

INTERACTION, FOREIGN LANGUAGE PRODUCTION AND DEVELOPMENT

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1. INTRODUCTION

Input and interaction hypotheses have stimulated a lot of research during the last decade in the field of second language acquisition (Wesche 1994). Based on Krashen's input hypothesis (1985), which claims that comprehensible input is a necessary condition for second language acquisition (SLA), Long (1980, 1983, 1985) suggests that it is the negotiated interaction which simplifies comprehension and indirectly promotes SLA. From this interactional perspective, native speaker (NS) and nonnative speaker (NNS) discourse has been analysed taking into account variables such as sex (Gass and Varonis 1986; Pica *et al.* 1991, Alcón and Codina 1996), content knowledge (Woken and Swales 1989; Zuengler and Bent 1991; Zuengler 1993; Alcón and Guzman 1995), proficiency (Varonis and Gass 1985), and task differences (Duff 1986; Long 1980; Pica 1987; Pica and Doughty 1985; Plough and Gass 1993; Samuda and Rounds 1993).

Although the above-mentioned studies focus on the role of conversational interactions in second language acquisition, they do not show the role of

interaction in terms of language development. Brock *et al.* (1986), who examined the short-term effects of negative input in native-nonnative conversations, found little change in the learners' forms after listening to native speakers' feedback. However, Gass and Varonis (1989) showed that in nonnative-nonnative conversations corrected feedback helped interlocutors to incorporate target-like forms, but much later in the discourse. In 1994 Gass and Varonis supported the idea that the results of interaction are not necessarily immediate. In other words, through interaction learners may notice a gap between what they produce and what is produced by speakers of the L2. However, the awareness of this mismatch may show up later in time. In line with the results obtained by Gass and Varonis (1994), Alcón (1994) showed that in nonnative-nonnative interaction negotiation, independently of the learner's level of proficiency, familiarity with the items, or degree of participation, functions as a language awareness device. However, negotiated interaction was shown to be powerless to convert language awareness into acquisition.

In the literature on interaction, there seems to be agreement on the fact that negative feedback, which occurs when interlocutors find input which is incomprehensible, allows speakers to become aware of a possible conversational breakdown, modify their speech to make themselves understood (Long 1980, 1983, 1985), and adjust their production towards target-like use (Swain 1985). However, few studies have focussed on the effect of negative feedback on second language development. Pica *et al.* (1989) and Alcón and Guzman (forthcoming) analysed how second language learners responded linguistically when native speakers signalled difficulty in understanding them and compared types of learner responses in relation to different signal types and communication tasks. In both studies it was found that NS signals of non-understanding affected learners' interlanguage modifications. In particular, it was found that NS clarification questions had an effect on learner production. That is to say, by using clarification questions NSs provided negative feedback and thus forced learners to modify their production towards target-like use. However, Alcón and Guzman suggested that care should be taken in considering the effect of NS signals of incomprehension on second language acquisition. They claim that if it is true that NS clarification questions force learners to modify their production, it is also true that NS confirmation requests provide learners with an input which may facilitate language

development. The authors therefore concluded there was a need for research focussing on the effect of negative feedback on language development.

The present study was undertaken to address this need. If, as suggested by White (1987), comprehension difficulties are what allow learners to notice that certain linguistic modifications are necessary, what is the relationship between signals of non-understanding, second language production and language development? To answer this question three hypotheses were tested in a study of NS and NNS secondary school students. So that the task factor would become a variable affecting the amount of interaction, the NS and NNSs were asked to perform two different communication tasks: an information gap activity and an opinion exchange task. The hypotheses were:

1. The proportion of negotiated interaction would be greater in the information gap task than in the opinion exchange task (following the claim of Doughty and Pica 1986 and Duff, 1986).

2. The effect of using clarification questions on learners' language development would be higher (drawing on Pica *et al.* 1989; and Alcón and Guzman, forthcoming, who reported that the NNSs' interlanguage modifications were greater after a request for clarification than after a confirmation or comprehension check).

3. There is an effect of interaction on language development, but this is not immediate (drawing on Brock *et al.* 1986; and Gass and Varonis 1989, 1994).

2. RESEARCH DESIGN

The subjects of the study were 14 Spanish females aged between 15 and 18 who were studying English as a foreign language at a secondary school. Two English native speakers also participated as subjects of the study. As shown by an entry test held at the beginning of the academic year, the learners' level of English was not statistically different.

Each subject performed two different communication tasks, an information gap task and an opinion exchange task. In the information gap task the NS had to tell the learners where to place objects (human beings, inanimate objects, animals...) on a beach scene board. In the opinion exchange task NS-NNS engaged in a discussion on having holidays in Summer or in Winter.

Immediately after performing the tasks, the subjects were given an identical board, but this time it was the learner who had to tell the NS how to arrange the objects on the board. In the opinion exchange task, they discussed the advantages and disadvantages of going to the sea-side during their holidays. Finally, a week later, they performed the tasks again, but this time, in order to control task familiarity as a variable, the same objects had to be placed on a summer house board, and the discussion was about going on holidays. In all the opinion exchange tasks NSs were asked to argue a point of view opposite to that of the learner in order to create discussion.

Every communication task was recorded and transcribed by the researcher. Immediately after finishing the first opinion exchange task and the first information gap task, we compared the total number of sequences of negotiation. That is to say, following Varonis and Gass (1985) we isolated the number of clarification questions, comprehension questions and confirmation checks produced by the speakers in the two communication tasks. Then we isolated the total number of lexical items for which the interlocutors asked clarification questions, confirmation checks or comprehension checks.¹ After transcribing the second opinion exchange task and the second information gap task, we compared the learners' ability to produce items in the L2 for which interlocutors had indicated non-understanding in the first task. If they were not able to produce target-like use of the item, we checked whether the learners could provide a paraphrase or similar structure, or whether, on the contrary, if they were unable to deliver the message. Finally, a week later we made a similar comparison, but this time matching items produced in the first task with those produced a week later. Following Cohen's procedure (1960), a minimum agreement of 84% was found for the model. The following examples illustrate the procedure:

1st information gap task

NNS. What's fishing-rod?

NS. A fishing rod is something you use to catch fish, the animals that live in the sea.

NNS. Ah, caña de pescar.

2nd information gap task

NS. Pardon?

NNS. Yes, you must have an object to take some fish.

NS. Oh, the fishing rod, you mean.

NNS. Yes.

3rd information gap task

NNS. Place the fish-rod on the garage.

NS. OK; the fishing rod in the garage.

We see that the NNSs use a clarification question in order to ask for the meaning of fishing-rod, the NS uses a paraphrase in order to explain the item, and the NNS uses the Spanish word to indicate his understanding. In the second exchange the NS cannot understand the learner's utterance, which is repeated by the NNS. However, instead of using the word previously used in the first information gap task (fishing rod), the learner uses a kind of paraphrase to describe the object. Finally, in the third task the learner uses the word but it is not properly produced. Using this procedure, we could compare the items topicalized (highlighted in the discourse because of their difficulty) and produced correctly, and the items topicalized and produced incorrectly. In order to consider the effect of both the NSs' and NNSs' signal of incomprehension on second language development, items topicalized by NNSs were treated separately from those topicalized by the NS. So, in the previous example, "fishing rod" is topicalized by a NNS, while in the following example it is the NS who topicalizes the item:

1st information gap activity

NNS. No, next to the man with a camera there is . . .

NS. You mean a *towel*?

NNS. This is a *towel*?

NS. *There is a towel* next to the man with a camera.

NNS. Yes.

2nd information gap activity

NNS. There are a boy and mother.

NS. Yeah, there are a boy, his mother, and a *towel*.

3rd information gap activity

- NNS. There is a *towel* on the floor.
 NS. There is a green *towel* next to the door.

3. RESULTS AND DISCUSSION

Hypothesis 1, which predicted that the proportion of negotiated interaction would be greater in the information gap task than in the opinion exchange task, was supported in this study. As illustrated in table I, the number of clarification questions, confirmation checks and comprehension checks was used to measure the amount of negotiated interaction.

Table I: total number of clarification questions, confirmation and comprehension checks used in all the tasks.

	INFORMATION GAP TASK	OPINION EXCHANGE TASK
CLAR	304	179
CONF	214	97
COMP	31	14

CLAR = Clarification questions.
 CONF = Confirmation checks.

COMP = Comprehension checks.

X^2 analyses of results showed that the amount of negotiated interaction was greater in clarification questions ($X^2 = 32.04$, $df = 13$, $p = < 0.05$), and confirmation checks ($X^2 = 31.34$, $df = 13$, $p = < 0.05$) used in all the tasks by the interlocutors. However, the number of comprehension questions used in the information gap task and in the opinion exchange task is not statistically different ($X^2 = 77.91$, $df = 13$, $p = > 0.05$). Our results support the claims reported by Pica and Doughty (1986), Duff (1986) and Pica *et al.*, (1989) which suggested that information gap activities provide learners with greater opportunities to negotiate input. However, the results of the study partly contradict a recent study by Alcón and Guzman (forthcoming) in which the role of task was not a discriminating factor in the frequency of negotiation. The differences in the results may be accounted for by the difficulty of taxonomizing communication task types. That is to say, the degree of difficulty or complexity of the task may be modified by simply changing one feature, and as a consequence it is impossible for two tasks to be equal.

Drawing on Pica *et al.* (1989), and Alcón and Guzman (forthcoming), Hypothesis 2 predicted that the effect of using clarification questions on learner language development would be higher than the effect produced by using confirmation or comprehension checks. This hypothesis was also supported in this study.² To test it, the items highlighted by a clarification question or confirmation question were selected. In addition, as shown in table 2 (overleaf), we distinguished between those learners who indicated a lack of understanding in the first task (NU.), those who produced the item properly (PP.) and those who showed a certain approximation to it (A I.) in the second or third task. Since we were interested in the effect of interaction on learner language development, we ignored the items which, even if used in the first task, were not produced in the second or third information gap task. This type of activity was chosen in preference to the opinion exchange task because it produced a greater amount of negotiation.

The Pearson product-moment correlation test shows a high positive correlation between items highlighted using a clarification question and an approximation to the item in the following tasks ($r = 0.98$). The same statistical

test shows no correlation between use of clarification questions and items properly produced ($r = 0.39$). On the contrary, the degree of relationship between items highlighted using confirmation check and an approximation to the item in later production is not significant ($r = 0.36$). Moreover, there seems to be no correlation between the use of confirmation checks and items properly produced ($r = 0.16$).

Table 2. Items highlighted by a clarification question or confirmation check in relation to learner production.

	NU. CLAR	NU. CONF	PP. CLAR	PP. CONF	A I. CLAR	A I. CONF
S1	10	3	1	0	8	1
S2	10	8	2	1	7	6
S3	10	10	0	9	10	6
S4	20	7	3	2	18	4
S5	18	5	1	2	14	2
S6	14	4	4	3	11	4
S7	34	11	3	8	27	9
S8	21	8	2	1	17	6
S9	14	4	4	3	11	3
S10	6	4	2	2	6	3
S11	6	6	1	6	5	4
S12	6	5	2	4	4	1

S13	8	2	1	1	4	1
S14	6	0	2	1	5	0

NU. CLAR. = non-understood items signalled by a clarification question.
 NU. CONF. = non-understood items signalled by a confirmation check.
 PP. CLAR. = Items produced properly in the second or third task and signalled by a clarification question in the first task.
 PP. CONF. = Items produced properly in the second or third task and signalled by a confirmation check in the first task.
 IA. CLA. = an approximation to the items in the second or third task and signalled by a clarification question in the first task.
 IA. CON = an approximation to the items in the second or third task and signalled by a confirmation check in the first task.

So far, outcomes of the study support the claim that negotiation is the means through which language items are highlighted (Alcón 1994; Plough and Gass 1993). This is clear in the way most of the items for which learners indicate a signal of non-understanding are later used in the discourse, but frequently they are not correctly produced. Then, in line with the research reported by Alcón (1994), and Gass and Varonis (1994), our study shows the role of negotiation in making learners aware of certain linguistic difficulties, but casts doubt on the assumption that negotiated items in interaction have a direct effect on language development. The effect of using clarification questions for language development suggests that selective attention and awareness are important for language development (Schmidt 1990; and Long 1992). Closer examination of the data indicates that by using clarification questions speakers are forced not only to produce the language (Alcón and Guzman, forthcoming), but also focus explicitly on the way language is used. On the other hand, when they are exposed to confirmation questions, the listeners tend to express acknowledgment. Moreover, most of the clarification questions are produced in order to elicit lexical explanations, while confirmation checks are related to the content of the conversation. It is also possible that the learners' belief about the learning process has an effect on the attention they pay to language. It must be remembered that for a long time the teaching of English was grammar-based and consisted of vocabulary learning. It is not difficult, then, to understand why the learners' attention is

focused on lexical difficulties. Another possible explanation is suggested by VanPatten (1990) who claims that lexical information is processed before grammar.

The fact that clarification questions serve to focus learner attention in those cases where there is some difficulty in communicating, their effect on raising the learner's awareness and their impact on the learner's attempt to approximate the L2 are even clearer in NS use of clarification and confirmation checks (Figure 1 and 2).

The positive correlation between the use of confirmation checks and items produced correctly ($r = 0.23$) or incorrectly (0.38) indicates the direction of the association of the two variables. In other words, it shows that the use of confirmation checks helps learners to restructure their knowledge of the L2 to a certain extent. However, the relationship between the variables is not strong. On the contrary, the degree of relationship between the NSs' use of

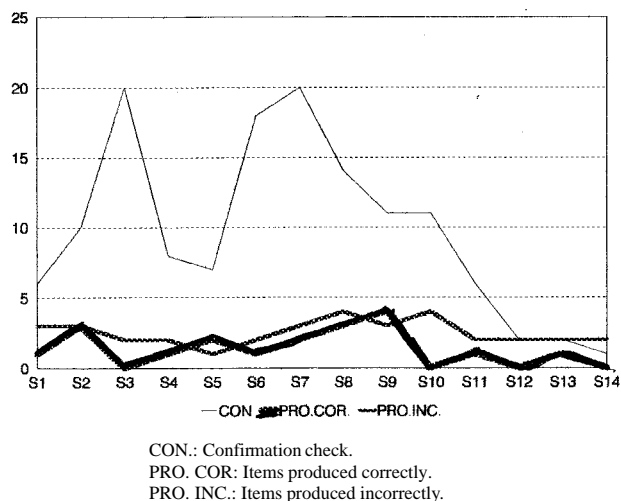
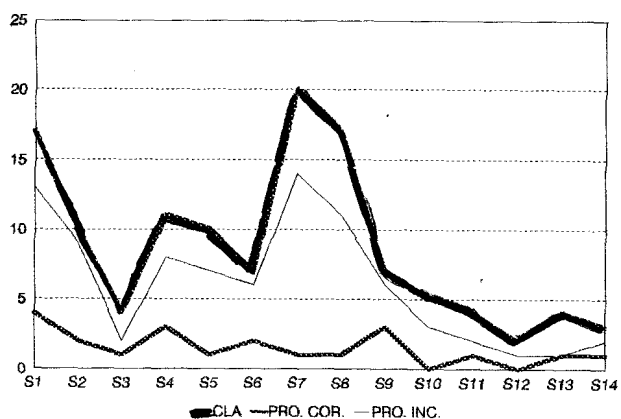


Figure 1: Lexical items topicalized by the NS' use of confirmation checks and produced correctly or incorrectly by learners.



CLA.: Clarification questions.

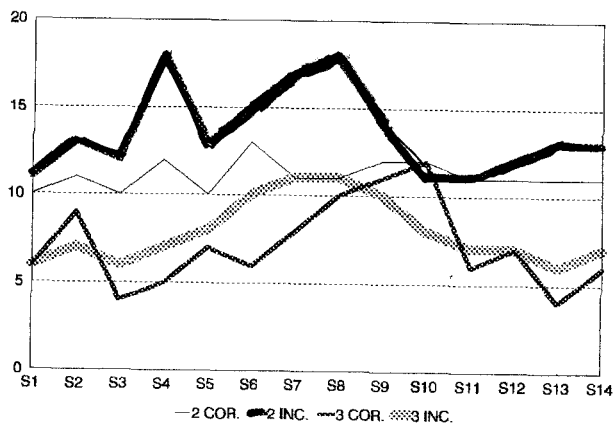
PRO. COR.: Items produced correctly.

PRO. INC.: Items produced incorrectly.

Figure 2: Lexical items topicalized by the NS' use of clarification questions and produced correctly or incorrectly by learners.

clarification questions and items produced properly (0.41) or incorrectly (0.98) by learners shows a similar pattern to the one described above for the learners' use of clarification questions and items used correctly or incorrectly.

Hypothesis 3, which claimed that the effect of interaction on language development was not immediate, was not supported in this study. To test this hypothesis we chose only the items topicalized by clarification questions or confirmation checks in the first task and later used both in the second and third task. By comparing the items produced in the second and third task, we attempted to find out whether there were linguistic effects because of prior interaction. Figures 3 and 4 show the effect that interaction has on learner production in two different periods of time: one after finishing the first task and the other a week later.



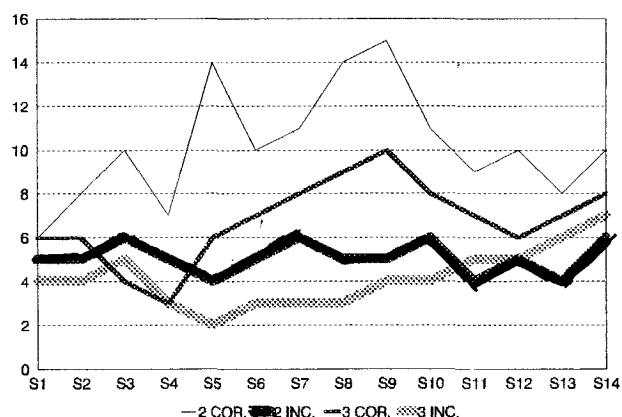
2COR. = produced correctly immediately after performing the task (during the second task).

3COR. = produced correctly a week later (during the third task).

2INC. = produced incorrectly after performing the task (during the second task).

3INC. = produced incorrectly a week later (during the third task).

Figure 3. Number of lexical items topicalized by clarification questions and produced correctly or incorrectly in two different periods of time.



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2COR. = produced correctly immediately after performing the task (during the second task).

3COR. = produced correctly a week later (during the third task).

2INC. = produced incorrectly after performing the task (during the second task).

3INC. = produced incorrectly a week later (during the third task).

Figure 4. Number of lexical items topicalized by confirmation checks and produced correctly or incorrectly in two different periods of time.

As far as the impact of clarification questions on learners' production is concerned, X^2 analysis of results shows that the difference between production in the two periods is not statistically different ($X^2 = 5.92$, $df = 13$, $p > 0.05$ for items produced correctly; and $X^2 = 1.94$, $df = 13$, $p > 0.05$ for items produced incorrectly). Nor is the difference significant for the impact of confirmation checks on learner production ($X^2 = 3.21$, $df = 13$, $p > 0.05$ for items produced correctly; and $X^2 = 3.30$, $df = 13$, $p > 0.05$ for items produced incorrectly). Results of this study show that interaction does not show a clearer effect on subsequent conversations than it does in the conversation in which the interaction takes place. As a consequence, in line with previous research (Alcón 1994; Gass and Varonis 1994), our study provides mixed support for Long's (1980) revision of Krashen's (1980) input

hypothesis. It is true that interlocutors' use of clarification questions and confirmation checks eases comprehension and, to a certain extent, leads to modification of the learners' interlanguage rules. However, the study also indicates that the relationship between interaction and acquisition is not clear. It appears that one may generally use certain cooperative strategies in order to comprehend input without turning it into intake. Similarly, one can easily be pushed to modify one's interlanguage in order to be understood without obtaining interlanguage development. This does not mean that there is a lack of relationship between interaction and language development, but simply that this relation is not immediate. In other words, the interactional feature observed in interlanguage discourse plays an important role in comprehension, but the relationship between interaction and language development is rather complex and not automatic.

4. CONCLUSION

This study examines the role of interactional features on language production and development in the context of learning English as a foreign language. The results shed light on the role that different types of task may have in the relationship between interaction and language production. The relationship between two different types of task (information gap task and opinion exchange task) and language output has been supported in this study, but the relationship between language output and second language development is not linear.

Conclusions drawn from the study also suggest that interaction facilitates better comprehension and awareness of linguistic difficulties. However, the effect of interaction on language development seems to be multiple and complex. Consequently, care should be taken before making general statements about the effect of interaction on second language acquisition, as they are bound to be oversimplified. The results of the study support the claim that interactional adjustments facilitate comprehension (Long 1980, 1983, 1985) and bring specific information to the learner's attention. The study also shows that by signalling incomprehension learners become aware that their current interlanguage rule system is inadequate and start to restructure their interlanguage. The main relationship between interaction and language pro-

duction appears to be more effective communication, including comprehension by NNS, but the relationship between interaction and learner intake appears to be a long-term process. What the learner gets from the interaction is a further stage in the acquisition process, as shown by the number of lexical items produced incorrectly by the learners. Imperfect learner output does not mean that the interaction has no effect on their interlanguage, but that deeper analysis, practice, and perhaps time processing are required for eventual second language development.a

NOTES

1. *Comprehension checks*: Following Pica (1987, 1991) *comprehension checks* occur when the speaker wants to determine if the listener has understood him. *Clarification checks* refer to the listener's signals of non-understanding. Finally, *confirmation checks* occur when the listener is not completely sure of the speaker's message.

2. Since the comprehension questions produced by the interlocutors were few and those produced in the tasks were statistically insignificant, we only analysed the use of clarification and confirmation questions. We also decided to focus on lexical items since the learners had difficulty in understanding them, and signalled their incomprehension in the discourse.

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