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Enhanced input, individual output, and collaborative output: Effects on the acquisition of the English subjunctive mood

Input realzado, output individual y output colaborativo: Efectos en la adquisición de estructuras del inglés

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Abstract

A number of studies have displayed the significance of focusing on form in L2 learners' acquisition of morphosyntactic features. This study compares the effects of three focus-on-form tasks (input enhancement, individual output, and collaborative output) on the acquisition of English subjunctive mood. The learners' trend of development in the subjunctive mood acquisition process is also investigated. Ninety freshmen from a B.A. program in TEFL were randomly divided into the three task groups. These tasks included textual enhancement in Group 1, and dictogloss in Group 2 and 3, where texts were reconstructed individually and collaboratively, respectively. A time-series design was used to measure progress in the participants' production of the target feature; in conjunction with a pretest and a posttest, three production tests were given to assess the trend of development in each group. The study revealed that the impact of input and collaborative output tasks was greater than that of the individual output task. Moreover, the findings showed that the trend of development in the individual output group was not a linear additive process, but a rather U-shaped one with backsliding. This study supports previous studies that have combined both enhancement and instructional assistance. It also adds further importance to the effectiveness of collaborative interaction in the acquisition of English structures.

Key Words: Collaborative output, individual output, input enhancement, dictogloss, subjunctive mood.

Resumen

Una serie de estudios ha expuesto la importancia de centrarse en la forma para la adquisición de aspectos morfosintácticos de estudiantes de L2. Este estudio comparó los efectos de tres tareas enfocadas en la forma (realce del *input*, *output* individual y *output* colaborativo) para la adquisición del modo subjuntivo en inglés. El estudio también investigó la tendencia de desarrollo del proceso de adquisición del subjuntivo de los estudiantes. Noventa estudiantes de primer año de licenciatura en Enseñanza del Inglés como Idioma Extranjero fueron divididos aleatoriamente en tres grupos de trabajo. Las tareas incluían realce textual en el Grupo 1 y dictoglosia en los Grupos 2 y 3, donde los textos eran reconstruidos de manera individual y colaborativa, respectivamente. Un diseño de series cronológicas fue utilizado para medir el progreso en el aspecto objetivo de la producción de los participantes; en conjunto con un pre-test y un post-test, tres test de producción fueron administrados para medir la tendencia de desarrollo en cada grupo. El estudio reveló que los impactos de las tareas de *input* y de *output* colaborativo fueron mayores que el de la tarea de *output* individual. Más aún, las conclusiones documentaron que la tendencia de desarrollo en el grupo de *output* individual no siguió un proceso de adición lineal, sino más bien uno en forma de 'U' con retroceso. Este estudio apoya estudios anteriores que han combinado realce con asistencia en la instrucción y añade sustancia a la efectividad de la interacción colaborativa en la adquisición de estructuras del inglés.

Palabras Clave: *Output* colaborativo, *output* individual, realce de *input*, dictoglosia.

INTRODUCTION

By the advent of communicative language teaching, there was some shift in L2 teaching towards meaning-based approaches in which the main focus was on meaning at the expense of form. Nevertheless, this purely meaning-based approach may deprive language learners from the acquisition of target morpho-syntactic forms or features. Striking a balance between meaning and forms-focused instruction enticed researchers in applied linguistics to come up with the focus-on-form approach which facilitates interlanguage restructuring (Doughty, 2001) through form-function mapping. Focus-on-form instruction aims to promote linguistic accuracy through focused tasks in which there is a balanced focus on both meaning and linguistic forms. A number of reviews have shown that, in general, focus on form facilitates second language learners' acquisition of target morpho-syntactic forms or features (Doughty & Williams, 1998; Ellis, 2002).

Focus on form may facilitate noticing of target linguistic forms in the input not only by input enhancement techniques but also by 'pushed output' which stretches learners' competence through the need to express themselves in a language that is accurate and appropriate (Swain, 1995, 2000; Swain & Lapkin, 1995). Through output enhancement tasks, linguistic evidence in the input and corresponding internal representations are subject to cognitive comparison, resulting in 'noticing

the gap' (Schmidt & Frota, 1986). Such noticing, Schmidt (1990, 2001) argues, helps L2 learning. For these reasons, focus on form is seen as potentially beneficial for L2 learners.

1. Background

Input enhancement is based on the premise that highlighting selected forms in input enhances the saliency of the forms. By the same token, saliency of the forms can be enhanced internally by pushed output in that learners notice that there is some meaning they cannot express adequately. These two topics, underpinning the three tasks for the acquisition of the English subjunctive mood in this study, are discussed below.

1.1. Input enhancement

Input contains many instances of the target language and different grammatical aspects. According to Schmidt (2001), one of the important functions of language teaching is to help focus learners' attention on these linguistic aspects. Schmidt (2001) further argues that some aspects of L2 input are so subtle and abstract that they cannot possibly be attended to. Instructional steps should be taken to bring these aspects into focal attention and input enhancement is claimed to do so. Inability to process form and meaning simultaneously as well as lack of ability to pay global attention to all aspects of the input at once due to limited memory capacity are two reasons for the application of input enhancement in focus-on-form tasks in which specific target forms are highlighted among the others to make them more salient for the learners.

Various studies over the past decade have debated the instructional effect of an input-based approach, namely, input enhancement (Leow, 2001, 2007, 2009a). According to Schmidt (1990), noticing the form in the input is a prerequisite for intake. Yet, the results obtained from these studies are highly contradictory. While some researchers have found positive effects of input enhancement, others found little or no effect for this type of instruction. Some of these contradictory studies will be reported below. Sharwood-Smith (1981) argues that internalization of the target forms as well as meaning occurs through improving the quality of input via typical input enhancement techniques such as color coding, boldfacing, underlining, italicizing, capitalizing, and highlighting for textual enhancement purposes and oral repetition for aural enhancement purposes.

The results obtained from textual enhancement studies vary greatly (Izumi, 2003; Lee & Huang, 2008). The reviews of this issue offer reasons for sources of inconsistency and hence needs for future research to gain deeper insights (Han, Park & Combs, 2008). The rationale for choosing a specific target linguistic item is based on various criteria such as the level of difficulty, frequency of exposure, semantic

complexity, and learnability. Studies vary in sample size from 14 (Jourdenais, Ota, Stauffer, Boyson & Doughty, 1995) to 259 (Lee, 2007) participants. They also differ in types of typological cues and the kind of tasks employed: recognition (Leow, 1997), comprehension (Leow, 2001), intake (White, 1998), and production (Shook, 1994). Other variables that were investigated in different studies include length of the text (Leow, 1997), topic familiarity (Overstreet, 1998), number and choice of typographical cues (Simard, 2009), and prior knowledge (Shook, 1994).

Over the past two decades, the effectiveness of textual enhancement has been investigated through various methodologies, all of which aimed at deriving the maximum benefit from the available input. Some of these studies, still, failed to prove the effectiveness of input enhancement. For example, Leow (1997) investigated the effectiveness of written input enhancement and text length on L2 comprehension and intake of target linguistic forms. The participants, who were 84 Spanish college-level students, were exposed to one of four conditions: a long non-enhanced text; a long enhanced text; a short non-enhanced text; and a short enhanced text. Results revealed no significant effect for input enhancement on comprehension and intake. In another study, Izumi (2002) investigated the effects of output and visual input enhancement on the learning of English relativization by 61 ESL learners. The target linguistic form was presented through reading texts and participants were exposed to enhanced and non-enhanced texts. Izumi's study involved four treatment groups and one control group: the +output (O)-input enhancement (IE) group, the +O+IE group, the -O+IE group, and the -O-IE group. Those who received enhanced input failed to show any significant gains compared with the other groups. Finally, Lee (2007) studied the effects of textual enhancement and topic familiarity on Korean EFL students' learning of a linguistic form. As many as 259 Korean EFL students were under investigation. They were assigned into groups which were offered four different treatments, involving textual enhancement and topic familiarity conditions. The study revealed that, although textual enhancement had positive effects on the learning of the target forms, it had negative effects on the meaning comprehension.

Lack of congruence in the results of these studies can be due to differences in the methodological selection by the researchers. Methodological variation such as provision of explicit instruction leads to the effectiveness of textual enhancement in some studies and partial or no effectiveness in others. The basic premise of all these studies is that, when learners fail to notice a linguistic form in the input, instructional intervention comes into play to direct their attention to the form during input processing. But it is still not clear what forms are more amenable to enhancement and whether the acquisition that results from such enhancement would persist. In a study on input enhancement, White (1998) investigated the effect of textual enhancement on the use of possessive determiners in English. The results showed that the participants who were exposed to textual enhancement increased the use of the target forms; but it did not have a positive effect on the subjects' ability to use them correctly. Leow

(2001) investigated the effects of textual enhancement on learning Spanish formal imperatives and found no advantage for enhanced over unenhanced text.

Reviews of input enhancement research (Han, et al., 2008; Simard, 2009) reveal methodological differences. Some of these aspects are consideration of the learners' prior knowledge of the target form, frequency of the enhancement, number of the enhanced forms, provision or absence of explicit instruction, length of the texts, and number of the treatment sessions. Another recent critical review of over 18 input enhancement studies (Leow, 2009a) shows that the type of research design operationalizing input enhancement leads to differential results. For instance, the results from a conflated design which combines more than one independent variable in what comprises enhancement (e.g. enhancement plus instruction or additional type of exposure) may differ from those involving a non-conflated design which teases out the variable enhancement as the only variable and which compares it to a non-enhanced group. Leow (2009b) reports that the former design produce beneficial effects but is unable to differentiate which independent variable contributed to the effects; by contrast, the latter design brings about no effects. Due to the wide array of differences, these studies are not comparable and the results cannot be generalized.

1.2. Individual output

Swain (1985) proposed the Output Hypothesis about three decades ago. She believes that output 'pushes' learners from 'semantic processing' prevalent in the input to the 'syntactic processing' to encode meaning during output. She contends that compared with input, there is more mental effort involved when learners are engaged in output processing, and, therefore, output is part of the learning process rather than the outcome of it. The rationale behind using output-based tasks in language classrooms is that learners mainly process input for meaning. But when they are pushed to produce output and subsequently provided with the relevant input, their attention is most likely drawn to the forms.

Extensive research has been conducted to document the effects of output tasks on language processing and language learning (Swain, 1995; Swain & Lapkin, 1995; Izumi, Bigelow, Fujiwara & Fearnow, 1999; Izumi, 2002; Toth, 2006; Yoshimura, 2006; Hanaoka, 2007; Reinders, 2009). For example, Izumi et al. (1999) investigated whether learners' output would promote the noticing of linguistic form when relevant input was subsequently provided and whether output would result in the acquisition of the form. Participants were exposed to short passages for the output-based reconstruction purpose and subsequently to a model text for the comparison purpose. The results proved the efficiency of output in both noticing and learning of target forms.

Izumi (2002) and Hanaoka (2007) also investigated the effects of output on noticing. Izumi compared the effects of visual input enhancement and output tasks

on the acquisition of English relativization by ESL learners. He found a facilitative effect for the output task on promoting the noticing and acquisition of the target form but found a non-significant effect for the visual input enhancement task as far as the acquisition of the form was concerned. Hanaoka (2007) researched into the noticing function of output and the effect of noticing on subsequent learning by Japanese university students in an EFL writing context. He implemented a four-stage writing task consisting of output, comparison, and two revisions. As the learners compared their output with models, they identified their problems and incorporated them in subsequent revisions.

1.3. Collaborative output

In addition to individual output, collaborative output has recently received attention, predominantly from the perspective of sociocultural theory. Collaborative output tasks which are rooted in the sociocultural tradition aim to help learners promote their language acquisition through the negotiation of meaning and social interaction. Swain (2000) couched her output hypothesis within sociocultural theory. She argues that learners externalize their hypotheses about form and meaning and expose those hypotheses to scrutiny and discussion when they are engaged in collaborative output. When learners use language collaboratively for problem solving purposes, they are in fact engaged in a cognitive activity. Their metatalk through collaboration as well as their hypothesis testing about language and the feedback they receive from their interlocutors during collaboration results in language growth. While positive evidence in the input from the peers deepens or enhances learners' knowledge about the forms, negative peer feedback may draw their attention to the forms they may not have noticed acting alone. In this case, peers may facilitate the acquisition of the language forms by filling the gaps in their interlocutors' knowledge.

Sociocultural theory, thus, offers insightful perspectives on the role of collaboration in learning. These perspectives have inspired many studies aimed at finding evidence regarding the facilitative effects of collaborative tasks in second language learning (Donato, 1994; Kowal & Swain, 1994; Storch, 1998; Swain, 2000; Leaser, 2004; Watanabe & Swain, 2007; Kim & McDonough, 2008; Reinders, 2009; Nassaji & Tian, 2010).

Swain and Lapkin (2001), for example, compared the effectiveness of two focus-on-form tasks, jigsaw and dictogloss. Both tasks involved the learners in collaborative reconstruction of written texts. They concluded that students in either tasks focused equally on form as they collaboratively constructed the texts. Additionally, the dictogloss led students to notice and reproduce complex syntactic structures.

Kowal and Swain (1994) reported on a study aimed at collaborative output. The study was conducted on intermediate and advanced French learners working collaboratively to reconstruct a text. The researchers hypothesized that collaborative

output would promote learning by making the learners aware of the gaps in their present knowledge, raising their awareness of the links among the form, function, and meaning, and helping them receive feedback from their peers during task completion. The results confirmed the hypothesis.

Watanabe and Swain (2007) investigated the effects of L2 proficiency differences in pairs and patterns of interaction on L2 learning. Three-stage tasks were employed: pair writing, pair comparison (between the original and reconstructed texts), and individual writing. Each pair's production was analyzed in terms of language related episodes (LTRs) and patterns of pair interaction and learners' individual post-test score. The findings suggested that collaborative patterns of interaction resulted in higher posttest scores regardless of the proficiency level of the partners.

Finally, in more recent studies, Reinders (2009) and Nassaji and Tian (2010) investigated the beneficial effects of collaborative tasks. Reinders (2009) studied the effects of the production activities, i.e. dictation, an individual reconstruction, and a collaborative reconstruction. He found that collaborative reconstruction and dictation resulted in greater uptake than the individual reconstruction but there was no differential effect for the activities on the acquisition of grammatical items. Nassaji and Tian (2010) compared the effectiveness of two types of collaborative tasks (reconstruction cloze task and reconstruction editing task) for learning phrasal verbs in English. The aim of the study was to find out whether collaborative task performance results in greater gains as to the target form than individual task completion. Low intermediate ESL learners were studied and the results supported the effectiveness of collaborative tasks in promoting the accuracy in the production of the target form.

The above studies on output provide, in varying degrees, evidence of the value of output tasks as vehicles for interlanguage restructuring. As the above mentioned studies were different in terms of task types, learners' L1, proficiency level, and target forms under investigation, there is a need for further research to measure the various roles played by collaborative output.

2. The present study

Many reasons were behind the present study. Examples of the linguistic forms which were targeted in the previous studies on focus on form are present perfect (Shook, 1994), past tense (Doughty & Varela, 1998), question formation (Mackey & Philp, 1998), relativization (Izumi, 2002), passive voice (Lee, 2007), and negative adverbs (Reinders, 2009). In all these studies a proactive focus on form was used where the teacher preselected a form to present to students while they were involved in a communicative task. Mennim (2003) believes that proactive focus on form might be useful if a teacher has a clear idea of common language problems in a class with the same L1, or if a particular language form is useful or necessary for the completion

of a communicative task. The effects of input enhancement and output need to be investigated with other linguistic forms. The present study took this gap into account and purported to shed light on the effects of input-and output-based tasks on the acquisition of the subjunctive mood. As an English structure, subjunctive does not frequently appear in language instructional materials. As this structure was problematic for the EFL learners in this study, the researchers found it a suitable target for focus on form.

Besides, most of the studies to date have been conducted in ESL settings where learners were not homogeneous as far as their native languages were concerned (Lee, 2004). Thus, the present study can contribute to the research database by investigating the effects of enhanced input, individual output, and collaborative output on helping EFL learners to acquire an English grammatical feature.

The third reason was the need for the quantitative investigation of the developmental pattern learners go through as they are involved in the acquisition process. Studies on the effects of input enhancement and pushed output to date have based their findings on the results of a pretest and an immediate posttest and only few on a delayed posttest. Utilizing a time-series design, the present study investigated the pattern of development from the onset of the intervention up to the acquisition.

The final reason was the scarcity of research on the effect of the collaborative task on the acquisition of forms. For example, Izumi's (2002) research, bearing close similarity to the present study, examined whether output and (visual) input enhancement, in isolation or in combination, promoted the noticing and learning of an L2 grammatical form. However, in this research, output was conducted individually, and possible effects that collaborative output tasks might have on the acquisition of the forms were not considered.

Against this backdrop, it seems that data are thin on the ground as to the effect of input in relation to individual and collaborative output and that no study to date has been devoted to the investigation of such effects as far as the acquisition of subjunctive mood is concerned. Subjunctive refers to verb forms occurring in hypothetical constructions (e.g. 'if he were coming'), in certain formulae (e.g. 'so be it'), and in some 'that'-clauses, especially in American English, preceded by such verbs as 'demand', 'insist', and 'order' (e.g. 'The judge ordered that he be detained indefinitely') or by adjectives like 'important', 'necessary', and 'urgent' (e.g. 'It is important that you not be lazy') (Crystal, 1991; Radford, 1997). Due to the variety of forms under the title of subjunction, for practical purposes, only subjunctive verb forms occurring in 'that'-clauses were chosen to be investigated.

To carry out the study, the questions below were addressed:

1. What are the effects of input enhancement, individual output, and collaborative output tasks on the acquisition of English subjunctives?

2. What is the trend of development in the acquisition of English subjunctives by enhanced input, individual output, and collaborative output groups?

3. Method

3.1. Participants

First-semester B.A. students majoring in the English Language were selected as the participants in this study. Two main considerations were at work when deciding to select first-semester students: (a) focus of the study, which was related to grammar as one of the first courses to be taught to the students; and (b) minimal prior knowledge of the target structure as determined by a pretest of structures. A total of 140 adult students participated in the experiment. At the time of the experiment, the target linguistic form, English subjunctive mood, had not been formally taught to the participants. To ensure that the data included only participants who had minimal knowledge of the target linguistic form, those who scored higher than 20% on the subjunctive pretest were eliminated from the final data analysis. Participants who failed to attend all the treatment and testing sessions were also eliminated from the data analysis. Participant attrition was almost equal in all the groups. Of the original pool of 140 participants, 50 were eliminated. The remaining 90 participants who qualified to be included in the analysis were randomly divided into three groups: the enhanced input group (N=30), the individual output group (N=30), and the collaborative output group (N=30). All the participants in each group were exposed to the respective treatment.

3.2. Instrumentation

The instrumentation employed in this study was of two main types: treatment materials to instruct subjunctive mood and tests to measure knowledge of subjunctive mood. What follows is a description of the two types of instrumentation.

3.3. Treatment materials

3.3.1. Textual enhancement material and procedure

The treatment phase for each group lasted twelve sessions. In each session, an authentic text of approximately 100 words which contained about 4 instances of the target structure was presented to the participants. Overall, the materials in the treatment phase included 48 instances of the subjunctive mood, out of which 27 were examples of subjunctive following verbs (e.g. 'insist', 'order', 'demand') and 21 following adjectives (e.g. 'necessary', 'important', 'essential'). Multiple exposures to the target form can function as an experience which helps students become accustomed to the reading conditions of typographical enhancement. In addition, frequent exposures to the target forms make the learners attend to the forms more efficiently (Lee, 2007). Texts that lent themselves to natural occurrence of subjunctives were chosen. All

texts were scrutinized for lexical as well as syntactical adjustments. Participants were assumed to be at the intermediate level of competence; therefore, lexical choices for the texts were made in view of this point. Subjunctive structures were authentically used in the texts, while they were typographically enhanced.

In each instructional session, participants in the input enhancement group individually read a passage which had been enhanced for the targeted form. Due to the individual differences in comprehension, the teacher ensured that vocabulary was not an issue. Nevertheless, in order to ensure that all the participants could understand the content of the texts, the teacher instructed them to circle the unknown words that might affect their comprehension. She then explained problematic words as well as key phrases to help them completely get the meaning conveyed by the texts.

To fulfill the purpose of the task, while participants were reading for comprehension of the text content, they were explicitly instructed to attend to the enhanced forms. The teacher used examples to clarify the matter. Participants were further announced that there would be a recall task afterwards in which they were to write a few sentences on what they understood about the text. Using L1 in the free-recall task gave participants an opportunity to easily write about the ideas without any concern for the form.

3.3.2. Output task material and procedure

Dictogloss as a reconstruction task was used in both individual and collaborative output groups, with little variation in the way it was implemented (individual vs. collaborative reconstruction). The effectiveness of reconstruction tasks such as dictogloss has been investigated in studies by Swain and her colleagues (collaborative output task: Kowal & Swain, 1994; collaborative dialog: Swain, 2000; Swain & Lapkin, 1998, 2001). To discern the effects of different treatments and to make sure any changes in the results of the study can be attributed to the treatments, the treatment materials were all balanced in terms of content and length except for the type of instruction learners underwent (input versus output-based instruction).

The twelve short texts used in the input enhancement group were used as the reconstruction passages in dictogloss in both individual and collaborative groups. Due to the length of the texts, verbatim memorization was difficult. Still, texts were short enough to make reconstruction through the dictogloss task possible.

There were four steps in the dictogloss task (adapted from Qin, 2008). In step 1, the teacher introduced the main idea in each text and distributed text copies to the learners. These texts were the same as those used in the textual enhancement group. A typical dictogloss task requires learners to listen to their teacher as he/she reads a passage to them for the reconstruction purpose, while in this practice the participants were exposed to the written form of the passage. Thornbury (1997) believes that this

practice eases memory load and frees up attention to syntactic processing. Following Qin's (2008) version of dictogloss, the teacher drew the learners' attention to the usage of the target form in the text in step 2. The rationale for this consciousness-raising activity is that during a dictogloss task learners seem to have less concern for the morpho-syntactic features and relatively more concern for the meaning of words and expressions (Williams, 1999; García Mayo, 2002). García Mayo (2002) offers a possible explanation for this; when learners were struggling to reconstruct the text, they fell back on discourse or composition strategies and used simple sentences and avoided complex structures. After the participants reconstructed the text in stage 3, they were given the original passage for the comparison purpose in stage 4. They were asked to make notes on the differences between their own production and the original text. They wrote about the perceived differences in both content and form that they might have noticed between the two texts. The use of L1 in this task facilitated writing about one's ideas without concern for the form. During the task, direct copying of the whole text was not allowed. Learners only took notes on key lexical items that they assumed would help them reconstruct the text. The time limit for the task implementation was 50 minutes each session.

The participants in the individual output group were asked to reconstruct the texts individually, whereas in the collaborative output group the participants formed groups of three to reconstruct the texts. They discussed the content and shared their understandings in the reconstruction task. The learners in both individual and collaborative output tasks were then exposed to the original texts for comparison purposes. A free-recall task followed immediately after, in which learners were encouraged to take notes in their L1 on their reconstruction and comparison experience.

The experimental treatment started a week following the pretest session and lasted 12 weeks. Due to the nature of the treatments in this study, each week the instructional treatment session took 20 minutes for input and 50 minutes for output groups. After the completion of the treatment phase, the posttest was administered. All three groups received an equal amount of instruction.

3.4. Test materials

As this study used a time-series design, at the onset of the experiment, a test of syntax with four different target forms taken from the students' grammar course book was administered to all the participants. The aim of the test was to select the most problematic form for the learners. The test of syntax comprised 80 completion items, 20 items for each structure. The structures included modals, prepositions, inversion, and subjunctives. Each structure was tested through 10 target as well as 10 non-target items. It was mentioned earlier that subjunctive structures were selected as the learners got the lowest scores for this form. The scores on subjunctives were also

considered as the pretest scores for the participants. Besides the pretest, one posttest and three during-treatment tests were used. The posttest was a version of the pretest with the same subjunctive-related content but different order of items. It incorporated 10 examples of ‘that’-clauses in which subjunctive mood was used. Three during-treatment tests (tests A, B, and C) were administered besides the pretest and posttest in order to assess the trend of development in all three groups. These test tasks were constructed to assess the participants’ ability to produce English subjunctive mood. There were 20 items in each test, 10 addressing the subjunctive mood in the present and the past (negative, progressive, or passive) and 10 related to non-target structures. To sample items are given below:

1. It is important that he..... (to visit) the director of the English program.
2. The sun is scorching today. I insist that my little daughter (to put on) sun block before she gets a sun burn.

In total, the three during-treatment tests included 30 subjunctive types: 17 for subjunctive following verbs and 13 for subjunctive following adjectives. A variety of verb forms were tested so as to decrease the chance of practice effect. The participants were scored +1 for the correct production of each item and the total score was 10.

4. Results

4.1. Task effects on the acquisition of subjunctive mood

The first research question concerned the effectiveness of instructions on learning English subjunctives in the enhanced input, individual output, and collaborative output groups. To make sure the groups were homogeneous, the results of the subjunctive pretest was analyzed. Table 1 reports on mean, SD, minimum score, and maximum score of the performance of each group on the pretest.

Table 1. Descriptive statistics for the subjunctive pretest.

Group	N	Mean	SD	Min	Max	Total
Enhanced input	30	.37	.615	0	2	10
Individual output	30	.33	.802	0	4	10
Collaborative output	30	.63	.999	0	3	10
Total	90	.44	.823	0	4	10

The three groups’ scores in the pretest were subject to ANOVA statistics. The result (Table 2) showed that there were no significant differences between the three groups ($F(2, 87) = 1.515, p = .226$). This means any changes in the mean scores of the groups in the posttest were unlikely to be attributed to preexisting differences among the groups and, instead, could be due to the different treatments they received.

Table 2. ANOVA for the subjunctive pretest.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.400	2	.700	1.515	.226
Within Groups	40.200	87	.462		
Total	41.600	89			

The second step to address the first research question is to analyze the subjunctive posttest to investigate the effects of the three types of treatment. Table 3 shows the results of the posttest. The mean score of the enhanced input group was the highest ($M=6.26$), followed by the collaborative output group ($M=3.57$), and the individual output group ($M=.97$). Comparison of the means of pretest and posttest in the three experimental groups shows a gain score of 5.83 for enhanced input, 2.94 for collaborative output, and .64 for individual output.

Table 3. Descriptive statistics for the subjunctive posttest.

Group	N	Mean	SD	Min	Max	Total
Enhanced input	30	6.20	3.178	0	10	10
Individual output	30	.97	.928	0	3	10
Collaborative output	30	3.57	2.674	0	10	10
Total	90	3.58	3.243	0	10	10

An ANOVA ($3 \times$ treatment types) was performed to decide whether there was a significant effect for treatment types. The result, depicted in Table 4, shows a significant variation in the performance of the three groups in the posttest ($F(2, 87) = 34.03, p < .001$). Time and test type were considered as the within-subjects factors.

Table 4. ANOVA for the Subjunctive posttest.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	410.822	2	205.411	34.031	.000
Within Groups	525.133	87	6.036		
Total	935.956	89			

Post-hoc analysis was run to specify the location of differences. It showed the following:

- A significant advantage for the enhanced input over the collaborative output treatment ($p < .001$). The mean difference between the two groups was 2.633.
- A significant advantage for the collaborative over the individual output treatment ($p < .001$), with a mean difference of 2.6.

- A significant advantage for the enhanced input over the individual output treatment. The mean difference was 5.23.

The second research question addressed the trend of development in the acquisition of subjunctive mood during the treatment phases by the three groups. Table 5 shows the results of the three tests. Input and collaborative output groups showed a linear progressive pattern of development from Test A to Test C (MA=1.60; MB=2.93 and MC=4.07 in the enhanced input group; MA=.77; MB=1.87 and MC=3.07 in the collaborative output group). The means of the developmental tests, from A to C, in the individual output group were 1.10, .57, and 1.17, respectively. Comparison of the means reveals a linear developmental trend in input and collaborative output groups and a nonlinear one in the individual output group.

Table 5. Descriptive statistics for the three developmental subjunctive tests.

Group		Test A		Test B		Test C	
	N	Mean	SD	Mean	SD	Mean	SD
Enhanced input	30	1.60	1.429	2.93	2.828	4.07	2.9
Individual output	30	1.10	1.373	.57	.817	1.17	1.02
Collaborative output	30	.77	.898	1.87	2.529	3.07	2.53

The time-series design in this study provided data on the trend of development from the pretest, developmental tests, up to the posttest. Results of this trend are illustrated in Table 6.

Table 6. Descriptive statistics for the subjunctive pretest, development tests, and posttest.

Group	N	Pretest		Test A		Test B		Test C		Posttest	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
EI	30	.37	.615	1.60	1.429	2.93	2.828	4.07	2.9	6.20	3.178
IO	30	.33	.802	1.10	1.373	.57	.817	1.17	1.02	.97	.928
CO	30	.63	.999	.77	.898	1.87	2.529	3.07	2.53	3.57	2.674

Note: EI = enhanced input, IO = individual output, CO = collaborative output

Unlike the other two groups which showed a consistently positive linear trend from the pretest up to the posttest, the individual output group showed a fairly nonlinear U-shaped trend of development during the intervention. In a U-shaped behavior, L2 learners have an initial target-like production, which is later followed by an overgeneralized incorrect form in their output. Eventually, the correct target language form reappears. The developmental trends in the three groups are clearly depicted in Figure 1.

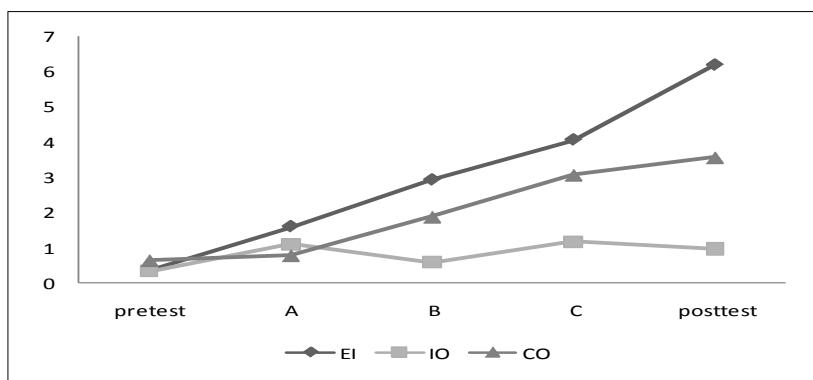


Figure 1. Trend of subjunctive development in the three experimental groups.

5. Discussion

Results showed the significant benefits of enhanced input and collaborative output. In addition, a linear trend of development was observed in these two groups, while a very small improvement and a nonlinear trend were observed in the individual output group.

One possible explanation for the outperformance of input-based over output-based treatments is differences in the cognitive processes they require. Reconstruction of a passage in output-based treatments is more cognitively demanding because the processes of reconstruction and comparison make it a dual rather than a single task. Moreover, learners first have to process the input semantically and then reconstruct it syntactically. During semantic processing for the purpose of reconstruction, previous knowledge and long term memory come into play. These two factors probably make the task more demanding. Yet, this conceptualization is in contrast with Robinson's (2001) task complexity framework in which he argues that more complex and demanding tasks promote more noticing and learning.

The outperformance of the enhanced input group is also in contrast to Swain's (2000) claim that 'acquisition-rich-input' does not push the learners beyond their current level of interlanguage. Yet, the finding that participants in the output groups showed less improvement than those in the input enhancement treatment supports the claims made by Toth (2006: 326):

"Even if one sees encoding meaning as essential to language learning, it is difficult to establish how this in itself could build linguistic knowledge without being construed as either an accessing procedure for knowledge already present or a reflection of gains made from exposure to subsequent input."

It seems that the effect of input enhancement in promoting L2 development is related to the provision of what Izumi (2002) calls 'instructional assistance.' Future

research with no provision of instructional assistance should be conducted to support the findings of the present study; therefore, the results of this study should be interpreted cautiously. Moreover, the results could have been contaminated by the participants' outside exposure to the target form within the period of the instructional treatment. This internal validity issue could have affected the findings of the study.

The effect of enhanced input in this study is not compatible with a number of previous studies (Izumi, 2002; Izumi et al., 1999; Leow, 1997, 2001, 2003). In a series of studies, Leow (1997, 2001, 2003) found no solid evidence for the main effect of textual enhancement to promote grammatical abilities in L2 learners. But in a more recent study, Leow (2009a) argued that combining input enhancement with an instructional period or interactional session that is focused primarily on the target grammatical item in the input contributes to significantly better L2 development.

The results of this study also contradict the findings of Izumi (2002). He investigated whether output and input enhancement in isolation or in combination can promote noticing and learning English relativization by ESL learners. The results he obtained were in favor of output. Analyzing the results, Izumi asserted that input enhancement solely draws learners' attention to form without further cognitive processing; yet, the cognitive comparison between the interlanguage and TL forms through output facilitates superior learning of the form. Unlike Izumi's findings, this study lends support to the efficacy of enhanced input in addition to that of output.

Although the posttest mean score of the participants in the collaborative output group was lower than that of the enhanced input group, the collaborative output group's higher gain score compared with that of the individual output group can be explained from a sociocultural point of view, which confirms the importance of collaborative output tasks for the promotion of L2 learning. Regarding the improvement of the learners in the collaborative output group, the results of the present study indicate that dictogloss, when done collaboratively, could lead L2 learners to improve their knowledge on English subjunctive mood. The justification for this main effect is the existence of different consciousness-raising techniques in a dictogloss task. The results are in favor of Swain and Lapkin's (2001) 'collaborative dialog' in which speakers were engaged in two meaning negotiation tasks: dictogloss and jigsaw. Findings from the present study also substantiate Watanabe and Swain's (2007) claim that when engaged in collaborative patterns of interaction, learners are more likely to achieve higher posttest scores regardless of their partner's proficiency level.

With regard to the trend of development in the three groups, results of the individual output group revealed that learning is not always a linear additive process because U-shaped learning, restructuring, and backsliding may occur during second language acquisition. A few reasons may account for the U-shaped progression in this group. First, the task may be more demanding when it is done individually. Participants in the individual output group had to remember long stretches of texts without the

help of a partner, whereas in the collaborative group it was also more likely that at least one of the participants in a group would notice the target structure and include it in the reconstruction. This is in line with sociocultural theories of learning. As there were no interactions in the individual output group, they were deprived of assisted performance (Ellis & Barkhuizen, 2005) in order to accomplish the task which could not be performed individually. As a result, their trend of development, as reflected in their during-treatment test performances, did not follow a consistently linear pattern. Provision of peer assistance in the collaborative output group, by contrast, seemed to create a supportive condition for the participants to consistently extend their current knowledge of subjunctive mood to a higher level of competence.

There is a second reason. The U-shaped trend in the individual output group, which was not observed in the input enhancement group, might be due to multiple exposures to subjunctive forms in the latter group. In line with Lee's (2007) argumentation, the reason for the linear trend in the latter might be due to ample exposure to subjunctive mood which facilitated a more efficient allocation of attentional resources during form processing and probably an increasingly higher level of subjunctive competence.

CONCLUSION

The results of this study appear to support previous studies that have combined enhancement with instructional assistance (see Leow, 2009a, for a review of these studies). The results, may also add further substance to the effectiveness of collaborative dialogs on improving EFL learners' knowledge regarding English subjunctive mood. At the pedagogical level, the present study suggests the use of instructional treatments which focus on both form and meaning. Still, factors other than the investigated ones could have contributed to the obtained results.

The basic premise of enhancement studies is that when the target items are made salient through enhancement techniques, L2 readers may notice and then process them. The effectiveness of input enhancement in promoting L2 learners' grammatical competence is still a controversial issue. In light of the above findings, this controversy can be attributed to the fact that some structures, e.g. subjunctives, lend themselves to this type of intervention, although it is not yet clear which linguistic forms are more susceptible to input enhancement. Han et al. (2008: 608) argued that if future research demonstrates that certain forms are influenced by Textual enhancement, then instruction utilizing this type of intervention "should selectively target certain forms as opposed to any forms indiscriminately". This point is also emphasized by Izumi and Bigelow (2000: 266), who posited that "Like many other pedagogical techniques, output-input activities may be more effective in promoting the noticing and learning of some forms than of others".

The results of this study documented the weaker impact of output compared with that of enhanced input. As the learners are engaged in text reconstruction throughout

the output treatment, their attention is drawn to the content and they strive to construct the intended meaning. It seems that learners' engagement with the form prevents them from applying the required grammatical encoding during production. This is more obvious in the case of low proficiency learners who are more likely to draw on lexical items to reconstruct the meaning at the expense of form.

The U-shaped behavior observed in the individual output group needs further verification by longitudinal or cross-sectional studies. Moreover, from a methodological perspective future studies investigating both input and output processes need to document input processes via concurrent data elicitation procedures and output processes via recordings for collaborative groups to shed light on what L2 data learners process and how they engage with the L2.

It is to be noted that this study has enriched the input enhancement literature by focusing on EFL learners who had received no previous instruction on the target form under investigation. A great contribution to the field would be made by investigating the effects of input enhancement and dictogloss on other linguistic features and also integrating these two tasks to maximize their benefits. Long-term effects of these techniques should also be examined. In addition, personality factors, attitude toward collaboration and language proficiency level can be investigated. Such factors may be determining factors in the pattern of learners' engagement with the tasks and, as Izumi (2002) claimed, the effectiveness of input and output treatments can be constrained by learners' developmental readiness.

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