Pragmatic Listening Comprehension of English Intonation: Variation across Item Type and L2 Proficiency

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The present study investigates the degree to which EFL learners are able to accurately comprehend pragmatic messages encoded in English intonation. The results of this paper stem from a pilot study that implemented a listening task on pragmatic English intonation to a group of Korean EFL middle school students. First, the accuracy of comprehending the task items was compared across item types. The results showed that the students scored significantly lower for the sentence items than the dialogue items. Also, the students were less accurate in interpreting intonational meaning that contradicted linguistic content. The second research question analyzed the item difficulty and the distribution of student responses on the distractor options. The findings indicate that intonation involving heightened displays of attitude was comprehended more accurately, whereas less typical and disaffiliative uses of intonation resulted in more errors. Lastly, the third research question examined the relationship between L2 proficiency as operationalized by the students' midterm, listening test scores, and proficiency levels determined through self and teacher evaluations. Although the combination of all three proficiency measures explained a total variance of 52% of the students' accuracy scores, the only significant predictor of pragmatic intonational comprehension was the self and teacher evaluations.

[intonation/L2 pragmatics/listening comprehension
영어 억양/제2언어의 화용론/듣기 이해]

I. INTRODUCTION

Subtle meanings in conversational discourse are not always linguistically coded, but encapsulated in other features such as pauses, elongation, and in the case of this study,

intonation. Intonation is more than a melodic feature of language. By means of altering intonation, speakers can display intentions, attitudes, emotions, and stances that are absent or even contradicted by their linguistic cues (Couper-Kuhlen, 1986). The meaning of "oh great," for instance, can vary according to the intonation of the sentence. A rising intonation can portray the speaker's excitement, but a falling intonation implies disappointment – a stance opposite to the literal content of the message. Thus, the indirectness and irony inherent in intonational meaning is capable of performing pragmatic functions, but whether these messages are comprehended by non-native speakers of the language remains as an unanswered question.

To date, the importance of teaching intonation in ESL/EFL has been discussed alongside the learners' *production* of English intonation (S. Kang & H. Ahn, 2011) and the impact of non-native intonation on intelligibility of L2 speech (Jenkins, 2004; Munro & Derwing, 1999). However, how learners *comprehend* intonation has received relatively less attention. The subtle pragmatic uses of intonation may be elusive to learners if their attention is focused only on deciphering linguistic content (Levis, 1999). In any case, it cannot be readily assumed that the learner's repertoire for interpreting L2 intonational meaning is automatically transferred from L1 knowledge.

Therefore, the purpose of this study is to investigate whether EFL learners are able to accurately comprehend pragmatic messages that are encoded in English intonation. The results of this paper come from a listening task on pragmatic English intonation that was administered to a group of Korean EFL middle school students. The students' accuracy of interpreting pragmatic intonational meaning was examined across the different task items in terms of item length (sentence vs. dialogue) and the contradiction that occurs between intonation and linguistic content (non-contradictory vs. contradictory). In addition, student errors were analyzed to the gain further insights into the item difficulty as well as the distribution of student responses on the distractor options. Lastly, statistical comparisons were made between the students' accuracy scores and other language proficiency measures – midterm test, listening test, and self and teacher evaluations – to elucidate the relationship of L2 proficiency and comprehension of pragmatic intonation.

II. LITERATURE REVIEW

1. Meaning and Functions of Intonation

Intonation often provides some state of redundancy to linguistically-coded messages, but it can also be the primary cue that expresses the meaning the speaker wishes to communicate. According to Couper-Kuhlen (1986), intonation choices made by speakers

perform six communicative functions: informational, grammatical, illocutionary, attitudinal, textual/discourse, and indexical. The first two categories are intonational functions that have been most addressed in current ESL/FL course books. For example, the informational function of English intonation has been widely realized in topics such as *prominence,* and students are taught with the features of sentence stress that mark new or contrasting information (e.g., Hanh, 2004; Pennington, 1996). The grammatical function of intonation has been discussed in terms of the intonational differences between declarative and interrogative sentences (i.e., falling vs. rising intonation).

The illocutionary and attitudinal functions of intonation, however, are relatively less represented in ESL/FL teaching. By illocutionary and attitudinal, it means that intonation is used to signal the speaker's intention or affective force – in other words, the pragmatic meaning of an utterance in a given context (Searle, 1969). To illustrate this phenomenon, Hirst (2005) presents the following examples:

(1) It's so exciting
(2) He's got nice handwriting

If the speaker says (1) with a falling intonation, one would hear it as a sign of boredom although the semantics overtly indicate the opposite (i.e., excitement). Likewise, if (2) was said with a falling-rising pitch on *handwriting*, the utterance would be heard as a criticism rather than a compliment. These illustrations note that when a discrepancy exists between the intonation and linguistic content, it is intonation that overrules the interpretation of the implied message.

As such, the pragmatic role of intonation is potent in portraying the speaker's intentions in speech acts such as compliments, refusals, complaints, or apologies (Clennell, 1999). Some intonation patterns also express attitudes and emotions like affiliation, anger, doubt, irony, and sarcasm (Wennerstrom, 2001). However, the organization of intonation patterns and pragmatic intonational meanings are language-specific, and such cross-linguistic differences can cause difficulties for learners dealing with a non-native language. One early study by Cruz-Ferreira (1987) hints on these potential challenges. In a study of Brazilian Portuguese and American English speakers' perceptions of intonation, the participants were able to interpret the meaning of intonation patterns that were shared between the two languages. When the same intonation pattern had different meanings in each language, the listeners consistently misinterpreted what was meant by the utterance. When the intonation pattern was absent in the listener's native language, the participants' answers were random.

More recent studies on L2 intonation started to discuss the learners' difficulties of recognizing and producing native-like intonation features, but such discussions were still

limited to personal anecdotes or appeals to intuition (Wennerstrom, 1994). When it comes to the pragmatic comprehension of intonation, we are left with an even unclear picture. According to Cruz-Ferreira's (1987), we cannot take for granted that the learners' existing L1 repertoire allows full access to intonational meaning in their non-native language. Whether or not ESL/FL learners share the native English speakers' categories for pragmatic uses of intonation should be subject to empirical examination (Levis, 1999). Or else, non-native speakers of English may not only risk leaving with a misunderstanding of the speaker's intention, but they may also fall short in producing appropriate responses or actions that are socially demanded by the interlocutors.

2. L2 Pragmatic Listening Comprehension

The body of research on L2 pragmatic listening comprehension is small, but it is continuously evolving. Bringing in Grice's (1975) theory of conversational implicature, the earliest research on the L2 comprehension of pragmatic meaning actually centered on reading comprehension. Under this perspective, primary interest was placed on the learner's understanding of indirect speech acts and the role of conventionality, linguistic form, and context in the learner's interpretational process (e.g., Carrell, 1979, Kasper, 1984, Takahashi & Roitblat, 1994).

While the earlier studies were restricted to self-paced reading tasks, more recent work has shifted to examine pragmatic comprehension in listening. This transition reflects the research efforts to extend beyond written L2 pragmatic input – to address how L2 listeners are able to cope with an *aural* modality in the comprehension of indirect speech acts. Taguchi (2005) was a pioneering study in this field in that it focused on Japanese EFL students' L2 listening comprehension of indirect requests, refusals, and opinions. The results produced two main findings. First, when compared against native speakers, the EFL students' comprehension was significantly slower and less accurate. Second, whereas the native speakers were uniform across both conventional and non-conventional types of indirect speech acts, the EFL students were faster and more accurate with conventionalized implicatures. Further studies on this topic followed in Taguchi (2007, 2008, 2009, 2011) which extended to different population groups and a variety of instructional settings. As a result, the theoretical framework of pragmatic studies has been enriched by renewed conceptualizations of accuracy and speed in pragmatic listening comprehension as well as their interrelations with language proficiency.

Whereas Taguchi's studies have undeniably produced significant contributions to the field of L2 pragmatics, the task stimuli have been limited to pragmatic indirectness that is encoded in *linguistic* forms or patterns (e.g., "I'm not feeling well" to refuse an dinner invitation). Indirectness signaled through *paralinguistic* features and the pragmatic

interpretations of them by L2 learners of English have not yet been explored. Nonetheless, several studies have documented that learners do attend to intonational differences in their L2 (Chun, 2002; Odline, 2003). For instance, Curz-Ferrerira (1989) reported that English learners of Portuguese were able to distinguish the prosodic differences in L2 intonational minimal pairs. Niioka , Caspers, and van Heuven (2005) who looked into the perception of interrogativity in native speakers and Japanese ESL learners of Dutch discovered that the Japanese learners placed more weight on rising intonation than the native speakers did. These findings suggest that ESL/FL learners do perceive and recognize the intonational features of the target language, but the focus of these studies were restricted to the scope of single words or sentences that were isolated from any form of context. Such abilities do not necessarily entail accurate interpretation of pragmatic intonational meaning, especially when it occurs within a longer stream of conversation. In this respect, task stimuli based on "authentic" conversational dialogues better represent the learners' real-life processing of pragmatic listening scenarios (Taguchi, 2005).

Therefore, this pilot study seeks to explore how L2 learners comprehend pragmatic meanings of intonation and by means of implementing a listening task that incorporates real examples of conversational intonation use. The research questions of the study are as follows:

1) How does the L2 learners' accuracy of pragmatic comprehension vary over item length (sentence vs. dialogue) and different types of intonational meaning (non-contradictory vs. contradictory)?
2) What is the item difficulty of the pragmatic intonation listening task, and how do the L2 learners of different levels respond to the distractor options?
3) Is there a relationship between L2 proficiency and the listening comprehension of pragmatic intonation?

III. METHODOLOGY

1. Participants

The participants consisted of three ninth grade classes of a public middle school in Seoul, Korea. Every week, the students had regular English classes that were held for 45 minutes, and the classes occurred four times a week. The large majority of the students did not have experience of having studied abroad with the exception of 18 students. Eight of these students had stayed abroad for more than one year, with the longest being up to six years. As these students were considered as exceptional cases and thus potential outliers, they

were eliminated from the analysis. One female English teacher, who was the instructor of all three classes, also participated in the study.

2. Listening Task

A listening task was developed to assess the ability of comprehending the pragmatic use of intonation. The task had a total of 20 items: 2 practice items, 4 filler items, and 14 experimental items. The number of items was limited to 20 in reference to the standard length of the national English listening test that is implemented to public school students every year. A task longer in length was assumed to be an overload to the students. The experimental items consisted of two parts: items with single sentences and items with dialogues. The sentence and dialogue items were also sub-divided according to two types of intonational meaning: illocutionary or attitudinal meaning encoded in intonation but not contradicted by linguistic content (non-contradictory), and illocutionary or attitudinal meaning in intonation contradicted by linguistic content (contradictory). Table 1 illustrates the two types of intonational meaning with examples.

TABLE 1
Types of Intonational Meaning

Intonational meaning	Examples	Represented literature
Illocutionary/attitudinal meaning not contradicted by linguistic content (Non-contradictory)	"Ex↗CU::se me↗?" to indicate disaffiliation with the speaker	Chun (2002) Couper-Kuhlen (1986) Pickering (2001)
Illocutionary/attitudinal meaning contradicted by linguistic content (Contradictory)	M: Did you hear that Mary left her job? W: no really? M: She wasn't happy with her boss →W: oh ↗what a surprise↘ ((falling intonation to indicate that it was actually not a surprise but was expected by the listener))	Clennel (1997) Hirst (2005) Wennerstrom (2001)

Note. ↗ indicates rising intonation, and ↘ falling intonation. Underlined words mean emphasis, capital letters mean raised volume, and colons mean elongation of sounds.

Both the sentence and dialogue items were read by a male and female native speaker of English. Each item was followed by multiple-choice questions with four answer options. In

these questions, the students were asked to listen to the sentence and interpret what was meant by the speaker. For the dialogue items, the students were instructed to attend to the last sentence of the conversation. The multiple-choice options were given in Korean so that the students' L2 reading abilities would not interfere with completing the task.

The length of the items was designed to be similar and relatively consistent across the test. The sentence items were kept short within two to three syllables. For the dialogue items, the length of the conversation consisted of three to six speaker turns, lasting for about 12 to 20 seconds, and the target sentence was within the range of two to eleven syllables. The conversation dialogues were not invented, but directly taken from the Santa Barbara Corpus of Spoken English and the TalkBank. The two corpora were searched for cases of pragmatic intonational use, transcribed, and then re-recorded by a male and female native speaker of English. The intonational properties were maintained as closely as possible to the original recording, while the delivery speed and difficult vocabulary items were modified to meet the level of the students.

For the multiple choice questions, three principles were followed in creating the distractor options: 1) the most routine use of the phrase, 2) another routine use of phrase that requires a different intonation, and 3) an unrelated item. So for example, if the question asked the listener to interpret the pragmatic intonation of *hello*, and the correct answer was *checking someone's availability inside a room*, the distractors consisted of the following three options: 1) greetings when you meet your classmate in the morning (the typical routine use, 2) summoning when you answer the phone (another routine use that requires a different intonation), and 3) requesting help (an unrelated item). For the dialogue items, the three distractor options were 1) an interpretation opposite to the implied meaning of the target sentence, 2) content related to the last words of the conversation, or 3) content related to other parts of the conversation (Taguchi, 2008).

Before implementing the listening task to the participant groups, the instrument was piloted with three native speakers of English[1]. All three resulted in perfect scores. Brief interviews were conducted afterwards to gain insights into areas for improvement, which resulted in a revised version of the instrument. In the main study, the internal consistency reliability of the listening task was estimated using Cronbach's alpha, which yielded 0.75 for the total of 14 experimental items.

3. Data Collection

The listening task was paper-based, and it was administered during one of the students' regular English classes. The students were first given instruction on the purpose and

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[1] The native speakers were graduate students enrolled in an American university.

procedure of the task, and then they filled out a questionnaire about their language learning backgrounds (e.g., language test scores, study-abroad experiences). In this questionnaire, the students were also asked to provide a self-evaluation of their English proficiency level on a scale of 5. The actual listening task was then completed as a whole class. Nothing about intonation was mentioned to the students. They were simply told to select one answer that most accurately represented the communicative situation.

School-based midterm and listening test scores were collected as a way of obtaining different measures of the students' L2 proficiency. Both tests were taken in the same month of the data collection, and they were official tests that counted towards the students' English grades. The reason for using school exams was that the students did not have any other language proficiency scores (e.g., TOEFL, junior TOEIC, IELTS, etc.) available. Only four students indicated that they had experience taking a nation-based or internationally based language test, and thereby, the school English exam scores were the only common measure that was available for all of the students.

In addition to the test scores, the self and teacher evaluations of the students' proficiency were also collected. Similar to what the students indicated on the questionnaire, the English teacher was asked to rank each student's English ability on a scale of 5. The student levels determined by the teacher were then averaged with the students' self-evaluation scores, which led to a numerical score that ranged from 1 to 5.

4. Data Analysis

The first research question asked whether listening comprehension of pragmatic intonation would vary across the different items of the listening task. Taking only the 14 experimental items into consideration, each item was scored with five points, leading into a possible score range of 0 to 70. Differences that occurred between the item types of simple sentences and dialogues as well as the contradictory and non-contradictory uses of intonation were each determined by running a matched pair *t* test.

The second research question aimed at conducting an analysis on the item difficulty and distractor options of the listening task. The *p*-value of item difficulty was calculated by dividing the total number of response by the number of correct answers. The distractor analysis involved indicating the number and percentage of responses across each distractor option. To be fair in representing the variance of errors across different student levels, the analysis involved dividing the students into two groups: students who scored more than 50% were classified as *high*, whereas those that had below 50% accuracy were grouped as *low*.

Lastly, the third research question concerned the relationship between collected proficiency measures of the L2 learner group and their comprehension of pragmatic

intonation. L2 proficiency, the independent variable, was operationalized through three different measures: the students' midterm English test scores, English listening test scores, and the English proficiency levels determined by self and teacher evaluations. The midterm test assessed the students' abilities on English grammar, vocabulary, and reading comprehension, with scores ranging from 9 to 100. Scores on the listening test ranged from 1.5 to 10. The proficiency levels were based on calculating the average of the self evaluations of the students as well as the teacher's evaluations on a scale of 1 to 5. Whether the midterm, listening test, and proficiency level were possible predictors of comprehending pragmatic intonation was examined by running a multiple regression analysis.

IV. RESULTS

1. Comprehension Accuracy across Item Types

The first research question asked whether L2 learners vary in accuracy for items of different length (sentences vs. dialogues) and items with different intonational meaning (non-contradictory vs. contradictory intonation). Table 2 shows the total participants' scores as well as the mean scores across different types of items.

When observing the students' responses across the item categories of sentences and dialogues, the item length led to different results in accuracy. The mean scores were slightly lower for the sentence items ($M = 16.45$) than the dialogues ($M = 18.67$), indicating that the shorter items caused more difficulty for the L2 learners. A matched pair t test ($\alpha = 0.05$) showed that the observed differences were statistically significant, $t(82) = 2.35$, $p < 0.05$, with a strong effect size of $d = 2.48$.

Variation also occurred across the items of different intonational meaning. The mean scores show that the items with contradictory intonation were much harder to comprehend ($M = 13.55$) than the items with non-contradictory intonation ($M = 21.57$). The difference was confirmed by a matched pair t test ($\alpha = 0.05$), $t(82) = 8.54$, $p < 0.01$, and again with a strong effect size of $d = 1.89$.

TABLE 2
Descriptive Statistics of Comprehension Scores

Group		K	M	Mdn	SD	Min.	Max.
L2 learners	Total	14	35.12	35.00	15.75	5.00	65.00
(n = 83)	Sentence items	7	16.45	15.00	9.19	0.00	35.00
	Dialogue items	7	18.67	20.00	8.77	0.00	35.00
	Non-contradictory intonation	7	21.57	25.00	8.90	0.00	35.00
	Contradictory intonation	7	13.55	10.00	9.02	0.00	35.00

Note. K represents the number of items in each category. Five points were given for each correct answer. The total possible points were 70, and 35 for each sub-category.

2. Item Difficulty and Distractor Analysis

The second research question was aimed at gaining detailed insights into the students' responses. Two types of analyses were conducted: an analysis of the individual item difficulty and a distractor analysis of the incorrect answers. Table 3 presents the *p*-value of each item, indicating that the three easiest items in descending order were Q5, Q16, Q15 (p = 0.78, 076, 0.71) where more than 70% of the L2 learners obtained correct answers. For the sentence item Q5, the speech act was a complaint ("it's raining") where the speaker conveyed an attitude of disappointment. Q16 and Q15 were dialogue items in which the intonation was used to display affiliation ("you baked!" and "you did!"). A commonality among these items was that they involved a strong attitudinal use of intonation. Because the tone was laden with exaggerated displays of emotion, it is possible that the implied message was relatively straightforward to the learners. The three items may have also been comprehended with relative ease because the intonational meaning did not lie in contrast with the literal content.

On the other hand, the most difficult items appeared to be Q6, Q4, Q20 (p = 0.20, 0.22, 0.27), and the proportion of correct answers was less than 30%. Q6 and Q4 were sentence items that tested the less routine intonational uses of *excuse me* (i.e., to display offence) and *goodbye* (i.e., to display annoyance). The source of difficulty may have been that the intonation used for the disaffiliative function of these phrases was unfamiliar to the learners. Meanwhile, the dialogue item Q20 may have been perceived as a challenge because the intonation not only carried contradictory meaning to the semantic content, but it was also the only item that made use of mid-level intonation.

TABLE 3

Item Difficulty (*p*) of L2 Pragmatic Comprehension Intonation Task

Item	*p*	SD	K	Item	*p*	SD	K
Sentence				Dialogue			
Q2	0.53	0.50	35	Q11	0.65	0.48	35
Q3	0.66	0.48	35	Q12	0.37	0.49	35
Q4	0.22	0.41	35	Q14	0.42	0.50	35
Q5	0.78	0.41	35	Q15	0.71	0.46	35
Q6	0.20	0.41	35	Q16	0.76	0.43	35
Q8	0.55	0.50	35	Q18	0.55	0.50	35
Q9	0.34	0.48	35	Q20	0.27	0.44	35

In addition to the item difficulty, the distractor items were also examined to gain deeper insights into the student errors. Looking first at the single sentence items, Table 4 shows that the majority of the high group had correct responses except for Q9, with the addition of Q4 and Q6 that ranked highest in difficulty. The analysis indicates that for Q4 and Q6, the high group was most attracted to distractors that pointed to the typical use of the phrase. For instance, the correct interpretation of *excuse me* in Q6 was that the speaker was displaying offence. The majority of the high group, however, answered that it was clarification request – a routine use of the phrase that is more familiar to the students. Q9 was an item with contradictory intonational meaning. Instead of the correct answer, 31.11% of the students chose the distractor with unrelated meaning as their next resort. This choice indicates that the high group may have distinguished an unusual use of intonation, but was unable to infer what specific meaning that corresponded to in the English language.

The low group was also similar in that the routine distractor items were their most popular choice, but several patterns differentiated them from the high group. First, 84.44% of the high group answered Q8 correctly, while only 25.71% of the low group had correct answers. As this item had contradictory intonational meaning, the lower group's listening proficiency may not have been strong enough to attend to the pragmatic cues that were beyond what was presented in the linguistic content of the message. An additional difference is that for the low group, the distribution of responses displayed an equal attraction to almost all four distractors. This pattern is suggestive of their confusion, which is another reflection of their limited listening proficiency.

TABLE 4
Distractor Analysis of L2 Pragmatic Comprehension Intonation Task: Sentence Items

Item	Correct Responses % (n)	Routine Meaning % (n)	Routine Meaning 2 % (n)	Unrelated Meaning % (n)
High				
Q2	71.11 (32)	17.78 (8)	11.11 (5)	0.00 (0)
Q3	73.33 (33)	11.11 (5)	15.56 (7)	0.00 (0)
Q4	35.56 (16)	8.89 (4)	55.56 (25)	0.00 (0)
Q5	86.67 (39)	6.67 (3)	6.67 (3)	0.00 (0)
Q6	40.00 (39)	46.67 (21)	6.67 (3)	6.67 (3)
Q8	84.44 (38)	8.89 (4)	2.22 (1)	4.44 (2)
Q9	46.67 (21)	8.89 (4)	13.33 (6)	31.11 (14)
Low				
Q2	22.86 (8)	60.00 (21)	17.14 (6)	0.00 (0)
Q3	60.00 (21)	22.86 (8)	11.43 (4)	5.71 (2)
Q4	11.43 (4)	2.86 (1)	82.86 (29)	2.86 (1)
Q5	57.14 (20)	11.43 (4)	22.86 (8)	8.57 (3)
Q6	5.71 (2)	45.71 (16)	28.57 (10)	17.14 (6)
Q8	25.71 (9)	28.57 (10)	28.57 (10)	17.14 (6)
Q9	22.86 (8)	37.14 (13)	11.43 (4)	28.57 (10)

Moving to the dialogue items, Table 5 presents the distractor analysis of the high and low groups. The majority of the high group was accurate in their answers except for the two most difficult items, Q12 and Q20. One interesting difference between the high and low group was discovered in the responses of Q11, Q14, and Q18. All three were items that had contradictory intonational meaning. The high group was mostly accurate, but the distractor with opposite meaning provided the most competing source of information to the low group. More than 42% of the low group was attracted to the distractor that corresponded with the literal content of the sentence. As in the sentence items, these results suggest once again that the comprehension of contradictory intonational meaning is a challenge particularly for L2 learners of lower proficiency.

Another difference concerned the student responses to Q20. This item was the one that required an accurate interpretation of mid-level intonation and was ranked as the third most difficult item in the task. The high group was most attracted to the distractor that related to last utterance of the dialogue (31.11%) with a considerable percentage also slanted towards the distractor with opposite meaning (24.44%). More than 50% of the low group, in

contrast, was concentrated on the distractor option that had information related to the last utterance of the conversation. The analysis shows that while both high and low groups had difficulties in recognizing the pragmatic use of mid-level intonation, the low group was relatively more reliant on the most recent information that they heard from the conversation.

TABLE 5

Distractor Analysis of L2 Pragmatic Comprehension Intonation Task: Dialogue Items

Item	Correct Responses % (n)	Opposite Meaning % (n)	Last Word % (n)	Other Related % (n)
High				
Q11	80.00 (36)	11.11 (5)	2.22 (1)	6.67 (3)
Q12	51.11 (23)	13.33 (6)	2.22 (1)	31.11 (14)
Q14	53.33 (24)	20.00 (9)	2.22 (1)	20.00 (9)
Q15	86.67 (39)	2.22 (1)	6.67 (3)	4.44 (2)
Q16	91.11 (41)	4.44 (2)	2.22 (1)	2.22 (1)
Q18	80.00 (36)	8.89 (4)	6.67 (3)	4.44 (2)
Q20	37.78 (19)	24.44 (11)	31.11 (14)	6.67 (3)
Low				
Q11	40.00 (14)	42.86 (15)	11.43 (4)	2.86 (1)
Q12	20.00 (7)	22.86 (8)	14.29 (5)	37.14 (13)
Q14	22.86 (8)	42.86 (15)	5.71 (2)	22.86 (8)
Q15	48.57 (17)	14.29 (5)	14.29 (5)	22.86 (8)
Q16	54.29 (19)	17.14 (6)	22.86 (8)	2.86 (1)
Q18	25.71 (9)	45.71 (16)	14.29 (5)	14.29 (5)
Q20	14.29 (5)	25.71 (9)	54.29 (19)	5.71 (2)

3. Influence of L2 Proficiency Measures

The third research question examined the relationship between L2 pragmatic intonational comprehension and three other measures of the students' L2 proficiency: English midterm test scores, English listening test scores, and English proficiency levels based on teacher and student self evaluations. Multiple regression analysis was used to assess which proficiency measure might be a predictor of comprehension accuracy.

TABLE 6

Multiple Regression Analysis of L2 Proficiency Measures and
Pragmatic Intonational Comprehension (N = 83, 3 missing)

Variables	R^2	F		β	t
Midterm			-0.11	0.03	0.24
Listening test	0.52	27.90***	0.29	-0.17	-0.91
Proficiency level			9.46	0.84	5.49***

Note. *** $p < ,001$. 3 out of the total n were taken out because of missing data in listening test scores.

As displayed in Table 6, the combination of all three proficiency measures explained a total variance of 52% in the L2 comprehension of pragmatic intonation [$F(3,76) = 27.90$, $p < 0.001$]. However, there was no significant impact of midterm and listening test scores on the accuracy of comprehension, indicating that these two measures were not predictors for comprehending pragmatic intonation. Only the proficiency levels determined by teacher and student self evaluations were found be a predictor of comprehension at the significance level of < 0.001. The unstandardized coefficient   shows that with the increase of one proficiency level, there is a corresponding increase in comprehension accuracy scores of 9.46.

V. DISCUSSION AND CONCLUSION

The present study developed a listening task to assess the pragmatic listening comprehension of intonation among L2 learners. In the first research question, accuracy of comprehension was compared across the different items of the listening task. Comparisons on item length revealed that the students scored significantly lower for the single sentence items than the dialogue ones. This variation serves to highlight the influence of context on the interpretation of pragmatic intonation. Although the dialogue items place higher listening demands in regards to the amount of information that needs to processed, the added context may have allowed the learners to inference the indirect intentions and emotions conveyed by the speaker. In addition to item length, another variation was observed across contradictory and non-contradictory intonation meanings. Items that required the learner to understand the irony behind the intonation were much more difficult to comprehend. On the other hand, items where the intonation aligned with the literal content of the message were accurately interpreted with relative ease.

The second research question was based on an analysis of the task's item difficulty as

well as the distribution of responses of the distractor options. The item difficulty analysis revealed that the students had an easier time comprehending pragmatic intonation that involved heightened displays of attitude, whereas the interpretation of less typical and disaffiliative uses of intonation was perceived as a challenge. Accurate interpretations of the interlocutor's subtle disaffiliative moves, as in a situation where the speaker feels offended, is crucial for the repairing and maintenance of social relations. If learners fall short in their recognition of such intonational cues, they risk facing the possible breakdown of not only communication but also social relationships. Students, therefore, need to be exposed to the different pragmatic alterations of intonation, explicitly on how L1 speakers of the language use intonation to perform a wide range of communicative actions other than what is known as the most routine use of the expression.

The distractor analysis provided further information in that the students were distracted by the options that pointed to the most typical use of the target phrase. The student errors suggest that L2 learners can be unaware of the intonational variations of highly frequent expressions, and how they map on to different types of implied meanings and pragmatic functions. Another significant finding regards the discrepancies found between the high group and the low group in their interpretation of contradictory intonational meaning. Compared to the high group, the low group was substantially more inclined to comprehend them in their literal meaning, which led to an interpretation opposite to the implied message of the sentence. In other words, the listening proficiency of the low group allowed them with access to the linguistic content of the message, but not to the extent that they were able to attend to the pragmatic cues in the intonation. In order to prevent L2 learners from misinterpreting the speaker's intent, EFL students may benefit from having their awareness raised about the irony embedded in pragmatic intonation even at an early stage.

Lastly, the third research question examined the possible relationship between L2 proficiency as operationalized by the students' midterm, listening test scores, and proficiency levels determined through self and teacher evaluations. Although the combination of all three proficiency measures explained a total variance of 52% of the students' accuracy scores, the only significant predictor of pragmatic intonational comprehension was the proficiency levels based on the self and teacher evaluations. This finding is striking in that the scores obtained through school exams did not predict the listening abilities for pragmatic intonation. One explanation could be that the school exams are more achievement-based tests that assess the student's mastery of curricular content rather than their actual language proficiency. Because the teacher and student self evaluation did predict to a certain extent the comprehension of pragmatic intonational meaning, it is still highly possible that a relationship between L2 proficiency and pragmatic comprehension of intonation does exist. This conjecture will need to be further explored via comparisons with other internationally-recognized and valid language proficiency

exam scores.

Being a pilot project, this study is not without its limitations. Further research is needed over larger samples, and possibly over different participant population groups to confirm the generalizability of the findings. Because this study dealt with middle school students, the questions of the instrument were short and limited to 20 items. A longer listening task could be conducted with adult participants of a wide proficiency range to discover further variation across different item formats and types of intonational meaning. Alternative proficiency measures also need to be available as this study was not able to establish a solid relationship between L2 proficiency and pragmatic comprehension of intonation other than what was collected through teacher and student self evaluations. The influence of L2 proficiency as operationalized in valid language tests could be one fruitful area for further investigation.

Despite its shortcomings, the present study adds to an underrepresented area of L2 pragmatic research – pragmatic comprehension – and with an unprecedented focus that goes beyond the linguistic features of English. By investigating the challenges of EFL students in comprehending pragmatic intonation, this study seeks to promote a deeper understanding of the interplay among types of intonational meaning, L2 proficiency, and pragmatic comprehension.

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Examples in: English
Applicable Languages: English
Applicable Levels: Secondary

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