The effect of modeling a jigsaw task on communicative strategies of ESL learners

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The effect of modeling a jigsaw task on communicative strategies of ESL learners

by

Sojung Kim Choe

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in partial fulfillment of the requirements for the degree of

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This is certify that the Master’s thesis of

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Signatures have been redacted for privacy
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ABSTRACT

This study examines one aspect of task-based language instruction, an increasingly popular approach, which provides learners practice in performing communicative acts in English and which promotes learners’ ability to use communicative strategies when problems are encountered (Long 1983; Pica 1996; Tarone & Yule 1995). This study addresses the question of whether or not a video of native speakers of English (NSE) interacting during a jigsaw task positively affects the communicative strategies of English as a Second Language (ESL) learners involved in a similar task.

Two experiments were conducted. A video model showing two NSE using communicative strategies including confirmation and comprehension checks during a jigsaw task was shown to ten advanced learners of English before they performed a similar task. This group was compared with a control group of learners (N = 10) who were not shown the video. The second experiment examined how modeling may affect different proficiency levels. Twelve Korean students had a high proficiency level (mean = 601 on TOEFL) and Eight Korean students had a lower proficiency level (mean = 516 on TOEFL). For the data analysis, the utterances of participants during interaction were transcribed, and three communicative strategies (clarification requests, confirmation/comprehension checks) were coded and analyzed.

The results indicate that modeling appeared to increase the communicative strategies of the experimental groups, with an apparently stronger influence on the high proficiency learners. The results suggest that video modeling of communicative strategies may be an effective method for enhancing the teaching of ESL/EFL communication strategies.
CHAPTER 1. INTRODUCTION

The Need for Communicative Competence by Korean ESL Students

In spite of the recognition throughout Asia of a need for proficient English and many resources devoted to English teaching programs both in public schools and the private sector, Korean ESL learners have problems in communication. This is, in part, probably a result of the fact that most classroom interaction in Asian countries is a one-way flow, in which students listen to a lecture and then display their knowledge on tests in which teachers correct their errors (Liu & Littlewood 1997). In this passive teacher-centered classroom environment, learners have few opportunities to practice real two-way conversation and no opportunities to modify and restructure their interaction toward mutual understanding (Pica 1996). Thus, students cannot gain communicative competence. This is part of a larger pattern in many Asian countries, where the typical focus is on linguistic rules and teachers expect and permit very little discussion (Jones 1999). This teacher-centered, grammar-focused and relatively passive learning background has caused many communication problems in real situations in spite of the relatively high Test of English as a Foreign Language (TOEFL) scores of many Korean learners. As a Korean learner of English, my difficulty in English communication and concern for the needs of other Korean English as a Second Language (ESL) students in the U.S. has challenged me to focus on effective ways of teaching ESL communication. One of the most promising approaches appears to be the task-based instruction.
Theoretical Claims of Task-based Instruction

To teach ESL communication effectively, many practitioners have moved away from traditional lessons involving drill and pattern practice, explicit grammar instruction, and corrective feedback (Pica 1996). Classroom activities include discussion-oriented, problem-solving tasks, and group or pair work rather than the more traditional teacher-fronted arrangement (Liu & Littlewood 1997). Tarone and Yule (1995) suggest using communication tasks such as problem-solving and information gap activities which provide the learners practice in performing communicative acts in English and promote the learners’ ability to use communication strategies when problems arise. In the past 20 years, task-based instruction has grown and become a center of communicative teaching for second language (L2) learners (Yule 1991). Skehan (1996) defines tasks as activities that are meaning-focused and outcome-evaluated, and have some sort of real-world relationship. Proponents of the task-based approach argue that transacting tasks will push forward interlanguage development because tasks will engage the very processes that lead to acquisition (Aston 1986; Doughty & Pica 1986; Long 1983; Pica 1996).

Researchers on task-based instruction also claim that social interaction (negotiation of meaning in particular) in the classroom environment promotes the second language process. The modified interactions (negotiation) during the task assist comprehension and effective production of L2 communication (Pica 1996; Yule 1991). Based on extensive research in task-based instruction, there is now considerable agreement that the learning environment must include opportunities for learners to engage in meaningful social interaction using communication tasks in which speakers negotiate meaning. Many researchers believe that
negotiation assists and promotes interlanguage development, communicative effectiveness in particular (Skehan 1996).

Negotiation can occur when the learner restructures and modifies the interaction through requests and responses (such as communicative strategies, open questions and repetition/modification of prior utterances) regarding message comprehensibility. Interaction modified by negotiation consists of messages about comprehensibility as well as lexical and phrasal meaning. Thus, negotiation promotes effective communication and communicative competence of L2 learners by providing useful comprehensible input and feedback between interlocutors (Pica 1996). This negotiation of meaning, in which speakers collaborate to determine input, has been emphasized by many researchers and this perspective has led to a research priority: establishing which tasks and task-types are more likely to generate effective interaction, in particular, the negotiation of meaning (Pica et al. 1993).

**Jigsaw Communication Task**

One of the most effective activities to maximize the negotiation of meaning is, according to Pica (1993), the jigsaw communication task. In this task each participant holds a different portion of information, and participants supply and request this information to meet a convergent goal and single outcome (Pica 1996). No one holds all the necessary information, but all of this information is crucial to complete the task. In the jigsaw task, the learners have the greatest opportunities to obtain comprehensible input, feedback on production, and output modification during modified interaction (Pica 1996). According to Yule (1990), using communicative strategies is key in the tasks because effective
communication is only possible by taking into account possible listener difficulty during the negotiation.

Need for the Study

Recent research suggests that utilizing native and non-native speaker interaction promotes higher learning compared to learner-learner interaction (Pica 1996). Unfortunately, many second or foreign language learners, particularly in contexts such as Korea, have infrequent opportunities for interaction with native speakers (Pica 1996). Even in an ESL situation, it is not easy to obtain native speakers’ input in most classroom situations. Thus the challenge is to find ways of maximizing the learning and practice of native-like communication using learner-learner (L/L) interaction. One promising possibility seems to lie in using video models of native speakers utilizing communicative strategies. Yet, while research (Liu & Littlewood 1997) has suggested the need to supply students with models, the effect of modeling has not been studied, at least not in the context of second language classroom learning.

The present study examined the influence of modeling communicative strategies on the task performance of Second Language Learners (SLL). In particular, the study investigated whether or not a video model in which two native speakers of English use communicative strategies during a jigsaw task affects task outcome (communicative strategies in particular) of Korean learners of English. Two research questions guided the study:
1. Does modeling of the task increase interaction (total words and turns) for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?

2. Does modeling of the task affect the number and kind of communicative strategies for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?

By examining the possible link between modeling of a jigsaw task and increased use of communicative strategies by second language learners, this study might be helpful to future EFL/ESL researchers and practitioners.

**Thesis Organization**

In this chapter the background and justification are given for this research, which focuses on the effect of modeling on the communicative strategies of Korean learners of English. Chapter 2 reviews the literature pertaining to previous studies on task-based instruction to justify the usefulness of communicative tasks for L2 communicative effectiveness, including the benefits of negotiation of meaning and the usefulness of the jigsaw communication task. Chapter 3 presents the methods and procedures used in conducting the research, and Chapter 4 provides the results and the discussion. Finally, Chapter 5 summarizes the results, discusses the implications of the research, and makes suggestions for future research in this area.
CHAPTER 2. LITERATURE REVIEW

In this chapter presents a review of the literature relevant to the present study. The first part focuses on problems of ESL students and the need for communicative competence, including practical suggestions for effective ways of teaching communication. The next subsections review studies conducted on task-based instruction, which justify the usefulness of communicative tasks and benefits of negotiation of meaning to L2 communicative effectiveness, including the usefulness of jigsaw communication tasks. Finally, the implications of these previous studies are reviewed relative to effective ways of implementing task-based instruction to increase the benefits of using communication jigsaw tasks.

Problems Confronted by Asian ESL Learners seeking Communicative Competence

Why do Asian ESL learners (including Korean students) have communication problems in real situations? Liu and Littlewood (1997) found that inadequate speaking opportunities at school, where listening to the teacher has been the most frequent classroom experience of Asian ESL students, result in low competence in their speaking ability. The authors note that this input-poor environment does not provide enough opportunities for learners to perform communicative acts in English. Although many Asian ESL students have high TOEFL scores, this lack of experience in oral English usage causes problems in using communicative strategies in real situations.

In a study related to the communication problems of Asian ESL students, Jones (1999) focuses on the question: “Why do many Asian students have difficulty in participating actively in academic groups at English-speaking institutions of higher
education?” (p. 243). He concludes that, in most Asian classroom settings, the teachers expect and permit very little discussion; instead, they transmit and command. This passive classroom culture inhibits Asian students’ freedom and expression, and results in a lack of competence in the rules and norms of English conversation.

Liu and Littlewood (1997) suggest that two strategies are needed to solve the ESL communication problem. First, students need many more opportunities in class to activate their language skill and practice using it for communication. They also need to have a learning environment in which they can practice language skills using more active techniques, for example, by communicative strategies (such as questioning and role-playing activities). The study also suggests that small discussion group or pair work can be used to create an effective environment because they provide more opportunities for talk. One means of doing this is through task-based instruction. The following subsections review task-based instruction, focusing on communicative effectiveness for L2 learners.

**Task-based Instruction**

**Definition of a task**

In the past 20 years, language teaching has evolved to incorporate a higher portion of meaning-based activities, in contrast to the earlier era in which form was primary and a concern for meaning only followed the establishment of control over specific forms. Although a task focusing on meaning provides opportunities for practicing real communication and promotes communicative competence during interaction because there are many definitions of task, it is important to define “task” for the present study (Nunan 1989). Skehan (1998) defines a task as an activity which satisfies the following criteria:
- Meaning is primary
- There is a goal which needs to be worked towards
- The activity is outcome-evaluated.
- There is a real-world relationship. (p. 268)

In task-based approaches, meaning is brought into prominence by the emphasis on goals and activities. Participants have at least one goal to be reached through the task and their performance is evaluated. Similarly, a real world relationship implies that an activity focused on language itself cannot be a task (Skehan 1998).

Long and Crook (as cited in Skehan 1996) discuss another quality of tasks. Tasks have a clear relationship to out-of-class language use. For example, a task which requires personal information to be exchanged, or a problem to be solved, or a collective judgment to be made, bears a relationship to things that happen outside the classroom (Skehan 1996). Tasks which satisfy the above criteria can promote L2 communicative effectiveness because such task-based activities provide real communication practice for L2 learners (Skehan 1998). A specific theoretical view of task-based instruction focuses on the role of interaction in task-based activities for L2 learning, that is, how task-based instruction affects communicative effectiveness of L2 learners.

**Theoretical claims**

In the past 10 years, there has been a movement from traditional lessons involving explicit grammar lesson and drill/practice to meaningful activities in task-based instruction (Pica 1987). "Authenticity," "reality," and "communicative effectiveness" have become buzzwords for ESL communication teaching (Pica 1987; Skehan 1996). Theoretical discussions regarding L2 communication learning have claimed that most classroom activities should include social interaction which provides practice for real situations.
Proponents of current theory argue that languages are learned, not through memorization of their rules and structures, but through internalizing rules from input made comprehensible within a context of social interaction, negotiation in particular (Pica 1987).

Recently, much research on task-based instruction has focused on negotiation (modified interaction) during communication tasks. The researchers believe that modification features through negotiation help learners realize a need for interlanguage change and enable effective interlanguage development (Skehan 1998). According to Skehan, restructuring moves on the part of both learners and interlocutors facilitate the learners' comprehension and production of the target language and enables effective communication through negotiation. Thus the learners enable effective communication through the negotiation (Skehan 1998).

Such interaction facilitates incorporation of the new linguistic material into the learner's emerging L2 system and influences target language production (Aston 1986; Pica 1987). Furthermore, Long (1983) has also argued that the task itself triggers acquisitional processes as the task generates productive forms of communication breakdown, while meaning is negotiated at such points between the learners. For example, the use of communicative strategies such as clarification requests and confirmation checks is seen as contributing vital feedback to the learner in helping him/her realize that there is a need for interlanguage change.

Many convincing theoretical claims support the contributions of interactional modification moves in the acquisition process and encourage their use by the classroom participants (Pica 1987). Task-based negotiation of meaning appears to assist and promote
Findings

Usefulness of modified interaction for L2 learners

Previous studies have shown the benefits of task-based instruction (negotiation in particular) for L2 communicative effectiveness. Aston (1986) found that certain features of discourse, such as clarification requests, assist learners in modifying their interlanguage and thus promoting L2 communication learning. He compared native speaker-learner (N/L) and learner-learner (L/L) interaction through a describe-and-draw communication task. This information gap task requires that one person describes a picture and the other person draws the picture. In his study both interaction groups produced high frequencies of clarification requests and similar strategies. Aston (1986) concluded that L/L modified interaction could develop strategies not only for obtaining comprehensible input but also for establishing and maintaining social rapport during the task as well as N/L interaction.

Aston’s (1986) findings were confirmed in later studies (Doughty & Pica 1986; Pica 1987; Pica 1996). In comparing empirical data on native speaker-non-native speaker (NS-NNS) conversational interaction collected outside the classroom, Pica (1987) found that NS-NNS negotiation became available when the learner asked the NS to clarify or confirm the meaning of a message, either by appealing directly to the NS (excerpt 1) or by responding to the NS’s check for learner comprehension of the message (excerpt 2) (Pica 1987).
These requests serve to restructure the interaction between the learner and interlocutor so that the meaning of unfamiliar linguistic material contained within the interlocutor's message can be repeated or reworded until the learner can understand it.

Pica (1987) also found that the total number of restructuring moves (i.e., confirmation and comprehension checks and clarification requests) in NS-NNS interaction outside class was significantly larger than in teacher-student interaction (Aston 1986). Regarding the total number of restructuring moves (i.e., confirmation and comprehension checks and clarification requests), the teacher-directed participation pattern generated a relatively small amount of modified social interaction compared to the student-grouping pattern. In the study, the information-exchange activity resulted in significantly more restructuring of interaction than the decision-making task. Therefore, students themselves could structure and restructure their social interaction toward mutual comprehension, as long as they were
given an activity which required that they exchange information rather than activities which only made interaction optional (e.g., decision-making discussion).

In a more recent study, Pica (1996) used two different types of jigsaw tasks (interaction required for each participants) and compared NS-NNS and NNS-NNS interaction. Results of the comparison revealed that the learners' negotiation with other learners affects L2 learning by providing comprehensible input, although the amount is not as high with NS-NNS negotiation. The results of this study, however, suggest that learner-learner negotiation could help L2 learning by giving feedback and useful comprehensible input to each other through the modified interaction. Based on her findings in both studies, Pica concluded that classroom activities, which require two way interactions, could create a social and linguistic environment more favorable to second language acquisition.

**Effects of task types**

Long (1983) conducted an interaction study and found that the modified features including clarification requests and confirmation/comprehension checks were more frequent in N/L than in N/N interaction. In addition, Long also found that certain classroom activities (problem-solving tasks) were more likely to produce modified interaction than others (decision making tasks). In his study (1983), Long suggested that certain classroom activities and tasks appear more likely to produce modified interaction than others, presenting teachers with the challenge of finding the most effective task for maximizing the opportunities of negotiation and the communicative effectiveness of L2 learners. One such approach has been to categorize tasks in such a way that pedagogic decisions can be made more easily made (Nunan 1989; Skehan 1998).
Long (1989) distinguished between task characteristics such as one-way (one participant holds the crucial information) versus two-way (all participants make important contribution), and open versus closed (i.e., in the former no fixed answer is required, e.g., discussion, whereas in the latter there is a need to negotiate an agreed solution to a task, e.g., information gap activity). Long (1989) suggested that two-way closed tasks provide more opportunities to negotiate during the tasks and to promote communicative effectiveness for L2 learners.

Pica et al. (1993, as cited in Skehan 1998, p. 271) developed and formalized the approach taken by Long, suggesting that tasks can be identified under the following heading:

1. Interactional Activity
   Interactional Relationship
   Interactional Requirement
2. Communicative Goal
   Goal Orientation
   Outcome Option

The Interactional Activity sub-headings are concerned with the distribution of information among the different participants in a task and how they are to act on this information (the distinction between one-way versus two-way tasks is handled neatly by this categorization). The Communicative Goal sub-headings are concerned with whether the different task participants share goals or have different goals, and whether the goal contains only one acceptable outcome or whether many outcomes are possible. In this case, the distinction is between convergent and divergent tasks.

Pica et al. (1993) analyzed and compared five representative communication tasks types (jigsaw, information gap, problem-solving, decision-making, and opinion exchange
tasks) based on the criteria shown above. These task types are defined as follows. Table 1 presents a typology with representative tasks from previous research literature.

The jigsaw task is identified following characteristics:

1. Each interactant holds a different portion of information which must be exchanged and manipulated in order to reach the task outcome.
2. Both interactants are required to request and supply this information to each other.
3. Interactants have the same or convergent goals.
4. Only one acceptable outcome is possible from their attempts to meet this goal. (Pica 1987, p. 17)

As jigsaw task interactants, X and Y hold dual roles as information holders, suppliers, and requesters, each having a piece of the ‘puzzle’ which must be joined together. The task participants are expected to achieve a convergent goal and a single outcome which allow no options, in order to complete the task (Pica et al. 1993). Thus, Pica claims that “this task can be considered the type of task most likely to generate opportunities for interactants to work toward comprehension, feedback, and interlanguage modification processes related to successful SLA” (p.17).

An information gap task is defined as one participant holding information that the other does not already know, but needs to know in order to complete a task (Davies 1982, Johnson 1981, as cited in Pica et al. 1993). The gap in the distribution of information results in a one-way flow of information from the sending one interactant (X) to the receiving interactant (Y). Thus, interactants have less of a chance to modify production toward greater comprehensibility since the task assigns each interactant a fixed role (Pica et al. 1993). Although the “information gap” task limits interlanguage modification, the activity has been even more widely used than the jigsaw in language teaching and learning, particularly in
Table 1. Communication types used in L2 research analysis based on the interactant (X & Y) relationships and requirements in communicating information (INF) to achieve task goals and reach task outcomes (adapted from Pica et al. 1993)

<table>
<thead>
<tr>
<th>Task type</th>
<th>INF holder</th>
<th>INF requester</th>
<th>INF supplier</th>
<th>INF requester-supplier relationship</th>
<th>Interaction requirement</th>
<th>Goal orientation options</th>
<th>Outcome</th>
<th>Examples</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jigsaw</td>
<td>X&amp;Y</td>
<td>X&amp;Y</td>
<td>X&amp;Y</td>
<td>2 way (XtoY &amp; YtoX)</td>
<td>+ required</td>
<td>+ convergent</td>
<td>1</td>
<td>Sequence the house</td>
<td>Pica et al. 1990, 1991</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tell a story</td>
<td>Hawkins 1985</td>
</tr>
<tr>
<td>Information</td>
<td>XorY</td>
<td>XorY</td>
<td>XorY</td>
<td>1 way &gt; 2 way (XtoY / YtoX)</td>
<td>+ required</td>
<td>+ convergent</td>
<td>1</td>
<td>Draw the picture</td>
<td>Pica et al. 1990, 1991</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Assemble the scene</td>
<td>Young &amp; Doughty 1987</td>
</tr>
<tr>
<td>Problem-solving</td>
<td>X=Y</td>
<td>X=Y</td>
<td>X=Y</td>
<td>2 way &gt; 1 way (XtoY &amp; YtoX)</td>
<td>- required</td>
<td>+ convergent</td>
<td>1</td>
<td>Spot the difference</td>
<td>Crookes &amp; Rulon 1985</td>
</tr>
<tr>
<td>Decision making</td>
<td>X=Y</td>
<td>X=Y</td>
<td>X=Y</td>
<td>2 way &gt; 1 way (XtoY &amp; YtoX)</td>
<td>- required</td>
<td>- convergent</td>
<td>1+</td>
<td>Desert Island</td>
<td>Duff 1986</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Odd man out</td>
<td>Long 1981</td>
</tr>
<tr>
<td>Opinion exchange</td>
<td>X=Y</td>
<td>X=Y</td>
<td>X=Y</td>
<td>2 way &gt; 1 way (XtoY &amp; YtoX)</td>
<td>- required</td>
<td>- convergent</td>
<td>1 +/-</td>
<td>Debate</td>
<td>Pica et al. 1990, 1991</td>
</tr>
</tbody>
</table>
characterizing activities which motivate communication among classroom language learners (i.e., Lewis & Morgenthaler 1989, “draw the picture,” as cited in Pica et al. 1993).

The last three categories of tasks are problem-solving, decision-making, and opinion-exchange. A problem-solving task is characterized as a task oriented toward a single resolution of outcome (Duff 1986, Ur 1984, as cited in Pica et al. 1993). In this task information is expected to flow two ways, but participation of all students is not necessary for successful completion of the exercise (i.e., Crookes & Rulon 1985, “Spot the difference,” as cited in Pica et al. 1993).

A decision-making task has a number of possible outcomes available to participants in contrast to the problem-solving task (i.e., Pica & Doughty 1985, “who gets the heart transplant?” as cited in Pica et al. 1993). The decision-making participants can choose to seek, withhold, or exchange information and reach one of many possible decisions as they work to complete this task (Pica et al. 1993). Such discussion tasks are open-ended and do not require the participation of all students. There is also no expectation of convergence of opinions to any particular outcome (p. 31).

The opinion-exchange task, which engages learners in discussion and exchange of ideas (Ur 1984, as cited in Pica et al. 1993) is also not expected to converge toward a single goal, but any number of outcome options, including no outcome at all, is possible for participants (i.e., Rulon & McCreary 1986, “advantage/disadvantages of America revolution,” as cited in Pica et al. 1993). To complete the task, interaction is possible but not required by the participant and even a single interactant might dominate.

The three categories of tasks (problem-solving, decision-making, and opinion-exchange) have been used throughout the literature on L2 learning and teaching. On all three
tasks, interactants start out with shared access to the information needed for task completion, and, thus, a two-way exchange of the information is possible. However, interaction is not necessary in order for participants to carry out the task, as one participant can work individually using the information to complete the task. Therefore, Pica et al. (1993) concluded that there are clear differences in the effectiveness of various tasks as a means of providing learners with opportunities to work toward comprehension, feedback, and interlanguage modification through the negotiation. The most effective task types appear to be the jigsaw and information gap tasks, while the least effective are the opinion exchange tasks.

Implementation

Recently, those interested in task-based learning have been increasingly concerned with maximizing the benefits of using the task. The major question is: Which conditions promote a “better” quality of language acquisition through negotiation of meaning? While some scholars (Foster & Skehan 1996; Skehan 1998) have expressed concern about pre-task activities (i.e., modeling, inductive presentation of materials, and even teaching), only student planning time has been studied previously to examine whether or not given preparation time for a task affects L2 communicative production. These studies on planning have been conducted with different types of tasks such as personal information exchange, narrative, and decision-making activities.

Crooks (1989) and Foster and Skehan (1996) examined the influence of planning on the communicative production of L2 learners. The participants in the experimental group were asked to prepare speech for the tasks while those in the control group were not given
time for planning. The research concluded that the effects of planning are greater with narrative and decision-making tasks than with personal information exchange task, which requires interaction. Generally, a planned condition promotes more complexity and fluency in the learners' language, but not accuracy. The study brings to attention the matter of facilitation in the task-based instruction, and highlights the importance of tradeoff effects between the goals of complexity and accuracy in the context of the use of limited capacity attentional resources (Skehan 1996). Crooks, (1989), however, suggest that choice of task is more important to the quality of speech produced than whether or not participants have time to plan.

Although there is clearly some interest in maximizing the benefits of tasks, more work in this area needs to be done. For instance, even though Liu and Littlewood (1997) suggest the use of “appropriate and accurate linguistic models” (p. 380) during tasks, there is no direct empirical evidence supporting the use of models as a benefit in task-based approaches to language learning. This dearth of research was the impetus for the present study.

**Summary**

In most Asian countries, classroom environments have focused on teacher-centered formal lectures, grammar study, and reading. These passive learning experiences have resulted in communication problems in real situations (John 1998; Liu & Littlewood 1997). To teach communication effectively, Tarone and Yule (1995) suggest using communication tasks such as problem-solving and information gap which provide the learners practice in performing communicative acts in English and promote the learners' ability to use
communication strategies when problems are encountered. At the same time, researchers of task-based instruction also claim that social interaction (negotiation in particular) in classroom environments promotes the second language acquisition process because modified interactions during the negotiation provide comprehensible input and feedback, and promote modified production of L2 learners (Pica 1996). From this point of view, the negotiation of meaning especially contributes to an understanding of the role of comprehensible input and, thus, promotes L2 communicative effectiveness (Young 1988). Therefore, the learners themselves could promote effective communication and their own communicative competence (Pica 1987, 1996). Based on the theoretical claims, in the past 20 years researchers on task-based instruction have emphasized the importance of negotiation of meaning. There is considerable empirical support that negotiation could promote L2 learning effectively (Doughty & Pica 1986; Long 1983; Pica 1996).

Previous studies in SLA also have indicated that interaction is useful for L2 learning (communicative effectiveness in particular) between non-native speakers of English (Pica 1996). Although NS provides better input for L2 learning, SL learners still provide useful input with each other within a communication context (Pica 1996). Pica et al. (1993) suggest that NNS-NNS interaction using communication tasks should be encouraged in EFL contexts which have infrequent opportunities of interaction with native speakers. The jigsaw activity apparently provides learners the greatest opportunity for negotiation of input and modification of interlanguage.

Task facilitation is also an important issue to be considered for maximizing the benefits of task-based instruction. Recently, researchers and practitioners have considered implementation matters in certain classroom settings for effective learning and teaching of
L2 communication and have suggested some ideas (e.g., the influence of pre-task activity and planning). However, few studies have been conducted that examine the ways in which tasks might be enhanced via pre-task activities such as modeling. The latter is the focus of the present study.
CHAPTER 3. METHOD

This chapter provides information on the subjects, data collection, the procedures used for collecting data, and the methods of data analysis. As previously stated, the purpose of this study was to determine whether or not the modeling of a jigsaw task affects the communicative strategies of ESL learners. A video model featuring two native speakers of English was used to demonstrate three communicative strategies during a task, specifically clarification requests, confirmation, and comprehension check. The video was shown to students in experimental groups immediately before they started a similar task. On the other hand, control groups were given identical instructions, except they received no video modeling before the task. The differences in strategy use between experimental and control groups were compared.

Research Questions

Two research questions guided the study.

1. Does modeling of the task increase interaction (total words and turns) for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?

2. Does modeling of the task affect the number and kind of communicative strategies for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?
Approach

The method used in this research was focused description (Larsen-Freeman & Long 1991). This methodology is placed in the middle of the continuum between qualitative and quantitative approaches. Thus, this study incorporated both qualitative and quantitative attributes in the research questions, data collection, analysis, and interpretation of results. For example, the research questions in the present study are qualitative in the sense that there is no hypothesis to be tested and the questions are open-ended and discovery-oriented. However, unlike many qualitative studies (e.g., an observational study), the scope of this study was quite narrow and particularly in the selection of only two variables: (1) the modeling effect on L2 communicative strategy use; and (2) the effect of modeling on proficiency in L2 communicative strategy use.

Like many quantitative studies, this study used a data-collection instrument (a jigsaw task) to elicit learner behavior or measure learner characteristics. The study was also cross-sectional in design and outcome-oriented. On the other hand, a more qualitative approach was used to analyze the data. The interactions of the participants were transcribed and communicative strategies were coded on the basis of a somewhat subjectively, but a system was developed to enable replication of the study. The analysis was descriptive. Finally, regarding interpretation of results, both quantitative and qualitative methods were used. Turn taking, use of words, and strategy use were calculated, but more subjective and holistic observations were also made.
Participants

The participants in the study, all adult volunteers, were 20 native speakers of Korean who were students at Iowa State University (ISU). The students ranged from 23-30 years in age. All of the participants had been in the U.S. for 5 to 10 months. The speakers represented two different proficiency levels of English based on their recent TOEFL scores: The mean was 516 for the low-level students and 601 for the high-level students.

For the high proficiency level (data set 1), 12 (8 female and 4 male) prospective graduate teaching assistants at ISU participated. I grouped students into 6 pairs (3 pairs in the experimental and 3 pairs in the control groups). The pairing pattern was based on the following four criteria: (1) Speech/Teach test scores required for international teaching assistants (ITAs) at ISU; (2) enrollment in the communication course offered for prospective ITAs at the university; (3) major; and (4) gender. These criteria were used to balance the experimental and control group pairs. That is to say, Pair 1 of the experimental group has the same characteristics as Pair 1 of the control group. This pattern of pairing in the high proficiency group is shown in Table 2. Learners in every pair were acquainted with each other. As shown in Table 2, Pair 1 of each group (experimental and control) consisted of two female graduate students in Textile and Clothing (TC) program. The students had not taken the Speech/Teach test and the course. Pair 2 of each group (experimental and control) was comprised of two graduate students who had been studying Chemistry. Student A (female) from Pair 2 of both the experimental and control groups did not take the test and the ITA communication course. Student B (male) from Pair 2 of both the experimental and control groups took the test (score level 2) and also took the ITA communication course one time before. Pair 3 of each group (experimental and control) consisted of two graduate students
Table 2. Pairing patterns for the experimental and control groups in data set 1 (high proficiency level)

<table>
<thead>
<tr>
<th>Pairs (N = 12) (experimental and control groups)</th>
<th>Major</th>
<th>Speech/Teach score</th>
<th>TA preparation course</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pair 1 (of each group)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student A</td>
<td>TC</td>
<td>not taken</td>
<td>no experience</td>
<td>female</td>
</tr>
<tr>
<td>Student B</td>
<td>TC</td>
<td>not taken</td>
<td>no experience</td>
<td>female</td>
</tr>
<tr>
<td><strong>Pair 2 (of each group)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student A</td>
<td>Chem.</td>
<td>not taken</td>
<td>no experience</td>
<td>female</td>
</tr>
<tr>
<td>Student B</td>
<td>Chem.</td>
<td>Level 2</td>
<td>taken 1time</td>
<td>male</td>
</tr>
<tr>
<td><strong>Pair 3 (of each group)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student A</td>
<td>TC</td>
<td>Level 3</td>
<td>taken 1time</td>
<td>female</td>
</tr>
<tr>
<td>Student B</td>
<td>Chem.</td>
<td>Level 3</td>
<td>taken 1time</td>
<td>male</td>
</tr>
</tbody>
</table>

who had been studying TC and Chemistry. Student A (female, TC major) from Pair 3 of both the experimental and control groups had taken the test (score level 3) and taken the communication course one time. Student B (male, Chemistry major) from Pair 3 of both the experimental and control groups had taken the Speech/Teach test (score level 3) and also taken the ITA communication course one time.

For the low proficiency level, eight (five female and three male) students were selected from a preacademic, advanced level class at the university based intensive English language program (IEP). I grouped students into four pairs (two pairs for the experimental and two pairs for the control group). The low proficiency group was not paired based on gender because there was uneven number of males and females. I arranged three female-male pairs and one female-female pair for one of the experimental pairs. Otherwise, the group was similar in proficiency and background. They had not taken any regular academic course offered at the university and had not been officially admitted into the university. All
the students were selected from one class and the students participated in the study immediately after the class. All the participants were acquainted with one another.

Materials and Procedures

Materials

The participants were given a jigsaw communication task, much like the one described by Pica (1996). Each pair received eight pictures (four pictures per partner) of a story that can only be told completely with all eight pictures. The participants had to interact with each other to determine the proper order of the pictures to tell the complete story. All of the elements in this task promoted comprehension of input, feedback on production, and interlanguage modification during negotiation. To maximize negotiation, I modified this task from the traditional jigsaw story where both participants are given all their information at one time, to a task in which each participant only gets one piece of his or her information at a time.

In other words, the modification of the task requires participants to look at only one picture at a time and make guesses together through negotiation. This modification was designed to promote equal interaction among the participants. This modification also maximizes turn taking and negotiation of meaning to complete the task, promotes more frequent interaction, more strategies, and thus comprehensible input. The task was also designed to be fun and motivating in order to encourage participants to engage in the task, and in their relationship with each other, so that they could work at negotiating the right order and meaning while they use communicative strategies for comprehension.
The focal topic of the jigsaw task, which can be seen in Appendix A, is the story of a researcher who goes to South America to look for a rare and valuable artifact. His trip is widely promoted and incurs great expenses of money, time, and personnel. The trip is treacherous and long, but he finds the valuable artifact and brings it back to civilization in order to make a lot of money and become famous. Unfortunately, the researcher finds that the nearest town has dozens of identical artifacts on sale at the local market. This is a straightforward story when seen in its complete form, but not necessarily when discovered in its individual parts.

Procedure

The experiments were administered for all 10 pairs in 10 days (February 1-10, 2000). The task took place in an empty and quiet classroom with no interruption. Two sets of data were collected: one set from the high proficiency learners (6 pairs), and the other set from the low proficiency learners (4 pairs). Only the participants (two learners) were in the classroom and no audience was allowed during each experiment. I gave the task instruction to the participants. I observed the task while I simultaneously audio and videotaped the procedure. In addition, all the participants answered a questionnaire after completion of the task (see Appendix C) about the task experience. The participants’ responses were collected to determine how they regarded the usefulness of task/interaction and effects of modeling for L2 learning.

First, a video model of a jigsaw task was given to the students from the experimental groups in both proficiency levels immediately before they started a similar task. Before showing them the video, I asked the learners to watch the video model of two native
speakers' interaction and read the transcription of the video shown on an overhead projector. The transcriptions were used for learners to accurately understand the utterances of the NS on the video. The video model portrayed two female NSs involved in an interaction task in which they used communicative strategies such as clarification, confirmation, and comprehension check. However, the learners were not instructed to focus on the use of specific strategies while they were watching the video.

All the participants from both groups in the two proficiency levels were given specific instructions (see Appendix B). Students in each pair were given the same amounts of information (four pictures for each student). In each pair, student A was given four odd-numbered pictures while student B was given four even-numbered pictures. This was done to ensure the least amount of variance in procedure among pairs. The participants had to describe the picture to the partner one by one and make guesses together to complete the task. They were instructed to interact to create one complete story. When they finished looking at all their cards, they were told to decide the right order of eight pictures (number 1 through 8) through interaction. They were not instructed as to what strategies to use or how often they needed to use these strategies. While the participants had options about the kinds of communicative strategies they used and the kinds of interaction they employed to complete the task, other parameters were more strictly defined. The task and the goal were defined carefully and participants were not allowed to change the rules of the task by showing each other their pictures, turning over more than one picture at a time, or any other variation. In particular, a divider was placed between each member of a pair to prevent him/her from seeing his/her partner's pictures but not eye contact. There was no time limit
for this task although it was expected to be completed within approximately 25 minutes. All the participants completed the task and were audio and videotaped.

Transcription

I transcribed all the tape-recorded interactions (utterances) of the participants prior to analysis of the data. I listened to the audio tapes at least two times to transcribe the learners’ interaction. When I had trouble to understanding words, I repeated listening to the tape until I could identify the words. Words that could not be clarified after listening several times were marked with a parenthesis and the word “unintelligible.” After transcribing the interaction of each pair, I watched the video recorded tape of the interaction and confirmed the transcription. To verify the transcription procedure, a native speaker who was a graduate student in the English department at ISU, transcribed 35 pages out of 100 pages following the instructions given by me. I checked the transcription for consistency with the tapes. There was an agreement of ≥90% between the two transcribers. Fewer than five words in the total transcription were in dispute and these were resolved by listening to the tape again. I listened to the tape and considered the context carefully, and revised the disagreement. A sample transcription of one pair of participants is included in Appendix D.

I transcribed all meaningful linguistic utterances of participants. Intonation was not transcribed in this study. Although intonation is key to understanding, the intonation patterns of Korean learners did not follow native-speaker conversational patterns, e.g., a rising intonation was not necessarily used for a question. For the sake of simplicity, pauses, laughter, and learners’ gestures (such as nodding) were also not transcribed.
Data Analysis

Coding

I coded the following communicative strategies using the transcripts: clarification requests, confirmation, and comprehension checks. Unfortunately, the method of coding communicative strategies has not been defined clearly in previous studies. For example, Long (1983) employed a mix of formally defined categories (repetition) and functionally defined ones (comprehension and confirmation check, clarification request). However, these categories partly overlap; for instance, one means of carrying out a confirmation check is by repeating the words of the other speaker's utterances (other-repetition). In his study, Long used repetition as a separate category as well as confirmation. It is not clear as to which of the two separate categories (repetition or confirmation check) the one arrowed in the following should be assigned (Aston 1986):

A: What is the time?
B: Ten o'clock.
A: Ten o'clock?←
B: Yeah.

The arrowed expression could be coded as a repetition or a confirmation check. It is not clear whether it would have been coded as a repetition or a confirmation check. This fuzziness in defining coding categories makes it difficult to replicate the coding employed in the study with confidence (Aston 1986). On the other hand, Doughty and Pica (1986) deleted the “repetition” as a separate category in their study. According to them, the function of repetitions is difficult to ascertain. Much repetition occurs without affecting the interaction at all (e.g., the case of a speaker who repeats an utterance several times even though the partner understood the first time) and there is apparently no function for
negotiation function in this sort of repetition. Consequently, Doughty and Pica (1986) used three functional categories (clarification request, confirmation/comprehension check) and coded the only repetition that occurred during actual or perceived communication breakdown as a confirmation check. They suggest that it is useful not to include repetition as a separate category.

In the current study, I used three categories of communicative strategies to analyze the data: clarification request, confirmation, and comprehension. These strategies have most often been used as the coding categories in previous negotiation studies (Doughty & Pica 1986; Long 1983). These strategies were also credited as the most effective measurements for modified features during negotiation in the past 20 years (Skehan 1998). I adapted the definition of each category from the study of Doughty and Pica (1986) and modified the coding criteria for the current research. Each strategy had particular functions for the modified interaction process and typical characteristics (see Table 3). The coding method for each strategy is identified in the following paragraphs.

**Clarification requests**

Clarifications occur when one does not entirely comprehend the meaning and asks for clarification. They are mostly formed by questions. However, unlike confirmation checks, they may consist of Wh or Yes/No questions as well as tag questions, for they require that the interlocutor either furnish new information or recode information previously given.

Here is an example from the data collected in this study:

A: His friend is crawling in the ground.
B: What does it mean?←
A: He's lying, lying on the ground.
<table>
<thead>
<tr>
<th>Strategies</th>
<th>Forms</th>
<th>Examples</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request</td>
<td>(wh, yes/no questions)</td>
<td>Or</td>
<td>Obtain new information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A: How many people are there?</td>
<td>Recode previous information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmation</td>
<td>Repetition</td>
<td>A: He is wearing Mexican hat.</td>
<td>Confirm the previous utterances</td>
</tr>
<tr>
<td>Check</td>
<td>(a part or all parts of interlocutor)</td>
<td>B: Mexican hat ←</td>
<td>whether he/she has heard or understood previous utterances correctly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A: Yeah.</td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>Questions</td>
<td>A: Do you know what I mean right? or A: Can you understand?</td>
<td>Prevent communication breakdown.</td>
</tr>
<tr>
<td>Check</td>
<td>(Yes/no, tag questions)</td>
<td></td>
<td>Confirm listeners' understanding.</td>
</tr>
</tbody>
</table>
In this example, learner A interprets the arrowed utterance (by learner B) as a clarification request and replies by clarifying the meaning.

**Confirmation checks**

Confirmation checks are any expressions immediately following an utterance by the interlocutor which are designed to elicit confirmation that the utterance has been correctly heard or understood by the speaker. In other words, in making a confirmation check, the listener believes he or she has heard and partially understood the previous utterances but would like to make sure it was correct. Confirmation checks are usually formed with a repeated expression of all or part of the other's preceding utterance. They are always confirmed by following the utterance of the interlocutor and they are also answerable by a simple confirmation (i.e., yeah and uh-huh). The following is an example of a confirmation check from the current study.

A: They, each of them bring some luggages  
B: luggages ←  
A: Yeah, with their bag.

In Long's study (1983), the confirmation checks are always formed by raising intonation questions, with or without a tag. However, the analysis of the data in the current study did not rely upon intonation because the participants' intonation was not accurate and clear compared to that of typical native speakers. The participants in the current study had strong Korean intonation patterns where they raise intonation at the end of many sentences. Many of their repeated expressions for confirmation have a drop in intonation. They make no difference between questions and statements, so intonation does not necessarily indicate a function of speech. Therefore, only utterances preceding and following the coded features
were considered rather than the intonation. To analyze the interaction (two-way conversation) effectively in the current study, I adopted the coding approach of Levinson (1983), a proponent of the conversational analysis approach (CA)

Levinson (1983) suggests: "Conversation, as opposed to monologue, offers the analyst an invaluable analytical resource: as each turn is responded to by a second, we find displayed in that second an analysis of the first by its recipient" (p. 321). Participants provide such an analysis not only for each other but for the analysts, too. This approach, thus, solves one of the major problems of discourse analysis by taking the problem of judgment away from the analyst and awarding it to the interlocutor. The following is an example from the data collected in the current study:

A: There's a kind of exit.
B: Exit ←
A: Exit. Looks like a hole. I think
B: Look like a hole. What do you mean looks like a hole?
A: It's kind of door, gate.
B: Door, Gate? ←
A: Yeah, but it's small so I think the guy cannot enter the gate. But I think he can put the doll or the sculpture on that spot.
B: Oh Ahh Ahh. By the way, in my picture, there is no exit.

In the example, the arrowed utterances were coded as confirmation checks because the they were analyzed by considering the previous and following utterances instead of relying on intonation (whether intonation is down or rising). This is especially useful in NNS data where such an intonation may differ from those continuously used by NS. For data analysis of this study, I was only concerned with the utterances preceding and following the coded features rather than the intonation. I, a native Korean, had an advantage in interpreting the participants' conversation (including Korean accent /intonation) easily and more accurately than English native speakers or other foreign language speakers.
Comprehension checks

Comprehension check was used as a question form (not repetition). It is defined as follows. The speaker wants to be certain that the listener has understood conversation. The comprehension check (such as Right? OK? and Do you understand?) clearly shows an effort on the part of speaker to prevent a breakdown in communication and enhance conversation.

The following is an example from the current data:

A: He is just kind of fraud. Do you understand?
B: Proud? Or?
A: Fraud. liar, liar.
B: Oh, deceiving.

To answer the research questions, I coded the three communicative strategies while listening to the tapes and looking at the transcripts simultaneously. Clarification requests were marked as CR, confirmation checks as CF, and comprehension checks as CH. The following is an example from the current data:

A: And three men are looking at him.
B: Three men? (CF)
A: Yes. I think it’s
B: Where are the tree mens? (CR)
A: It’s ah just
B: Near him? or (CR)
A: Just the side of him
-----------------------------
A: So .
B: Can you understand what I mean? (CH)
A: No.
B: The old guy look at this side, and the other yellow clothing, yellow hat guy’s look at the old guy’s back side.

When utterances appeared ambiguous, I reviewed the tapes several times and considered the previous and following utterances. For example,
A: He's lying, lying on the ground.
B: Oh, he's lying down on the ground. ←
A: Yeah. Yeah, right. He looks like very very tired, exhausted.

In this example, the arrowed utterance (by learner B) was ambiguous. Although the utterance was confirmed by the following simple utterance (yeah, yeah) as a confirmation check, the repeated expression seemed to function as a self-confirmation. To verify coding decisions, a native speaker, a graduate student in the English department at ISU, was asked to check any ambiguous utterances for coding, using the coding criteria given. She checked the coding of these ambiguous utterances and agreed with my coding decisions.

Tabulation of strategies

First, I calculated the number of turns, the length of time on the task, and total words. Then the total number of each strategy was calculated. In particular, to answer the first question (Does modeling of the task increase interaction for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?), I counted the total number of words and turns and compared the data between the two groups of each data set. Although the focus of this study was to determine how modeling affects learner use of communicative strategies, the frequency of interaction was also an important consideration. First of all, negotiation only occurs when learners interact. In addition, greater frequency indicates greater use of communicative strategies. To answer the second question (Does modeling of the task affect the number and kind of communicative strategies for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?), I calculated the total number of strategies and occurrences of each strategy and
then compared the data between the two groups of each data set. The communicative strategies used by the participants were analyzed and compared between the experimental and control groups of each data set. Then I analyzed additional features in the data. The results are reported in Chapter 4.
CHAPTER 4. RESULTS AND DISCUSSION

The purpose of this study was to ascertain the effect of modeling on L2 learning in order to determine whether or not modeling of communicative strategies during a jigsaw task by two native speakers of English affects the communicative strategies of Korean English learners. I compared the number of interactions and the use of communicative strategies for the control and experimental groups for the two proficiency levels. The results of the data analysis are presented based on the research questions of the study.

Research Question 1: Does modeling of the task increase interaction for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?

To answer this question, I counted turns taken by each pair and then calculated the total number of interactions for the two proficiency levels of both the experimental and control groups (data set 1 and 2). As shown in Table 4, the experimental groups on average elicited more interactions than the control groups in both data sets.

In the high proficiency level, the total number of interactions for the experimental group was 665 while that of the control group was 580. The total number of words used by pairs in the high proficiency experimental group on average was greater than in the control group. Learners in the experimental group used a total of 7,585 words during interaction while the learners in the control group used 6,830 words. However, interestingly, experimental Pair 1 used a lower number of words (2242) compared to control Pair 1 (2835).
Table 4. Total interactions between the experimental and control groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental group</th>
<th></th>
<th>Control group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data set 1 (high proficiency level)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total turns</td>
<td>Pair 1 261</td>
<td>Pair 2 244</td>
<td>Pair 3 160</td>
<td>Total 665</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mean=221.7</td>
</tr>
<tr>
<td>Time</td>
<td>21min</td>
<td>21min</td>
<td>21min</td>
<td>63min mean=21.0</td>
</tr>
<tr>
<td>Total words</td>
<td>2242</td>
<td>2905</td>
<td>2438</td>
<td>7585 mean=2528</td>
</tr>
<tr>
<td><strong>Data set 2 (low proficiency level)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total turns</td>
<td>Pair 1 194</td>
<td>Pair 2 109</td>
<td>Total 303</td>
<td>Pair 1 173</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mean=152</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>20min</td>
<td>21min</td>
<td>41min mean=20.5</td>
<td>22min</td>
</tr>
<tr>
<td>Total words</td>
<td>1765</td>
<td>1416</td>
<td>3181 mean=1591</td>
<td>1866</td>
</tr>
</tbody>
</table>
Individual variations in fluency and personality may have affected the result. Regarding the length of time for the task, there was little difference between two groups. It is interesting to note that most learners in both groups took approximately 21 minutes to complete the task (see Table 4). However, there was a time difference within the control group pairs. Pair 2 of the control group took 25 minutes while Pair 3 took 17 minutes to complete the task, perhaps in part accounting for their difference in total words.

In the low proficiency level, the experimental group also had a greater number of interactions when compared to the control group (303 vs. 286). The experimental group used more words to complete the task than the control group (3,181 words for the experimental group and 3,072 words for the control group). Regarding the length of time to complete the task, there was also not much difference between the two groups. As shown in Table 4, all pairs took approximately 20.5 minutes. In short, with low proficiency learners, the differences in all features (turn taking, words, and time) were small between the experimental and control groups.

The results indicate that groups exposed to modeling had more interactions than no modeling. The difference in number of interactions (by turn taking and words) between the two groups was greater in the high proficiency level than the low proficiency level (see Figure 1 and Table 4). When comparing the total number of words and amount of time spent on the task by the two groups, the experimental group used more words but generally finished the task faster than the control group. This may suggest greater fluency in this group. Furthermore, the participants in both proficiency levels of the control group used fewer words and took slightly more time to complete the task as compared to the
Figure 1. Means of interactions from the experimental and control groups of high and low proficiency levels

Experimental group. It appeared that the participants in the control group employed more pauses which caused delays in task completion.

Research Question 2: Does modeling of the task affect the number and kind of communicative strategies for Korean English learners of high and low proficiency levels in the experimental groups compared to those in the control groups with no modeling?

To answer this question, I counted and compared the occurrences of communicative strategies of both the experimental and the control groups. As shown in Table 5, both proficiency levels in the experimental group with modeling used more communicative strategies on average than the control group average. The result indicates that modeling appeared to affect the frequency of communicative strategies primarily in the high proficiency level. However, with low proficiency learners, the experimental group used the strategies slightly more than the control group, but the difference of strategy use between the two groups was relatively small (see Table 5 and Figure 2).
Table 5. Frequency of communicative strategies between experimental and control groups in both proficiency levels

<table>
<thead>
<tr>
<th></th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pair 1</td>
<td>Pair 2</td>
</tr>
<tr>
<td>Clarification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>request</td>
<td>46</td>
<td>34</td>
</tr>
<tr>
<td>mean=34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmation</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>check</td>
<td>mean=20.3</td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>check</td>
<td>mean=2.7</td>
<td></td>
</tr>
<tr>
<td>Total frequency</td>
<td>81</td>
<td>53</td>
</tr>
<tr>
<td>mean=57</td>
<td>mean=40.7</td>
<td></td>
</tr>
</tbody>
</table>

Data set 2 (lower proficiency level)

<table>
<thead>
<tr>
<th></th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pair 1</td>
<td>Pair 2</td>
</tr>
<tr>
<td>Clarification</td>
<td>37</td>
<td>20</td>
</tr>
<tr>
<td>request</td>
<td>mean=28.5</td>
<td></td>
</tr>
<tr>
<td>Confirmation</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>check</td>
<td>mean=11.5</td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>check</td>
<td>mean=0</td>
<td></td>
</tr>
<tr>
<td>Total frequency</td>
<td>54</td>
<td>26</td>
</tr>
<tr>
<td>mean=40</td>
<td>mean=38.5</td>
<td></td>
</tr>
</tbody>
</table>
The learners in the high proficiency level of the experimental group used strategies 171 times (mean = 57) while the learners in the high proficiency level of the control group used strategies 122 times (mean = 40.7) during the task (see Table 5). Four learners (out of six) in the experimental group ranked within the top 50% for the use of strategies (see Table 6). In particular, learners from experimental Pair 1 used the strategies most frequently compared to all other pairs. This suggests that modeling may have positively affected strategy use in this study. Perhaps modeling affected the high proficiency learners more positively because of their better linguistic ability (including vocabulary, grammar, and speaking ability). On the other hand, it is possible that participants would have performed this way regardless of modeling. For example, two learners from the control group ranked within the top 50% for the use of strategies (see Table 6) with four other learners from the experimental groups. Also, two experimental learners ranked within the bottom 50% for the use of strategies. Individual variances (e.g., fluency, shyness, and reluctance of speaking) also possibly affected the learners' strategy use.

Learners in the low proficiency level of the experimental group used strategies 80 times (mean = 40) while the learners in the low proficiency level of the control group used strategies 77 times (mean = 38.5). While the experimental group used more strategies than the control group, the difference was relatively small (see Figure 2).

Regarding the individual differences of strategy use, the learners in both the experimental and control groups did not differ (see Table 6). For example, a learner in the experimental group was the most frequent user of the strategies (33 times) followed by learner from the control group with 31 strategies. As shown in Table 6, there was little or no
Table 6. Individual communicative strategies used by learners

<table>
<thead>
<tr>
<th>Data set 1 (Graduate TA group): high proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>student</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1 (student B)</td>
</tr>
<tr>
<td>2 (student A)</td>
</tr>
<tr>
<td>3 (student B)</td>
</tr>
<tr>
<td>4 (student A)</td>
</tr>
<tr>
<td>5 (student A)</td>
</tr>
<tr>
<td>6 (student B)</td>
</tr>
<tr>
<td>7 (student B)</td>
</tr>
<tr>
<td>8 (student B)</td>
</tr>
<tr>
<td>9 (student B)</td>
</tr>
<tr>
<td>10 (student A)</td>
</tr>
<tr>
<td>11 (student A)</td>
</tr>
<tr>
<td>12 (student A)</td>
</tr>
<tr>
<td>total</td>
</tr>
<tr>
<td>(61%)</td>
</tr>
<tr>
<td>mean (X)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data set 2 (IEP group): low proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>student</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1 (student B)</td>
</tr>
<tr>
<td>2 (student A)</td>
</tr>
<tr>
<td>3 (student A)</td>
</tr>
<tr>
<td>4 (student B)</td>
</tr>
<tr>
<td>5 (student A)</td>
</tr>
<tr>
<td>6 (student A)</td>
</tr>
<tr>
<td>7 (student B)</td>
</tr>
<tr>
<td>8 (student A)</td>
</tr>
<tr>
<td>total</td>
</tr>
<tr>
<td>(73.4%)</td>
</tr>
<tr>
<td>mean (X)</td>
</tr>
</tbody>
</table>
Figure 2. Mean of strategy use by the experimental and control groups of high and low proficiency levels

apparent individual difference in strategy use between both groups in the low proficiency level.

In sum, while modeling appears to have affected strategy use primarily in the high proficiency level, it was negligible or non-existent in the low proficiency level group. With low proficiency learners, lack of linguistic competence (including limited vocabulary, grammar, and conversation skills) and other variances (characteristics such as shyness) could probably have caused less use of strategies than the high proficiency learners.

To examine the types of communicative strategies employed during the task, I also calculated the number of each strategy used by all participants. As shown in Table 5 and 6, the clarification request was the strategy most frequently used among the learners in both proficiency levels of the experimental and control groups. High proficiency learners used the strategy 179 times while the low proficiency learners used it 116 times. The confirmation
check was used 99 times by the high proficiency level and 40 times by the low proficiency level.

High proficiency learners used the clarification request most frequently as compared to the other strategies. This strategy occurred 179 times (61% of total strategies). This use of clarification requests was greater in the experimental group than in the control group (102 vs. 77 times). The confirmation check was used 99 times (33.8% of total strategies). Like the clarification request, the learners of the experimental group used the confirmation check more frequently than those of the control group (61 vs. 38 times). The comprehension check was the least frequently used strategy of the three examined in this study, and it occurred only 15 times (5.2% of total strategies) which is much less than the other two strategies. There was little difference in use of comprehension checks between the experimental and control groups (8 vs. 7 times).

In the low proficiency group, the learners also used the clarification request most frequently 116 times (73.4% of accounting for the total strategies). The amount of clarification requests was slightly less in the experimental group than in the control group (57 vs. 59 times). The confirmation check was used 40 times (25.3% of total strategies). Confirmation checks were used more often in the experimental group than in the control group (23 vs. 17 times). The comprehension check was used only 1 time by the control group (0.6% of total strategies). In the following subsections, learner use of each strategy is discussed and examples of use are given.
Clarification Requests

The clarification request appeared to be the most important strategy for negotiation while completing the task. In fact, none of the pairs finished the task without using clarification requests (see Table 5). Clarification requests were used to obtain useful information required to complete the task, and the strategy seemed essential for obtaining comprehensible input for negotiation of meaning during the task. The following examples were collected from clarification requests.

(Excerpt 1 from high proficiency level)

A: It looks like kind of a place, the place consists of jungle and some building.
B: Is it looks like pyramid? ←
A: It is Yes, that’s right.

(Excerpt 2 from low proficiency level)

A: In the mountain, he’s pointing a town.
B: They are talking two guys.
A: There are two guys and one.
B: Where is where is the situation? ←
A: Uh, they are looking down the town from the mountain.
They are in the mountain.


Confirmation Checks

During the task, learners often used confirmation checks. As receivers of information, the learners needed to confirm utterance to determine whether they have correctly heard and understood including such things as pronunciation and spelling. The
learners used confirmation checks to increase comprehensible input and obtain useful information, thus the learners enhanced negotiation of meaning to maximize communicative effectiveness. The following are some examples of confirmation checks from the data.

(Excerpt 3 from the high proficiency level)

A: All of them look very funny. Oh. There are four guys.
B: Four guys? ←
A: Yeah.

(Excerpt 4 from the high proficiency level)

A: They, each of them bring some luggages.
B: Luggages ←
A: Yeah, with their bags.

(Excerpt 5 from the low proficiency level)

A: Then, other people. They’re taking out.
B: Taking out ←
A: Yeah, taking some I mean baggage. Taking out baggage from airplane.

The strategy also elicited speakers’ interlanguage change (including grammar and pronunciation) in that it caused the speaker to modify the output to provide better input for their partner.

(Excerpt 6 from the high proficiency level)

A: It looks like he’s standing on sort of a cliff kind of thing.
B: Cliff?
A: Yeah, it’s a sort of a bunch of rocks, you know, really high up in the air you know, it has sort of a steep ledge.
B: Steep, very steep
A: Yeah, like sort of a steep ledge, like if you fall over you’ll die.
B: Yeah, I understand.

It is noteworthy that in the above example, the learner could possibly acquire new vocabulary. The communicative strategies were used not only for obtaining information but also for developing new words during negotiation in the task.
Comprehension Checks

Comprehension check was rarely used when compared to the other two strategies. Because the function of this strategy is for a speaker to check a listener’s comprehension, the result of the study implies that listeners made more effort to obtain necessary input in order to succeed in the task than the speakers. The learners continued negotiation and finished the given task without the sender checking the receiver’s comprehension. If any comprehension problem occurred, it seemed that the receiver of information was most likely to request clarification or confirm comprehension immediately using the other strategies. However, the comprehension check was still useful for enhancing conversation since the sender of information sometimes anticipated and prevented the communication breakdown through use of a comprehension check. The following is an example of a comprehension check from the data.

(Excerpt 7 from the high proficiency level)

A: The old guys face is kind of embarrassed with something. The old looks at the other side of the other guy.
B: But...
A: Can’t you understand what I mean? ←
B: No.
A: The old guy look at this side, and the other yellow clothing, yellow hat guy’s look at the old guy’s back side.
B: Ahh hah. Yes. So he chasing the guy with the orange hat.

In the example, learner A anticipated and prevented communication breakdown by asking if the partner had understood. After checking the partner’s incomprehensibility, learner A modified the previous utterance and the conversation was continued without a breakdown.

In sum, the learners most often used clarification requests and the confirmation checks to obtain comprehensible input to complete the task. The use of these strategies
apparently increased the amount of negotiation between the two learners. This finding also implies that learners as receivers of information used more of these strategies during the task than senders of information. When receivers of information used these strategies, they obtained the necessary input to successfully complete the task. Regarding the modeling effect on kind of communicative strategies, high proficiency learners in the experimental group used these strategies more frequently than those in the control group. In the low proficiency level, there was little difference between two groups as compared these strategies.

Additional Features

In addition to answering the research questions, the performance results provided additional interesting features that characterize the differences between learners in the experimental and control groups of the two proficiency levels. Some features were analyzed through direct observation of task performance.

High proficiency level

Relationship between time spent for the task and use of strategies

Regarding the length of time spent for the task and its effect on strategy use, most pairs took similar amounts of time (usually 20 to 22 min.) in both proficiency levels (see Table 4). However, in the high proficiency level, the control group showed the greatest difference in length of time for task completion among the three pairs. The control group Pair 2 (hereafter called C 2) took the longest time to complete the task (25 min.). This pair also used the least words during negotiation. Furthermore, Learner A in C 2 used the
strategies the least frequently (only four times). Learner A often had difficulty in describing pictures. His limited vocabulary perhaps affected the low use of strategies and delays in task completion. The following is an example from the data.

(C 2 in the high proficiency level)

A: This picture doesn’t show us why did he . . .
B: Sad?
A: Why is he so happy.
B: He is happy?
A: Yeah. He looks like he found something about the . . .
B: Statue?
A: Yeah about the statue.

Pair 3 in the control group (C 3) finished the task much faster (17 min.) than any other pair (including the experimental 3 pairs). They quickly solved their communicative problems through use of communicative strategies as needed. Perhaps they were better at understanding each other’s utterances and better at solving this type of jigsaw task as compared to other learners. Possibly the individual characteristics of these two learners rather than their English proficiency allowed them to complete the task more quickly. In short, it seemed that there was not necessarily a relationship between the time spent on the task and number of strategies by learners.

Learners’ role in interaction

In regard to the role of the speakers, the learners from the experimental group Pair 2 in the high proficiency level (hereafter called E 2) had an interesting exchange. Learner A played the dominant role in completing the task. In the following example, learner A almost led the entire conversation to solve the problem. Learner A used many words to describe the pictures and summarize the guesses to solve the problem. Learner B mostly accepted the utterances of learner A. The following is an example from the data.
(E 2 in the high proficiency level)

A: And he went down to the market to sell or to say that he found it, but when he arrived the market, he was a lot of a lot of same exactly same statues,
B: Yeah. Umm hmm
A: So he’s very disappointed, something like that.
B: OK.
A: That way.
B: Then uh
A: So then, the last picture, you talk about it, you can’t understand it, that is uhh, after it, after my last thing, after he after they knew that statue is not unique and it is not valuable at all and they are very disappointed and they are sad. It makes sense to me.
B: Ahh. Ok. Then, uhh.

In this example, learner A obviously took charge of the task and learner B seemed content to provide little input. In this type of negotiation, the learner who played dominant role had to use more words and strategies than the partner.

Control group Pair 2 (C 2) also had an interesting exchange during interaction. Most of the time learner A accepted her partner’s utterances. Learner B in C 2, therefore, had the dominant role during the task and used strategies often to obtain comprehensible input from learner A. The following is an example from the data.

(C 2 in the high proficiency level)

A: Peoples walking in a very narrow
B: In a valley. Valley?
A: Yeah. In a very narrow
B: Narrow?
A: Narrow, narrow.
B: Road?
A: Road.
B: That is after the expedition. One of them are those people, they are worn out
A: Right.
B: They are tired. What is the other one?
A: He looks
B: Exciting?
A: Yeah.
In the example, learner B had to use strategies often to obtain information and input for the task because learner A merely accepted input from her partner (learner B) and repeated previous utterances during negotiation without using communicative strategies.

**Degree of success for the task**

With regard to the degree of task success, there were variations from pair to pair in the high proficiency level. Pair 1 of the experimental group (E 1) completed the task successfully in terms of interactions and strategies. Both learners used the greatest number of strategies compared to all other participants (see Table 6). They engaged in more interactions (261) and used more communicative strategies (81) during negotiation than all other pairs (including the control group pairs). These two learners both performed equally in providing useful input for each other. The modeling probably affected the result. On the other hand, there was also the possibility that individual differences in learners affected the results.

Pair 3 of the experimental group (E 3) produced the least number of the interactions and also used fewer strategies compared to the other pairs. Individual variances (i.e., shyness, difference in linguistic ability) might have affected these results. Based on my observation, learner A in this pair showed less enthusiasm for the task than learner B and hurried to finish the task. Unlike other participants, she did not use gestures or facial expressions when she described the pictures. She seemed reluctant or shy. These traits probably contributed to this pair having the least amount of interactions and the least number of strategies. Among all the participants, only one pair did not solve the problem. Pair 2 of experimental group (E 2) put the pictures in the wrong order although they completed the
task. In this pair, when learner B had difficulty describing his pictures, learner A interpreted
the utterance of B in her own way. Here is a segment of the interchange:

(E 2 in the high proficiency level)

B: I have, something, difficult to understand. That is second one. Two guys are in
middle of jungle and they are sitting on the ground and they, one of those guys
has something which looks like
A: They look happy or they look tired
B: They look tired.
A: They look sad?
B: Uhh.
A: Ok. That must be last one I think.
B: Last one?
A: Uhh Huhh. Because, that was, I think that story as this way, He, the guy, the
guy plan to, the guy spend a lot of time to plan to found to find some key
thing, it might be very valuable, the statue, so he got some fun and he has some
support to go there to hire some people, the guys.
B: OK.

In the example, learner B seemed to give up trying to negotiate and just accepted the decision
of A, although the decision was not correct. They tried to negotiate meaning, but this
unbalanced negotiation probably caused an unsuccessful result.

Influence of the ITA communication courses and test scores on the use of
strategies

With regard to the communication course experience (required for prospective
teaching assistants at the university), the learners without course experience used strategies
more frequently (see Table 2 and 6). Regarding the test scores, there was no correlation
between the test scores (TOEFL and Speech/Teach test) and the use of strategies. For
example, learner B (C 1 in the high proficiency level) who had the highest TOEFL score
(658) did not use the strategies most often. She was ranked 9th in number of strategies used
(see Table 7). In addition, learner B (E 1 in the high proficiency level) received the lowest
Table 7. Frequency of strategy use and individual variances of learners

<table>
<thead>
<tr>
<th>Data set 1 (Graduate TA group): high proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>1 (student B -E 1)</td>
</tr>
<tr>
<td>2 (student A-E 1)</td>
</tr>
<tr>
<td>3 (student B-C 2)</td>
</tr>
<tr>
<td>4 (student A-E 2)</td>
</tr>
<tr>
<td>5 (student A-C 1)</td>
</tr>
<tr>
<td>6 (student B-E 3)</td>
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<td>7 (student B-E 2)</td>
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<td>8 (student B-C 3)</td>
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<td>9 (student B-C1)</td>
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<tr>
<td>10 (student A-E 3)</td>
</tr>
<tr>
<td>11 (student A-C 3)</td>
</tr>
<tr>
<td>12 (student A- C 2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data set 2 (IEP group): low proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1 (student B-E 1)</td>
</tr>
<tr>
<td>2 (student A-C 1)</td>
</tr>
<tr>
<td>3 (student A-E 1)</td>
</tr>
<tr>
<td>4 (student B-C 1)</td>
</tr>
<tr>
<td>5 (student A-E 2)</td>
</tr>
<tr>
<td>6 (student A-C 2)</td>
</tr>
<tr>
<td>7 (student B- E 2)</td>
</tr>
<tr>
<td>8 (student B-C 2)</td>
</tr>
</tbody>
</table>
score in the TOEFL test (580) and who had not taken the course used the strategies most frequently (see Table 6). There was also no clear relationship between the Speech/Teach scores and the strategy use. It appears to that there was no positive relationship between test scores and the use of strategies.

In addition, gender did not appear to correlate with the incidence of strategy use among learners. Although female students used slightly more strategies on the average during negotiation, the difference was negligible. Other characteristics were perhaps of greater importance than gender. With regard to majors, learners in the TC program used slightly more strategies than those in the Chemistry program. This difference was negligible (see Table 7). However, there were still possibilities that all different types of individual variances might affect the results produced by each participant in addition to the effect of modeling.

**Low proficiency level**

Not surprisingly learners in the low proficiency groups had many more problems with grammatical forms (including ellipsis) than the high proficiency group. The learners also had a more limited vocabulary, so they had to spend more time trying to clarify uncertain words instead of focusing on information exchange. Using communicative strategies was also beneficial for new vocabulary acquisition to the low proficiency learners. Learners could acquire new words through the task in addition to develop the communicative effectiveness. The following are some examples.
Many low proficiency learners had more difficulty in describing the pictures because of their limited vocabulary. Furthermore, they also sometimes selected wrong words to explain the pictures, which hampered understanding.

In this example, learner A should have used the word ‘crawling’ instead of ‘climbing.’

These examples indicate that the learners’ English proficiency was probably not sufficient to describe the pictures effectively. The results indicate that this lack of proficiency could have reduced the possible influence of modeling. Also, the limited linguistic competence probably affected the difference in use of strategies. The low proficiency learners mostly used the
strategies for clarifying the literal meaning of vocabulary while the high proficiency learners used the strategies more often for obtaining the information for the task.

Generally the low proficiency learners used fewer strategies compared to the high proficiency learners. However, some learners (E1 and C1) in the low proficiency level were able to do the task more quickly (20 min.) than other learners in the high proficiency groups, even with less proficient English and fewer strategies (see Table 4).

Differences in strategy use between learners and native speakers

In addition to answering the research questions, it was interesting to see how learners' use of strategies compared with those of native speakers of English. I compared the learner-learner data in this study with those of three pairs of native-learner data obtained from a previous study. In a previous unpublished study by Hykes and Choe (1999), the task was identical and the data were collected in the same manner as this study. I coded the three strategies (clarification requests and confirmation/comprehension checks) used by native speakers' strategies using the same criteria (see Table 3). As shown in Table 8, native speakers used clarification requests (83.9%) most often compared to the other two strategies. While confirmation checks were used (16.1%), comprehension checks did not occur at all (0%). Clarification requests appeared to be the most frequently used strategy for negotiating meaning for both learners and native speakers of English, whereas both learners and native speakers used the confirmation check more often than the comprehension check (see Table 6 and 7). The results indicate that the learners' use of strategies in both proficiency levels closely coincided with native speakers' use. Furthermore, the learners used more communicative strategies during the task than did native speakers (see Table 4 and 8).
Table 8. Frequency of communicative strategies by three native speakers of English (NSE) during interaction with ESL learners

<table>
<thead>
<tr>
<th></th>
<th>NSE #1</th>
<th>NSE #2</th>
<th>NSE #3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification</td>
<td>40</td>
<td>10</td>
<td>2</td>
<td>52 (83.9%)</td>
</tr>
<tr>
<td>Confirmation</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>10 (16.1%)</td>
</tr>
<tr>
<td>Comprehension</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>10</td>
<td>2</td>
<td>62 (100%)</td>
</tr>
</tbody>
</table>

Transcription was adopted from a prior study by Hykes and Choe (1999).

**Learner perception of the task and modeling experience**

In addition to answer the research questions, I also investigated the learners’ perception of their task and modeling experiences. All the participants (N = 20) were given a questionnaire (see Appendix C). All participants answered six questions on a 5-point scale with 1 indicating “strongly agree” and 5 indicating “strongly disagree.” More accurate information about the learners’ perceptions was gathered rather than by using simple yes/no answers. The experimental groups (N = 10) in both proficiency levels were asked two additional questions regarding the usefulness of the modeling video. I calculated the point average (mean) for the data analysis (see Table 9). Generally, the task was neither very difficult or not very easy for the learners (mean = 3.8 point). However, according to the survey data, the task was more difficult for some low proficiency level learners. In particular, two low proficiency learners responded that the task was difficult. The degree of the task difficulty probably affected the performance of the learners. The task instruction
Table 9. Learner perception for the task and modeling experience

<table>
<thead>
<tr>
<th>Perceptions</th>
<th>Mean</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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</thead>
<tbody>
<tr>
<td>Task is difficult</td>
<td>3.8</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Task is fun</td>
<td>1.4</td>
<td>12</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The instructions are clear</td>
<td>1.3</td>
<td>15</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task is better than lecture for communication</td>
<td>1.7</td>
<td>8</td>
<td>10</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task is useful for communication skills</td>
<td>1.6</td>
<td>8</td>
<td>12</td>
<td></td>
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</tr>
<tr>
<td>Interaction is useful for communicative</td>
<td>1.4</td>
<td>12</td>
<td>8</td>
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<tr>
<td>effectiveness</td>
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<tr>
<td>Modeling is useful for task example</td>
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<td>5</td>
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<tr>
<td>Modeling is useful for increasing</td>
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<td>communicative strategies</td>
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</tbody>
</table>

was clear to all learners (mean = 1.3 point). The learners preferred doing the task rather than listening to a lecture (mean = 1.7 point) for communication learning, and they also perceived that the task was a lot of fun (mean = 1.4 point). Regarding the task usefulness, the learners perceived that the task was useful for increasing communication skill (mean = 1.6 point). They also strongly agreed that interaction was useful for communicative effectiveness (mean = 1.4). In short, generally the learners agreed that the task experience, including interaction was useful for communication learning.

With regard to the modeling, most learners agreed that watching modeling was useful for the task (mean = 1.8). Most learners also perceived that the modeling was somewhat useful for communicative strategies (mean = 2.6). However, the learners perceived that the modeling is more useful for the task example than for the communicative strategies (see Table 9). This suggests that modeling in the EFL/ESL classroom may be useful for
learners who might otherwise have difficulty performing new tasks because of unclear instruction.
CHAPTER 5. CONCLUSION

Summary of the Results

The purpose of this study was to determine whether or not modeling of a jigsaw task affects the overall interaction and use of communicative strategies by Korean English learners. To examine the effect of modeling, the data from two sets of learners (an experimental group shown modeling and a control group not shown modeling) of different English proficiency levels were collected, analyzed, and compared.

Both the high and low proficiency levels of the experimental group on average engaged in more interactions compared to the control group average, suggesting that modeling may have had a positive effect, especially pronounced in the high proficiency experimental group. On average, the experimental groups of both high and low proficiency levels produced more communicative strategies than the control groups, again most pronounced difference was in the high proficiency group. However, there was great individual variation, with the second highest number of communicative strategies being used by a control group member and one of the least number of strategies being used by a experimental group member. This finding suggests that modeling may have had more strong effect in the high proficiency level. However, the great individual variation suggests that there were possibilities that different types of individual variances (such as shyness, proficiency, and gender) might affect the results.

The results also indicate that learners (NNSE) in both experimental and control, high and low proficiency groups and NSE used clarification requests most frequently. The learners were able to obtain comprehensible input and essential information for completion
the task using this strategy. With regard to the usefulness of strategies (including confirmation/comprehension checks), the learners were able to increase the negotiation of meaning and promote communicative effectiveness using the strategies. Although the sample size and effects were modest, and individual differences such as personality, gender, and area of study may have affected the results of the study, it is nevertheless a starting point for future similar studies.

Conclusion and Implications

Based on these preliminary results, there is tentative evidence that modeling may positively affect the use of communicative strategies. It appears that certain modifications in the jigsaw task may affect this interaction and, in turn, assist L2 learning.

The results suggest that the usefulness of L/L interaction can be increased when learners are given an authentic model or negotiated interaction by native speakers. In many EFL classroom situations, including those in Korea, where learners have infrequent opportunities to interact with NSE, the results of this study suggest a reason for optimism. Negotiation of meaning may get an added boost through prior modeling before task-based activities. It would seem desirable to use native speakers for models, and this can be accomplished fairly easily through use of a video. Of course, modeling probably also helps learners perform the task effectively in addition to assisting their interaction and learning.

One caveat for future researchers and teachers is that the task in the study may have been somewhat difficult for some participants and thus lessened the potential effect of modeling.
Limitations and Recommendations for Further Research

The results of this study suggest that modeling may be a useful tool for promoting L2 learning. However, the limitations of this study should be considered. First, the number of subjects was small. To better generalize the findings and increase the reliability of this study, more subjects are desirable. A larger number of participants would provide a more confident comparison between the experimental and control groups and the different proficiency levels, and lend itself to statistical analysis. In addition, confidence levels could be established.

A second limitation is the relatively undetailed transcription. Further research should conduct a more careful analysis of conversational discourse and should include pauses, intonation, and gestures in their transcription. This type of transcription would result in greater accuracy as well as include additional interesting features to study. Future researchers should also carefully select tasks to align with participants' $i+1$. Krashen (as cited in Richard-Amato 1996) defines $i+1$ as the distance between actual language development (represented by $i$) and potential language development (represented by $i+1$). Krashen claims that learning should always be one step ahead of development. However, the input should not be too difficult for the learners. In addition to the three communicative strategies analyzed in the study (clarification requests, confirmation/comprehension checks), the learners used other strategies (nodding, and some verbal sounds such as Uhh-Huh) during interaction. Although these strategies did not directly affect interlocutor response, they did enhance conversation between learners. It would be interesting to examine the benefits of these interactional strategies in relationship to communicative effectiveness.

Another implication for future study is examine the effects of individual differences on learner performance. In addition, the different types of modeling on learner performance
would also be interesting to study. For example, in this study, I used video modeling without first teaching specific use of communicative strategies. Had I first taught the learners different types of communicative strategies, then the results might have been different. Furthermore, in this study, the learners watched the video and read a transcription of the video simultaneously. A different procedure (e.g., giving the students the transcription first and then showing the video later) may also have affected the results. Future studies on the effects of prior task experience may also be beneficial. It would be interesting to see how learners with task experience perform on similar tasks as opposed to learners without experience. In short, there are many options for future studies which might help researchers and teachers learn more about task-based instruction for L2 learners.
APPENDIX A: PICTURES FOR THE JIGSAW TASK USED IN THIS STUDY
APPENDIX B: INSTRUCTIONS FOR THE JIGSAW TASK

“The task will ask you and your partner to put eight pictures in the right order to tell a story.”

Each of you is going to have four pictures of one complete story. You and your partner have to decide what order your pictures should be placed in and what the story they tell might be.

You can only look at your pictures, not your partner’s.

You have to interact with each other to complete the task.

You have unlimited time to finish the task.

Please use English only.

Directions of the task:

Each of you should take turns turning over one of your pictures and describing the picture to your partner one by one. And then making some guesses together about what could be happening in the picture, what possibly is happening in the story, what might have happened right before the picture, and what may happen next. When you have both finished looking at all your cards, you should be able to decide together the right order of the pictures and you should be able to tell the story together.
APPENDIX C: SURVEY QUESTIONNAIRE

Task and Modeling Experience

Please pick only one number of your agreement from the scale 1 to 5 and write the number for each question (A to H).

Last two questions (G and H) are only for the students shown video modeling before the task.

Scale: 1. Strongly agree  2. Agree  3-Neutral  4-disagree  5-strongly disagree

Questions:
A. The task is difficult.
B. The task is fun.
C. The instruction is clear to me.
D. This communication task is much better than lecture types of lesson for oral communication.
E. This jigsaw task is useful for ESL oral communication skill.
F. The interaction with partner is helpful to improve communication effectiveness.
G. The video modeling is useful for the task.
H. The video modeling is useful for the communicative strategy use.
APPENDIX D: SAMPLE TRANSCRIPTION
The transcription: experimental group Pair 1 in data set 1 (high proficiency level)

A: There's a guy.
   A little bit old.
   And he's wearing a hat.
   Cap, not hat, cap.

B: Hat with a cap?

A: Yes. And
   He's looking at some sculpture. Small one.

B: He's looking at a sculpture.

A: Yes.
   And three men are looking at him.

B: Three men?

A: Yes. I think it's..

B: Where are the three mens?

A: It's ah Just..

B: Near him? or .

A: Just the side of him
   But, it's a little bit far, not so far. But there's some distance
   Um, I think the place is a kind of temple, or something like that.
   It looks like a kind of Egypt. But I'm not sure about that.
   Temple or just in front of the pyramids or something like that.
   I think it can be Egypt. But I'm not sure.
   And he is sweaty.

B: Sweating

A: Yes. And I think he is a little bit excited to look at the sculpture.

B: Which kind of sculpture?

A: Ahh Like Buddha.
   Like Buddha.

B: Like Buddha?

A: Yeah. But I'm not sure. It seems like that

B: Let me summarize what you're saying.

A: Yeah.

B: Old guys a old guy is looking at the sculpture which is a kind of Egypt pyramid or .
A: No! Buddha.
B: Buddha. Oh, OK. They are Buddhist. Ok.
A: And the place is kind of Egypt.
A: And that place is kind of Egypt.
B: Yeah.
A: And three mens is looking at him.
B: Yeah, they are holding the Mexican hat.
A: Mexican hat?
B: Yeah, they are holding.
A: And the old guy is excited.
B: mmm hmmm yes.
A: looking at the sculpture.
B: Yeah. So he is sweating.
A: Sweating?
B: Yeah. Yeah.
A: Mmm. In my pictures the place looks like market, open market.
B: mmmm hmmm. You mean kind of traditional market?
A: Yes. Traditional open market in Mexico.
B: Uhhh hhhh. Ok
A: And there are lots of peoples selling small ethnic dolls
B: Yeah, ok
A: Actually monkey dolls.
B: Yeah.
A: And one guy
B: Ok. one guy
A: wearing a hat
B: I see.
A: is . .
B: Is it orange-y hat? Orange, is it?
B: And is it, is there a yellow sculpture or the doll?
A: Yellow monkey.
B: Is it monkey?
A: It's kind of monkey.
B: I thought that it's Buddha.
A: Buddha! I don't think so.
B: Yeah, I think it's same one.
A: Yeah. They look like monkeys.

A: Yeah
B: And the guy has a yellow monkey doll and he looks like surprised at
    something.
A: Mmhmmm. Ok.
B: Actually, he's looking at a woman who sells monkeys.
    A woman...woman's back, a baby...is on her, woman's, back.
A: Uuhh huhhh yeah.
B: That's all.
A: Yeah. Uhhh,. Is he wearing a green clothes?
B: Right.
A: Yeah. Ok.
B: Green clothes.
A: And the next picture is the guy wearing orange hat and the green clothes.
    He's climbing up a mountain with the other, the three old men. Not old. I'm
    not I'm not sure.
B: Ok. The other three guys?
A: Yes. The other three men. Yes.
    Oh. There are lots of people following them.
B: Following four guys
A: Following them. Following four guys. Yes. Four guys.
    And, I think this picture is just...picture is before the first one that I have.
So he's climbing the mountain, and I think he can reach the place that he was started with the doll with the sculpture.

A: Is the top of the mountain? Is the top of the mountain? Oh. Is the sculpture on the top of the mountain?

A: No.
B: No?
A: He's just holding it.
B: Holding
A: It's a kind of doll, you said that it's doll, the monkey. I'm not sure that it's
B: Ahh.ahh. Ok.
A: I'm not sure it's monkey or not but he's holding it, just in front of some...some architecture.
B: Mmm. I see.
A: I'm not sure architecture or some kind of temple.
B: Temple
A: He's holding that doll. You said it's doll. So I think this picture is, not Just before, but anyway before, that first one.
B: Ohh. OK.
A: So he's climbing up the mountain.
B: Up the mountain? In my picture the place looks like the Inca, in Peru
A: Yeah. Yeah. I think it's the same place.
B: And there is many tropical trees.
A: Yes.
B: And I found three guys.
A: Yes.
B: They are wearing a hat. And Mexican.
A: Yes, traditional clothes
B: Traditional clothes. A old guy's, as you said, wearing a orange hat and green clothing. Is looking at the sculptures
A: Mmmm Hmmm, holding that holding that one? No?
B: holding
A: Where's the sculpture?
B: He holds a sword.
A: Sword. Yeah.
B: in his hand. And his face is kind of exciting and the other three guys are also looking at the sculpture.
A: Where's the sculpture?
B: Sculpture is on the pyramid architect.
B: The same building?
A: I'm not sure, there's a kind of exit.
B: Exit
B: Look like a hole. What do you mean looks like a hole?
A: It's kind of door, gate.
B: Door. Gate?
A: Yeah, but it's small so I think the guy cannot enter the gate. But I think he can put the doll or the sculpture on that spot.
B: Oh! Ahh ahh. By the way, in my picture, there's no exit. Exit?
A: Exit.
B: Or doors?
A: It looks like window. Not actually door.
B: Not window.
He's in the forest. He's kind of higher than the sculpture, so he just found the sculpture, so he's happy to found it, to find it.
A: Ok. I think that can be just before the first one, mine , my first one.
B: OK. Let us see your picture.
A: Oh. This can be the first one. I think you said, it's kind of Mexico.
B: Mexico.
A: But I think, but I'm not sure this is Mexico. He just found the kind of map
B: Map?

A: In his office, or his room. So was so happy. He looks so happy, to find the map.

B: Ok.

A: In the map, there's a picture of that, the sculpture, the doll, the kind of Buddha.

B; Ok, yeah.

A: So I think he is going to find them, find it.

B: Ok. He's find a treasure map.

A: Yes.

B: And plan to go there to find treasure.

A: Maybe, yeah, I think so. I think he's kind of archaeologist.

B: Archaeologist.

A: so he looks happy to find it.

B: He may be a business man

A: No. I don't think so.

B: Who wanna be a rich man?

A: To be rich.

B: It's kind of airplane, airport. There is an airplane. And many many young men is, how can I say, delivering baggages to the airplane, and passengers are waiting in front of the airplane, and many passengers have the monkey dolls on their hands. Especially the old guy with the orange hat and green shoes, do gestures, something in front of the passengers.

A: Is he explaining something in front of them?

B: What?

A: Is he explaining something in front of them? No?

B: It looks like he explaining something to passengers.

A: Yeah, ok

B: And he thought a monkey dolls in his mind.
A: Ahh. He just thinking
B: Yeah, he just thinking. But .
A: Maybe he's departing to find the monkey doll to the Mexico, maybe.
B: Maybe, right. Maybe, this picture maybe the people want
A: Yeah, just after the map and that just before he find the monkey...
B: Yeah, right.
A: Yeah. Oh what's this?
B: What?
A: This one difficult.
B: Difficult one
A: Yeah.
B: There is many situation on the picture.
A: No. Ahh. He's holding that doll in his one hand.
B: Oh, Ok.
A: And he's just in front of the cliff.
B: Cliff?
A: You mean, you said he's climbing up the mountain
B: Ohh, I see.
A: And just this is the .
B: He stands at the cliff.
A: Yes.
B: Ok.
A: I think he's acting that he can through away the doll just under, just down the cliff.
B: So, he's throws out the doll
A: No, he's just motioning that
B: Motioning?
A: Yeah. And other guy is begging him not to throw it out, throw it away.
B: Ahhh Ok.
A: I'm not sure. He looks like begging.
   And he, the guy wearing the orange hat, is threatening him, maybe.

B: Oh, ok.
A: And the guy, who's wearing the orange hat, looks like, a little bit tired, a little bit red

B: Wait a second. Who is threatening to whom?
A: Wearing the orange hat.
B: The old guy threatens to .
A: threatening another guy.
B: Threatening another guy
A: Yeah, just one.
B: Just one?
A: One man
B: One man?
A: Yeah. He looks a little bit tired.
B: Tired?
A: Yeah. His suit, his clothes is rags.
B: Rags  Ohh. Ok.
A: Yes. It can be
B: Maybe this picture explain the end of the journey.
A: Yeah.
B: Ok. Mmm.. My picture is similar to yours.
A: The last one?
B: Yes. Two guys in a forest. The old guy with orange hat, green, ruggish, ruggish shoes.
A: Rags?
B: Hold a yellow monkey doll and the other guys, the other one guy, wearing an orange hat and an orange rugged clothes, is begging, or threatening. I'm not
A: Oh, threatening begging

B: I can't identify his face. Kind of threatening, kind of threatening to the old guy.

A: To, you mean old guy is...

B: Threatened by the other guy.

A: Oh really?

B: Yeah.

A: So, who is holding the doll?

B: The old guy.

A: With orange hat?

B: and green

A: And he is standing

B: No. He's a sit down.

A: Ahh hahh. He's climbing, ahh, no?

B: No. Two guys is in the forest.

A: In the forest, not just in front of the cliff.

B: There's no cliff. Yes. The background is in the forest. Tropical trees and the old guys face is kind of embarrassed with something. The old looks at the other side of the other guy.

A: Oh, there's another guy

B: Yeah.

A: But...

B: But...

A: So...

B: Can't you understand what I mean?

A: No.

B: The old guy look at this side, and the other yellow clothing, yellow hat guy's look at the old guy's back side.
A: Ahh hah. Yes. So he chasing him? Chasing the guy with the orange hat? The guy with the yellow hat is chasing the . .

B: I'm not sure he's chasing to him or not.

A: Uhh Hhh , yeah, ok. I think that one, that one can just be before the last one that I have.

B: Oh, really.

A: So, he was chasing the guy who's wearing the orange hat to get that doll. So he just went to the cliff and he threatening him to if you don't go away I will throw this away, like that. What do you think?

B: I, the story is kind of funny.

A: Yeah. So, the guy with the yellow, the orange hat, find the map, the treasure map.

B: Is the first?

A: Yeah, the first one. And then, the airport scene can be the second one.

B: Yes, mine is the second one.

A: Yes, and then, he's climbing up the mountain to find, .ohhh. market one?

B: Yes, market one.

A: Market one. Can you describe it, the market one. Is it, Mexico, right?

B: I think he is surprised at looking at many monkey dolls in market place. He thought that the monkey doll maybe a treasure. By the way he can find easily it, same thing, in market, so he was kind of shocked. I think this is the last one, picture of the story.

A: The last one. Ok.

B: Yes, maybe. And the

A: He looks happy?

B: Kind of surprised.

A: Surprised

B: Because he thought that he found treasure, but that's not the treasure.

A: It, this kind of monkey, common thing in Mexico?

B: Yes, common thing in Mexico.
A: Ok. So, the climbing mountain one can be the third one?

B: Third one. Ok. And then . .

A: And then he found something

B: He found the pyramid, and on the top...

A: On the top of the pyramid, the doll was there.

B: Yeah, ok, it's the fourth.

A: Yeah. The fourth. And then he was holding the doll and he was so excited. And then another guy was chasing him to get it. And then he was, he came up the cliff.

B: Cliff

A: And then he is threatening

B: After that picture

A: Yeah, the market one

B: No. Just one you said right before

A: Cliff?

B: The Cliff. Two guys at the cliff.

A: The the guy with the yellow

B: Will be the, will be the sixth, sixth one.

A: Sixth.

B: Yes.

A: We can put it here.
REFERENCES


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