Second Language Learners' Comprehension of Conversational Implicatures in English

HENDI PRATAMA
Linguistics Postgraduate Program,
Universitas Sebelas Maret, Indonesia
hendi.edu@gmail.com

JOKO NURKAMTO
Faculty of Humanities,
Universitas Sebelas Maret, Indonesia

RUSTONO
Faculty of Language and Arts,
Universitas Negeri Semarang, Indonesia

SRI MARMANTO
Faculty of Humanities,
Universitas Sebelas Maret, Indonesia

ABSTRACT

Conversational implicature is a case in which a speaker produces a coded utterance to convey certain intent. The listener of the utterance then decodes the speaker's intent accurately and 'intuitively'. For instance, a speaker saying that 'the room is hot' could mean that the listener is expected to turn on the air conditioner. However, 'intuition' tends to work seamlessly for native speakers but it becomes rather problematic for second language learners. This study comes with two questions: 'what are the most problematic implicatures for second language learners?' and 'what are the factors affecting learners' competence to comprehend implicatures?' The implicatures discussed in this study are in the form of joint-taxonomy adopted from the studies of Bouton, Grice and Arseneault. The joint-taxonomy produces ten types of implicatures: POPE-Q, Indirect Criticism, Sequential, Minimum Requirement Rule, Scalar, Idiomatic, Quantity, Quality, Manner and Relevance. 110 college students at one university in Indonesia participated in this study. Vocabulary, grammar formal exposure and informal exposure are four variables affecting the students' competence in comprehending implicatures in English. This research has been influenced primarily by the study of Bouton and Roever. The results of this study show that indirect criticism implicatures are the most problematic implicatures for all groups of respondents. Additionally, this study is able to illustrate how both Bouton's claim on proficiency and Roever's claim on exposure as affecting factors of implicature comprehension can be correct at the same time.

Keywords: pragmatic competence; pragmatic comprehension; conversational implicature; second language learning; communicative competence

INTRODUCTION

In an ideal exchange of communication, second language learners are expected to be able to convey meaning and intention to his/her listener effectively. Second language learner are expected to be able to interact, negotiate and have a transactional communication using the target language (Celce-Murcia, Dornyei & Thurrell 1995) or, pragmatics in language use. To be able to interact, negotiate and perform transaction, second language learners need to be exposed to the target language intensively and extensively. Unfortunately, second language learners who live in second language setting are rarely exposed to language input containing pragmatic saliency (Bardovi-Harlig 2010). Consequently, this limited pragmatic input impedes the second language learners to comprehend and use the pragmatic features of the target language including implicatures.

In general, second language learners have the following pragmatic difficulties. Learners often meet socio-pragmatic difficulties such as maintaining the length of conversation, using appropriate formality and socializing in a good manner accepted in the target culture (Yates & Major 2015). Learners sometimes also struggle with pragma-linguistic difficulties such as indirect utterance, pragmatic flexibility, and natural language use (Lee 2011, Nguyen 2008, Li, Raja & Sazalie 2015). Learners also often fall into the trap of overusing and underusing some pragmatic features (Li & Suleiman 2017, Economidou-Kogetsidis 2009, Bada 2010). In the study of Ecomidou-Kogetsidis (2009), second language learners tend to underuse lexical downgraders compared to native speakers but on the other hand the learners tend to overuse repetitive supportive moves in making requests. Bada (2010) found that second language learners overuse repetition as a communication strategy.

In Indonesian context, the underuse, overuse and misuse of English pragmatics features have been identified by a number of researchers. Mulyanah (2013) found that most of second language learners in Indonesia fail to adopt the English native speakers' norms in stating refusal. Second language learners often misjudge direct and indirect strategies in stating refusal. Nadar (1998) also identifies very limited variations of pragmatic strategies of Indonesian learners in making request. Cedar (2017) even pointed out that Indonesian learners might have pragmatic norms which may never been used by English native speakers. She finds that some of the students participating in her study showing apology by thanking. Within the topic of implicature, Chandra (2001) finds that second language learners often fail to comprehend English implicatures because they are unable to identifiy one or more aspects of relevance (Sperber & Wilson, 1995). The studies discussed here thus suggest that second language learners in Indonesia may experience conversational implicatures when they use or communicate in English.

The researchers of the current study have conducted an initial study in 2016 and found similar results. A study involving 141 college students at one university in Indonesia shows that the students on average could only comprehend 72% of dialogues containing English implicatures (Pratama, Nurkamto, Marmanto & Rustono, 2016). This study is therefore a follow-up study attempting to investigate types and factors of learners' failure in comprehending English implicatures. Differing from Chandra's study (2001) which uses relevance theory as its framework, this study analyses implicatures using a combined framework by Grice (1975), Bouton (1994) and Arseneault (2014). There are two lines of inquiry on conversational implicatures in this study. The first inquiry is the types of conversational implicatures which are considered as the most problematic implicatures for second language learners. The second inquiry looks at the factors affecting second language learners comprehension of conversational implicatures in English.

IMPLICATURE AS AN IMPORTANT THEME IN PRAGMATICS

Conversational implicature or 'implicature' is discussed in almost all seminal literatures about modern pragmatics (Cummings 2005, Levinson 1983, Thomas 1995, Leech 1983, Brown & Levinson 1987, Grice 1975). According to Levinson (1983), discussions on implicatures are important mainly because:

(1) Implicature is an example of the most typical phenomenon of pragmatic usage.
(2) Implicature shows how the intentions may differ from the produced speech.
(3) Implicature may refer to a substantial simplification of the structure as well as the content of the semantic description.
(4) Implications make linguists aware that some aspects of language require not only semantic studies but also need to be studied in their pragmatic mechanisms.

(5) The principles that generate implicatures have a generalizable explanatory effect for other linguistic phenomena.

Grice (1975) argues that implicature enables speakers to convey their intention without explicitly stating it in their utterance. To explain the mechanism of implicature, Grice (1975) starts with the mechanism of Cooperative Principle. According to Grice, human communication in general has a purpose of collective communication and this purpose can only be achieved using a collectively agreed principle. There are four maxims in Cooperative Principle.

(1) Maxim of Quality: make your contribution true by:
    a) not saying something that you believe is wrong
    b) not saying anything lacking of evidence
(2) Maxim of Quantity
    a) make your contribution as informative as needed for the purpose of ongoing communication
    b) do not make your contribution more informative than necessary
(3) Maxim of Relevance: make your contribution relevant
(4) Maxim of Manner: be perspicuous
    a) avoid obscurity of expression.
    b) avoid ambiguity.
    c) be brief (avoid unnecessary prolixity).
    d) be orderly.

An interaction, which fulfills one or more maxims and does not violate the other maxims, is referred to *standard implicature*. When an interaction involves the act of flouting or manipulating one or more maxims, then the interaction contains a *conversational implicature*. Levinson (1983), based on the explanation of Grice (1975), believes that there is a further classification of implicatures: *conventional* and *conversational*.
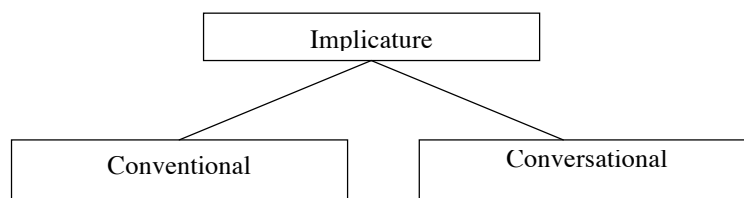

FIGURE 1. Simplified Implicature Taxonomy based on Levinson (1983, p. 131)

Conventional implicature is an implicature, which can be recognized with the presence of semantic markers and discourse markers such as: 'but', 'even', 'therefore', 'and 'for' (Thomas 1995). Other ample markers to signify the presence of conventional implicatures can be found in the work of Potts (2014).

According to Potts (2014), the predictability of the utterance meaning in conventional implicature is quite high and it depends heavily on markers. Hence, Potts argues that it is almost certain that conventional implicature falls perfectly in the study of semantics. In other words, Potts believes that conventional implicature does not belong to pragmatics.

Conversational implicature is a type of implicature that can only be understood and interpreted if the speaker and the listener are able to evaluate the specific context behind the speaker's utterance. According to Grice (1975, in Cummings 2005), conversational implicature is a result of manipulation and/or the flouting of the maxims in the cooperative

principle. The term conversational implicature is often shortened to 'implicature' conventionally referring to conversational implicature.

THE TAXONOMY OF CONVERSATIONAL IMPLICATURE

As the importance of conversational implicature has grown as an interesting topic in pragmatics, some efforts have been made to create the taxonomy of conversational implicature.

Grice (1975) divided conversational implicature into several types of implicatures, depending on which maxim is manipulated to generate the implicature.

(1) Manipulation of quantity maxim produces *quantity implicature.*
(2) Manipulation of quality maxim produces *quality implicature.*
(3) Manipulation of relevance maxim produces *relevance implicature*
(4) Manipulation of manner maxim produces *manner implicature*

The study by Bouton (1992, 1994) expanded the taxonomy of implicatures by stating that some implicatures are formulaic and some implicatures are not. Thus, Bouton divides the implicature into: (a) *formulaic* and (b) *idiosyncratic*. Formulaic implicatures are implicatures, which have particular semantic and pragmatic patterns, and idiosyncratic implicatures are implicatures, which are heavily depended by the context inherent in the conversation. The Bouton's study mentions five types of formulaic implicatures namely: (a) *POPE Question (POPE-Q),* (b) *Minimum Requirement Rules (MRR),* (c) *Sequential,* (d) *Indirect Criticism* and (e) *Scalar*. According to Bouton's explanation, we can safely assume that idiosyncratic implicature contains four types of implicatures mentioned by Grice (1975): *quantity, quality, relevance* and *manner*.

Arseneault (2014) mentions a type of conversational implicature, which may be added to formulaic implicatures. The implicature is called *idiomatic implicature*. Idiomatic implicature utilizes idiomatic expressions to deliver the speaker's intent. Because idiomatic expressions are used consistently in this type of implicature, it can be said that this type of implicature belongs to formulaic implicatures. Summary of the types of implicature in this literature review can be seen in the following table.

TABLE 1. Summary of Types of Implicatures

Implicature	Remarks	Example
POPE-Q	Implicature using rethoric question	John: Would you like to go to the beach? Arthur : Is the Pope Catholic?
Minimum Requirement Rule (MRR)	Number mentioned by the speaker implicitly means the minimum number	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? Wendy : Now you're talking.
Indirect Criticism	Implicature indicating criticism without being to explicit	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. Tim : No! Do you read for a living?

Quality	Implicature relying on manipulation of quality maxim	Chuck : Hey! For the record, every time I laughed at one of your jokes, I was faking it. Larry : You're a monster!
Manner	Implicature relying on manipulation of manner maxim	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... (the implicature is "no")
Relevance	Implicature relying on manipulation of relevance maxim	Mr. Andrew : Where is my box of chocolate? Mrs Andrew : The children were in your room this morning.

The framework used in this study roots from the division of formulaic and idiosyncratic implicatures by Bouton (1994). Formulaic implicatures can be explained as implicatures based on certain templates. The templates can be identified by the presence of lexical, semantic, syntactic or pragmatic markers. For example, POPE-Q can be recognized by the presence of rethorical question and scalar implicatures by the presence of modals. On the other hand, idiosyncratic implicatures are template-less and rely heavily not on semantic or pragmatic markers but on context. For example, the implicature within the conversation between Mr. and Mrs. Andrews on table 1 can only be intepreted if the context is identified by the listener. No lexical, semantic, syntactic or pragmatics markers can reliably help the listener to guess the speaker's intent in such instance.

Bouton (1994) has explained that there are five implicatures which can be classified into formulaic implicatures. In addition, Arsenault's (2014) claim that idiomatic expression can be a template for implicatures. This adds Bouton's classification of formulaic implicatures into six types. Unfortunately, Bouton (1994) does not make further classification for idiosyncratic implicatures. However, relying on Bouton's definition of idiosyncrasy, it can be assumed that four types of implicatures mentioned by Grice (1975): *quantity, quality, relevance* and *manner* can fall neatly under the umbrella of idiosyncratic implicatures. Based on the classifications suggested by Bouton (1994), Arsenault's (2014) and Grice (1975), the following taxonomy is used as the framework of the study.
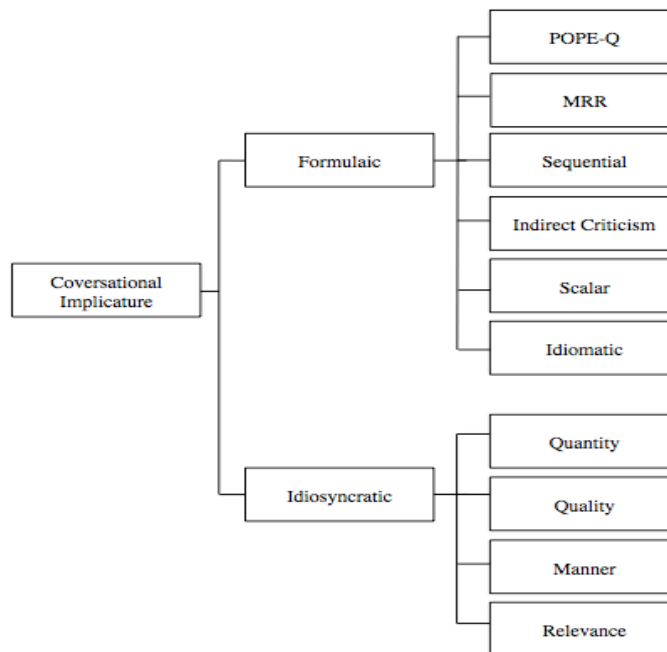

FIGURE 2. Taxonomy of Conversational Implicatures used as Framework of the Study

FACTORS AFFECTING SECOND LANGUAGE LEARNERS'
PRAGMATIC COMPETENCE

A number of studies have discussed the difficulties faced by second language learners in pragmatic comprehension, especially involving English implicatures (Bouton 1992, Roever 2005, Ishihara & Cohen 2010, Bardovi-Harlig 2010). Bouton (1992) argues that language exposure is a major factor to facilitate the comprehension of non-native of English implicatures. Bouton examined a group of second language learners who studied in the United States for four and a half years and after four and a half years, the respondents showed a significant increase in comprehension. Bouton (1994) took 14 participants to be trained in a formal pragmatic class in 6 weeks. Bouton found that explicit instruction can improve the comprehension of English implicatures of non-native speakers. Bouton notes that not all types of implicatures can be enhanced by explicit instructions.

Roever (2005) argues that Bouton (1992, 1994) has missed the difference between language exposure and language proficiency. Therefore, Roever adds that the main contributing factor in comprehending English implicatures is the English proficiency of the learners. Murray (2011) explored Bouton's (1994) methodology and found that some items in the Bouton's instrument have some cultural sensitivity. Some items might create bias towards the results of the study. According to Murray (2011) the cultural factors of second language learners can influence their comprehension of English implicatures. Murray takes the example of implicatures containing the concept of 'dancing'. In one culture, a man dancing with a friend's wife might be acceptable but in another culture, it is not acceptable. This cultural difference can affect the learners' comprehension of the following example.

> *Bill and Peter have been friends since they were children. They shared a house when they were students and travelled together after graduation. Now friends have told Bill that they saw Peter dancing with Bill's wife while Bill was away on business.*
> *Bill: Peter knows how to be a really good friend, doesn't he?* (Grice, 1975)

The possible implicature here is that Bill is not happy with Peter because Peter had been dancing with his wife while Bill was away. Bill is allegedly accusing Peter of not being a good friend. Bill presumably comes from the culture where dancing with a friend's wife while the friend is away is not a good behavior. However, there are four repondents of Murray's (2011) study who think that Peter is being a good friend by dancing with Bill's wife while Bill is away. This shows that researchers studying implicature must attempt to control cultural bias whenever possible.

Ishihara and Cohen (2010) summarized five factors affecting the difficulty of second language learners in using pragmatic features of English. These factors are:

(1) The negative transfer of language features and cultures from the first language
(2) The limited ability and knowledge of grammar and vocabulary of the second language.
(3) Overgeneralization of English pragmatic rules
(4) Effects of improper teaching or learning materials.
(5) Resistance to use English pragmatic norms.

Out of those five factors proposed by Ishihara and Cohen, only factor (2) can be measured using written test. Factors (1), (3), (4) and (5) can only be investigated using qualitative approach such as in-depth interview or think aloud protocol. Due to limited time and resource, such approach cannot be done in this research. Furthermore, factor (2) is the only factor from five which has an overlapping concept with the factor proposed by Bouton

(1992) and Roever (2005) namely *proficiency*. This consideration makes the researchers only focus on two aspects of language proficiency as possible factors of learners' comprehension of implicatures: vocabulary and grammar. There is another factor mentioned in both Bouton (1992) and Roever (2005) i.e. *exposure*. Combining exposure with the previous two factors, the researchers decide to use the following variables as possible factors affecting learners' implicature comprehension: (a) vocabulary, (b) grammar and (c) exposure.

RESEARCH METHOD

This study employs a quantitative approach to investigate;

(1) the most problematic implicatures for second language learners, and
(2) the linguistic factors and non-linguistic factors which affect learners comprehension of English implicatures.

The linguistic factors examined are vocabulary and grammar and the non-linguistic factors are formal and informal exposures. The respondents of this study were second language learners studying at one of the universities in Indonesia. All the respondents were at their first year of their study. This was to eliminate batch and age variation.

To investigate the linguistics and non-linguistics factors affecting comprehension of implicatures, the students were chosen from three different groups. The first group is a group of TESOL students whose curriculum includes linguistic knowledge of English, pedagogical knowledge of English and their lecturers also teach them in English. The first group is called as the *High Exposure Group* (HEG). The second group consists of students joining international classes whose majors are not English but their language instruction is English. This group represents an implicit instruction condition. The second group is called as the *Medium Exposure Group* (MEG). The third group is students who only received 2 credits of English courses during their college days and their language instruction is Indonesian. This group is called the *Low Exposure Group* (LEG).

TABLE 2. Summary of Respondents

Group	Department	Semester	Participants
HEG	English Education	2	40
MEG	Chemical Engineering and Early Childhood Education (International Class)	2	32
LEG	Accounting Education	2	38
		TOTAL	**110**

The five variables examined quantitatively in this study are: (1) comprehension of English implicatures, (2) vocabulary, (3) grammar, (4) formal exposure and (5) informal exposure. The following table summarizes the nature of these five variables and the instruments needed to examine them.

TABLE 3. List of Variables and Instruments Used

Variable	Variable Description	Required Instruments
1	Comprehension of English Implicature	Instrument A The instrument is a 30-item multiple choice test with three choices per item. Each item contains an example of a conversation referring to certain type of implicature. There are ten types of implicatures tested: POPE-Q implicatures, sequential implicatures, MRR implicatures, scalar implicatures, implicit indirect implicatures, idiomatic implicatures, quantity implicatures, quality implicatures, implicature of means and implicature of relevance. Each type of implicature was represented by 3 questions. Hence, the total number of the items is 30. This type of instrument has the same format used by: Bouton (1994), Garcia (2006) and Roever (2005).
2	Vocabulary	Instrument B Written instrument consists of 30 multiple-choice items. Each item questions the meaning of a word or phrase originated from the usage of the particular vocabulary in instrument A.
3	Grammar	Instrument C Written instrument consist of 30 multiple-choice items. Each item tests one grammatical aspect, which has been used in instrument A.
4	Formal Exposure of Language	Based on their program, the respondents are grouped into three: high exposure group (HEG), medium exposure group (MEG), and low exposure group (LEG).
5	Informal Language Exposure	Instrument D Informal exposure to English language such as through English songs, English movies and English chat buddies. The instrument is constructed in the form of a written questionnaire using a 5-level Likert scale. The questionnaire consists of 10 questions.

Instrument A examines the first question of this research that is, 'what are the most problematic implicatures for second language learners?'. The construction process of instrument A involved two native speakers from the United States and one native speaker from United Kingdom. The native speakers serve as validators of the items in this instrument. Ambiguous items were discussed and revised by the researchers and the validators. The following is the distribution of the implicatures in Instrument A.

TABLE 4. Item Distribution based on Types of Implicatures

Type of implicature		Sub-type of Implicature	Number of test items
A. Formulaic	1	POPE-Q implicature	3
	2	Sequential implicature	3
	3	Minimum Requirement Rule Implication	3
	4	Scalar implicature	3
	5	Indirect Critic Indirect Critic implicature	3
	6	Idiomatic Implicature	3
B. Idiosyncratic	7	Quantity Implicatures	3
	8	Quantity Implicatures	3
	9	Manner Implicatures	3
	10	Relevance Implicature	3
		Total number of items	30

Using the item distribution above, the participants' performance can be measured and tallied. Difficult implicatures are represented by low scores from the participants and relatively easy implicatures would produce high scores from the participants.

Instrument B and instrument C are vocabulary and grammar multiple-choice tests. Instrument D is a customized written questionnaire and it is a potential tool to reveal the level of informal language exposure received by the students in their daily lives. The language informal exposures quantified in this study have been carefully selected from different studies

on informal language exposures. Habits and resources for informal language exposure are as follows:

(1) Informal English course (Van Marsenille 2015)
(2) Conversation with native speakers of English (Long 1983)
(3) Songs in English (Salcedo 2002)
(4) Books in English (Yamashita 2013)
(5) The use of English in social media (Lin, Warschauer & Blake 2016)
(6) Conversation in English with peers (Tyers 2002)
(7) English competition participation (Flores 2015)
(8) Immediate family who can speak English (Han 2007)
(9) Movies in English (Karakas & Saricoban 2012, Sabouri, Zohrabi, & Osbouei 2015)
(10) Visits or stays abroad (Kinginger, Wu, Li & Tan 2016)

The scores from instrument B, instrument C and instrument D represent the operating values for vocabulary, grammar and informal exposure and those values are used for correlation analysis determining the significance of those variables affecting implicatures comprehension. The correlation analysis is conducted using Pearson Product Moment processed with SPSS version 23. The correlation analysis is conducted to answer the second question of this study.

IMPLICATURE COMPREHENSION AMONG THREE GROUPS BASED ON FORMAL EXPOSURE

The ability to understand English implicatures was tested using a multiple-choice test consisting of 30 questions. If a respondent correctly answered all questions then the maximum score is 30 and if all answers were wrong then the minimum score is 0. The following table is the average result of the implicature comprehension test administered to the 110 participants.

TABLE 5. Overall Results of Implicature Comprehension Across Groups

No.	Group	The Average Score of English Implicature Comprehension	Standard Deviation
1	All respondents (n=110)	20.982	5.19170
2	The High Exposure Group (n=40)	23.550	4.20241
3	The Medium Exposure Group (n=32)	21.781	5.58250
4	The Low Exposure Group (n=38)	17.605	5.19170

The results of the test showed that the average score of English implicature comprehension of all respondents is 20.982 out of the possible maximum score of 30. The score indicates that on average the respondents answer 21 items correctly. If we split our attention to the three categories of respondents, the average English implicatures comprehension scores vary considerably among the three groups. The first group with high English exposure achieved an average implicature comprehension score of 23.550. The second group with medium English exposure recorded an average of 21.781 for the implicature comprehension score. On the other hand, the last group with low English exposure booked an average of 17.605 of the similar category. One-way ANOVA test and Post-hoc test were used to determine whether the differences between groups are significant. The following is the results of one-way ANOVA test and post-hoc test for all three groups of respondents.

TABLE 6. The Results of ANOVA Test and Post Hoc Test of Comprehension Implicature

Oneway ANOVA
IMP

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	717.516	2	358.758	17.288	.000
Within Groups	2220.448	107	20.752		
Total	2937.964	109			

Multiple Comparisons
Dependent Variable: IMP
Tamhane

(I) GROUPCODE	(J) GROUPCODE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	1.76875	.94083	.182	-.5402	4.0777
	3.00	5.94474*	1.07396	.000	3.3108	8.5787
2.00	1.00	-1.76875	.94083	.182	-4.0777	.5402
	3.00	4.17599*	1.17132	.002	1.3078	7.0442
3.00	1.00	-5.94474*	1.07396	.000	-8.5787	-3.3108
	2.00	-4.17599*	1.17132	.002	-7.0442	-1.3078

. The mean difference is significant at the 0.05 level

Based on the results of the one-way ANOVA test, the sig. value was 0.00 or less than 0.05. Hence, the mean score difference of the learners comprehension of English implicature among three groups is significant. To investigate further, the results of post-hoc *Tamhane Test* revealed that the mean score difference between the high exposure group and the medium exposure group is not significant. However, the difference between the average score of implicature comprehension between the high exposure group and the low exposure group is significant. A significant difference is also found between the mean score of medium exposure and the low exposure group.

FORMULAIC VS. IDIOSYNCRATIC IMPLICATURES

Bouton (1994) argues that English implicatures for second language learners can be divided into two broad categories. The first category is the formulaic implicature category and the second category is the idiosyncratic implicature category. A total of 18 questions on the implicature instrument tested the formulaic implicature and a total of 12 questions on the same instrument tested idiosyncratic implicatures. The number of questions for formulaic implicatures is different from that of idiosyncratic because in fact, formulaic implicatures consist of 6 types of implicatures and idiosyncratic of 4 types. The following table shows the comparison between the scores of formulaic implicatures and idiosyncratic implicatures comprehension in percent.

TABLE 7. Formulaic and Idiosyncratic Implicatures Comprehension Comparison

Group	Formulaic	Idiosyncratic
All respondents	67.22%	74.02%
High Exposure Group	75.69%	82.71%
Medium Exposure Group	69.62%	77.08%
Low Exposure Group	56.29%	62.28%

Table 7 shows the respondents average percentage for formulaic implicature comprehension is 67.22% and the average percentage for idiosyncratic implicature is 74.02%. The pattern of percentage on formulaic and idiosyncratic implicature on three groups reflects similar fashion with the trend shown by all respondents. The percentage of the high exposure group on formulaic implicature is 75.69% and 82.71% for the idiosyncratic implicature. The

percentage of the medium exposure group is 69.62% for the formulaic implicatures and 77.08% for the idiosyncratic implicatures. Lastly, the low exposure group achieves 56.29% for the formulaic implicatures and 62.28% for the idiosyncratic implicatures.

Wilcoxon test was conducted to determine the significance of the mean scores difference of formulaic and idiosyncratic implicatures across three groups. The results of the Wilcoxon test can be seen on this following table.

TABLE 8. Wilcoxon Test of Formulaic and Idiosyncratic Implicatures Comprehension

| | **Test Statistics**[a] | | | |
	All respondents	HEG	MEG	LEG
Z	-4.216^{b}	-3.262^{b}	-2.209^{b}	-1.940^{b}
Asymp. Sig. (2-tailed)	.000	.001	.027	.052
a. Wilcoxon Signed Ranks Test				
b. Based on negative ranks.				

Based on the results of the Wilcoxon test, the score differences between formulaic and idiosyncratic implicatures in high exposure groups and medium exposure groups are all significant with Z score lesser than -1.96. Only low exposure group shows insignificance of score difference in this matter with Z score greater than -1.96.

From the analysis, it shows that comprehension scores or percentages of idiosyncratic implicatures are consistently higher than the participants' comprehension on formulaic implicatures. Thus, formulaic implicatures are more problematic for the second language learners compared with idiosyncratic implicatures.

MOST PROBLEMATIC IMPLICATURES AMONG TEN TYPES

Based on the findings that formulaic implicatures are consistently more difficult for second language learners, further investigation is conducted. According to the framework set up earlier in this study, implicatures can be further divided into ten types of implicatures: (a) *POPE Question (POPE-Q),* (b) *Minimum Requirement Rules (MRR),* (c) *Sequential,* (d) *Indirect Criticism*, (e) *Scalar, (f) Idiomatic, (g) Quantity, (h) Quality, (i) Manner and (j) Relevance*. Therefore, this study shall be able to establish the most problematic implicatures out of ten types using the research method explained in the previous section. The following table summarizes the results of implicature tests conducted to 110 students and divided into three groups of formal exposure.

TABLE 9. Mean Scores of Each Type of Implicatures

		POPE	SEQ	MRR	SCAL	CRIT	IDOM	QUAN	QUAL	MAN	REV
All Groups		2.02	2.26	1.73	1.98	1.61	2.50	2.11	2.24	2.23	2.31
Rank		7	3	9	8	10	1	6	4	5	2
Group	HEG	2.13	2.58	1.93	2.50	1.78	2.73	2.28	2.30	2.73	2.63
Rank		8	4	9	5	10	1	7	6	1	3
Group	MEG	2.06	2.44	1.75	2.03	1.59	2.66	2.28	2.53	2.06	2.38
Rank		6	3	9	8	10	1	5	2	6	4
Group	LEG	1.87	1.79	1.50	1.39	1.45	2.13	1.79	1.92	1.84	1.92
Rank		4	6	8	10	9	1	6	2	5	2

Each type of implicatures is represented by three questions in the test. Therefore, the maximum mean score that a type can record is 3. The closer the score to 3 means that the implicatures are easier for the respondents and the closer the score to 0 means that the

implicatures are problematic for the respondents. Looking at the data on table 9, further summary can be described as follows.

TABLE 10. List of Most Problematic Implicatures Across Groups

No.	Groups	Most Problematic Implicatures	Mean Score (Max 3.0)
1	All Respondents	MRR	1.73
		Indirect Criticism	1.61
2	High Exposure Group (HEG)	MRR	1.93
		Indirect Criticism	1.78
3	Medium Exposure Group (MEG)	MRR	1.75
		Indirect Criticism	1.59
4	Low Exposure Group (LEG)	Indirect Criticism	1.45
		Scalar	1.39

Across the groups there are some types of implicatures consistently emerged as the most problematic implicatures for second language learners. Minimum Requirement Rules (MRR) is consistently difficult for all groups. From the maximum score of 3.0, all respondents only recorded the average of 1.73. Each group of exposure also show similar trend: High Exposure Group (1.93), Medium Exposure Group (1.75) and Low Exposure group (1.39). Indirect Criticism Implicature is proven the most difficult for High Exposure Group and Medium Exposure Group but Indirect Criticism is not the most difficult implicature for low exposure group (LEG). Scalar Implicature is the most problematic for LEG although it is not the most difficult for HEG and MEG.

Minimum Requirement Rules (MRR) is not only difficult for second language learners but it is also proven difficult for native speakers. The concept of MRR seems counterintuitive for native speakers and non-native speakers. During the focus group discussion for item constructions, some native speakers involved in this research had dissenting opinion about the answer. Disputes could be settled after the native speakers read the research report by Bouton (1994) about MRR. After examining the definition and examples of MRR, agreement among validators increased. The following is the example of a test item containing MRR Implicature.

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

Based on MRR explained by Bouton (1994), Arthur's answer refers to the fact that fifty is the minimum number of seats McDonalds' has. It is also impossible to imagine that McDonalds has exactly fifty seats. The only answer logically possible would be 'more than fifty'. From 110 respondents, there are 47 respondents who answered (c) and 3 of them answered (a). Based on the experience during item construction process in this study, MRR is quite problematic for native speakers. Hence, it is quite understandable that it is also difficult for non-native speakers.

Indirect criticism implicatures are problematic for second language learners but they are not difficult for native speakers. All native speakers involved in this project did not have any dispute on answering the items representing indirect criticism. The following is the example of a test item containing Indirect Criticism implicatures.

Context - *Mr. Ray and Mr. Moore are teachers who work at a 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 admires the typing of the paper.*
> *b. Mr. Moore doesn't like the writing.*
> *c. Mr. Moore likes the writing.*

All three native speakers involved in this project do not find it difficult to identify that Mr. Moore's response is a soft sarcasm. Mr Moore's commenting on the typing of the paper is not relevant to the content of the paper. Hence, Mr. Moore most likely does not like the content of paper. In spite of being obvious for the native speakers, this item is somehow problematic for non-native speakers. From 100 respondents, there are 54 answered (c) and 44 answered (a). Only 12 respondents (11%) answered the item correctly.

On scalar implicatures, the native speakers, the HEG and the MEG do not find them as the most difficult implicatures. For HEG, this type of implicatures is regarded as medium difficulty and for native speakers, this type of implicatures is not problematic at all. For LEG however, scalar implicatures are very problematic. The following is the example of a test item containing Scalar Implicature.

Context - *Gretta is an amateur singer and composer.*

> *Gretta   : I told you, I write songs from time to time.*
> *Dan   : What do you write them for?*
> *Gretta   : What do you mean what for? For my pleasure. And for my cat.*
> *Dan   : Oh really? Does he like them?*
> *Gretta   : She. Yes, she <u>seems</u> to.*

Question - *To what extent does Gretta think that her cat likes her music?*

> *a. Completely sure.*
> *b. Quite sure*
> *c. Not sure.*

If it is put on an imaginary scale or continuum, the word 'seem' is weaker than 'must'. That is why this implicature is called 'scalar'. For native speakers and HEG, this kind of scale can be easily recognized. But for LEG, the concept of modality scale or any other types of scale is hard to grasp.

The results shows that high exposure group (HEG) and medium exposure group (MEG) behave almost similarly although HEG performance is always slightly higher than that of MEG. Low exposure group (LEG), on the other hand, almost always behaves differently than the other two and the LEG's scores are consistently lower than those of two other groups.

FACTORS CONTRIBUTING TO IMPLICATURE COMPREHENSION

Four variables that are examined in this research are: (a) vocabulary, (b) grammar, (c) formal language exposure, and (d) informal language exposure.

Formal language exposure is discussed first in this section because formal language exposure is the only variable which is not included in the correlational analysis in this study. Formal language exposure has been represented by dividing the respondents into three groups. The first group is a group of TESOL students whose curriculum includes linguistic knowledge of English, pedagogical knowledge of English and their lecturers also teach in

English (HEG). The second group is a group of students joining international classes whose majors are not English but their language instruction is English (MEG). The third group is students who only received 2 credits of English courses during their college days and their language instruction is Indonesian (LEG).

This study shows that HEG always gets the highest mean score of overall implicatures and each type of implicature, MEG comes in the second place and LEG always comes in the third place. The score difference between HEG and MEG is small and insignificant but score difference between HEG and LEG is huge and significant.

There are three variables left in this study to be explored as the contributing factors to implicature comprehension: vocabulary, grammar and informal language exposure. To answer this inquiry, a correlation analysis is conducted to show the level of correlation of those three variables and implicature comprehension. The following table is the correlational matrix of implicature comprehension, vocabulary, grammar and informal language exposure after a correlational analysis conducted.

TABLE 11. Correlations Among Four Variables

		IMP	VOC	GRAM	EXP
		Correlations			
IMP	Pearson Correlation	1	.740**	.586**	.172
	Sig. (2-tailed)		.000	.000	.072
	N	110	110	110	110
VOC	Pearson Correlation	.740**	1	.549**	.381**
	Sig. (2-tailed)	.000		.000	.000
	N	110	110	110	110
GRAM	Pearson Correlation	.586**	.549**	1	.407**
	Sig. (2-tailed)	.000	.000		.000
	N	110	110	110	110
EXP	Pearson Correlation	.172	.381**	.407**	1
	Sig. (2-tailed)	.072	.000	.000	
	N	110	110	110	110

*** Correlation is significant at the 0.01 level (2-tailed)*

Looking at the table above, significant correlations have been marked by SPSS using an asterisk (*) or double asterisk (**). In this case, vocabulary and grammar are correlated positively with implicature comprehension with the correlation coefficients of 0.740 and 0.586 respectively. Informal language exposure has shown a very weak correlation against implicature comprehension with correlation coefficient of 0.172. Informal language exposure has mild correlations with vocabulary and grammar with the correlation coefficients of 0.381 and 0.407 respectively. Studying the pattern, it can be suggested that vocabulary and grammar are mediating variables between informal exposure and implicature comprehension. Correlations of those four variables are also analyzed across three groups of formal exposures and the strength of correlations differ in each group suggesting that formal exposure is a moderating variable. Based on the findings, the following model of contributing factors can be proposed.
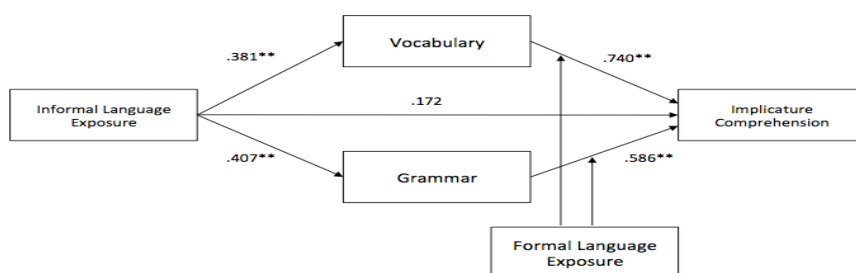

FIGURE 3. Proposed Model of Contributing Factors to Implicature Comprehension

CONCLUSION

To sum up, this study has shown that formulaic implicatures are consistently more problematic for second language learners than idiosyncratic implicatures. These finding supports Bouton's finding in 1994 that second language learners find it difficult to interpret formulaic implicatures. In particular, this study has supported Bouton's finding on formulaic versus idiosyncratic notion. To be specific, second language learners found it difficult to comprehend minimum requirement rules, indirect criticism and scalar implicatures. In a particular case, indirect criticism has become the single most difficult implicatures for all groups. This finding shall draw the attention of language teachers and learners because it may cause communication breakdown in real life situation.

The second question of this study examines the factors affecting learners' competence to comprehend implicatures. This research contributes to empirical evidence to support both Bouton's and Roever's arguments. Based on the correlational test conducted in this study, the findings illustrate that both Bouton and Roever may be correct at the same time. Vocabulary and grammar, representing proficiency, have direct correlation with implicature comprehension. Roever's claim that proficiency is the main factor can be supported here. However, although exposures do not have direct correlation to implicature comprehension, two types of exposures have different roles in giving indirect effects. Informal language exposure has positive correlations with vocabulary and grammar. Meanwhile formal language exposure has been proven to have effects on different level of implicatures comprehension throughout different groups.

This research has been successful to identify the most problematic types of implicatures among second language learners in one university in Indonesia. Language teachers and instructors may adjust their curriculum to accommodate this finding. In addition, this research has shed some light on the debate of exposure versus proficiency that could affect implicatures comprehension as discussed by Bouton and Roever.

Nevertheless, this research has some drawbacks. There is a possibility that different types of implicatures may overlap among each other. For example, POPE-Q implicatures might be derived from the combination of quality and relevance implicatures. Secondly, this research does not involve experimentation so that causality proposed by the model might not be as accurate as expected. These drawbacks can be points of improvements for future research in this field.

ACKNOWLEDGEMENTS

REFERENCES

Arseneault, M. (2014). An implicature account of idioms. *International Review of Pragmatics. Vol. 6*(1), 59-77.

Bada, E. (2010). Repetitions as vocalized fillers and self-repairs in English and French interlanguages. *Journal of Pragmatics. Vol. 42(*6), 1680-1688.

Bardovi-Harlig, K. (2010). Exploring the pragmatics of interlanguage pragmatics: definition by design. *Pragmatics across Languages and Cultures. Vol. 7*, 219-259.

Bouton, L. F. (1992). The interpretation of implicature in English by NNS: Does it come automatically without being explicitly taught?. *Pragmatics and Language Learning. Vol. 3*, 53-65.

Bouton, L. F. (1994). Can NNS skill in interpreting implicature in American English be improved through explicit instruction? A pilot study. *Pragmatics and Language Learning. Vol. 5*, 88-109.

Brown, P. & Levinson, S. C. (1987). *Politeness: Some Universals in Language Usage*. Cambridge: Cambridge University Press.

Cedar, P. (2017). Apology strategies used by EFL undergraduate students in Indonesia. *International Journal of Applied Linguistics and English Literature. Vol. 6*(6), 214-222.

Celce-Murcia, M., Dörnyei, Z., & Thurrell, S. (1995). Communicative competence: A pedagogically motivated model with content specifications. *Issues in Applied Linguistics. Vol. 6*(2), 5-35.

Chandra, O. H. (2001). *Pemahaman implikatur percakapan bahasa Inggris oleh penutur asli Bahasa Indonesia*. (Unpublished Master Dissertation). Universitas Indonesia, Jakarta.

Cummings, L. (2005). *Pragmatics: A multidisciplinary perspective*. New York: Routledge.

Economidou-Kogetsidis, M. (2009). Interlanguage request modification: The use of lexical/phrasal downgraders and mitigating supportive moves. *Multilingua-Journal of Cross-Cultural and Interlanguage Communication. Vol. 28*(1), 79-112.

Flores, J. F. F. (2015). Using gamification to enhance second language learning. *Digital Education Review. Vol. 27*, 32-54.

Grice, H. P. (1975). Logic and Conversation. In P. Cole (Ed.), *Syntax and Semantics* (pp. 411-58). New York: Academic Press.

Han, H. S. (2007). *Family influence on children's second language literacy building: A case study of Korean families* (Unpublished doctoral dissertation). Indiana University of Pennsylvania: Pennsylvania.

Ishihara, N. & Cohen, A. D. (2014). *Teaching and Learning Pragmatics: Where Language and Culture Meet*. New York: Routledge.

Karakas, A. & Sarıçoban, A. (2012). The impact of watching subtitled animated cartoons on incidental vocabulary learning of ELT students. *Teaching English with Technology. Vol. 4*, 3-15.

Kinginger, C., Wu, Q., Lee, S. & Dali, T. (2016). The short-term homestay as a context for language learning: Three case studies of high school students and host families. *Study Abroad Research in Second Language Acquisition and International Education. Vol. 1*(1). 34-60.

Lee, C. (2011). Strategy and linguistic preference of requests by Cantonese learners of English: An interlanguage and crosscultural comparison. *Multilingua. Vol. 30*, 99-129.

Leech, G. N. (1983). *Principles of Pragmatics*. New York: Taylor & Francis.

Levinson, S.C. (1983). *Pragmatics*. Cambridge: Cambridge University Press.

Li, R., Rozina, R. & Sazalie, A. (2015). An investigation into Chinese EFL learners' pragmatic competence. *GEMA Online® Journal of Language Studies. Vol. 15*(2), 101-118.

Li, R. & Suleiman, R. R. R. (2017). Language proficiency and the speech act of complaint of Chinese EFL learners. *3L: The Southeast Asian Journal of English Language Studies. Vol. 23*(1), 60-74.

Lin, C. H., Warschauer, M. & Blake, R. (2016). Language learning through social networks: Perceptions and reality. *Language Learning & Technology. Vol. 20*(1), 124-147.

Long, M. H. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied linguistics. Vol. 4*(2), 126-141.

Murray, J. C. (2011). Do bears fly? Revisiting conversational implicature in instructional pragmatics. *TESL-EJ. Vol. 15*(2). Retrieved from http://www.tesl-ej.org/wordpress/issues/volume15/ej58/ej58a4/

Mulyanah, A. (2013). A pragmatic failure in interculture: The yes and no done by Indonesian. *International Journal of Language Learning and Applied Linguistics World (IJLLALW) . Vol. 4*(2), 74-79.

Nadar, F. X. (1998). Indonesian learners' requests in English: A speech-act based study. *Humaniora. Vol. 9*(6), 61-69.

Nguyen, T. T. M. (2008). Criticizing in an L2: Pragmatic strategies used by Vietnamese EFL learners. *Intercultural Pragmatic. Vol. 5*(1), 41-66.

Potts, C. (2014). *Pressuposition and Implicature*. Retrieved from https://web.stanford.edu/~cgpotts/manuscripts/potts-blackwellsemantics.pdf

Pratama, H., Nurkamto, J., Marmanto, S. & Rustono, R. (2016, November). *Lenghth of study and students' comprehension of English conversational implicature.* Paper presented at International Conference Prasasti III. Surakarta, Indonesia. http://dx.doi.org/10.20961/pras.v0i0.1540

Roever , C. (2005). *Testing ESL Pragmatics*. Frankfurt: Peter Lang.

Sabouri, H., Zohrabi, M. & Osbouei, Z. K. (2015). The impact of watching English subtitled movies in vocabulary learning in different genders of Iranian EFL learners. *International Journal on Studies in English Language and Literature. Vol. 3*(2), 110-125.

Salcedo, C. S. (2002). *The effects of songs in the foreign language classroom on text recall and involuntary mental rehearsal* (Unpublished doctoral dissertation). Louisiana State University, Louisiana.

Thomas, J. (1995). *Meaning in Interaction: An Introduction to Pragmatics*. London: Longman.

Tyers, C. J. (2002). *Role play and interaction in second language acquisition*. Retrieved from http://www.k-junshin.ac.jp/juntan/libhome/bulletin/No32/kiyo_32_11.pdf

Van Marsenille, A. (2015). *Informal language learning: The perspective of higher education students in Brussels. A case study* (Unpublished doctoral dissertation). The Open University: London.

Wijayanto, A., Laila, M., Prasetyarini, A. & Susiati, S. (2013). Politeness in Interlanguage Pragmatics of Complaints by Indonesian Learners of English. *English Language Teaching. Vol. 6*(10), 188-201.

Yamashita, J. (2013). Effects of extensive reading on reading attitudes in a foreign language. *Reading in a Foreign Language. Vol. 25*(2), 248.

Yates, L. & Major, G. (2015). "Quick-chatting", "smart dogs", and how to "say without saying": Small talk and pragmatic learning in the community. *System. Vol. 48*, 141-152.