Differential Effects of Focus on Form vs. Focus on Forms

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Abstract

This study investigates the effects of focus-on-form tasks on SLA. Previous studies have used tasks in isolation, but which task is effective in which phase of instruction has not been investigated; thus, this study aims to examine how tasks should be graded and sequenced in a psycholinguistically relevant way. One group that received no instruction (Control Group) was compared with three experimental groups: the Input Group (explicit instruction + input processing tasks); the Output Group (explicit instruction + input processing tasks + output processing tasks); and the Drill Group (modelling of dialogues + pattern practice).

Overall, beneficial effects of focus-on-form tasks were found, compared to the Drill Group and the Control Group; however, no difference was found between the two task groups. It turned out that the teacher-directed output processing tasks were not substantially different from prerecorded input processing tasks. Concerning differential effects of instruction, the Drill Group exhibited an immediate impact to a certain extent in the grammaticality judgment test, whereas only the two task groups maintained the immediate gains two months later. In analyzing oral and written production, both the Input and the Output Groups exhibited short-term as well as long-term effects, whereas the Drill Group exhibited positive effects in written production only. Hence, audiolingual lessons ("focus on forms"), which are memory-based item learning, failed to promote oral fluency. This study suggests that instruction needs to integrate form and meaning from noticing to automatization.

Key Words: focus on form, tasks, pattern practice, cognition

1. Motivation for the study

Research interest in this study grew out of my experience in teaching Japanese as a second/foreign language. Although there is a gradual trend in the teaching of Japanese to use communicative language teaching (CLT), traditionally, Japanese has been taught on a grammar syllabus. Confusion and hesitation are common among teachers in regard to whether and/or how to integrate grammar teaching with teaching for real communication. To solve this dilemma, current classroom-oriented second language acquisition (SLA) research could make a relevant contribution to the field of language teaching.

In the foreign language classroom, teachers aim to get students to speak the target language (TL), whether through mechanical drills or through communicative activities. Yet, SLA research still pays more attention to input since Krashen (1977, 1980) and Long (1980, 1981) emphasized the role of "comprehensible input" in language acquisition, compared to output, despite the attention drawn by Swain's (1985) "comprehensible output" hypothesis. Although a substantial body of literature suggests that comprehensible input would be a prerequisite for language acquisition, comprehensible input alone is probably insufficient to trigger and complete SLA. One of the problems in input studies is that most communicative tasks used in experiments, which can provide meaningful contexts for interaction in the language classroom, were originally designed to promote fluency and not grammatical accuracy

for pedagogical purposes. No matter how many conversational adjustment features are produced during interaction, language acquisition of a certain grammatical item may not take place. Consequently, the Input/Interaction Hypothesis has not been adequately tested.

Furthermore, in order to maximize SLA, learners' cognitive processes need to be taken into account because SLA research has shown that learners do not learn the target language (TL) in the linear and additive way in which they are typically taught (Kellerman 1985). In other words, learners are constantly restructuring an internalized knowledge system towards the TL norms (McLaughlin 1990). In order for SLA to take place, learners need to notice a gap between their interlanguage (IL) and the TL norms in the first place (Schmidt 1990; Schmidt & Frota 1986; White 1987), and then, learners must formulate and test hypotheses (Bley-Vroman 1986; Faerch & Kasper 1983) until they internalize grammatical knowledge and ultimately automatically gain access to such knowledge (Bialystok 1988, 1994). Output could serve to promote cognitive processes of learners' IL development. Swain (1993, 1994) argues that "pushed output" has three functions: *(1) noticing a gap between function and form; (2) hypothesis testing; and (3) internalizing metalinguistic knowledge.* Thus, Swain sheds light on learners' cognitive processes during interaction in her Output Hypothesis, thereby relating to another line of classroom-oriented SLA research -- focus on form. The notion "focus on form"[1] proposed by Long (1991) aims to realize this integration. Long & Robinson (1998), in their attempt to establish theoretical grounds for focus on form, suggest that "focus on forms," or discrete-point grammar teaching such as the Audiolingual Method failed to bring about real changes in learners' internalized grammatical knowledge (Lightbown 1983, 1985), and that "focus on meaning" such as the Natural Approach also failed to promote accuracy despite native-like fluency (Swain 1985). Thus, "focus on form" which aims to allocate learners' attention to form at a certain point of time during interaction is the most beneficial feature for SLA.

Assuming that IL grammar needs to be developed in a way in which knowledge of form-meaning relationships becomes more analyzed and access to such knowledge becomes more automatic as learners internalize IL grammar (Bialystok 1988, 1994), noticing of input enhancement (which is mainly intended to promote the former) results in incomplete SLA. Accordingly, the role that output plays in SLA should be further emphasized. Hence, what is needed now is the investigation of how learners' focus-on-form output can be promoted in the language classroom and whether or not such output is as effective as is suggested in the foregoing theoretical proposals. One answer to this question might be to control carefully a certain grammatical form that learners have to attend to in tasks. Among many advocates of a task-based approach (Long & Crookes 1992, 1993; Nunan 1991, 1993), Loschky & Bley-Vroman (1993), in particular, have provided a theoretical framework for integrating grammar teaching and task-based pedagogy from the cognitive perspective. They proposed a notion of "task-essentialness" -- that is, the degree of involvement of grammatical structure in the task. In other words, the aim is that carefully controlled tasks cannot be successfully completed

without attending to a certain grammatical structure. According to Loschky & Bley-Vroman, comprehension tasks are considered "essential" since teachers control structures that learners have to attend to in completing the task. However, Nobuyoshi & Ellis (1993) report that it is possible to realize "task-essentialness" methodologically in production as well: learners produced more grammatically correct utterances when they were pushed by clarification requests.

Furthermore, sequences of tasks could enable learners to keep paying attention to a certain form if tasks are graded from more controlled comprehension tasks to more open-ended production tasks. In fact, Rulon & McCreary (1986) have already pointed out that SLA research has used tasks in isolation. Yet, which task is effective in which phase of instruction has not been considered. Teachers' frustration might be also due to their ignorance of when and how to use a certain task in the language lesson. In response, Rea Dickins & Woods (1988) suggest from a pedagogical point of view that explicit instruction on how grammatical forms function in context should be provided in order to direct learners' focus on a certain form in CLT. This is also supported by SLA findings that explicit instruction will promote "noticing" in the subsequent input (VanPatten & Cadierno 1993a; VanPatten & Sanz 1994). If these proposals are true, in order for production tasks to be carried out successfully, the following things are crucial: (1) explicit instruction is given first to increase the likelihood of learners' noticing of a certain form in subsequent input; (2) comprehension tasks follow explicit instruction to enable learners to take in as much as possible to be used for the internalization of IL grammar; and (3) during production tasks which follow comprehension tasks, learners are pushed to produce a certain target form by being asked for clarification.

In the present study, based on Bialystok's (1988, 1994) model, SLA is investigated from the two cognitive dimensions of analysis of knowledge and control of processing. Focus-on-form instruction is directed to the analyzed knowledge dimension, but automatic processing is also important because it provides more cognitive capacity for learners to take in further input. The term "focus-on-form task" is operationalized as a pedagogic task which involves learners in processing meaning through input or output in the TL which also draws their attention to form. The following research questions are addressed:

(1) Does instruction have a positive effect on SLA?

(2) If so, do focus-on-form tasks facilitate SLA, compared to mechanical drills?

(3) In the use of focus-on-form tasks, which approach is more effective in facilitating SLA: (a) pushed output subsequent to comprehensible input; or (b) longer exposure to comprehensible input without pushed output?

(4) Which approach, pushed output or output in mechanical drills, is more effective in facilitating SLA?

By pursuing these issues, the present study will help to unify interaction and formal instruction that misleadingly appear to be different procedures in the language classroom (Ellis 1994). It

will also provide empirical support for a psycholinguitically relevant way of grading and sequencing differently focused communicative tasks.

2. Method

2.1 The target of instruction: Japanese conditional "*to*"

The target of instruction is the Japanese conditional sentence, S1-*to*-S2 construction[2]:

S1 (subordinate clause) -*to* (clause-connective particle), S2 (main clause).

e.g. *Haru ni naru to, sakura ga sakimasu.*
Spring LOC become COND cherry blossoms NOM bloom
(When/Whenever it becomes spring, cherry blossoms bloom.)

"*To*" is a clause-connective particle, which appears at the end of the subordinate clause, immediately preceding the main clause. Since Japanese has four types of conditional construction ("*to*," "*ba*," "*tara*" and "*nara*"), the conditionals cause learners difficulty in differentiating and using them properly. Although the conditionals have been investigated for a long time, there is no single system to differentiate the four conditionals (Masuoka 1993). One difficulty is due to a fact that native English speakers need to restrict the usage of conditionals to a narrower semantic domain. Three out of the four Japanese conditionals, that is, "*to*," "*ba*" and "*nara*" are subject to time sequence restriction (TSR) in which the action or state in the main clause occurs only after the action or state in the subordinate clause has been completed, whereas none of the "if/when" conditionals in English are subject to this restriction. If Universal Grammar (UG) operates as the Subset Principle (Berwick 1985) predicts, learners extend a subset grammar, L1, to a superset grammar, L2, with positive evidence alone. However, Inaba (1993) found that this was not the case for the Japanese conditionals, supporting the Transfer Hypothesis (White 1989). That is, L1 has a superset grammar so that learners need negative evidence to disconfirm an erroneous hypothesis formulated based on L1. If the acquisition of a certain form cannot be accounted for by UG, such a form could be a good candidate for focus-on-form instruction.

In addition to TSR, the Japanese conditionals are also analyzed in terms of another semantic domain, modality restriction (MR) (Inaba 1991). Modality indicates attitudes of the speaker towards the event or state in the verb. Among the four conditionals, "*to*" and "*ba*" with the active verb which prohibit modality expressions such as desires, requests and suggestions are the most difficult to acquire. Since the English conditionals are not subject to MR, native English learners must apply differential semantic domains to the Japanese conditionals depending on the conditional type. Inaba (1991), in assessing the IL development of the Japanese conditionals by the grammaticality judgment test, implies (1) that learners apply the L1 domain to the TL domain when the TL domain is narrower than the L1 domain; (2) that learners exhibit negative transfer when the L1 domain and the L2 domain do not overlap; and

(3) that "semantic divergent phenomena" from L1 to L2 makes language acquisition difficult for learners. In addition, modality is also considered difficult to acquire.

Recently, what determines rule complexity has drawn attention in SLA literature (Hulstijin & DeGraff 1994). Westney (1994) suggests that we should give careful consideration to semantic complexity in addition to superficial formal complexity. In fact, many instructors of Japanese feel that different patterns of verbal endings connected to the clause-connective particles of conditionals are not a serious problem, but semantic complexity causes learning difficulty. Hulstijin (1995) also suggests that the absence of semantic distinctions in L1 causes a learning problem and learners need to "feel" the difference by minimal explicit instruction and sufficient exposure to input in a meaningful context. This is what the present study attempts to do. Among the four conditionals, "*to*" was selected because "*to*" is the most restricted conditional of all since it is determined both by TSR and by MR. Native English speakers definitely need negative evidence through instructional treatments to restrict applicable semantic domains in L2. Fortunately, though linguistically complex, it is relatively easy to create tasks visually because "*to*" is frequently used to give directions, to explain a procedure, to describe seasonal changes or habits and so on. Hence, the conditional "*to*" is a desirable target of instruction in order to pursue the effects of focus-on-form tasks on SLA.

2.2 Subjects and group assignment

30 students who were enrolled in all of the three sections of Intensive Japanese Level 2 (Spring semester) at Georgetown University in the U.S. served as subjects[3]. Participation in the experiment was a requirement for the course. Most of the subjects were native speakers of English, but five of them were foreign students. By the time of the experiment, the subjects had received 270 hours of instruction, or the equivalent. The textbooks *Situational Functional Japanese* Vol. I, II & III (Tsukuba Language Group 1991) focus on language functions and conversational strategies as well as basic structures of Japanese. At Georgetown University, though integrating four language skills throughout the curriculum, focus is shifted from basic grammar and spoken language to written language as the course level advances. Accordingly, Level 2 students were appropriate for this study whose aim was to have subjects perform focus-on-form tasks. Although the subjects who took Japanese Level I at the same institution had been briefly exposed to the target of instruction at the end of Level 1, the pilot study showed that there was still room for improvement for Level 3 students. In addition, the pretest in the main study also revealed that the subjects' mastery of the target of instruction was imperfect. Hence, the previous exposure to instruction on the target of structure was not considered a confounding factor. Throughout the time period of the experiment, the subjects were not exposed to any of the conditionals in the regular classes. The subjects differed in terms of experience living in Japan, the length of exposure to the TL and instructional materials, and types of instruction that they previously received because some of the students were placed in Level 2 out of high school based on the results of a placement test. Therefore,

these variables were identified before the experiment and a stratified assignment to groups was carried out.

2.3 Pretest/posttest measures

The research design was experimental with a pretest and two posttests. The acquisition of the Japanese conditional "*to*" is investigated from the cognitive perspective based on Bialystok's (1988, 1994) model, so two dimensions, analysis of knowledge and control of processing, needed to be measured. Since one type of test only results in revealing one aspect of learners' IL, four different kinds of tests were provided in order to examine the degree to which learners' IL is stretched toward the TL norms along the two cognitive dimensions. The four measurements were a grammaticality judgment test (GJT), a listening comprehension test (LCT), an oral production test (OPT) and a written production test (WPT). The tests were administered in the language laboratory.

The GJT addressed learners' internalized linguistic knowledge, which is assumed to be facilitated through input or output. In addition to grammaticality judgment, subjects were asked to circle problematic parts of the sentences when sentences sounded incorrect, and there was a "not sure" category in order to eliminate guesswork as much as possible. The instruction, "Don't go back to the previous questions," was also added to direct subjects to answer based on their intuition. The test consists of 40 target items and 10 distracter items. Half of them were grammatical and the rest were ungrammatical. Distracters were excluded for scoring. Each correct answer was scored for 1 point. A split-block design[4] was adopted to counterbalance a risk of gaining scores due to practice effects through tests for the GJT and the LCT. In the LCT, the subjects were allowed to listen to each dialogue only once and the pause between dialogues was controlled by the pre-recorded tapes. The subjects were instructed to make a judgment on whether each picture properly represented the dialogues they heard. There were 20 items and each correct answer was scored for 1 point.

The OPT addressed learners' internalization of the target structure. The subjects were to describe the 20 pictures shown, using an overhead projector so that the time spent for each picture was controlled by the researcher. Each subject was asked to speak to the microphone and record his/her sentences. Each picture was shown for about 15 seconds. Since oral production requires more automatic processing than written production, the OPT preceded the WPT. The sentences to be produced in the WPT were identical to those in the OPT. But this time the subjects were allowed to spend as much as time they needed because Crookes (1989) and Foster & Skehan (1996) suggest that students produce more complex sentences when they are allowed to think about language. Each sentence received a maximum 2 point score. A sentence that did not use the conditional or overtly violated restrictions received no point. Other grammatical mistakes that were partially related to restrictions resulted in minus 1 point. As part of the written test, a sentence completion test was added after the pilot study because it seemed unlikely that the subjects express desire when describing how to use a machine which

appeared in the picture. In the sentence completion test, the subjects had to complete the second half of sentences with the first part provided, such as "*Natsuyasumi ni naru to* (When it becomes summer holidays)" and "*Tenki ga ii to* (When the weather is fine)," which could provoke violations. The sentence completion test was adapted from Koyanagi et al. (1994) and piloted on the posttest in the pilot study. There were 10 items and each correct sentence was scored for 1 point. A pretest was administered 10 days before the instructional treatment and an immediate posttest, within two days after the treatment, and a delayed posttest, two months later[5]. (See Koyanagi in press for testing materials.)

2.4 Instructional procedures

The subjects in the experimental groups were asked to attend six instructional sessions outside the regular classes over a two-week period. Three 50-minute sessions per week were held. All the instructional sessions were conducted by the same person -- the researcher herself -- who was not the subjects' regular class instructor at that time. One group performed input processing tasks (Input Group). A second group performed output processing tasks in addition to input processing tasks (Output Group). A third group engaged in audiolingual pattern practice (Drill Group). These three experimental groups were compared with a Control Group which received no instruction. A considerable effort was made to keep three different treatments comparable in terms of vocabulary items and expressions to be covered in instruction and amount of exposure to the target structure, and to sustain the same enthusiasm in order to avoid any bias by the researcher toward different instructional treatments. The basic flow of the experiment is illustrated in Figure 1 (in Appendix). (See Koyanagi in press for instructional materials.)

2.4.1 Input & Output Groups: focus on form

The experiment proceeded in three steps for two groups (Input Group & Output Group): from explicit instruction to input processing tasks to differential task activities: that is, further input processing tasks with gradually increasing difficulty for the Input Group and output processing tasks for the Output Group, using the same materials as in the Input Group but asking the subjects to produce sentences. Explicit instruction included how to connect verbs with the clause connective particle, language functions that the conditional "*to*" expresses, and the two semantic restrictions. Processing strategies were also taught, so the subjects were encouraged to pay attention to the end of the sentences and to the temporal relationship between two clauses. The purpose of explaining grammar explicitly is that the likelihood of "noticing" in subsequent input processing tasks would be increased (VanPatten & Cadierno 1993a; White 1991). Explicit instruction lasted approximately ten minutes.

Following the explicit instruction the subjects proceeded to input processing tasks, which would serve as initial linguistic data to the subjects. Such input processing is considered necessary because conventional foreign language classrooms often force students to speak too

soon after explicit instruction is provided (VanPatten 1994). In addition, since tasks which require no production are cognitively less demanding than those which require production, in that production also involves control over speech processing in addition to the retrieval of mental knowledge of form-meaning mappings (Bialystok 1988; Loschky & Bley-Vroman 1993; VanPatten & Sanz 1994). Another advantage is that teachers can control a certain form that they want students to attend to, so that "task-essentialness" (Loschky & Bley-Vroman 1993) can be more easily achieved in input processing tasks than in output processing tasks. This "task-essentialness" is important in order for learners to notice a gap between their IL and the TL, which is considered to be the first step that triggers language acquisition (Schmidt 1993; Schmidt & Frota 1986). The input processing tasks basically consisted of three parts depending on language functions. The first part focused on giving directions, the second part, on giving instructions on how to use a certain machine or instrument, and the third part, on others such as describing climates or daily life, talking about mental or physical problems and so on. In the beginning, there were exercises to familiarize vocabulary items and expressions in the format of tasks. Then, likewise, tasks went on from a sentence level to a discourse level. Considering different learning styles among the subjects, they received both oral and written input at this stage. The subjects were to match or choose pictures with sentences that they would hear or read. Each dialogue on the tape was played at least twice before checking the subjects' answers, and one more time after every one reached the correct answer. The instructor made sure if every one reached the correct answers and provided feedback on comprehension accuracy, if necessary.

For the next three days, the Input Group was further engaged in the same kind of input processing tasks in order to examine whether longer exposure to comprehensible input is beneficial as Loschky (1994) suggests. At this stage, tasks were a little bit more difficult in terms of task demands and syntactic complexity. For instance, instead of choosing a location a, b, or c, the subjects were asked to draw a map. The Output Group performed the same tasks, but each subject was to produce target sentences by interacting in turn with the instructor who sought information to complete the task. Each subject received a card which contained an expected outcome, and was given time to think about how to interact before starting tasks because it has been found that students produced more complex sentences when they were allowed planning time than when they were not (Crookes 1989; Foster & Skehan 1996). During interaction, the researcher provided feedback that focused on form in order to elicit the intended output. The rest of the group was engaged in tasks by listening to such interaction. The way in which feedback would be provided from requests for repetition to requests for clarification to recasts was carefully determined beforehand. (See Figure 2 in Appendix for the flow chart for eliciting pushed feedback.)

2.4.2 Drill Group: focus on forms

The procedures for the Drill Group followed a typical audiolingual lesson[6] as described in Richards & Rodgers (1986). It has been suggested that oral practice through mechanical drills would not cause real changes of IL grammar (Lightbown 1983, 1985). The delayed posttest planned for the main study could confirm this claim, since the pilot study exhibited immediate effects of pattern practice. Instead of explicit instruction as provided to the Input and the Output Groups, model dialogues containing target structures were orally presented to the Drill Group with handouts that included dialogues in Japanese and English translations. The reason that explicit instruction was not provided for the Drill Group is that the Drill Group's instruction was not psycholinguistically motivated. After the researcher orally presented model dialogues, the subjects were asked to repeat each line of the dialogues in chorus, and then individually. By doing so, they were expected to memorize dialogues, and then, acted them out with the researcher or other classmates without looking at handouts. Following the modelling of dialogues and repetition drills, the Drill Group proceeded to audiolingual types of mechanical drills such as substitution drills and sentence combination drills by being provided drill cues, but without any visual cues. Before doing drills, the subjects were allowed to look at a vocabulary list with English translation of words which were going to appear in pattern drills. Handouts included the vocabulary list and examples of each drill. A typical drill procedure was as follows: First, the instructor explained an example while the subjects were looking at written scripts on their handouts, and ensured that every one understood the drill patterns. Then, example sentences were repeated by the subjects. Next, the instructor provided a drill cue and called on one subject. When he/she produced a target sentence, the instructor strictly corrected mistakes and asked him/her to repeat the sentence. Then, the instructor modelled the target sentence, and asked other subjects to repeat it in chorus and individually. In conversation drills, two subjects were called on to construct a two-line dialogue, and later, this dialogue was repeated by other pairs of subjects. While doing so, mistakes of grammar and pronunciation were strictly corrected.

2.5 Statistical procedures

All data from the pretest and the posttest measures were subjected to analyses of variance (ANOVAs) with repeated measures using one between-subjects (Instruction) and one within-subjects (Time) factorial design. The between-subjects factor (Instruction) had four levels: Input Group, Output Group, Drill Group, and Control Group, and the within-subjects factor, Time had three levels: Pretest, Posttest I (an immediate posttest) and Posttest II (a delayed posttest two months after the treatments). The statistical decision level was set *a priori* at .05. The total score comprised the same portion (25%) of the four measurements. In order to ensure the homogeneity of the four groups in terms of prior knowledge of the target structure, one-way analyses of variance (ANOVAs) were carried out on the pretest scores of each test type. The result reveals that there was no significant difference between groups prior to

instructional treatments ($F(3/26) = .572$, n.s. for the GJT, $F(3/26) = 1.486$, n.s. for the LCT, $F(3/26) = .284$, n.s. for the OPT, $F(3/26) = .883$, n.s. for the WPT, $F(3/26) = .347$, n.s. for the TOTAL). Hence, any changes which occurred over the period of the experiment were considered to be due to the instructional treatments that the subjects received, rather than to prior knowledge of the target of instruction in any of the groups.

3. Results

Sincce subjects' performance exhibits variability of language proficiency from task to task, IL development was evaluated by the four different aspects as a whole in order to examine overall effects of the instructional treatments. Figure 3 (in Appendix) presents visually the change of group means over time on the Total Test Scores. The ANOVA reveals a significant two-way interaction effect between Instruction and Time ($F(6/52) = 3.82$, $p < .05$). Since the interaction effect found suggests that Instruction and Time affected the results of each other, the analysis of the Instruction x Time interaction was conducted to examine the simple main effects of Instruction or Time. The interaction effect analysis reveals the significant simple main effects of Instruction on Posttest I ($F(3/26) = 16.92$, $p < .01$) and on Posttest II ($F(3/26) = 13.92$, $p < .01$), and those of Time in the Input Group ($F(2/52) = 14.20$, $p < .01$), in the Output Group ($F(2/52) = 25.81$, $p < .01$) and in the Drill Group ($F(2/52) = 12.00$, $p < .01$). Thus, the post-hoc analyses of simple main effects for Instruction and for Time on the Total Test Scores, i.e., between-group comparisons and between-test comparisons, were done using a least significant difference (LSD) procedure in order to locate where significances came from as shown in Tables 1 & 2 (in Appendix).

Based on the above-mentioned results, the hypotheses formulated for the present study were tested in order to examine effects of instructional treatments on the acquisition of the Japanese conditional "*to*." The research hypotheses were as follows.

H1: Focus-on-form tasks have positive effects, compared to no instruction.

H2: (a) Pattern practice has a positive immediate effect, compared to no instruction.
(b) Even if mechanical drills have a short-term effect, that effect disappear.

H3: Focus-on-form tasks have more beneficial effects than mechanical drills.

H4: In focus-on-form tasks, output processing tasks preceded by input processing tasks have more beneficial effects than a series of input processing tasks alone.

H5: Focus-on-form output processing tasks have more beneficial effects than mechanical drills of audiolingual types.

The first hypothesis was supported because the Input and the Output Groups which were engaged in focus-on-form tasks outperformed the Control Group on both Posttests I & II. In addition, the Input and the Output Groups exhibited no significant decrease in the scores between Posttest I and Posttest II. Hence, short-term as well as long-term effects of focus-on-form tasks were found. The second hypothesis (a) was rejected, because no difference between the Drill Group and the Control Group was found either on Posttest I or on Posttest

II. That is, mechanical drills were not beneficial, compared to no instruction. However, as far as only the Drill Group is concerned, the Drill Group showed significant gains on Posttest I, suggesting a short-term effect; yet, the Drill Group also showed significant losses on Posttest II. Thus, the second hypothesis (b) was supported. The third hypothesis was partially supported because there were no significant differences between the Input and the Drill Groups, and between the Output and the Drill Groups on Pretest I; yet significant differences were found on Posttest II. Hence, it is assumed that focus-on-form tasks have long-lasting effects whereas immediate improvement in the Drill Group faded out as time passed by.

Furthermore, the fourth and fifth hypotheses looked at differential effects of two types of focus-on-form tasks. The fourth hypothesis was rejected because no significant difference between the two task groups was found either on Posttest I or on Posttest II. The reason why the difference between the two task groups was not detected will be discussed later. The fifth hypothesis was partially supported. That is, the Output Group and the Drill Group performed equally on Posttest I; however, the Output Group outperformed the Drill Group on Posttest II. In comparing gains between tests, although gains after the treatment was significant for both groups, only the Output Group maintained those gains from Posttest I two months later. Moreover, the Drill Group's decrease on Posttest II was significant. Hence, the output processing tasks had long-lasting effects of the acquisition of the Japanese conditional "*to*," which was more beneficial than mechanical drills.

The present study presents empirical evidence that tasks that were designed to direct learners' attention to form with primary focus on meaning were beneficial in SLA. However, other questions arise as to why no difference was found in the two task-based instruction groups and whether instructional treatments may have had differential impacts on learners' IL grammar development. Thus, the instructional materials and test items in addition to the results of each test type (see Tables 1 & 2 in Appendix) were further analyzed. The following section discusses how the results obtained in the present study can be interpreted and they can contribute to SLA theory. The first part analyzes substantial similarities and differences in the treatment groups. In light of these instructional differences, the next part discusses the results in terms of differential effects of learners' IL development.

4.Discussion

4.1 Instructional differences in the treatment groups

4.1.1 The Input Group vs. the Output Group

As presented in the previous section, no difference in overall language proficiency was found between the two task groups contrary to the hypothesis, although both instructional treatments were more facilitative than the Drill Group and the Control Group. Apparently, this instructional design did not support the Output Hypothesis (Swain 1985, 1993) which implies that learners need to produce output comprehensible to the interlocutor in addition to the provision of comprehensible input. Nevertheless, according to Bialystok's (1994) model of

language proficiency, output practice would be important in order to develop the dimension of automatized access to metalinguistic knowledge. Thus, substantial differences and similarities in the instructional procedures that could have contributed to the results need to be clarified. Both task groups received explicit instruction in the target structure and input processing task activities during the first week. The instructional differentiation was done in the second week when the Input Group engaged in further input processing tasks with a gradual increase in difficulty in task demands and syntactic complexity whereas the Output Group engaged in output processing tasks by one representative student interacting with the instructor. However, in the Output Group output processing tasks might have been the same as input processing tasks for the rest of the group who listened to negotiated interaction between a peer student and the instructor, because what they did was completing tasks such as choosing a picture just as the Input Group did. In addition, each subject in the Output Group had only three to four opportunities to produce the target structure in each lesson.

Furthermore, when examining audiotaped interaction between subjects and the instructor in the Output Group, it was found that the number of opportunities for learners to be pushed by the instructor's repetition or clarification requests was limited. For example, on Day 4, there were thirty three sentences to be produced, only six of which were pushed output. Moreover, feedback was often related to particles or vocabulary items rather than overt time sequence restriction (TSR) or modality restriction (MR) which was the target of instruction. The reason the subjects in the Output Group did not violate such restrictions could be that they had received sufficient linguistic data during the first week, and that they were given planning time for production. Another reason might be that contexts provided by tasks restricted the subjects' possible output. For example, when the instructor asked, "*Kono suicchi o osu to, doo narimasu ka?* (What happens if I push this switch?)," it was obvious that the instructor was concerned with what happens after a certain thing has happened, and this was not a question to ask for someone's intention or feelings. Thus, violations of TSR or MR never seemed to occur. Considering these factors, the instructional treatments in the Input Group and the Output Group did not significantly differ. As a result, both groups performed similarly on the two posttests. Nevertheless, this finding further confirmed Pica (1991) and Muranoi's (1996) claim that the observation of meaning negotiation work brings about changes in learners' IL development in classroom settings. Compared to the prerecorded tape played in the Input Group, interaction between a representative student and the instructor in the Output Group was a discourse distorted in a way that such interaction contained a number of repetitions, hesitations, errors and corrections. Yet, the subjects in the Output Group appeared to benefit from listening to others' interactions.

4.1.2 The Output Group vs. the Drill Group

In comparing the two kinds of output, the Output Group and the Drill Group equally gained in the scores on Posttest I; yet only the Output Group maintained these gains two

months later and the difference between the Output Group and the Drill Group became statistically significant on Posttest II. This suggests that output practice in task-based instruction has long-lasting effects whereas the immediate improvement by pattern practice faded as time passed by. Table 3 (in Appendix) summarizes the comparison between the two groups in the instructional procedures. Basically, the Output Group incorporated the feature of so-called "focus on form" whereas the Drill Group engaged in "focus on forms."

A clear distinction between task-based instruction and audiolingual lessons lies in whether or not explicit metalinguistic information on the target structure was provided for subjects. Although determining whether explicit instruction makes a difference is beyond the scope of this study, recently, an attempt to tease out this variable in tasks was made by VanPatten & Oikkenon (1996) who partially replicated VanPatten & Cadierno's (1993a, b) input processing instruction. Their instruction aims to strengthen the processing from input to intake in the learners' developing IL grammar system by using input processing tasks. VanPatten & Cadierno's studies raised a question about whether explicit instruction, including teaching input processing strategies preceding task activities, might have been responsible for significant improvement in the input processing instruction group. Thus, VanPatten & Oikkenon used explicit instruction as a variable, suggesting that input processing tasks, rather than explicit instruction, caused changes of the subjects' developing IL grammar. In light of VanPatten & Oikkenon's findings, the improvement manifested by the Input Group in the present study may be assumed to be due to input processing tasks rather than to explicit instruction alone. Therefore, since it turned out that the instructional treatment in the Output Group was not virtually different from that in the Input Group, task activities rather than explicit instruction may have caused changes in the Output Group.

However, the impact of a combination of explicit instruction and task activities was powerful in maximizing SLA by helping learners develop rule-based knowledge of grammar, and automatize such knowledge. Explicit instruction is important, particularly when semantically opaque grammatical features are the target of instruction as in the present study. In addition, explicit instruction can serve as a flag to be flown in order to make the lesson objective clear to students. It was observed that while doing output processing tasks, the subjects in the Output Group corrected themselves promptly when they forgot to use the target structure, or when they failed to say it correctly. Hence, explicit instruction in the initial phase of instruction serves to "alert" and "orient" students toward the incoming input in Tomlin & Villa's (1994) sense. Furthermore, according to DeKeyser's (1998), explicit knowledge stored in short-term memory needs to become "proceduralized" until short-term memory turns into long-term memory. Tasks that achieve "task-essentialness" help learners make a firm connection between form and meaning by using explicit knowledge in meaningful contexts. The present study provides evidence for Hulstijn's (1995) claim that learners need to have a "feel" of semantic subtleties which are absent in L1 through minimal explicit instruction and ample exposure to input in a meaningful context. While keeping these instructional differences

in mind, the results of each measurement are discussed in the following section in order to explore differential effects of instruction on the subjects' IL grammar development.

4.2 Differential effects of instruction on learners' IL development

4.2.1 Internalized grammatical knowledge

The grammaticality judgment test was supposed to measure learners' internalized grammatical knowledge. The post-hoc analysis shows that although the three instructional groups significantly improved their knowledge immediately after the treatment, only the two task-based instruction groups maintained the same level two months later (see Tables 1&2). In order to examine the degree to which the task groups and the Drill group learned TSR and MR violations, test items were, then, further analyzed. As Figure 4 (in Appendix) indicates, all the groups exhibited similar accuracy rates on grammatical items whereas they started at a low rate of approximately 10% on ungrammatical items. This can be accounted for by the subset/superset relationship of the conditionals in Japanese and in English because ungrammatical items are considered to be grammatical in English. Then, the Input and the Output Groups improved their accuracy on the immediate posttest. Taking a closer look at ungrammatical items category by category, there were discrepancies depending on error types. What made the instructional treatment groups different from the Control Group was high accuracy rates concerning modality expressions that were morphosyntactically transparent such as "---*oo to omoimsu* (I think I will ---)," "---*mashoo* (let's)," " ---*masen ka* (why don't we ---?)" etc. as in the examples (1) and (2). In contrast, as to the sentences of which the surface structure does not provide sufficient information on whether [+modality] or [-modality] applies as in (3), accuracy rates were low in any of the groups. The same is true of TSR violations. Although TSR was mentioned in the explicit instruction phase, tasks did not provide opportunities to elicit TSR violations because tasks themselves restricted the time sequence of two events as discussed in the previous section. Thus, TSR might have been insufficiently learned.

(1) **Fuyu ni naru to, sukii ni ik-oo to omoimasu.*
winter LOC become COND ski LOC go-volitional that think
(If winter comes, I think I will go skiing.)

(2) **Raishuu jikan ga aru to, paatii o shi-mashoo..*
next week time NOM exit COND party ACC do-let's
(If I have time next week, let's have a party.)

(3) **Kono botan o osu to, teepu o tomemasu.*
this button ACC push COND tape ACC stop
(If I push this button, I will stop the tape.)

The interpretation of this finding can be argued in relation to Trahey's (1996) study which found that an input flood was beneficial in learning that something impossible in L1 is possible

in L2 whereas neither the input flood nor explicit instruction was beneficial in the long run in learning that what is possible in L1 does not exist in L2. Thus, Trahey suggests that a combination of positive evidence and negative evidence could promote SLA more effectively. In the present study the Input and the Output Groups might have benefited from explicit instruction in the initial phase of the treatment because learners were informed of what is not possible in Japanese. This enabled learners to proceduralize explicit knowledge by attending to the endings of sentences in the subsequent activities related to MR. Nevertheless, it would be difficult for learners to pay attention to the temporal relationship between the two clauses related to TSR. Although negative evidence is crucial for SLA, there are cases in which the provision of negative feedback would ordinarily be restricted because of task contexts and linguistic nature. In this respect, explicit rule explanations would be important to the extent that explanations might be the only means to inform learners of what is impossible in L2. Unlike Trahey's (1996) study whose subjects were children, university students in the present study would be more sensitive to grammar; thus, explicit instruction works more effectively.

On the other hand, negative evidence was rare in the Drill Group. Output practice in the Drill Group was rigidly controlled by the instructor who predetermined sentence patterns and drill cues to be practiced so that violations of semantic restrictions never happened. Explicit negative feedback was provided not in terms of semantic features but in terms of surface structures such as pronunciation and morphosyntax. Hence, in the Drill Group that represents implicit learning, the knowledge acquired through pattern practice is memory-based item learning as Robinson (1997) suggests. This knowledge, which heavily relied on memory of each instance was quickly lost two months later due to the lack of rule-based generalized knowledge. Therefore, a certain sentence sounded incorrect to the subjects but problematic parts of the sentences were not correctly located in most cases. Furthermore, their memory of the sentences which they were exposed to declined as time passed by. Putting it another way, internalized grammatical knowledge should be ultimately stored in the form of generalized rules in order to become available for access to such knowledge; otherwise, the IL grammatical knowledge system remains unchanged. Instruction should aim to assist learners to develop rule-based knowledge of grammar.

4.2.2 Comprehension ability

Overall, differences between groups in terms of listening comprehension ability were not significant compared to other aspects of language proficiency (see Tables 1&2). Despite the fact that input processing instruction is usually favored for the interpretation test in VanPatten's studies (VanPatten & Cadierno 1993a, b), the Input Group outperformed the Drill Group and the Control Group only on the immediate posttest, but did not significantly outperform any group two months later. Another interesting fact is that only the Output Group showed significant improvement on the LCT immediately after the treatment. Negotiated interaction between a representative student and the instructor increased comprehensibility for the rest of

the Output Group as well. However, it should be noted that the starting point of the Input Group had been already high prior to the treatment (though no statistically significant differences were found between groups). This factor might have prevented further improvement.

In any case, subjects in all groups appeared to be cognitively ready to process complex sentences whether the structure involves conditionals or not. Although input processing strategies that aimed to draw attention to the temporal relationship of the main and subordinate clauses and semantic aspects of the main verbs were taught to the Input and the Output Groups, it might be possible for subjects in any group to interpret sentences by listening for content words in the main and subordinate clauses and by figuring out contexts via pictures provided. This made a minimal difference across the four groups. By the time of Posttest II, all the groups were at the same level of comprehension. This may be because comprehension does not require as much careful attention to form, in particular when morphology or syntax plays a minor role in processing sentences. The results of the LCT, at least, lend additional support to the previous studies that comprehensible input promotes immediate comprehension (Loschky 1994; Pica, Young & Doughty 1987).

4.2.3 Production ability

Since the present study investigates acquisition from a cognitive perspective, learners' spontaneous oral production as well as more deliberate written production were elicited. As to oral production, immediate effects of instruction were significant in all the three experimental groups while only the Input and the Output Groups sustained those effects two months later. In contrast to the oral production test, the Drill Group retained written production ability two months later, although the level attained was lower than the Input and the Output Groups, and the Drill Group did not significantly differ from the Control Group on the delayed posttest (see Tables 1 & 2). This could be accounted for by Bialystok's (1988, 1994) model in which written production does not require the same prompt access to mental representation of grammatical knowledge as oral production does. Furthermore, and more importantly, this finding suggests that automatization would involve a more complex cognitive process beyond speech processing muscle movement. Just "drilling" did not seem to promote fluency in oral production in the long run. During the instructional treatment, one subject in the Drill Group, while doing a substitution drill, commented, "we should do this kind of drill more often in class because I cannot change the sentence without thinking about meaning." But "meaning" in his sense was very limited within a sentence and did not take language functions or contexts into account. Although the Drill Group orally repeated target structures hundreds of times individually or in chorus, this type of output practice did not help learners internalize grammatical knowledge. This led to the decline in the oral production test two months later. On the other hand, in the Output Group, only one representative student interacted with the researcher and a target structure produced was never repeated by the rest of the group; yet the

Output Group improved performance significantly in all the tests. It would be important to do output practice by processing form and meaning together for automatization. This supports DeKeyser's (1997, 1998) claim that explicit knowledge needs to be proceduralized in meaningful contexts before becoming available for the prompt retrieval of such knowledge.

In addition, this integration of form and meaning also led to the improvement of the Input Group in oral and written production abilities. This lends additional support to the research in favor of input processing tasks (Ellis 1995; VanPatten 1994; VanPatten & Cardierno 1993a, b; VanPatten & Sanz 1994). Nevertheless, a series of studies by VanPatten and his associates were recently challenged by DeKeyser & Sokalski (1996) who imply that the linguistic nature of the target structures could have influenced VanPatten's results. That is, the target of instruction involved simple morphosyntactic structures such as clitic direct object pronouns and past tense verb morphology in Spanish, which are considered to be difficult to perceive but easy to produce once perceived, according to DeKeyser & Sokalski; therefore, this could have resulted in greater improvement for the input processing group who received instruction on the difficult skill of the rule, i.e., comprehension, while both the input processing group and the traditional output-based instruction group achieved the same level of production ability. Thus, DeKeyser & Sokalski compared two morphosyntactic rules in Spanish: clitic direct object pronouns as a simple rule and the conditional as a complex rule that is easy to perceive but difficult to produce. Their prediction was that input practice would have a greater impact on the former whereas output practice would have more impact on the latter. However, no statistically significant difference was found in the learning of the two target structures via input practice or output practice. Only descriptive statistics showed that with regard to clitic object pronouns, immediate skill-related effects partially existed because input practice was more beneficial than output practice for comprehension and output practice for production, while an overall advantage was found in output practice regarding the conditional.

How can their findings be interpreted in relation to the present study? In their study, DeKeyser & Sokalski selected the Spanish conditional as a complex morphological rule; yet a grammatical concept of the conditional may be harder than object pronouns. In other words, semantic complexity could come into play in learning the conditional. As far as the Japanese conditional "*to*" is concerned, the easy/difficult distinction may be more subtle because it would be easy to comprehend the entire sentence containing the conditional by relying on content words but difficult to perceive semantic restrictions of the conditional in the input. Additionally, although DeKeyser & Sokalski carefully planned the instructional procedures such as the same amount of explicit metalinguistic information provided and the comparability of practice in comparison groups, both input and output practice are relatively mechanical compared to VanPatten's input processing group. Therefore, the degree to which form and meaning are integrated during practice differs from VanPatten's input processing group as well as from the task-based instruction groups in the present study. The present study demonstrates that even though plenty of output practice was carried out in the Drill Group, too much focus

on forms failed to promote automatization. In contrast, despite the lack of opportunities for production, the Input Group in the present study exhibited the same level of significant improvement as the Output Group after the instructional treatment.

Acknowledging DeKeyser & Sokalski's (1996) limitations such as a small amount of practice time, DeKeyser (1997) further investigated the effects of input vs. output practice in terms of the automatization of explicit grammatical knowledge by creating an artificial language, Autopractan. Rule presentation and practice were conducted this time with visual aids, so instruction on morphosyntactic rules was more meaning-oriented than that in his previous study. In such laboratory studies as DeKeyser (1997) and Robinson (1997), reduced reaction time and reduced error rates in metalinguistic tests are regarded as automatization taking place. DeKeyser found that the subjects in any condition were particularly slow in performing the first task before they became able to react faster little by little, suggesting that grammar learning in L2 proceeds in the same manner as other cognitive skills. That is, declarative knowledge needs to become proceduralized first, and this proceduralized knowledge, which is qualitatively different from declarative knowledge, then becomes automatized; namely, quantitative changes in the knowledge system occur. In addition, DeKeyser shows that input practice led to better comprehension and output practice led to better production, claiming that practice effects are skill-related. Nonetheless, as is the case in implicit/explicit learning interacting with rule complexity (DeKeyser 1994, 1995; Robinson 1995, 1996), whether input or output practice is more facilitative might depend on the linguistic nature of the target instruction, how practice is carried out (e.g., whether explicit instruction is provided, what kind of activity follows or precedes, etc.), and to what extent learners' cognitive capacities are freed up for language processing. Although current classroom SLA research is influenced by cognitive psychology, it remains uncertain to what extent SLA is similar to acquisition of other cognitive skills. Actual automatization of grammatical knowledge is more complex than just responding in metalinguistic tests quickly and correctly. As DeKeyser mentioned that he does not mean to claim that his results are applicable to any other rule, automatization processes in SLA would be complex because even though a certain grammar feature is internalized in the knowledge system, accurate retrieval of such knowledge may not always occur in using language for comprehension or production in real context. This area - how learners ultimately automatize their internalized grammar knowledge - certainly needs further investigation. Automatization could occur via processing form and meaning, but it does not always have to involve speech production. Another possibility is that the Input Group had already attained the level at which producing complex sentences was relatively easy. The results of the present study would be different if the target of instruction had been purely morphosyntax. Yet, the present study provided more evidence that task-based instruction has an impact on the acquisition of semantic aspects of grammar in addition to the impact of the acquisition of morphosyntax previously investigated.

5. Conclusion

As discussed above, the present study provides empirical support for task-based language teaching (TBLT) that incorporates the feature of "focus on form." The present study suggests that:

(1) Focus-on-form tasks that aim to direct learners' attention to form while involving meaningful activities were more effective than audiolingual mechanical drills.

(2) Audiolingual mechanical drills had immediate effects, but these effects were reduced as time passed by. Such memory-based item-learning failed to bring about real changes in learners IL. Even for automatization objectives such as acquiring oral fluency, form and meaning should be kept together in practice.

(3) The longer exposure to focus-on-form input was beneficial on the acquisition of the Japanese conditional "*to*." This effect was evident even in oral and written production abilities.

(4) The sequences of classroom activities were important to maintain learners' attention to form. In creating tasks in which a certain form can be essential to task completion, output processing tasks preceded by explicit instruction and input processing tasks had positive effects on SLA.

(5) Semantically opaque grammatical features were permeable to "focus on form," namely, TBLT.

The arguments for focus on form were supported by recent findings of laboratory studies in SLA (DeGraff 1997; Dekeyser 1995, 1996, 1997; Robinson 1995, 1996, 1997) that were motivated by claims in cognitive psychology (see Long & Robinson 1998; Doughty & Williams 1998b for review). While such laboratory studies could provide an insight into each cognitive trait of language acquisition processes, highly controlled experiments on the computer screen lack ecological validity in classroom settings. Thus, classroom-oriented studies such as the present study complement the disadvantages of laboratory studies (Hulstijn 1997; Robinson 1997; Spada 1997). However, limitations of the study should be noted. The present study was intended to explore the sequences of classroom activities; yet this type of research design has disadvantages at the same time. First of all, the effects of output in contrast with input were not found as hypothesized. It is suspected that three hours of differential tasks (in addition to three hours of the same tasks) might have been insufficient, or that targeted semantic features might have had few differences. If the target of instruction had been syntax or morphology, output practice may have had more impact on SLA. In addition, as for the listening comprehension test, there were no differences between groups at the time of Posttest II. This might also be attributed to the target of instruction. Comprehension would be possible by listening to content words and using contexts and world knowledge. Another concern is that the subjects' level of proficiency was high enough to comprehend and produce morphosyntactically less problematic sentences. It is worth investigating this issue with a

different grammatical form. Furthermore, the absence of explicit metalinguistic information in the Drill Group might have affected the result. Other studies to tease out these variables are also necessary, using a different research design. Finally, the number of subjects was small, although the subjects were all those available to the researcher at her institution. Replication studies will be necessary to increase the reliability of the present study.

In conclusion, not only does the present study provide solid evidence that the sequences of focus-on-form tasks that attempt to match learners' cognitive processes are effective in promoting SLA, it also suggests the relevance of a cognitive approach to language teaching.

Notes

* The findings reported here are based on my Ph.D. dissertation submitted to Georgetown University in 1998. I gratefully acknowledge the guidance and insightful comments given me by my dissertation committee members, Catherine Doughty as Chair, Andrea Tyler, and Ruth Kanagy from the University of Oregon.

[1] Doughty & Williams (1998a) point out that there exists confusion regarding terminology such as "form-focused instruction," "formal instruction," "grammar instruction" etc. in SLA literature. In this paper, the term "form-focused" is avoided because this term could mean "focus on form" as well as discrete-point grammar teaching which Long (1991) calls "focus on forms." Spada (1997) also discussed this terminology issue.

[2] The usage of conditionals in Japanese is limited to non-past tense which is usually treated in beginners' textbooks, although the conditionals are used to express counterfactual or imaginative supposition as well.

[3] Prior to the main study, a pilot study was conducted, the purpose of which was to assess the effectiveness of instructional materials. Pretest/posttest measures were used. 20 subjects were recruited from Intensive Japanese Level III. Considering methodological problems identified in the pilot study, instructional and testing procedures were adjusted and refined in order to explore differential effects of instructional treatments more deliberately.

[4] Three completely different versions of the GJT and the LCT were prepared. Subjects who took version A on Pretest, took version B on Posttest I and version C on posttest II. Likewise, those who took version B on Pretest, took version C on Posttest I and version A on Posttest II, and those who took version C on Pretest, took version A on Posttest I and version B on Posttest II.

[5] The split-half reliability by Spearman-Brown formula was estimated for all the tests, and the tests were considered internally consistent.

[6] Some instructors of Japanese may regard the so-called "Jorden" method as a typical audiolingual method in teaching Japanese. Jorden's textbooks, *Japanese: the Spoken language* (Yale University Press 1987) are widely used in American universities. However, the Jorden method is different from Richards & Rodgers (1986) in that the Jorden method includes explicit instruction and uses a lot of visual aids.

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APPENDIX

Figure 1: Basic flow of the experiment

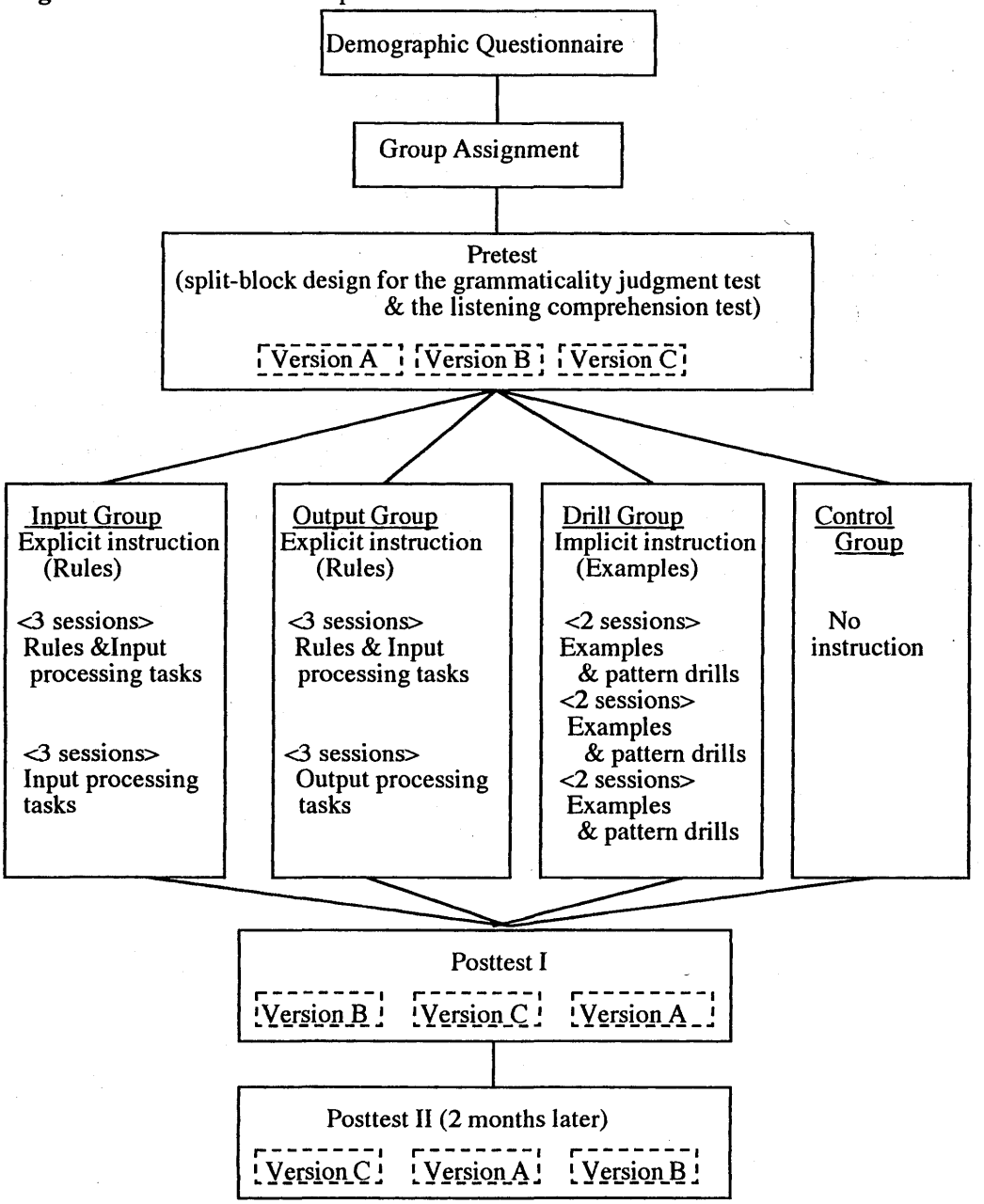


Figure 2: Flow chart for eliciting pushed output

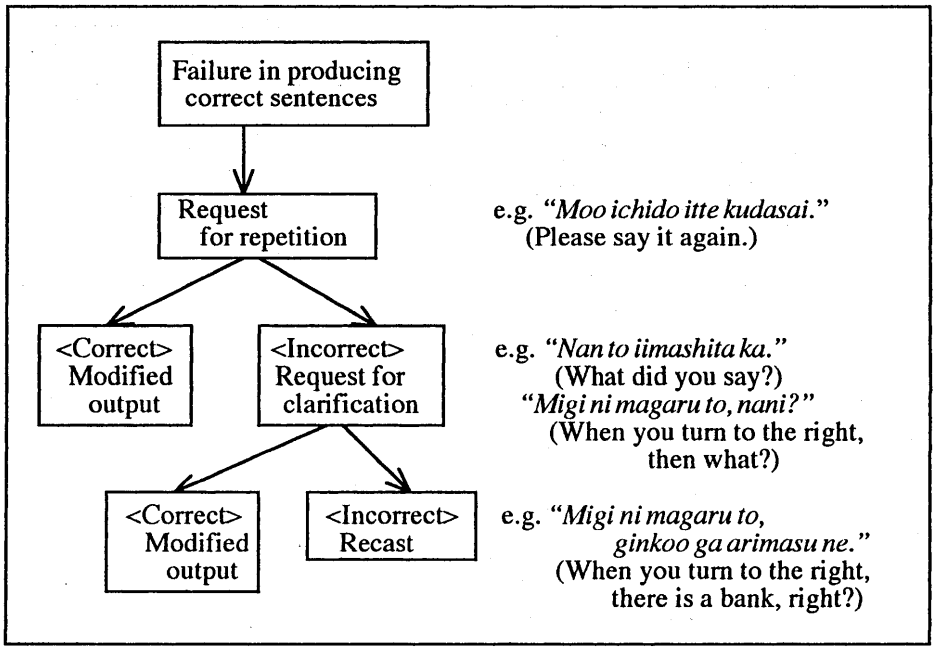


Figure 3: Change of group means on the Total Test Scores

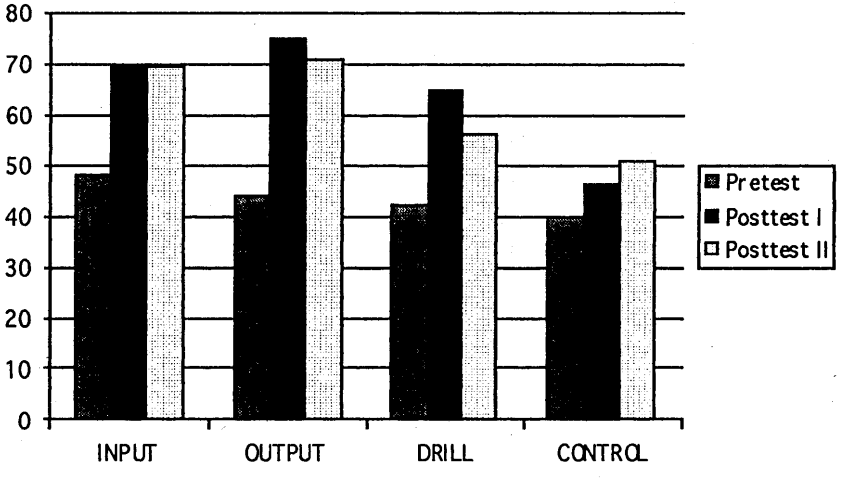


Table 1: Summary of the major findings on differential effects of instruction
<Total Test Scores>

Posttest I			Posttest II		
Input	=	Output	Input	=	Output
Input	=	Drill	Input	>	Drill
Input	>	Control	Input	>	Control
Output	=	Drill	Output	>	Drill
Output	>	Control	Output	>	Control
Drill	=	Control	Drill	=	Control

GJT				LCT			
Posttest I	Input	=	Output	Posttest I	Input	=	Output
	Input	=	Drill		Input	>	Drill
	Input	>	Control		Input	>	Control
	Output	=	Drill		Output	>	Drill
	Output	>	Control		Output	>	Control
	Drill	=	Control		Drill	=	Control
Posttest II	Input	=	Output	Posttest II	Input	=	Output
	Input	>	Drill		Input	=	Drill
	Input	>	Control		Input	=	Control
	Output	>	Drill		Output	=	Drill
	Output	>	Control		Output	=	Control
	Drill	=	Control		Drill	=	Control
OPT				**WPT**			
Posttest I	Input	=	Output	Posttest I	Input	=	Output
	Input	=	Drill		Input	=	Drill
	Input	>	Control		Input	>	Control
	Output	=	Drill		Output	=	Drill
	Output	>	Control		Output	>	Control
	Drill	>	Control		Drill	>	Control
Posttest II	Input	=	Output	Posttest II	Input	=	Output
	Input	>	Drill		Input	=	Drill
	Input	>	Control		Input	>	Control
	Output	>	Drill		Output	=	Drill
	Output	>	Control		Output	>	Control
	Drill	=	Control		Drill	=	Control

Note: No differences between groups were found on Pretest.

Table 2: Summary of the major findings on changes overtime of group means scores

<Total Test Scores>

Input:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
Output:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
Drill:	Pretest	<	Post I	>	Post II,	Pretest	<	Post II
Control:	Pretest	=	Post I	=	Post II,	Pretest	<	Post II

GJT	Input:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II[i]
	Output:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Drill:	Pretest	<	Post I	>	Post II,	Pretest	<	Post II[ii]
	Control:	Pretest	=	Post I	=	Post II,	Pretest	<	Post II[iii]
LCT	Input:	Pretest	=	Post I	=	Post II,	Pretest	=	Post II
	Output:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Drill:	Pretest	=	Post I	=	Post II,	Pretest	=	Post II
	Control:	Pretest	=	Post I	=	Post II,	Pretest	=	Post II
OPT	Input:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Output:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Drill:	Pretest	<	Post I	>	Post II,	Pretest	=	Post II[iv]
	Control:	Pretest	=	Post I	=	Post II,	Pretest	=	Post II
WPT	Input:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Output:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Drill:	Pretest	<	Post I	=	Post II,	Pretest	<	Post II
	Control:	Pretest	=	Post I	=	Post II,	Pretest	=	Post II

Notes:

[i] Pretest < Post I = Post II, Pretest < Post II: Significant gains from Pretest to Posttest I sustained on Posttest II, and gains from Pretest and Posttest II were also significant.

[ii] Pretest < Post I > Post II, Pretest < Post II: There were significant gains from Pretest to Posttest I and significant losses from Posttest I to Posttest II, but gains from Pretest to Post II were still significant.

[iii] Pretest = Post I = Post II, Pretest < Post II: No differences were found between Pretest and Posttest I, and between Postest I and Posttest II, but gains from Pretest to Posttest II were significant simply due to practice effects.

[iv] Pretest < Post I > Post II, Pretest = Post II: There were significant gains from Pretest to Posttest I and significant losses from Posttest I to Posttest II, and no difference was found between Pretest and Post II.

Table 3: Summary of instructional differences between the Output Group & the Drill Group

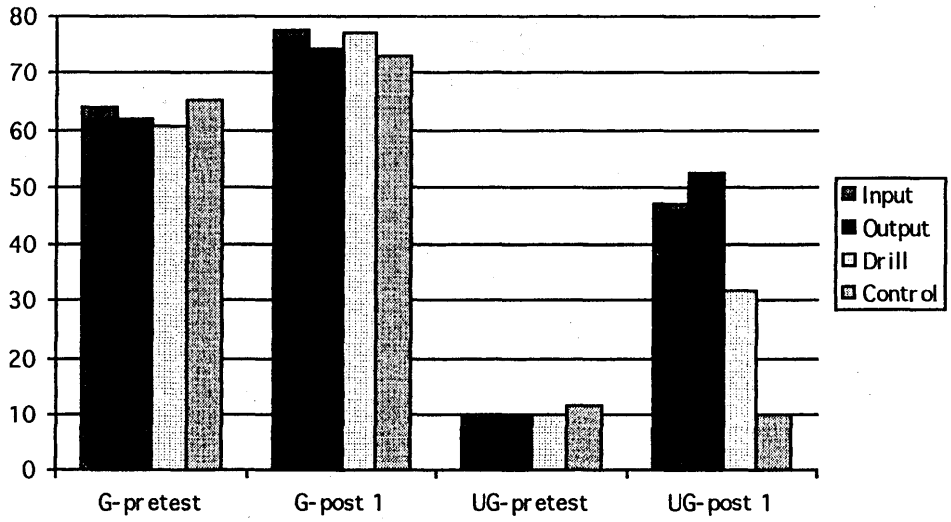
	Output Group	Drill Group
1.Explicit metalinguistic information	provided in the initial phase of instruction	none model dialogues, instead
2. Learning condition	deductive / enhanced	inductive / implicit[i]
3. Presentation of the target structures	words & expressions -> one-sentence level -> 2-line dialogues -> longer dialogues	model dialogues -> pattern drills 1) one-sentence level 2) conversation drills
4. The instructor's responses to errors	<u>input processing tasks</u> feedback on accuracy in task outcomes <u>output processing tasks</u> implicit negative feedback	overt error correction of pronunciation[ii] and grammar
5. Amount of learners' output in terms of the target structure	3 to 4 sentences a day for each subject in the second week, no repetitions by the rest of the group	a number of repetitions by an individual or in chorus throughout the treatment
6. Visual aids	pictures in the tasks	none
7. Vocabulary	included in the task activities	vocabulary list provided with English translation

Notes:

[i] The sentences which the subjects were exposed to all contained the target structures, so there was a good chance that the subjects would be aware of the target of instruction. Actually, half a year later, a subject in the Drill Group said to me, "Are you still doing '*to*'?" Obviously this subject noticed that he had learned the conditional "*to*" in the treatment.

[ii] Since the procedure in the Drill Group followed Richards & Rodgers (1986), pronunciation was corrected. However, correction rarely occurred because the subjects enrolled in the fourth semester of Japanese were quite good in pronunciation.

Figure 4: Accuracy rate on the grammaticality judgment test



G: grammatical items UG: ungrammatical items