The Relative Effectiveness of Three Types of Input-based Instruction: A Study of Japanese Learners of English

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The present study investigated the effects of three types of input-based approaches, deductive instruction, inductive instruction with problem-solving tasks, and inductive instruction with structured input tasks on the acquisition of pragmatic competence. Sixty adult intermediate proficiency native speakers of Japanese were randomly assigned to one of four groups consisting of three treatment groups and one control group. Each treatment group received one of the following kinds of instruction: (a) deductive instruction; (b) inductive instruction with problem-solving tasks; or (c) inductive instruction with structured input tasks. The purpose of the instruction was to establish knowledge about lexical/phrasal downgraders and syntactic downgraders in English for performing complex requests. All participants took a pre-test, a post-test, and a follow-up test. Each test was made up of two receptive judgment tasks and two production tasks. The results indicated that the three treatment groups performed significantly better than the control group (p < .006). However, in the listening test, only the participants in the deductive instruction group did not maintain the positive effects of the treatment between the post-test and the follow-up test.

Introduction

One of the issues in teaching a second language (L2) pragmatics is whether instruction is necessary for L2 pragmatics. Kasper and Rose (2002) argued that pragmalinguistic forms and sociopragmatic rules are often not salient enough, so that mere exposure to them, without pragmatic instruction, doesn’t help learners notice them. Moreover, Takahashi (2001) attested to necessity of developing both pragmalinguistic and sociopragmatic proficiency with some form of instruction. This finding suggests that it is useful, and possibly necessary, to teach appropriate L2 pragmatic realization patterns of speech acts, such as requests, refusals, and apologies. Among the three speech acts mentioned above, the present study will deal with requests. In the present study, pragmalinguistic knowledge refers to the knowledge of the strategies for realizing speech intentions and linguistic items used to express these intentions (Thomas, 1983), whereas the sociopragmatic knowledge refers to the knowledge of the social conditions governing language (Brown and Levinson, 1987).

A number of recent interventional studies in pragmatics teaching have contrasted the effectiveness of explicit and implicit learning and the results indicate a general trend in support of explicit learning (e.g., Alcón, 2005; House, 1996; Koike & Pearson, 2005; Takahashi, 2001; Tateyama, Kasper, Mui, Tay, & Thananart, 1997). However, there is still

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controversy regarding the nature and roles of explicit and implicit learning in regard to the role of awareness.

The basic contrast between explicit and implicit learning is usually regarded as a contrast between learning on the basis of awareness. Explicit learning is learning with awareness, while implicit learning is learning without awareness (Schmidt, 1990). However, Schmidt (1994a, 1994b, 1995) argued that learning without awareness is not possible. This notion is closely associated with the noticing hypothesis (Schmidt, 1994a, 1994b, 1995), which states that learners need to notice a feature consciously in order to acquire the feature. Schmidt (1990) listed five factors that influence the noticeability of L2 features, namely: expectations, frequency, perceptual salience, skill level, and task demand. Among these five factors, the present study places a special emphasis on the effectiveness of the perceptual salience of input enhancement and task demand.

In the present study, the two types of input enhancement techniques, structured input tasks and consciousness-raising tasks are used.

**Structured input tasks**

Ellis (1997) argued that: (a) structured input texts can be designed in such a way that the target forms are presented frequently; (b) the meaning of the target form is clear; and (c) understanding the target forms is essential for comprehending the whole text. Ellis (1997) explained some general principles for the design of structured input tasks.

1. An interpretation activity consists of a stimulus to which learners must make some kind of response.
2. The stimulus can take the form of spoken or written input.
3. The response can take various forms (e.g., true/false, check a box, select the correct picture, draw a diagram, perform an action), but in each case the response will be either completely non-verbal or minimally verbal.
4. The activities in the task can be helpfully sequenced to require first attention to meaning, then noticing the form and function of the grammatical structure and finally error identification.
5. Interpretation tasks should require learners to make a personal response (i.e., relate the input to their own lives) as well as a referential response. (pp. 155-159)

The effect of a structured input task has been proved by a number of grammar teaching studies (e.g., Collentine, 1998; Morgan-Short & Bowden, 2006; Toth, 2006). Regarding the necessity of teacher-fronted explicit information before structured input tasks, studies by VanPatten and Oikennon, Benati (2003), Farley (2003), and Wong (2003) have shown that providing proactive explicit information was not beneficial and that structured input tasks by themselves effectively improved learners’ grammatical proficiency level.
Problem-solving tasks

One type of problem-solving task is an indirect consciousness-raising task. Ellis (1997) argued that the goal of this type of task is to obtain explicit knowledge of target features. Ellis noted further that in these tasks learners are provided with L2 data and required to perform some operation on or with it. Ellis (2003) identified the main characteristics of consciousness-raising tasks as follows:

1. There is an attempt to isolate a specific linguistic feature for focused attention.
2. The learners are provided with data that illustrate the target feature and they may also be provided with an explicit rule describing or explaining the feature.
3. The learners are expected to utilize intellectual effort to understand the target feature.
4. Learners may be optionally required to verbalize a rule describing the grammatical structure. (p. 163)

Some researchers have investigated the effectiveness of consciousness-raising tasks in L2 grammar teaching. Fotos and Ellis (1991) compared the effects of direct consciousness-raising instruction (teacher-fronted grammar explanations) with the effects of indirect consciousness-raising instruction (consciousness-raising tasks only) on two groups of Japanese EFL college students. The results indicated that both groups made significant gains on a grammaticality judgment test with the more durable gains made by participants exposed to the direct method. In a follow-up study, Fotos (1994) again compared the effects of direct consciousness-raising instruction with the effects of indirect consciousness-raising instruction on Japanese EFL learners. The results showed that there was no statistically significant difference between the two groups. Based on the results of two studies, Fotos and Ellis (1991) and Fotos (1994) concluded that the consciousness-raising tasks are useful in that they promote noticing and proficiency gains.

Although the goal of the problem-solving and structured input tasks is to make better form-meaning connections in morphosyntax studies, Ellis (2003) mentioned that problem-solving tasks differ from structured input tasks in that the problem-solving tasks lead to more overt instruction, while the structured input tasks lead to less overt instruction. One of the key issues here is whether explicit information should be provided before the input-based activities.

Deductive and Inductive Instruction

Decoo (1996) described five modalities on the deduction-induction continuum and the modalities relevant to the present study are Decoo’s modalities A and B:

- **Modality A** – Actual deduction: The grammatical rule or pattern is explicitly stated at the beginning of the learning process and the students move into the applications of this (examples and exercises).
- **Modality B** – Conscious induction as guided discovery: The students first encounter various examples, often sentences, sometimes embedded in a text. The “conscious
discovery” of the grammar is then directed by the teacher: on the basis of the examples he normally asks a few key-questions and the students are led to discover and formulate the rule. The rationale usually given is that students who discover the rule on their own will profit from this. (p. 97)

Deductive instruction in the present study is essentially an application of modality A, whereas inductive instruction derives from modality B. Inductive instruction can be defined as instruction that involves encouraging learners to attend to particular forms and try to arrive at explicit knowledge (Norris & Ortega, 2001) or learners’ intentional learning by consciously noticing how target structures are used in input specially contrived to contain numerous exemplars of the structures (Ellis, 1997). For the present study, the inductive approach is clearly differentiated from implicit learning in which there is neither rule presentation nor directions to attend to particular forms. In this study, both the deductive and inductive approaches are considered as examples of explicit instruction.

Although the deductive approach as defined by Decoo has been used in all related recent studies, the inductive approach has been applied in different ways. For example, the inductive approach has involved the presentation of the grammatical rule by the teacher at the end of the lesson (Seliger, 1975), students’ receiving sentences including the target structures with instructions to look for a rule (Abraham, 1985; Herron & Tomasello, 1988); and students’ receiving instructions to verbalize a rule after being exposed to input (Shaffer, 1989). Seligar (1975) found that the deductive method can be more effective, whereas Herron and Tomasello (1992) showed that the inductive method works better than the deductive method. The studies by Abraham (1985) and Shaffer (1989) fall in between the above two studies as no significant differences between the deductive and inductive approach were found. Although the results of the inductive-deductive instruction-related studies are rather equivocal, it is important to note that all experimental groups made progress regardless of the approach that they used because all of the techniques applied in these studies share a common objective: to enhance the salience of target forms in order to promote attention to and noticing of those structures. It could be assumed that the differences in the results were attributable to differences in the degree of five factors which are known to influence the noticeability of L2 features; expectations, frequency, perceptual salience, skill level, and task demand and it would be interesting to see whether the results of the inductive-deductive instruction-related studies could be extended to the intake of pragmatic information.

**Interventional Input-based Studies of L2 Pragmatics**

There have been some interventional input-based studies on teaching pragmatics. Some of these studies demonstrated that explicit instruction with some sort of input enhancement activities is effective (e.g., House, 1996; Takahashi, 2001; Tateyama, Kasper, Mui, Tay, & Thananart, 1997), while some studies (e.g., Martínez-Flor & Fukuya, 2005; Rose & Ng, 2001; Takahashi, 2005) found input enhancement activities alone are also effective. These studies provide support for the effectiveness of explicit instruction and the noticing hypothesis. Furthermore, only the study by Rose and Ng (2001) was conducted within the deductive/inductive framework proposed by Decoo (1996).
Rose and Ng (2001) investigated the effectiveness of the deductive and inductive approaches in teaching compliments and compliment responses. The participants, 44 undergraduate students in Hong Kong, were assigned to two experimental groups and one control group. Both experimental groups followed the same procedure with one exception. The inductive group was not provided with any metapragmatic information about the target structures, but was exposed to film segments and additional examples of the structures and provided with questions to guide their discovery about the target features. On the other hand, the deductive group was provided with metapragmatic information before working on analyses of compliment and compliment response data. The results of the discourse completion questionnaire showed that both inductive and deductive instruction led to gains in pragmalinguistic proficiency, but that only deductive instruction effectively developed sociopragmatic proficiency. Possible reasons for these findings are that the participants in Rose and Ng’s study were advanced learners who could benefit from either type of instruction. In addition, Kasper and Rose (2002) commented that the syntactic form of compliments is a relatively easy pragmalinguistic feature to acquire. It would be interesting to see whether instruction in other pragmalinguistic features (e.g., polite requestive forms) produced similar results.

The Present Study

Interventional studies in pragmatics teaching have indicated that target pragmatic features can be most effectively learned when they are taught explicitly with some sort of input enhancement. However, when and how input may be most beneficially enhanced and additionally, when and how metapragmatic information is best provided, are controversial issues. There has been only one study (Rose & Ng, 2001) in the field of interlanguage pragmatics (ILP) in which the effectiveness of deductive and inductive approach in line with Decoo’s (1996) modalities was investigated. The lack of recent studies in this field suggests that this is an underresearched area within the field of ILP that requires further attention. The following specific research question was investigated in this study. In the present study, deductive instruction, inductive instruction with problem-solving tasks, and inductive instruction with structured input tasks are considered three different types of explicit input-based instruction.

What are the effects of deductive instruction, inductive instruction with problem-solving tasks, and inductive instruction with structured input tasks on the development of Japanese learners’ pragmatic competence?

Participants

Participants were solicited through an employment advertisement in a weekly magazine published by Recruit, one of the major employment agencies in Japan as well as an employment advertisement provided by Recruit on the Internet. They were not informed that English lexical and syntactic downgraders were the focus of the study. Each respondent was required to submit a Test of English for International Communication (TOEIC) score and after checking their TOEIC scores, only individuals with intermediate English proficiency level (TOEIC scores of 500-700) were chosen for inclusion in the study.

The 60 participants had studied English from five to 22 years. The participants’ first
language was Japanese and their ages ranged from 18 to 40 years old. They were randomly assigned to one of four groups (three treatment groups and one control group). The three treatment groups were the deductive instruction group (DI) \((n = 15)\), the inductive instruction with problem-solving tasks group (IP) \((n = 15)\), and the inductive instruction with structured input tasks group (IS) \((n = 15)\).

**Target Structures**

According to the studies of learners’ requestive strategies conducted by House and Kasper (1987), Faerch and Kasper (1989), Hill (1997), and Takahashi (1998, 2001), non-native speakers of English typically lack the L2 pragmalinguistic knowledge to enable them to mitigate English by means of lexical/phrasal downgraders (subjectivizer and downtoner) and syntactic downgraders (aspect and tense). Thus, this study focuses on teaching lexical/phrasal downgraders and syntactic downgraders in English requestive forms.

Lexical/phrasal downgraders soften the imposition of a request by means of modifying the Head Act internally through lexical/phrasal choices, while syntactic downgraders modify the Head Act internally by means of mitigating the imposition force of a request through syntactic choices (Blum-Kulka, House, & Kasper, 1989). A list of internal modifiers (adapted from Blum-Kulka, House, & Kasper, 1989, pp. 273-186) is shown below.

<table>
<thead>
<tr>
<th>Internal modifier</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal syntactic downgraders</strong></td>
<td></td>
</tr>
<tr>
<td>Aspect (durative aspect marker)</td>
<td><em>I am wondering</em> if you could lend me a book.</td>
</tr>
<tr>
<td>Tense</td>
<td><em>I wanted</em> to ask you to come here.</td>
</tr>
<tr>
<td><strong>Internal lexical and phrasal downgraders</strong></td>
<td></td>
</tr>
<tr>
<td>Subjectivizer</td>
<td><em>I wonder</em> if you could come here.</td>
</tr>
<tr>
<td></td>
<td><em>I’m afraid</em> you are going to have to move your desk.</td>
</tr>
<tr>
<td>Downtoner</td>
<td>Could you <em>possibly</em> lend me your textbook?</td>
</tr>
</tbody>
</table>

**Instructional Treatments**

Four groups of participants, the deductive instruction, inductive instruction with problem-solving tasks, inductive instruction with structured input tasks groups and the control group, took part in four types of English language classes. Each teaching session for the three treatment groups and the control group lasted for 40 minutes and the instructor gave all directions in Japanese during the instruction. The sessions were
conducted twice a week for two weeks at one of the major English conversation schools in Osaka, Japan, by the same instructor.

The three instructional treatments were three types of explicit instruction; these were matched for target pragmatic structures and all four groups were matched for time on task. The first class for all treatment groups was spent on lexical/phrasal downgraders in English requests, the second class on syntactic downgraders, the third class on a review of the first class, and the fourth class on a review of the second class.

The deductive instruction group treatment consisted of two components: (a) a teacher-fronted explicit explanation of the relationship between the form of specific downgraders and the meanings that they convey and (b) structured input tasks. The present study employed the structured input tasks proposed by Ellis (1997) and the tasks are defined as activities designed to invite learners to engage in intentional learning by consciously noticing how a target pragmatic expression is used in input specially contrived to contain numerous exemplars of the structure.

The participants were instructed to not only read or listen to the dialogues, but to also make a decision concerning the appropriateness of the requests. In each lesson, the deductive instruction group participants were first provided with handouts that contained a brief summary of the target structures in English and examples. The researcher took approximately 10 minutes to read aloud the summary and examples in English and provided an explanation in Japanese. Then, the deductive instruction group participants were given handouts with three referential activities (referential response-based activities) and three affective activities (personal response-based activities).

The inductive instruction with problem-solving tasks treatment consisted of just one component, engaging in the problem-solving task. In the present study the terms “problem-solving task” and “consciousness-raising task” refer to the same task, but the term “problem-solving task” will be used in place of the term “consciousness-raising task” because teachers can control only the learners’ manipulation of the input, not its impact on their consciousness. The problem-solving tasks in the present study are defined as tasks in which learners are provided with L2 data and they need to perform some operation on or with it in order to arrive at an explicit understanding of some linguistic property or properties of the target language. Therefore, the problem-solving task includes the following three activities: (a) making a form-comparison, (b) answering analysis questions, and (c) making a list of the ways in which the requests in one dialogue differed from the ones in the other dialogue.

The inductive instruction with structured input tasks group treatment consisted of just one component, engaging in the same structured input activities as the deductive instruction group.

Lessons for the control group were designed to help participants perform well on the TOEIC and participants in this group engaged in TOEIC reading comprehension exercises. Participants in the control group were not exposed to the target structures at all during the lessons.
Table 1. Treatment Features of Each Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Treatment</th>
<th>Proactive metalinguistic information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive instruction (n = 15)</td>
<td>Structured input tasks</td>
<td>Yes</td>
</tr>
<tr>
<td>Inductive instruction with problem-solving tasks (n = 15)</td>
<td>Consciousness-raising tasks</td>
<td>No</td>
</tr>
<tr>
<td>Inductive instruction with structured input tasks (n = 15)</td>
<td>Structured input tasks</td>
<td>No</td>
</tr>
<tr>
<td>Control group (n = 15)</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Testing Instruments and Procedures

The pre- and the post-tests were modified from prototypic measures of cross-cultural pragmatics designed by Hudson, Detmer, and Brown (1992, 1995). Each test consisted of two output-based tests, such as the open-ended discourse completion test (OPDCT) and role-play test (RP), and two input-based tests, such as the listening test (LT) and acceptability judgment test (AJT). The OPDCT, RP, and AJT consisted of 20 situations, while the LT consisted of 15 situations. All situations have one speech act (request), and three sociolinguistic variables, Power (the status of the speaker with respect to the hearer), degree of Imposition (the difficulty that the speaker experiences when asking the hearer to perform the request), and Distance (the relationship between the speaker and the hearer), are controlled. The high Imposition situation (HI) is defined as -Power, +Distance, +Imposition or ±Power, +Distance, +Imposition and the present study focused on HI items. In addition to the degree of Imposition combined with Power and Distance, the factors identified in the constraints in making scenarios were carefully controlled. One HI item is shown below.

You are writing a difficult paper for Professor Hill. You need some help with the paper but Professor Hill is away for a month. A friend of yours has suggested you go and see Professor Watson. Although you do not know Professor Watson and Professor Watson is extremely busy, you have decided to ask Professor Watson to look through your long paper before you hand it in the next day. What would you ask Professor Watson? (based on Takahashi, 1998, 2001)

**Note**. imposition = +; power = - ; distance = + ;  + = more;  - = less;  ± = equal

The situations validated by Hudson et al. (1995), Hill (1997), and Takahashi (1998, 2001) were modified and used and three versions each (A, B, and C) of the OPDCT, RP, LT, and AJT were developed. In all of them, the levels of Power, Degree of Imposition, and Distance were counterbalanced. Three versions of the four testing instruments were also counterbalanced for order of presentation of the same situations across the pre- and...
post-tests sessions. Three versions were adopted so that any learning effects would be minimized.

A pre-test, post-test, and follow-up test were administered to all participants. The pre-test was conducted two to three days prior to the instructional treatment, which lasted for two weeks. The post-test was administered eight to nine days after the treatments and the follow-up test was conducted in the fourth week following instruction. The participants were asked to complete the four tests within 2 hours. Only the LT had a time limit (2 seconds), which was imposed in order to see whether the participants could rapidly access proceduralized knowledge of the target structures.

The pre-test, post-test, and follow-up test were conducted in the following order: the OPDCT, RP, LT, and AJT. The two input-based tests were moved to the end of the testing cycle because of a concern that they might function as a list of possible responses that would provide participants with some hints on the other tests.

**Open-ended Discourse Completion Test (OPDCT)**

The OPDCT required participants to read short descriptions of 20 situations in English and write what they would say in the respective situation in English. Participants were given a Japanese translation that they could look at if they wished. There was no time limit for completing the OPDCT. Most participants spent 30 to 45 minutes completing the test. The appropriateness of the request forms was rated on the appropriateness of request forms on a five-point Likert scale by two native speakers who were trained for an hour. An answer that reflected mastery of downgraders in participants’ requests was given five points. As there were 20 items on the test, the maximum score was 100.

**Role-play Test (RP)**

The RP consisted of short descriptions of 20 situations written in English with a Japanese translation and participants were instructed to play particular roles with the researcher in those situations. The researcher, a nonnative speaker of English, acted as the interlocutor in order to reduce the examinees’ feelings of anxiety, which may have arisen had they interacted with an examiner who was a native speaker of English. This procedure presumably elicited the examinee’s best performance. Participants were given role cards that described the situations and their roles before each role-play. Each situation required the participants to start the role-play and to ask for something from their interlocutors and the participants had to start the role-play. Participants spent an average of two to three minutes preparing for each role-play. The role-plays were tape-recorded, and each participant’s performance was rated on the appropriateness of request forms on a five-point Likert scale by two native speakers of English who were trained for an hour. Spoken sentences in each role-play that reflected mastery of downgraders in the participants’ requests were given five points. As there were 20 items on the test, the maximum score was 100.

**Listening Test (LT)**

The LT consisted of 15 situations with a Japanese translation and required the participants
to listen to a pragmatic performance between a Japanese university student and native speakers of English and then to score the appropriateness of the Japanese university student’s request forms on a five-point Likert scale. After hearing an oral recording of the dialogue, the participants had two seconds to rate the appropriateness of the requests. When a participant rated a request appropriately in line with English native speakers’ baseline data\(^2\), they were awarded five points. As there were 15 items on the test, the maximum score was 75.

**Acceptability Judgment Test (AJT)**

The AJT involved the use of a computer that required the participants to read English written descriptions of 20 situations with a Japanese translation. Then the participants were presented with three isolated requests one by one and were instructed to score the first possible request on an 11-point Likert scale and score subsequent responses with proportionally higher or lower numbers in line with their degree of perceived acceptability. When a participant rated requests appropriately in line with English native speakers’ baseline data\(^3\), they were awarded five points. As there were 20 items on the test, the maximum score was 100. One sample item is shown below.

**Reliability and Validity**

Interrater reliability was estimated by examining the correlation coefficients between the raters’ scores. The correlation coefficients for the OPDCT and RP were .995 and .994, respectively.

Cronbach alpha reliability estimates for the DCT, RP, LT, and AJT were .917, .926, .853, and .893. The internal consistency estimates for all the tests are fairly high, but the reliability estimate for the LT is somewhat lower due to five problematic items. By deleting those five items, the LT produced relatively high levels of reliability.

Regarding content validity, the present study was very careful about planning and matching test items to a theoretical framework involving the degree of Imposition, Power and Distance variables.

**Results**

In the following section, the results for each testing instrument will be examined more closely. In the data analysis a Bonferroni adjustment was employed in order to maintain an approximate experiment-wise .05 alpha level. In other words, the overall alpha level was set at .05, but there were four group comparisons (the OPDCT, RP, LT, and AJT) for one type of items (HI items). Therefore, .05 was divided by the number of comparisons (four), resulting in a \( p \) value of .0125 for the individual statistical decisions.

**Open-ended Discourse Completion Test Results**

The results of a two-way repeated-measures ANOVA performed on the raw scores of the HI items in the OPDCT show a significant main effect for Instruction, \( F(3, 56) = 99.92, p = .000 \), a significant main effect for Time, \( F(3, 56) = 583.57, p = .000 \), and a significant
interaction effect between Instruction and Time, $F(9, 56) = 48.64, p = .000$.

The results displayed in Figure 1 show that although there are no statistically significant differences among the four groups on the pre-test scores, $F(3, 56) = 1.06, p = .373$, the three treatment groups made gains from the pre-tests to the post-tests and the follow-up tests, $F(3, 56) = 127.12, p = .000$; $F(3, 56) = 178.42, p = .000$, and positive effects for the three treatments were maintained because there is no significant difference among the three treatment groups, $F(2, 42) = .58, p = .566$. Furthermore the interaction shows the relative superiority of the three treatment groups over the control group with no crossovers between the three treatment groups and the control group after the treatments.

Figure 1. Interaction Plot for the OPDCT (HI items)

Note. DI = Deductive instruction; IP = Inductive instruction with problem-solving tasks; IS = Inductive instruction with structured input tasks.

**Role-play Test Results**

The results of a two-way repeated-measures ANOVA conducted on the raw scores of the HI items in the RP show a significant main effect for Instruction, $F(3, 56) = 83.93, p = .000$, a significant main effect for Time, $F(3, 56) = 502.61, p = .000$, and a significant interaction effect between Instruction and Time, $F(9, 56) = 33.88, p = .000$.

The results displayed in Figure 2 indicate that although there are no statistically significant differences among the four groups on the pre-test scores, $F(3, 56) = .54, p = .654$, the three treatment groups made gains from the pre-tests to the post-tests and the follow-up tests, $F(3, 56) = 161.05, p = .000$; $F(3, 56) = 133.90, p = .000$, and positive effects for the three treatments were kept with no significant difference among the three treatment groups, $F(2, 42) = 161.05, p = .564$. Moreover the interaction shows the relative superiority of the three treatment groups over the control group with no crossovers between the three treatment groups and the control group after the treatments.
Listening Test Results

The results of a two-way repeated-measures ANOVA on the raw scores of the HI items show a significant main effect for Instruction, $F(3, 56) = 27.48, p = .000$, a significant main effect for Time, $F(3, 56) = 81.27, p = .000$ and a significant interaction effect between Instruction and Time, $F(9, 56) = 7.97, p = .000$.

The results displayed in Figure 3 reveal that although there are no statistically significant differences among the four groups on the pre-test scores, $F(3, 56) = 1.91, p = .139$, the three treatment groups made gains from the pre-tests to the post-tests and the follow-up tests, $F(3, 56) = 33.98, p = .000$; $F(3, 56) = 36.18, p = .000$. However, Figure 3 shows that unlike the IP and IS groups, the DI group did not maintain the positive effects on the HI items between the post-test and follow-up test, $F(2, 42) = 8.36, p = .001$.

A separate ANOVA performed on the follow-up test scores of the HI items shows a significant difference, $F(2, 42) = 13.10, p = .000$, in how the three treatment groups performed on this test. Although only the DI group did not retain the positive effects between the post-test and follow-up test, the interaction shows the relative superiority of the three treatment groups over the control group with no crossovers between the three treatment groups and the control group after the treatments.

**Figure 2. Interaction Plot for the RP (HI items)**

*Note.* DI = Deductive instruction; IP = Inductive instruction with problem-solving tasks; IS = Inductive instruction with structured input tasks.
Acceptability Judgment Test Results

The results of a two-way repeated-measures ANOVA on the raw scores of the HI items indicate a significant main effect for Instruction, \( F(3, 56) = 7.32, p = .000 \), a significant main effect for Time, \( F(3, 56) = 43.07, p = .000 \), and no significant interaction effect between Instruction and Time, \( F(9, 56) = 3.21, p = .000 \).

The results displayed in Figure 4 show that although there are no statistically significant differences among the four groups on the pre-test scores, \( F(3, 56) = .33, p = .801 \), the three treatment groups made gains from the pre-tests to the post-tests and the follow-up tests, \( F(3, 56) = 16.56, p = .000 \); \( F(3, 56) = 14.69, p = .000 \), and positive effects for the three treatments were maintained with no significant difference among the three treatment groups, \( F(2, 42) = 3.06, p = .058 \). Therefore, the three treatment groups performed significantly better than the control group.
The deductive instruction, inductive instruction with problem-solving tasks, and inductive instruction with structured input tasks groups performed significantly better than the control group, and the deductive instruction, inductive instruction with problem-solving tasks, and inductive instruction with structured input tasks groups performed equally well on the OPDCT, RP, LT, and AJT. However, the deductive instruction group did not perform as well as the inductive instruction with problem-solving tasks and inductive instruction with structured input tasks groups on the LT follow-up test. Why did the deductive instruction group perform as well as the inductive instruction with problem-solving tasks and inductive instruction with structured input tasks groups on the immediate LT but not as well on the follow-up version of the LT when no difference was evident on any of the other tests? Any answers to this question must be speculative as no information regarding the psycholinguistic processing involved in either the treatments or the test is available. What distinguishes the LT from the other tests is that it requires on-line processing. As such tests rely heavily on working memory, participants must process and respond to the stimuli rapidly. This heavy use of working memory requires relatively efficient processing and participants who perform well on the LT are assumed to have the ability to store and process information simultaneously in real time. Both the deductive and inductive treatments provided participants with explicit knowledge, but the explicit knowledge was provided in different ways. In the deductive treatment, the participants were simply given explicit information, while in the inductive treatments they had to discover the underlying rules themselves. It appears that the explicit knowledge formed by the participants who engaged in the deductive treatment was weakly established and was not accessible during the follow-up test, while the explicit knowledge produced by the participants who engaged in the inductive treatment was
more firmly acquired and thus more easily accessed when responding to all of the tests. In addition, it can be also assumed that the participants using the inductive approach were better able to process and store information about the target features in working memory.

Regarding the tasks, two types of input-based tasks, problem-solving tasks and structured input tasks, were employed in the present study. Based on the results, it can be assumed that inductive instruction is effective when it is combined with either problem-solving tasks or structured input tasks. There are at least two possible reasons for their effectiveness. One possible reason for the effectiveness of the input-based tasks is related to the participants’ attention to the pragmalinguistic forms of the target structures in the input that they received. Although the two treatments involved different tasks, both may have made the target structures salient. The participants in the inductive instruction with problem-solving tasks group were instructed to pay attention to the highlighted requests in two dialogues, copying them and comparing the request in one dialogue with that of the other dialogue. Then, they were instructed to find and discuss the underlying rules about the target structures. In contrast, the participants in the inductive instruction with structured input tasks group were asked to pay attention to the target linguistic forms and the meanings that they convey during referential and affective activities. In the referential activities, the participants were instructed to choose the more appropriate request form from the two offered for each highlighted part, whereas in the affective activities the participants were asked to rate the level of appropriateness of each bold-faced underlined request in accordance with their belief.

The second possible reason for the effectiveness of the two types of input-based tasks involves the processing of pragmalinguistic and sociopragmatic meanings. In the inductive instruction with problem-solving tasks treatment, the problem-solving tasks were designed not only to develop explicit knowledge, but also to stimulate internal mechanisms involved in the processing of pragmalinguistic and sociopragmatic meanings through opportunities to talk meaningfully about the target features. In addition, Wong and VanPatten (2003) suggested that when learners encounter input in structured input tasks, their internal learning mechanisms begin to make connections between the target features and the meaning that they convey. Wong and VanPatten suggested further that learners’ internal mechanisms deliver data to other internal mechanisms that form the linguistic system. In short, when the participants focus more on the meaning of the target feature, it stimulates their perceptual and mental processing and they are likely to process the target form at a deeper level. The results of the present study seem also to corroborate Bruner’s (1961) finding that learners do better when they have to discover underlying rules themselves rather than when they are simply told about the explicit rules. In other words, instead of striving to design the best possible proactive metalinguistic information in a task, material writers should focus on designing tasks that lead learners to process both pragmalinguistic and sociopragmatic resources at greater possible depth in teaching pragmatics.

**Conclusion**

The primary purposes of the present study were to examine the relative effects of deductive and inductive instruction as well as the relative effects of two types of inductive instruction. The present study has contributed to language pedagogy in several
ways. The findings of this study have practical applications, especially in English classrooms in a Japanese EFL context, where acquiring knowledge of English pragmatics is becoming an increasingly important area of instruction and where only limited class time is typically available for learning English.

The results of the present study indicated that inductive instruction was effective when combined with problem-solving tasks or structured input tasks where an emphasis is placed on pragmalinguistic and sociopragmatic resources. In this respect, teachers should use tasks that provide learners with opportunities for processing both pragmalinguistic and sociopragmatic resources of the target features. Therefore, the author hopes that teachers devote their energy to the design of the best possible task which lead learners to process both pragmalinguistic and sociopragmatic resources at greater possible depth, and that finally they come up with an ideal way of teaching pragmatics in an inductive manner.

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