The Process of Korean Learners of English in Understanding Conversational Implicatures

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Abstract
The ability to interpret implicatures is clearly a necessary skill for understanding everyday utterances in English. Previous research on NNS interpretation of English implicatures investigated their ability to understand implicatures rather than their process of understanding implicatures. The present study attempts to examine the procedure of how Korean learners of English understand implicatures. The hypothesis proposed in the present study is that, even when NS and NNS agree on the meaning of a given implicature, their respective approaches for computing its meaning may differ. The participants, 14 NS from the United States and 23 NNS from Korea, were given an instrument consisting of 10 multiple-choice items, in which they were asked to choose the response that best describes the implicature in a given utterance, and then provide a step-by-step explanation of each response. Findings supported the hypothesis as NNS patterns of explaining certain types of implicatures differed from those of NS. Also the reliability of multiple-choice items for assessing comprehension of implicatures is called into question as 22.3% of correct NNS responses provided explanation that suggests that they did not, in fact, understand the implicatures. (185 words).

Key words: conversational implicature, ILP (interlanguage pragmatics), maxim, Pope Q

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I. Introduction

Although the field of interlanguage pragmatics (ILP) is relatively new, it has generated a plethora of research in second language acquisition (Roever, 2006). Kasper and Rose (2002) define ILP as the non-native speaker's knowledge of the target language pragmatic system and the ability to use it. One interesting topic of ILP that has received much attention from researchers is implicatures. Most previous implicature research has focused on the outcome of implicature interpretation, i.e. can NNS correctly interpret implicatures? (Bouton 1988, Moon 2009)

The purpose of this study, however, is to focus on the process itself, i.e. how do NNS arrive at their interpretation of implicatures? Furthermore, most implicature studies use selected response (multiple-choice) questionnaires, which raises concerns over whether participants did in fact understand the implicature.

In an study about the research methods employed in ILP studies, Kasper and Dahl (1991) called for the need for a better assessment tool to measure pragmatics data. Also, Kasper and Rose (1999) mentioned the need for studies with a cognitive view in order to look not only at the differences between NS and NNS, but at the process of how learners acquire second language pragmatics. This study will address this issue by asking participants to explain their choices following each multiple-choice item. This may shed some light on the various strategies NNS employ in processing implicatures. It may also provide ESL/EFL instructors with a better understanding of their students' pragmatic interlanguage when it comes to interpreting English implicatures.

The following hypothesis is proposed for this study: Even when NS and NNS agree on the meaning of the implicature for a given utterance, their respective approaches for computing the implicature will differ. This hypothesis is based on two assumptions: (1) For each of the implicatures used in the present study, there was an interpretation that a majority of NS agreed on; and (2) speakers can articulate the reasoning behind their interpretation in the form of relatively discrete steps.
II. Review of the Literature

The term implicature was coined by Grice (1975) in reference to utterances that communicate more than what is said. Consider the following example:

John: Where is Bill?
Mary: There's a blue VW outside Sue's house.

On a literal level, Mary's utterance seems irrelevant to John's question. Yet most NNS may be able to recover a meaning from Mary's utterance that is sufficient for answering the question. This meaning is what Grice calls implicature, and in the example above it might be expressed as follows: Bill is at Sue's house. In order to arrive at this implicature, the interlocutor (John) must perform a number of mental steps or computations:

1. Mary is answering John's question.
2. Bill owns a blue VW.
3. Bill's car is parked outside Sue's place.
4. Bill is at Sue's place.

To explain how speakers arrive at the implicated meaning, Grice proposed the Cooperative Principle, which is stated as follows: "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" (1989, p.26). This principle is then elaborated into four maxims:

1. **Quality**: speakers should only say that which they believe to be true; speakers should avoid saying that for which they lack sufficient evidence.
2. **Quantity**: speakers should make their utterances as informative as is required; speakers should not provide more information than is required.
3. **Relation**: speakers' utterances should be relevant.
4. **Manner**: speakers' utterances should avoid obscurity,
ambiguity, prolixity, and disorderliness.

According to Grice, the violation of any of the above maxims generates an implicature. For instance, in the abovementioned example we find that Mary's utterance seems to violate the third maxim of relation: what does a blue VW outside Sue's house have to do with a question about Bill's whereabouts? However, if John and Mary implicitly agree to adhere to the Cooperative Principle, as Grice believed all speakers do, then John will begin computing the abovementioned steps in order to arrive at the intended relevance.

Grice assumed that (under normal circumstances) all speakers adhere to his four maxims: "... it is just a well-recognized empirical fact that people do behave in these ways" (p. 29, 1989). This view was contested in a pioneering study by Keenan (1976), which found that speakers in the Malagasy society often violated Quantity without generating any implicature. Under certain culturally determined circumstances, it was normal for a speaker to withhold information from their interlocutor. Keenan explained that the familiarity of the interlocutors and their gender can affect the extent to which speakers adhere to the maxims. Her findings were based on personal observations rather than a formal instrument, but they nevertheless inspired subsequent research to question the universality of Grice's maxims.

Devine (1982) conducted two pilot studies that addressed the universality issue. The first examined how NNS (15 university-level advanced ESL students) differed from NS (university students) in interpreting fifteen situations that contained conversational implicature. Participants were asked to paraphrase the situation in writing without being asked directly about the implied meaning. The advantage of this indirect method was to avoid influencing the participants, but it also proved to be somewhat impractical as about one third of the responses were inconclusive. The results suggested that NNS differed from NS in their understanding of implicatures that involve flouting (deliberate violation) of the Quality, Quantity and
Relation maxims.

The second study was more metacognitive. The same participants were asked to read a summary of Grice's conversational principles and to comment in writing on the relative importance and applicability of the principle in their cultures and language" (p. 201). The results provided an interesting glimpse of cultural differences in applying Grice's maxims. For example, South Korean participants were reported to agree with Quantity at all times. Devine claimed that underinforming does not create an implicature among Korean speakers because “the general understanding is that speakers will follow rules of politeness that require providing full information” (p. 201), but she did not explain why the existence of such rules should prevent implicatures. Japanese participants reported that status might affect their adherence to the Quantity maxim, and that the resulting violations would not necessarily lead to an implicature. Similarly, in a journal of classroom discussions by Nicholls (1993, cited in Broersma, 1994), Korean students reported that using certain implicatures with persons of higher status would be considered rude.

Bouton (1988) conducted a study that compared implicature comprehension in English between 436 NNS and 28 NS university students. He found that 21% of the time NNS were unable to interpret implicatures as well as NS. The instrument consisted of 33 multiple-choice questions. Each item presented a scenario and a short conversation or utterance that contained an implicature. Participants were asked to choose the answer that best explained the implicature. Bouton divides implicatures into six categories. These are outlined below as they will be used in the present study. The asterisk marks the utterance carrying the implicature.

(1) Relevance: an utterance that seems unrelated to the question being asked.
   Tommy: Can I watch TV?
   Mary: Did you do your homework? *
(2) Irony: saying the opposite of what is meant.
Bobby has been waiting a long time to go fishing with his father. As they leave the house it begins to rain heavily.
Bobby: Oh, it's raining. Perfect. *

(3) Pope Q: answering an obvious question with an obvious question.
It is the final week of exams. Two students are talking.
Student A: Are you going to study tonight?
Student B: Is the sky blue? *

(4) Indirect Criticism: avoiding expression of negative opinions by commenting on peripheral aspects
John: How was the play?
Tom: I liked the costumes. *

(5) Minimum Requirement Rule (MRR): the only information requested by the addressee is whether a certain minimum requirement has been met. More information is not necessary.
Tom: Do you have $200 on you?
Jim: Yes, I do. *

(6) Sequence: the use of and to mark the sequence of events.
John and Helen are cooking.
John: Add milk and boil the sauce.
Helen: No, I think the book said boil the sauce and add milk. *

Bouton (1992) conducted two longitudinal studies that investigated NNS interpretation of English implicatures. In the first study, 30 NNS participated in an implicature test in 1986 and again in 1991. After 4.5 years of living in the US, NNS showed significant improvement, choosing the same response as NS 92% of the time. The findings suggest that long term exposure to the language enabled NNS to acquire more but not
all types of implicature.

The second longitudinal study by Bouton (1994) illustrated, among other things, the relative difficulty of certain types of implicature. Difficulty was calculated by subtracting the percentage of correct NNS responses from those in the NS group for each of the six categories of implicature. Bouton concluded that the difficulty of implicatures depended on the type of reasoning necessary to interpret the message. Implicatures such as irony, Pope Q, indirect criticism, and sequence were found to be more difficult for NNS because they followed a structural, semantic, or pragmatic formula that was unknown to NNS. For example, in Pope Q implicatures, the respondent answers yes/no questions with another question that is extremely obvious. Bouton claims that relevance implicatures are generally easier to decipher because their interpretation is “idiosyncratically dependent on the relationship between a particular utterance and its specific context” (p.98). He acknowledges, however, that knowledge of that context is necessary for understanding the implicature.

In one of the few implicature studies conducted in Korean contexts, Moon (2009) found that the Korean university students misunderstood the implicatures 30% of the time. She also pointed out that the confidence level and the accuracy in the interpretation of the implicatures did not always correlate with each other. In order to accurately understand the process of how learners acquire second language pragmatics.

Since the studies mentioned focused mainly on L2 usage rather than development, they simply examined whether the L2 learners could choose the same responses as the native speakers. The present study, however, attempts to shed light on the process of how L2 learners understand implicatures in the hopes of meeting the challenge set forth by Roever (2007) to come up with a better assessment tool that could examine the development of ILP in L2 learners.
III. Research Methods

A. Participants

In the study, 14 NS (8 males and 6 females) and 23 NNS (4 males and 19 females) were recruited and asked to participate. All NS were Americans with undergraduate or graduate degrees. Their age range was 26-35 (mean=28.6). Since the NS were in agreement in most of the responses, they served as a baseline of native speaker responses. All the NNS were Korean EFL teachers in South Korea with undergraduate or graduate degrees in English and/or Elementary Education. Their age range was 24-47 (mean=33.9).

B. Instrument

The instrument consisted of a 10 item multiple-choice questionnaire adapted from Bouton (1988) (see appendix). Each item contained an exchange or an utterance in English that contained an implicature. In some cases, contextual information describing the situation was also provided. Participants were instructed to choose the answer that best explained the implicature and to provide a step-by-step explanation (in English) of their response below each item. The questionnaire contained two items addressing each of the following categories of implicature: relevance, Pope Q, indirect criticism, and irony. Only one item was devoted to each of sequence and minimum requirement rule implicatures because these are difficult to alter without being repetitive; they are also less interesting as far as explanations go because they follow a semantic formula rather than pragmatic reasoning.

C. Data Collection and Analysis Procedure

The instrument was distributed to the participants through email. The participants were directed not to seek any outside help of any kind and to complete the questionnaire in one
sitting. Responses were sent back to the researcher through email.

Data analysis procedures were as follows: (1) The researcher separately examined step-by-step explanations by NS and NNS to establish possible patterns. (2) Patterns were verified by comparing explanations of the same implicature category. Comparisons were made both within participants and across participants. (3) Responses were classified as correct when the correct answer was chosen. (4) Responses were classified as understood when the correct answer was chosen and an appropriate explanation demonstrating a clear understanding of the implicature was provided. (5) Percentages of correct and understood responses were calculated.

IV. FINDINGS AND DISCUSSION

A. Overall Results

Out of a total of 140 NS responses, 93% (130) were correct. The percentage of understood responses was virtually the same at 92% (129), which suggests that most implicature items reflected native speaker norms. It also suggests that multiple-choice instruments are valid for assessing NS understanding of implicatures. However, the NNS displayed a significant difference in this regard. Out of a total of 230 NNS responses, 72% (166) were correct but only 56% (129) were understood. These findings are summarized in Table 1.
The significant difference between correct and understood responses by NNS suggests that a substantial amount of guesswork may have been involved. The following are examples of Pope Q item responses where participants chose the correct response but failed to provide an appropriate explanation:

Frank is a big sports fan.
Jim: Did you see the game last week?
Frank: Is the Pope Catholic? *

Example 1:
Step 1: When people take part in the Pope Catholic's ceremony, they can feel it's too long or peaceful, boring.
Step 2: Because Frank is a big sports fan, he saw the game and disappointed the game was boring.
Example 2:
Step 1: Frank is a big sports fan.
Step 2: So Frank see all the sorts games if it's not prohibited.
Step 3: Frank thinks only Pope Catholic and prohibit seeing the sports game.

Even when the implicatures are correct and understood by the NNS, the steps taken to arrive at the implicated meaning may differ from NS. NS seemed to compute implicatures instantaneously and rarely considered the literal meaning. NNS, on the other hand, appeared to begin with the literal meaning and then tried to compute the implicature from there. In order to bridge the resulting relevance gap, NNS frequently 'told a story' by making up a context that could not be inferred from the given implicature. The following explanations by NS and NNS illustrate this difference.

Tommy: Can I watch TV?
Mary: Did you do your homework? *

NS example:
Step 1: Tommy is not allowed to watch TV without doing homework.

NNS example:
Step 1: Tommy usually indulges in watching TV with neglecting his work.

B. Pope Q

As mentioned, Bouton (1994) describes Pope Q implicature as formulaic. It is not surprising, therefore, that this category of implicature displayed the highest degree of consistency in NS explanation. NS explanation of Pope Q implicatures typically involved the following steps.

Step 1: Provide the answer to the Pope Q, e.g. the Pope is
Catholic.

Step 2: Explain that the answer to the Pope Q = the answer to the addressee’s question.

Pope Q proved to be the most difficult category for NNS. Of the total NNS responses in this category, 57% were correct and only 37% were understood. This may be due to the fact that Pope Q is the only implicature category that has no equivalent formula in Korean. Koreans use rhetorical questions and relevance implicatures but answering a question with an extremely obvious and unrelated question is pragmatically inappropriate. Surprisingly, there was a large difference in NNS scores between the two Pope Q items. NNS scored higher on the “Is the Pope Catholic?” item (74% correct, 48% understood) than they did on the “Is the sky blue?” item (39% correct, 26% understood). This raises two questions: Why was Pope-Catholic easier to understand than sky-blue (especially when the latter seems more accessible)? Also why was the knowledge from one not transferred to the other? The first question may be answered by the fact that as an implicature, Pope-Catholic is perhaps more prototypical than sky-blue. This prototypicality of the Pope-Catholic example may be evidenced by the fact that it has been used many times in the literature to refer to the Pope Q category of implicatures. Korean speakers may, therefore, have had more exposure to the Pope-Catholic version of this implicature. A possible answer to the second question may be that NNS knew the pragmatic function of Pope-Catholic but had not actually acquired the formula underlying Pope Q implicatures. Non-acquisition of the Pope Q formula may be evidence by the fact that only 26% of NNS responses provided explanations that showed that they had actually understood it.

C. Relevance

Relevance was one of the categories that displayed the smallest difference between NS and NNS. However, NS and NNS steps differed in that NNS created context that could not
be inferred from the information that was given. For example, on item 1 (*TV-homework*) NNS included steps such as “Mary is the mother,” and “Tom never does his homework.”

85% of all *relevance* responses were correct, which suggests that NNS did not find this type of implicature difficult. However, only 52% of these responses were understood. The resulting 33% gap between correct and understood answers is the largest in any single category of implicatures. By separating the items in this category, it can be observed that this gap was largely due to item 6 (*jogging-smoking*) rather than item 1 (*TV-homework*), since the former displayed a 63% difference between correct and understood answers and the latter only 4%.

Upon re-examination the researcher realized that item 6 (*jogging-smoking*) may have been an inappropriate question for the NNS population. In Korea, the act of women smoking in public is generally frowned upon. Since both persons in this example were female, NNS may have felt culturally obligated to add the elements of ‘giving advice’ and ‘statements of a general rule’ (e.g. smoking is bad for the lungs). These elements added steps that were beyond the implicature, making the explanations inaccurate.

**D. Indirect Criticism**

Most NNS responses on *indirect criticism* were correct (72%) and understood (70%), which suggest that this item was reliable. The main difference between NS and NNS in this category was that almost all NS had an ‘indirectness indicator’ in their steps such as “Sam doesn’t want to tell Mark this directly,” or “Sam understood his question and he is choosing to avoid answering it.” NS recognized that the objective of making a positive remark about a peripheral aspect was not to praise the peripheral aspect itself (nice handwriting, good costumes) but to avoid direct criticism of the main aspect (Emily’s paper, the play). NNS, on the other hand, tended to skip the ‘indirectness indicator’ step. Moreover, their explanations suggested that they perceived the peripheral compliment as genuine rather than a tool for
indirectness.

**E. Irony**

Contrary to Bouton’s findings (1988), Korean NNS had a relatively easy time understanding *irony* implicatures. 85% of responses were correct and 76% of those were understood. Explanations by NS and NNS were also quite similar in this category. Both groups tended to mention the element of sarcasm in their steps. It was surprising to find terms such as irony and sarcasm in NNS steps since these are relatively difficult terms. However this is probably due to the fact that both terms are used as English words in Korean conversation among people with higher education, as in the participants of the present study.

**F. Minimum Requirement Rule (MRR)**

52% of NNS responses on MRR implicatures were correct compared to only 36% of NS. It appears that NNS are surprisingly outperforming NS in this category. These findings almost replicate those in Bouton’s (1988) study. However, by factoring in the explanations, 29% of NS responses were understood, which actually gives them a narrow lead over NNS responses with 26%. This slight difference in scores between the two groups and the fact that 64% of the NS chose the same distractor suggest that this may have been an inappropriate item.

**G. Sequence**

93% of NS responses on *sequence* implicatures were both correct and understood. 74% of NNS responses were correct and 65% understood. Understanding this implicature depended entirely on the participants’ ability to recognize and as a sequence marker. The explanations that were provided were, hence, not very noteworthy.
V. CONCLUSION

Using a multiple-choice instrument alone for assessing comprehension of implicatures does not seem to be reliable. This is evidenced by the discrepancies between correct and understood scores on the majority of the items. Supplementing such an instrument with step-by-step explanation had proven to be a valuable tool for confirming qualitative results. This research does not claim that these steps necessarily reflect the cognitive processes underlying the comprehension of implicatures. It merely shows that comparing steps between NS and NNS can provide a rich source of data as well as significant insight into speakers' strategies when interpreting implicatures. Such information can also be of value to ESL/EFL instructors interested in developing their students' pragmatic skills. The findings confirm previous research that NNS often have difficulty in interpreting certain types of implicature. Even when NNS correctly identify an implicature, their process of interpretation seems to differ from NS.

There were a number of limitations to this study: (1) there was a high ratio of females in the NNS group, which creates an imbalance with regard to gender effects; (2) collecting results by email was practical but kept the researcher from monitoring the participants; (3) despite the directions, most NNS included 3 steps in their explanations because they appear to have been affected by the given example. In other cases, more than one sentence was included in a step, which made quantifying steps difficult.

As Gibbs (1999) pointed out, pragmatics plays a much bigger role than we normally expect in both what is said and interpreted. There also needs to be more studies conducted on the process of understanding implicatures, which would provide a link between the fields of ILP and second language acquisition (Kasper and Schmidt 1996). Therefore, future research is needed to establish possible 'semantic formula' for steps that speakers typically use when interpreting implicatures. Such studies should
also enforce stricter guidelines for the usage of steps, which would enable researchers to quantify and analyze steps according to cultural background and category of implicature.
APPENDIX

Questionnaire

The following questionnaire has 10 multiple-choice questions. Circle the answer that best explains the sentence with the asterisk (*). Then provide a step-by-step explanation for your answer.

EXAMPLE:
A husband and his wife are at home talking. Neither of them has a watch.

Husband: What time is it?
Wife: Well, the mailman came.*

(a) The wife is telling her husband approximately what time it is.
(b) The wife thinks her husband should buy a clock for the house.
(c) The wife thinks that her husband should stop what he is doing and check the mail.
(d) By changing the subject, the wife is telling her husband that she does not know what time it is.

In the above example, the answer that best explains the sentence with the asterisk (*) is (a).

Step-by-step explanation:
Step 1: The mailman normally comes during a certain time of day.
Step 2: The wife knows that her husband knows when the mailman normally comes.
Step 3: Telling her husband that the mailman came will give her husband an approximate idea of the time.

In the following questions, try to use a similar format (Step
1. Step 2, …etc.) Feel free to write as many steps as you think are necessary.

(1)
Tommy: Can I watch TV?
Mary: Did you do your homework?*

(a) Tommy should not watch TV.
(b) Mary wants to copy Tommy's homework.
(c) Mary does not want Tommy to know that the TV is broken.
(d) Tommy is allowed to watch TV if he finishes his homework.

Best answer:
Step-by-step explanation:

(2)
It is the final week of exams. Two students are talking.
Student A: Are you going to study tonight?
Student B: Is the sky blue?*

(a) Student B is going to study tonight.
(b) If the weather is nice, Student B won't study.
(c) Student B thinks the weather is more interesting than studying.
(d) Student B thinks Student A should spend more time studying for exams.

Best answer:
Step-by-step explanation:

(3)
Mark: Is Emily a good writer?
Sam: She has nice handwriting.*

(a) Sam admires Emily's handwriting,
(b) Sam does not think that Emily is a good writer.
(c) Emily has better handwriting than Mark and Sam.
(d) Emily not only writes well but she also has nice handwriting.

Best answer:
Step-by-step explanation:

(4)
Bobby has been waiting a long time to go fishing. As he leaves the house, it begins to rain heavily.
Bobby: Oh, it's raining. Perfect.*

(a) Bobby likes rainy weather.
(b) Bobby wants to fish in the rain.
(c) Bobby is unhappy that it's raining.
(d) Bobby predicted that it would rain.

Best answer:
Step-by-step explanation:

(5)
Tom: Do you have $200 on you?
Jim: Yes I do.*

(a) Jim has exactly $200.
(b) Jim has at least $200.
(c) Jim has at most $200.
(d) Could mean any of the above.

Best answer:
Step-by-step explanation:

(6)
Rachel and Helen are jogging together.
Rachel: Slow down Helen! I'm running out of breath.
Helen: I'm glad I don't smoke.*
(a) Helen does not want to slow down.
(b) Helen wants Rachel to jog as fast as her.
(c) Helen has never smoked and is glad that she hasn’t.
(d) Helen is saying the reason Rachel is out of breath is because she smokes.

Best answer:
Step-by-step explanation:

(7)
Frank is a big sports fan.
Jim: Did you see the game last week?
Frank: Is the Pope Catholic?*

(a) Frank saw the game.
(b) Frank did not see the game.
(c) Frank wants to know if the Pope is Catholic.
(d) Frank is more interested in religion than sports.

Best answer:
Step-by-step explanation:

(8)
Bill: I heard that restaurant isn’t very good.
Helen: Oh, it’s great if you like flies with your soup.*

(a) Helen likes flies with her soup.
(b) Helen doesn’t like that restaurant.
(c) Helen wants Bill to eat at home more often.
(d) Helen doesn’t believe what people say about restaurants.

Best answer:
Step-by-step explanation:

(9)
John: How was the play?
Tom: I liked the costumes.*

(a) Tom liked the play.
(b) Tom did not like the play.
(c) Tom thinks costumes are important.
(d) Tom doesn't go to the theater very often.

Best answer:
Step-by-step explanation:

(10)
John and Helen are cooking.
John: Add milk and boil the sauce.
Helen: No, I think the book said boil the sauce and add milk.

The cookbook instructions say that the sauce has to be boiled before adding milk. Who is correct? (There is no asterisk (*) in this question.)

(a) John.
(b) Helen.
(c) Both John and Helen.
(d) Neither.

Best answer:
Step-by-step explanation:

***Thank you for taking the time to fill out this questionnaire.***
References


