : Yeah?

Miss Foote: And Julian tripped him with a stick.

Sonny : I've never

Miss Foote: Julian found it hilarious.

Question : What's the last incident of the event told by Miss Foote?

- a. Julian's friend fell.
- b. Julian kept on playing with the rollerblades.
- c. Julian covered his face with newspaper.

(Instrument A on Question no. 22)

INT : Uh huh, the fall - where do you catch the word fall?

ATOP2 : From "and then our students", "wore rollerblades for show-and-tell.", and "and Julian tripped him with a stick."

INT : Ok, do you think this text is hard for you?

ATOP2 : No.

(ATOP2 respondent on Data 22)

The data shows that some sentences were read aloud by the respondent. This phenomenon is referred to as repetition strategy by Vandergrift (1997). By reading aloud ATOP2 respondent could guess the answer correctly.

4.2.11 Personal elaboration strategy in the high implicature score group

Personal elaboration strategy occurred three times in the upper group. Personal elaboration strategy is a technique that refers to personal experience in order to comprehend the implicature. The following data has examples that support the above phenomenon.

Context : John and Arthur are best friends. Their children go to the same school.

John : I need a place with fifty seats for my son's birthday party.

Arthur: McDonald's has fifty seats.

Question : Based on Arthur's answer, how many chairs does McDonalds' have?

- a. More than fifty.
- b. Less than fifty.
- c. Exactly fifty.

(Instrument A on Problem no. 13)

BTOP2 : I tend to choose A.

INT : Uh-hum ... more than fifty seats.

BTOP2 : If we request fifty seats, it is impossible that McDonald's has less than or exactly fifty chairs. Logically, if we need fifty chairs and the intended place only has fifty chairs, it will leave no chairs for other customers. So I assume it should have more than fifty seats because other incoming customers still demand seats.

INT : Oh ... so you use logical thinking with the McDonald's case. Is it easy or difficult?

BTOP2 : Easy

(BTOP2 respondent on Data 13)

BTOP2 respondent used the pronoun 'we' to narrate the McDonald's story using his own point of view and personal experience. The experience was then synthesized with the circumstances in the conversation. BTOP2 used some personal assumptions and then got the right answer.

4.2.12 Imagery strategy in the high implicature score group

Imagery strategy only emerged twice in the top group. Respondents engaged visualization or mental images to represent the information that should be coded into a separate category. Here is the data that supports this phenomenon.

Context: Billy and Casey are father and son. Billy is the coach of a professional sports team. The location of the conversation is an airport.

Billy : You're worrying about me.

Casey : You're in last place, Dad.

Billy : Do I look worried?

Casey : Yeah.

Billy : Cause you're getting on an airplane. Those things crash all the time.
Please stop worrying about your dad.

Question : What can be concluded from Billy's statement?

- a. Billy reminded Casey about airplanes' incidents.
- b. Billy felt the situation could still be handled well.
- c. Billy forbade Casey to leave because getting on a plane is very dangerous.

(Instrument A on Question no. 17)

INT : In the text, it is presumed that Casey is his son. So, who is getting on the plane?

ATOP3 : But we can see here "Cause you're getting on an airplane", it looks

like Billy is getting on a plane. Yes, I believe it is Billy who will board on a plane.

INT : So, Billy is going to board on the plane, isn't he?

ATOP3 : Yes.

INT : Okay, it is Billy, isn't it?

(ATOP3 respondent on Data 17)

ATOP3 respondent visually and clearly imagined the shape and the atmosphere of an airplane. ATOP3 respondent also visually described Billy's condition when going on a plane. Such visual imagery is included in the imagery technique. Because it only appeared twice, this technique was rarely used by the top group. Other strategies such as academic elaboration technique, summarizing technique, grouping technique and random guess technique did not appear in the top group during the TAP session.

4.3 Second language learners' strategy in the low implicature score group

The strategies used by the low group are different from those that have been successfully used by the top group. By performing a contrast analysis between the two groups, the typical strategies that may be dominant in both groups, and the tendency to be typical in a particular group can be identified.

The table below shows the strategy recapitulation used by the lower group in comprehending the implicatures in English. The sequence can be seen as follows:

Table 6. Recapitulation of comprehension strategies used by the low implicature score group

No	Strategies	Frequency of Occurrence	Percentage of Occurrence
1	Linguistic Inferencing	110	38.1%
2	Deduction/Induction	60	20.8%
3	Random Guessing	36	12.5%
4	Extralinguistic Inferencing	27	9.3%
5	Translation	25	8.7%

6	Creative Elaboration	13	4.5%
7	Between-Parts Inferencing	8	2.8%
8	Transfer	7	2.4%
9	Repetition	2	0.7%
10	Questioning Elaboration	1	0.3%
11	World Elaboration	0	0.0%
12	Personal Elaboration	0	0.0%
13	Imagery	0	0.0%
14	Academic Elaboration	0	0.0%
15	Summarization	0	0.0%
16	Grouping	0	0.0%

These strategies are directly compared to the sequence of occurrences with the higher group's strategies. The contrastive discussion shows the differences in the strategy patterns used in both groups. Here is the comparison frequency table used by the top and bottom groups.

Table 7. The comparison frequency table of top and bottom group strategies

Strategies	Top Group			Bottom Group		
	Ranking of Freq.	Freq.	Percentage of All Occurrence	Ranking of Freq.	Freq.	Percentage of All Occurrence
Deduction/Induction	1	127	33.5%	2	60	20.8%
Linguistic Inferencing	2	50	13.2%	1	110	38.1%
Extralinguistic Inferencing	3	50	13.2%	4	27	9.3%
Creative Elaboration	4	49	12.9%	6	13	4.5%
Translation	5	29	7.7%	5	25	8.7%
World Elaboration	6	19	5.0%	11	0	0.0%
Between-Parts Inferencing	7	18	4.7%	7	8	2.8%
Transfer	8	18	4.7%	8	7	2.4%
Elaboration of Questions	9	8	2.1%	10	1	0.3%
Repetition	10	6	1.6%	9	2	0.7%

Personal Elaboration	11	3	0.8%	11	0	0.0%
Imagery	12	2	0.5%	11	0	0.0%
Academic	13	0	0.0%	11	0	0.0%
Elaboration	13	0	0.0%	11	0	0.0%
Summarization	13	0	0.0%	11	0	0.0%
Grouping	13	0	0.0%	11	0	0.0%
Random Guessing	13	0	0.0%	3	36	12.5%

Table 7 displays some interesting patterns regarding the different uses of strategies among respondents from the top group and bottom group. The distinct patterns are as follows:

- (1) The use of excessive linguistic inference strategy in the low group;
- (2) The use of random guess strategy in the low group;
- (3) The minimum variations of strategy in the low group.

Those three distinct patterns are explained in the following sections.

4.3.1 The excessive use of linguistic inference strategy in the low implicature score group

The most dominant strategy used by the top group was the deduction/induction technique that appeared 127 times by the nine respondents during the TAP session. However, in the low group, the deduction/induction strategy was not the dominant strategy. This strategy only appeared 60 times in the low group. The most dominant strategy used by the low group was linguistic inference. The linguistic inference strategy appeared 110 times. The data shows that the bottom group tended to use a single keyword and then guess the intent of the implicature (according to the word) without any ideas being further developed. The difference between the top and bottom groups at this stage is that the top group tended to process the keywords through induction and deduction and then sought the alternative meaning of a word. The reliance on keywords and the reluctance to find alternative meanings were found evenly among the nine respondents from the bottom group. Here is some data that supports the pattern.

Context: Mr. Ray and Mr. Moore are teachers who work at the same school. They are talking about a paper written by a student.

Mr. Ray : Have you finished with Mark's term paper yet?

Mr. Moore: Yeah, I read it last night.

Mr. Ray : What did you think of it?

Mr. Moore: Well, I thought it was well-typed.

Question : What can be concluded from Mr. Moore's response?

- a. Mr. Moore admired the typing of the paper.
- b. Mr. Moore didn't like the writing.
- c. Mr. Moore liked the writing.

(Instrument A of Question No. 15)

ABOT3 : The answer is A, Sir. Because it states that this is his student's paper.

INT : How do you know it?

ABOT3 : From - - well-typed.

INT : Well-typed, right? What does "well-typed" mean?

ABOT3 : Em - - good writing.

(ABOT3 respondent on Data 15)

Respondents from the bottom group found it very difficult to recognize the sarcasm in this conversation. ABOT3 respondent, for example, assumed that well-typed was an appraisal expression from Mr. Moore for Mark. ABOT3 respondent did not try to find alternative meanings of this phrase. The following data also show similar things.

Context: Edward and Vivian are husband and wife.

Vivian : Let's watch old movies all night ... We'll just veg out in front of the TV.

Edward : Veg out?

Vivian : Yeah. Be still like vegetables. Lay like broccoli.

Edward : Look, I'll tell you what. I'll be back. We'll do broccoli tomorrow.

Question : What did Edward mean?

- a. Edward will go back looking for broccoli.
- b. The broccoli meal is postponed for tomorrow.
- c. Watching TV is postponed for tomorrow.

(Instrument A on Question no. 9)

INT : There will be broccoli tomorrow, do you know the phrase?

CBOT2 : No, I do not know.

INT : The phrase 'be still like vegetables', do you understand what it means?

CBOT2 : ... Something like vegetable...

(CBOT2 respondent on Data 9)

The respondent's reliance on the keywords is evident in the data above. CBOT2 respondent used the words '*broccoli*' and '*vegetable*' as the basis for comprehending the implicature. CBOT2 respondent never tried to find any other alternative meanings of the phrase, so he insisted that the implication was about eating broccoli.

4.3.2 The use of random guessing strategy in the low implicature score group

There is a strategy which is not included in the classification by Vandergrift (1997) and it only appeared in the bottom group of respondents. In other words, this strategy did not appear in the top group while it appeared several times in the bottom group. If an implicature is considered too difficult to understand, some respondents from the bottom group tried to guess the answer without any grounded reasons. This is a fundamental gap between the bottom and top groups. In the bottom group, this random guess strategy appeared 36 times whereas this strategy never appeared in the top group at all. The following data supports this phenomenon.

ABOT1 : Four fifty, C.

INT : Four fifty. How come? Why? Why not more or why not less?
ABOT1 : I do not know, I am only guessing.
INT : How do you guess?
ABOT1 : E - -
INT : It means, is there some thinking in your mind when guessing?
ABOT1 : It's - - John, this is like a report.
INT : Okay.
(ABOT1 respondent on Data 13)

In the above data, ABOT1 respondent explicitly stated that he was just using guesswork to answer the question. He did not bother to utilize any other strategies to find the correct answer, or to understand the implicature stated in the conversation. In other data, random guessing may only appear implicitly. Here is the data showing this phenomenon.

INT : What's the answer to number 10?
BBOT2: The answer is C.
INT : Why?
BBOT2: Because he does not want to ask about it.
INT : Do you know the meaning of "tired up"?
BBOT2: I do not know the meaning of the words, but I understand what this conversation means.
(BBOT2 respondent on Data 10)

In the above data, BBOT2 respondent did not explicitly indicate that he randomly guessed because he reassured the interviewer that he understood the meaning of the conversation. However, BBOT2 did not elaborate at all about the answer he chose. When asked about particular vocabulary, BBOT2 stated that he did not know the translation of some words but he understood the meaning. The statement is quite contradictory based on logical thinking. This statement supports that BBOT2 respondent is actually using the random guess strategy despite his claim in comprehending the text.

4.3.3 Minimum strategy variations in the low implicature score group

Another dissimilarity emphasizing the different strategy usage by the top and bottom groups in comprehending English implicatures is the lack of exploration of the bottom group respondents to different types of strategies. Of the fifteen types of strategies under the Vandergrift scheme (1997), the bottom group used only nine strategies. The strategy used by the bottom group was dominated by two main strategies: linguistic inference and deduction/induction techniques. The use of these two strategies represented 60% of the overall frequency of strategies used by the bottom group.

In the top group, the use of strategy was more evenly distributed. Of the fifteen categories of Vandergrift strategies, the top group used 11 strategies more evenly. Although dominated by one main strategy, other strategies were used more equally. Deduction/induction technique was used 127 times and represented 38% of the frequency of the strategies used by the top group. Linguistic inference appeared 50 times, intra-linguistic inference emerged 50 times and the creative elaboration was seen 49 times. It can be concluded that respondents from the top group were more likely to explore different strategies when compared with respondents from the bottom group.

5. Discussion

In investigating the strategies used by second language learners to comprehend English implicature, the research employs a practical taxonomy developed by Vandergrift (1997). Considering that practical application is paramount to this research, some conceptual and theoretical strategies from Sperber and Wilson (1986), Schmidt (1990), and Bialystok (1993) were deliberately put aside from the taxonomy. However, these theories are still valuable in elucidating some phenomena that emerge from the findings.

Employing Vandergrift's (1997) taxonomy, the current paper firmly claims that there are 13 techniques generally used by second language learners in comprehending implicatures. This finding can be confidently attributed as the current insight formulating special techniques for receptive strategies. It has been

stated previously, strategies in pragmatics have been immensely focused on productive competence (Blum-Kulka et al. 1989; Nguyen 2008). Aside from the different competence aspect, the finding also contributes to the list of practical techniques in spite of an enormous number of theoretical strategies (Bialystok 1993; Schmidt 1990, 1993, 1995; Sperber and Wilson 1986). The general list of the dominant strategies in comprehending implicatures found in both groups is below:

- (1) Deduction/induction
- (2) Linguistic inferencing
- (3) Extralinguistic inferencing
- (4) Creative elaboration
- (5) Translation
- (6) Random guessing technique
- (7) Between-parts inferencing
- (8) Transfer
- (9) World elaboration
- (10) Questioning elaboration
- (11) Repetition
- (12) Personal elaboration
- (13) Imagery

The findings here do not necessarily contradict other previous studies. The current results of this study have been successful in formulating applicable strategies which are empirically proven due to the established substantial theories. As an example, deduction/induction theory (which emerged the most during the TAP session) supports the relevance theory by Sperber and Wilson (1986). A learner searches for the shortest and most feasible cognitive process to understand the implied meaning of the conversation. The fact that deduction/induction strategy is used mostly by the high implicature score group shows that deduction/induction most probably demands a heavier cognitive process for the lower score group. Another sample is the translation technique that is actually the representation from the theory developed by Bialystok (1993). A learner has an adequate number of symbolic representations through

word-by-word translation. He uses the representations to divert his focus control to decide the implicit and explicit meaning of the conversation that he encounters.

The study also creates a list of comprehensive strategies: compared to prior research studies which have produced somewhat partial strategies. Taguchi (2005) claims that most learners hang on to the last word they hear as a strategy to comprehend the conversation. Bouton (1992) established a comparison strategy where learners compared the implicatures they were encountering with the implicatures they had previously heard both from native speakers and their own surroundings. Both strategies can be put into the list of the strategies found in this research. The strategy from Taguchi (2005) can be categorized as linguistic inference whereas the strategy from Bouton (1992) can be classified as world elaboration technique.

Interesting trends emerge from the high score and low score groups. Different strategies are used in comprehending the implicatures among second language learners from the high and low implicature score groups.

The results show three patterns:

- (1) The linguistic inferencing strategy is more often used by the lower group than the higher score group.
- (2) The random guessing strategy is frequently used by the lower group only.
- (3) The minimum variation strategy is found in the lower group

The first dissimilarity is the tendency for learners in the low implicature score group to use the linguistic inferencing strategy. To comprehend the conversations, they rely on the words or phrases that: frequently appear in the conversation; are stressed in the usage; and/or heard the last. This tendency is actually similar to the *recency effect* found by Taguchi (2005). Taguchi (2005) argues that learners heavily depended on the last word they heard in answering the questions. Taguchi (2005) even claims that the strategy she found is used by learners in general. The current findings of this study argue that learners from the low implicature score group indeed somehow use the same strategy as

Taguchi (2005). However, learners from the high implicature score group use this strategy far less than the lower group. This phenomenon can be explained using Schauer's (2006) research work stating that the low exposure group tends to use the linguistic inferencing strategy. The amount of language and pragmatic input which the learners are exposed to from their environment seems to contribute to the amount of pragmatic features they use in their interactions. Furthermore, the theory from Bialystok (1993) is highly related to the usage of the linguistic inferencing strategy. Learners from the low implicature score group cannot relate a symbolic representation toward attentional control. Their symbolic representation is limited to the point that one symbol can only convey one meaning. The default of explicit meaning will hinder them in understanding the implicit or intended meaning of the text.

The second contrast is a unique finding with the emergence of the random guessing technique added to the previous taxonomy from Vandergrift (1997). However, the finding does not bring a positive factor but a negative one that tends to belittle the attempt of the cognitive process. During the TAP session, learners who used this technique deliberately avoided any other possible strategies. By using the random guessing technique, the respondents felt like they had solved the problem so they could continue solving the next problem immediately. This behaviour can be linked to a learner's resilience factor as a predictor that can contribute to foreign language mastery. Some researchers have already dug into the factor (Yun et al. 2018; Nguyen et al. 2015; Kajabadi et al. 2016) and suggest that the lack of resilience and giving up easily in answering the tests impact the learners' low competence. Resilience has not been explored widely because this concept is less popular than the "consciousness" concept (Schmidt 1990) or it can be even regarded as the same as the "motivation" concept (Dörnyei 1994). Resilience should be investigated deeper for future studies in foreign language pragmatic mastery. In addition to resilience, anxiety might also affect foreign language learners' performance (Jee 2018).

The third difference is that the low implicature score group applies less variation of comprehension strategies than the high implicature score group. The low group tends to use fewer types of strategies to understand implicature. This phenomenon can be linked to Pratama et al. (2017), who propose that vocabulary and grammar have a positive correlation with implicature comprehension.

Limited choices of words and lack of grammar mastery, as parts of the cognitive process, hinder learners from the low group to employ multiple strategies in comprehending the implicatures. A case investigated in Greece by Economidou-Kogetsidis (2009) shows that the pragmatic variations used by second language learners are different from native speakers. Engaging different types of respondents, Lee (2011) confirms a similar result, asserting that young learners employ fewer strategy variations compared to adult learners. This phenomenon can be explicated through the research findings of the study conducted by Celce-Murcia et al. (1995), claiming that learners will avoid difficult English features and employ the easier ones.

6. Conclusion

In answering the research question, there are thirteen techniques used by second language learners in comprehending the conversational implicatures: (1) deduction/induction, (2) linguistic inferencing, (3) extralinguistic inferencing, (4) creative elaboration, (5) translation, (6) random guessing technique, (7) between-parts inferencing, (8) transfer, (9) world elaboration, (10) questioning elaboration, (11) repetition, (12) personal elaboration and (13) imagery. There are three different strategy patterns in comprehending conversational implicatures displayed by the high score and low score groups. They are: (1) the high usage of linguistic inferencing strategy by the lower group, (2) the frequent usage of random guessing strategy by the lower group, and (3) the minimum variation strategy employed by the lower group. The use of the linguistic inferencing strategy in the low group signifies limited symbolic representation. The use of the random guessing strategy in the low group is due to the low resilience factor. The minimum strategy variation in the low group denotes that the learners avoid difficult English features and apply the easy ones.

The strategies that are proved to be effective in comprehending implicatures are (1) deduction/induction technique, (2) linguistic inference, (3) extralinguistic inference, (4) creative elaboration and (5) translation technique. These five techniques should be conveyed and reinforced to learners so they can improve their resilience in learning and not simply give up when they encounter difficult

English features. By exploring these recommended strategies, it is hoped that students will use them to increase their communication skills in English.

Due to the different strategy tendencies used by the high and low implicature score groups, second language teachers should pay attention to technical conformity and teaching approaches. Aside from useful strategies, appropriate treatments should differ when teaching high proficiency students and/or low proficiency students. Based on the TAP session, the high proficiency group is recommended to acquire advanced pragmatic features meanwhile learners from the low implicature score group should be trained to use structured independent thinking. The lower group tends to give up easily in comprehending pragmatic features so teachers need to motivate them more so they can build more solid resilience in studying.

The strategies in comprehending implicature should be duplicated or investigated with further studies. The current study is deemed accurate in exploring the comprehension of implicature by recording the respondents' answers. However, some experts assert that a written test could not imitate real life communication perfectly. Future researchers can utilize audio/video technology that record either natural and/or role-play communication. The time of data collecting can be complemented by cross-sectional and/or longitudinal design.

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