

# Can negotiation provide a context for learning syntax in a second language?

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Evidence from a growing number of studies has revealed that linguistic modification occurs during negotiation. No research has yet examined whether such modifications assist the learning of syntax in a second language (L2). The present study asks if negotiation can aid one process in the learning of L2 syntax known as syntacticization. The three research questions addressed were: (1) To what extent are linguistic modifications during negotiation evidence of syntacticization? (2) To what extent do different negotiation moves affect syntacticization? and (3) To what extent does negotiation affect syntacticization over time? Evidence suggests that negotiation would integrate and intensify certain key processes in L2 learning and that these would have an impact on syntacticization over time. Experimental/control treatments were contained within ten sessions as 19 L2 learners participated in communication tasks with native speakers through a computerized writing conference. Results indicated that negotiation could stimulate syntacticization and sustain the process over time. However, comparisons with one control group showed that syntacticization was independent of the type of treatment given.

This paper<sup>1</sup> will report a study that was part of a larger research project investigating the extent to which a type of social interaction known as negotiation could assist the learning of syntax in a second language (L2). The study focused on two constructs that originated from very different fields: negotiation and syntacticization. Negotiation was developed in ethnomethodology, conversation analysis, and interactional sociolinguistics (Garfinkel 1967; Goffman 1967; Gumperz 1982) and subsequently introduced to the field of second language acquisition (SLA) (Hatch 1978a, 1978b; Long 1981). Syntacticization, however, was developed in the field of typological linguistics (Givon 1979a, 1979b, 1981), related to grammaticalization (Meillet 1912; Traugott & König, 1991), and more recently introduced to second language acquisition (SLA) (Sato 1986; Perdue & Klein 1992).

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This article will first define negotiation and syntacticization and also provide the theoretical and empirical background for the current study. After that, it will present the research questions and their respective hypotheses and describe the methodology that was used to address these questions. Next, the article will report the findings and then consider a few issues that were raised. Finally, the limitations of the study and several directions for future research will be discussed.

The construct of negotiation is defined as a learning process whereby: (a) The even flow of communication is interrupted as a result of real or anticipated difficulties of comprehension. Such problems could range from minor losses in clarity to complete breakdowns in communication; (b) Interlocutors collaborate in order to repair comprehension difficulties through a variety of interactional adjustments such as comprehension checks (*Do you understand?*), clarification requests (*What? Sorry?*), and confirmation checks (*Did you say apple?*).

Syntacticization is defined as a process of language change whereby morphosyntactic devices in an L2 increase over time and reliance on discourse-pragmatic context declines. This is a slight departure from the way syntacticization has been seen in creole studies (Sankoff 1972). These studies had conceived the process in terms of taking a particle that previously had morphological means becoming a syntactic function word. According to both definitions, syntax emerges from discourse (Givon 1979a, 1979b; Sato 1986) so that, for example, L2 learners will rely less on topic-comment and more on subject-predicate structures in their communication. To illustrate this, L2 learners would shift from utterances like *Philly it nice place-* to *Philly is a nice place*, (topic-comment to subject predicate) and from *She go store and she rich-* to *She go store because she rich* (loose coordination to tight subordination). In the next section, we turn to the theoretical and empirical motivations for this research.

### Theoretical and Empirical Background

The theoretical motivation for the current study came from the view that negotiation could provide a context for key processes in language learning that would fuel the acquisition process (Pica 1994). Specifically, negotiation was believed to provide learners with opportunities for comprehensible input (Krashen 1981; Long 1981), modified output (Swain 1985, 1993, 1994), focus on form (Long 1992; Rutherford & Sharwood Smith, 1988, 1990; Schmidt & Frota 1986), and feedback (Schachter 1983, 1984, 1986, 1991; Lightbown & Spada 1990; White 1991). All of the above have been argued to be important processes for L2 learning. Given that negotiation can integrate these processes and provide them in a heightened form, I argue that negotiation will lead to general interlanguage change and provide a heightened form of syntacticization.

The empirical motivation for the study came from a re-analysis of negotiation and syntacticization studies. The re-analysis of negotiation stud-

ies provided some evidence that the linguistic modifications during negotiation of meaning could be regarded as a type of syntacticization, i.e., manipulation of interlanguage syntax. The re-analysis of syntacticization studies revealed the potential role that negotiation could have in assisting syntacticization. Both examinations suggested a role for negotiation in L2 learning that had hitherto been unexplored in the field of SLA. A few extracts from these re analyses are shown below.

Data from Long's (1981) study revealed that native speakers (NSs) could provide a type of input that had been syntacticized for L2 learners. An example of this is shown in (1):

- (1)
- |                             |            |
|-----------------------------|------------|
| NS: Do you wanna hamburger? | [trigger]  |
| NNS: Uh?                    | [signal]   |
| NS: What do you wanna eat?  | [response] |
| NNS: Oh! Yeah, hamburger    | [closure]  |

Example (1) shows that the NNS was given an alternative way to encode the L2. The DO + SVO structure of the trigger was modified to a Wh- + Sub/Aux inversion structure in the NS's response. Varonis and Gass (1988) provide evidence that NNSs can provide syntacticized input to each other, as shown in example (2):

- (2)
- |  |            |
|--|------------|
| NNSa: He stands up? He stands, you mean? He stands up? | [trigger]  |
| NNSb: He stand. He is standing and—                    | [signal]   |
| NNSa: He is standing                                   | [response] |

In this case (2), NNSb provided a syntacticized version of her own utterance (*He stand. He is standing and*) which NNSa then incorporated (*He is standing*). In other words, NNSb's self-modification led to a syntacticized change in NNSa's original utterance, i.e., from present simple to present progressive tense. In another negotiation study, Pica, Holliday, Lewis and Morgenthaler (1989) reveal that learners may be given data not only about lexical or semantic features of an L2 but also about L2 structures. This could be valuable in building their interlanguage:

- (3)
- |   |            |
|---|------------|
| NNS: Children they visit their uncle few days.    | [trigger]  |
| NS: Their uncle has the children?                 | [signal]   |
| NNS: Their uncle has the children for a few days. | [response] |

In example (3), the NNS is shown that *uncle* and *children* could function in either subject or object position in a sentence.

Re-analysis of data from a negotiation perspective not only revealed that syntacticization occurred but also suggested how the process might be assisted, something that was accounted for unsatisfactorily in previous

work (Perdue & Klein 1992; Traugott & König 1991). Negotiation may play an important role in syntacticization because it can make L2 forms salient to learners and therefore more easily acquired. Pica, Young, and Doughty (1987) have demonstrated how repetition and rephrasing occur in negotiation. Data from Sato's (1986) study of syntacticization over a ten-month period showed how a NS could repeat and rephrase a NNS's utterances as a syntacticized rather than a paratactic form.

In the next section, the research questions are described and their respective hypotheses are outlined.

### Research Questions

This study addressed three research questions:

To what extent are linguistic modifications during negotiation evidence of syntacticization?

To what extent is there a differential effect for different types of negotiation moves on syntacticization?

To what extent does negotiation assist syntacticization over time?

*To what extent are linguistic modifications during negotiation evidence of syntacticization?*

The first research question arose from studies that have demonstrated, almost incidentally, that linguistic as well as interactional modifications occur during negotiation. The argument to be made here is that these linguistic modifications (the addition, deletion, and substitution of morphosyntactic features) could be considered a type of syntacticization. Some of the studies revealed that a heightened form of syntacticization is available in the context of comprehensible input (Long 1981; Long & Porter 1985; Pica 1987a; Pica & Doughty 1985a, 1985b; Pica, Young & Doughty 1987; Varonis & Gass 1988; Loschky 1994), and others in the context of comprehensible output (Swain 1985, 1993, 1994; Pica, Holliday, Lewis & Morgenthaler 1989).

In order to address this question, the following hypothesis was formulated:

*Hypothesis 1: Learners who negotiated would manipulate interlanguage syntax, i.e., syntacticize.*

The first hypothesis was motivated by a re-analysis of data from negotiation studies (Butterworth 1972; Brunak, Fain & Villoria 1976) demonstrating that NSs provide syntacticized models of NNS messages, and that NNSs syntacticized their own messages in response to NS signals. In addition, data from syntacticization studies reveal a potential role for negotiation in enabling learners to syntacticize (Sato 1986; Perdue & Klein 1992; Ramat 1992).

*To what extent is there a differential effect for different types of negotiation moves on syntacticization?*

The second research question arose from Swain's (1985) argument that certain negotiation moves were more likely to push learners to modify their interlanguage than others. For example, certain moves such as clarification requests (*What? Huh?*), signaled a problem in interaction yet supplied no (accurate) alternatives; in this way, learners were forced to modify their initial messages. Other moves, such as confirmation checks (*The boy went to the store?*), would be less likely to encourage learners to modify their messages because the NS provides an L2 model of original message in the form of a yes-no question. The following hypothesis was formulated to address this question:

*Hypothesis 2: Learners who were given clarification requests as negotiation signals would manipulate their interlanguage syntax, i.e., syntacticize, more than those who were given signals through confirmation checks.*

Hypothesis 2 was motivated by data from Pica (1987b), Pica, Holliday, Lewis and Morgenthaler (1989) and Nobuyoshi and Ellis (1993). These studies provided evidence suggesting that clarification requests led to more manipulation of learners' interlanguage than did other types of negotiation moves. Therefore, it was predicted that learners who were given clarification requests as negotiation signals would add, delete, and substitute their interlanguage syntax more than those who had been given confirmation checks.

*To what extent does negotiation assist syntacticization over time?*

The third research question was based on the view that negotiation provides a heightened type of comprehensible input, modified output, focus on form, and feedback, all of which have been claimed as vital for interlanguage change and L2 learning (Krashen 1981; Long 1981; Swain 1985, 1993, 1994; Long 1992; Rutherford & Sharwood Smith 1988; Schmidt 1990; Schmidt & Frota 1986; Schachter 1983, 1984, 1986, 1991; Lightbown & Spada 1990; White 1991). The argument to be made here was that negotiation, therefore, should be able to assist syntacticization as one part of the L2 learning process. To address this question, the following hypotheses were advanced:

*Hypothesis 3a: Learners who manipulated their interlanguage syntax, i.e., syntacticized, during negotiation would continue to syntacticize over time.*

Hypothesis 3a was motivated by evidence from Day and Shapson (1991) and Lightbown and Spada (1990) that immediate posttest gains by experimental treatment groups had held over time as measured by delayed posttests. Learners in the experimental groups had participated in activities similar to negotiation and had outperformed the control groups on both immediate and delayed posttests. In addition, data from several negotiation studies suggested that gains from negotiation would hold over time (Nobuyoshi & Ellis 1993; Doughty 1992; Varonis & Gass 1994).

Subject's Pictures:

FIXED		FIXED			FIXED
	LOOSE		LOOSE	LOOSE	

Researcher's Pictures:

	FIXED		FIXED	FIXED	
LOOSE		LOOSE			LOOSE

Figure 1. Distribution of Fixed and Loose Pictures Between Subject and Researcher

*Hypothesis 3b: Learners who manipulate their interlanguage syntax, i.e., syntacticized, during negotiation will syntacticize over time more than learners who were denied opportunities for negotiation.*

Hypothesis 3b was based upon the view that negotiation could provide a heightened type of key processes in L2 learning and that the presence of these in negotiation would enable negotiators to syntacticize more over time than other learners (Krashen 1981; Long 1981; Swain 1985, 1993, 1994; Long 1992; Rutherford & Sharwood Smith 1988; Schmidt 1990; Schmidt & Frota 1986; Schachter 1983, 1984, 1986, 1991; Lightbown & Spada 1990; White 1991).

### Methodology

The data was collected between November 1993 and June 1994 at a university with the assistance of six trained research assistants. An experimental pretest, posttest, delayed posttest design was used for the study. Researchers met one-on-one with each subject in the study for a period of approximately three to four weeks. Each session with the researcher was one hour in length and was held in a university computer laboratory. This resulted in a total corpus of 285 hours.

There were 19 subjects in the study, 10 males and 9 females, with an age range of 18 to 47. The first language backgrounds were Korean (12) and Japanese (7). All were college educated adults and had received EFL instruction for a range of 2-14 years prior to the study. The subjects were enrolled as ESL students at the English Language Program and placed in low-intermediate level classes. Their Michigan Placement Test scores ranged from 18 to 62.

Each student took a battery of a pretest, posttest and delayed posttests as shown below. These tests targeted tense and aspect and had been revised on the basis of results from an earlier pilot study. Although the time period between the pretest and posttest was only three weeks, it was believed that reordering the sequence of the tests would reduce possible practice effects. The delayed posttest was administered one week after the posttest.

*Pretest:*

1. Grammaticality Judgment (written)
2. Free Writing
3. Sentence Combination
4. Cloze (written)
5. Grammaticality Judgment (listening)
6. Sentence Imitation
7. Oral Interview

*Posttest:*

1. Free Writing
2. Grammaticality Judgment (listening)
3. Grammaticality Judgment (written)
4. Oral Interview
5. Sentence Imitation
6. Cloze (written)
7. Sentence Combination

*Delayed Posttest:*

1. Free Writing
2. Cloze
3. Oral Interview
4. Grammaticality Judgment (listening)

The typing instructor program for Macintosh SE/30 computers enabled the subjects to increase their typing speed and accuracy. Subjects were required to reach 15 w.p.m. for participation in the study. The Aspects 1.03 Program is a writing conference software package with a 'Chat Box' feature that allows participants to type messages to each other. A record of the interaction is displayed on the computer screen, and messages are instantly available to the interlocutor as soon as a participant hits the return key. Subjects were introduced to the 'Chat Box' feature in a discussion of hobbies and interests with a researcher. After the subjects were familiar with this type of interaction, the researcher introduced them to a practice task, 'The surprise visitor,' a two-way jigsaw task that had been developed in previous negotiation research (Pica, Lincoln-Porter, Paninos, & Linnell 1995). Both participants were divided by a screen and could not communicate with each other visually or orally. The task involved the retelling of a picture story and required collaboration on the part of both participants because each had a unique distribution of pictures as shown in Figure 1.

The tasks were primed for past tense with prompts such as "This is a story about a dragon that happened a long time ago." The researcher also reviewed potentially difficult lexical items prior to completion of the task.

Subjects were randomly assigned to four groups:

- Group 1: Clarifiers (n = 5) - negotiation via clarification requests
- Group 2: Confirmers (n=5) - negotiation via confirmation checks
- Group 3: Interactors (n=5) - interaction without negotiation
- Group 4: Gamers (n=4) - no interaction/negotiation (computer games only)

The Clarifiers were given negotiation only through clarification requests and the Confirmers only through confirmation checks. The Interactors were denied any opportunities to negotiate and the Gamers were denied opportunities for either interaction or negotiation, as they engaged in computer

<b>(i) Clarifiers:</b>	
<i>Learner:</i> The little boy goed home (trigger)	<i>Researcher:</i>  what? (clarification request signal)
The little boy going home (response)	Ok. So in the next event his father cooked some dinner (continuation move)
<b>(ii) Confirmers:</b>	
<i>Learner:</i>  the little boy was wait for dog (trigger)	<i>Researcher:</i>  he was waiting for the dog? (confirmation check/signal)
yes (response)	Ok. So then the dog ran away. (continuation move)
<b>(iii) Interactors:</b>	
<i>Learner:</i> The dragon came fly down to earth  (trigger) what? (signal)	<i>Researcher:</i>  She started to look for some food  It doesn't matter. (denial of negotiation) here were some people in the village nearby. (continuation with narrative regardless)
The people liked dragon (continuation of narrative)	
<b>(iv) Gamers:</b> only participated in computer games during the treatment period, e.g., PhraseCraze, Hangman, Wheel of Fortune, etc.	

Figure 2. Examples of Negotiation.

games throughout the time period. Examples of the treatment given for each group are given in Figure 2.

This data was coded using a framework for negotiation developed by Pica, Holliday, Lewis, Berducci, and Newman (1991) and by a framework designed specifically for the present study for syntacticization. The latter framework targeted the addition, deletion, and substitution of



Table 1. Summary of Findings, hypotheses, and Results

Research Questions and Hypotheses	Results
<p>1. To what extent are linguistic modifications during negotiation evidence of syntacticization?</p>	<p>Supported: Mean syntacticized response = 0.21.</p>
<p>Learners who negotiate will manipulate their interlanguage syntax, i.e., they will syntacticize</p>	<p>Supported: Mean syntacticized response = 0.30 (Clarifiers) vs. 0.12 (Confirmers). <math>t</math>-value = 3.90, d.f. = 8, significant at <math>p &lt; 0.05</math>.</p>
<p>2. To what extent is there a differential effect for different types of negotiation moves on syntacticization?</p>	<p>Rejected: Mean Syntacticized T-units = 0.83 (Clarifiers) vs. 0.86 (Confirmers). <math>t</math>-value = 0.84, d.f. = 8, not significant at <math>p &lt; 0.05</math></p>
<p>Learners who are given clarification requests as negotiation signals will manipulate their interlanguage syntax, i.e., they will syntacticize more than those who are given signals through confirmation checks</p>	<p>Supported in Syntacticized responses over Times 2, 4, 6, &amp; 8: <math>F = 0.63</math>, d.f. = 3, not significant at <math>p &lt; 0.05</math></p>
<p>3. To what extent does negotiation assist syntacticization over time?</p>	<p>(i) Rejected in Syntacticized T-units over Times 2, 4, 6, &amp; 8: Negotiators <math>F = 0.41</math>, d.f. = 3. Interactors: <math>F = 1.23</math>, d.f. = 3. Both not significant at <math>p &lt; 0.05</math>                  (ii) Rejected in Instances of syntacticization per T-unit over Times 2, 4, 6, &amp; 8: Negotiators: <math>F = 0.68</math>, d.f. = 3. Interactors: <math>F = 1.63</math>, d.f. = 3. Both not significant at <math>p &lt; 0.05</math>                  (iii) Rejected in Clauses per T-unit over Times 2, 4, 6, &amp; 8: Negotiators: <math>F = 2.54</math>, d.f. = 3. Interactors: <math>F = 0.57</math>, d.f. = 3. Both not significant at <math>p &lt; 0.05</math></p>
<p>a. Learners who manipulate their interlanguage syntax, i.e., syntacticize, during negotiation will continue to syntacticize over time</p>	
<p>b. Learners who manipulate their interlanguage syntax, i.e., syntacticize, during negotiation will syntacticize over time more than learners who are denied opportunities for negotiation</p>	

morphosyntactic features such as verb and noun morphology, subordination, passivization, and gerundivization. For example, in the addition of verb morphology a learner could initially type *Gabrielle ride Philadelphia*, then researcher would signal with *What?*, and the learner might respond with an example of the deletion of subordination which could occur as: *Gabrielle rode to Philadelphia because she was excited* (Learner) → *What?* (Researcher) → *Gabrielle rode to Philadelphia. She was excited* (Learner).

### Results

From Table 1, we can see that the first research question (To what extent are linguistic modifications during negotiation evidence of syntacticization?) was answered in the affirmative. When syntacticized responses to the researcher's signals were examined, it was found that the mean syntacticized response was 0.2136 (approximately one fifth of all responses). For a response to be syntacticized, it was not necessary for the learner to produce an accurate L2 response. It was critical, however, that the response modified the trigger through the addition, deletion, or substitution of specific morphosyntactic features. Examples of how negotiation could assist syntacticization are given below. The bolded words are provided for clarity and were not bolded in the original transcripts.

(4)

NNS:           boat was moving and **banp**

NS:             sorry?

NNS:           boat is up and down and wave on water and banping

(From: Task 8 'Storm')

(5)

NNS:           The wave to push a ship so the ship moved a lot

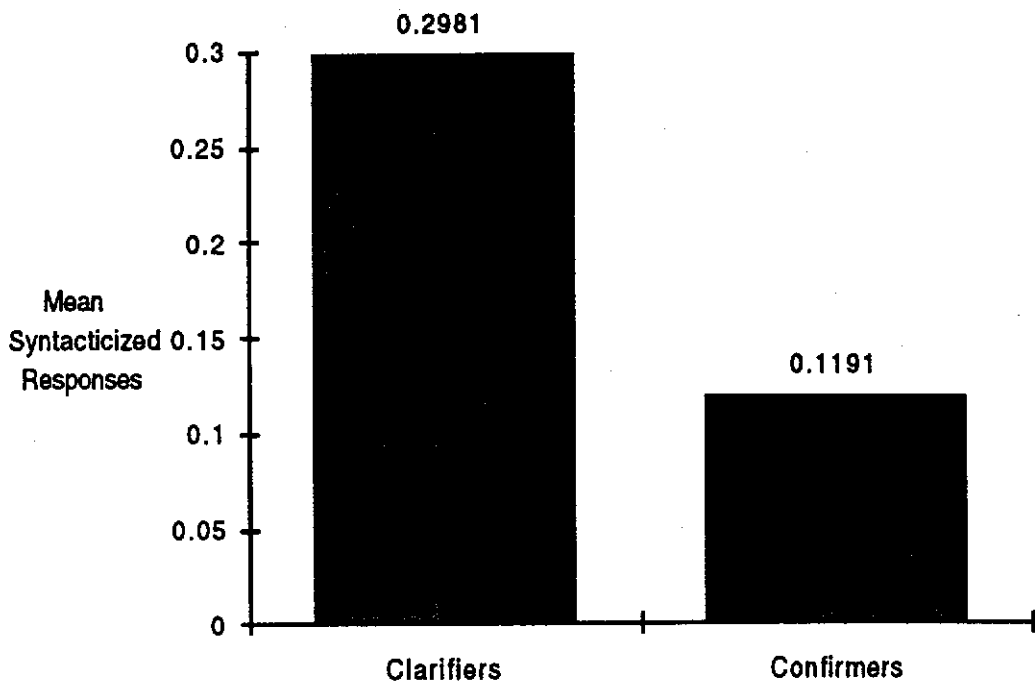
NS:             sorry?

NNS:           The ship very moved because the wave push to the ship

(From: Task 8 'Storm')

In example (4), the learner added *-ing* to the verb *banp* (possibly 'bump') in response to the researcher's request for clarification over an action occurring in the past (past progressive). In example (5), the learner manipulated subordinate and infinitive structures rather than verb morphology. The learner added a subordinate clause (*because the wave push to the ship*) in response to the researcher's signal (*sorry?*) in order to clarify the original trigger message. Furthermore, the learner switched the order of an infinitive verb from the trigger (*to push*) to the response (*push to*) resulting in the deletion of the infinitive.

The second research question (To what extent is there a differential effect for different types of negotiation moves on syntacticization?) was also answered in the affirmative. The hypothesis that learners who were given



**Figure 3. Comparison of Mean Syntacticized Responses by Clarifiers (N = 5) versus Confirmers (N = 5). This was significant at the  $p < 0.05$  level.**

clarification requests as negotiation signals would syntacticize more than those who were given signals through confirmation checks was supported, as shown in Figure 3.

From Figure 3, we can see that the Clarifiers syntacticized at almost three times the mean of the Confirmers. The following two examples show how Confirmers frequently behaved when they were given the researcher's signal.

(6)

NNS: **And the boy planted many carot seed  
and the carrot grow up**

NS: many carrot seeds?

NNS: yes

NS: Let's move on

(From: Task 1 'Carrot Seed')

(7)

NNS: Girl didn't looking for her class.  
Girl keep look her paper.

NS: Didn't look for her class?

NNS: Yes, that girl continually stand on the aile

NS: stood on the aisle?

NNS: Yes, stood on the aisle

NS: Ok

(From: Task 6 'School')

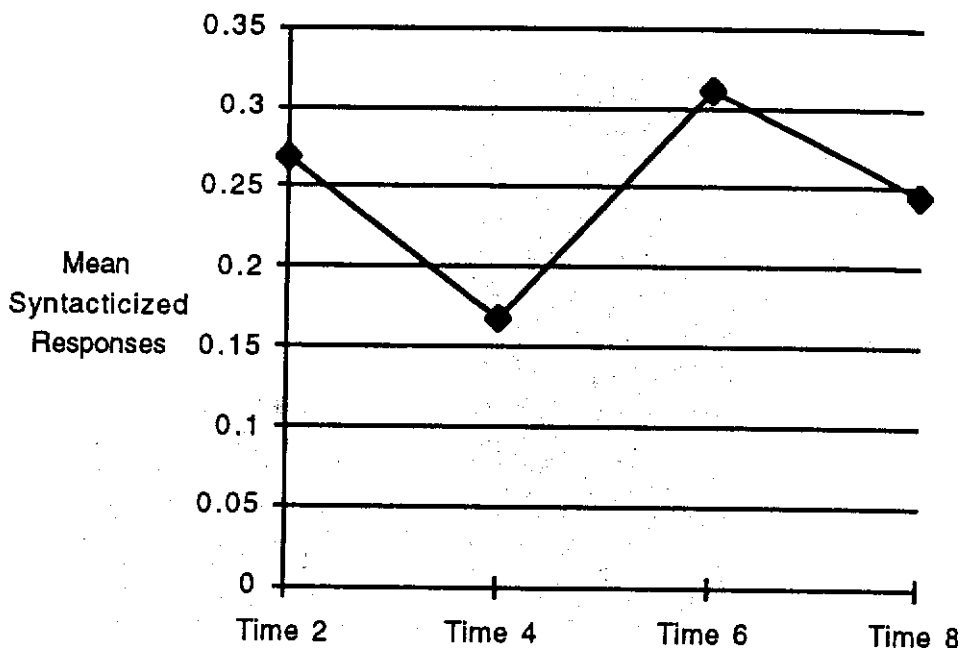


Figure 4. Mean Syntacticized Responses Over Time Periods 2, 4, 6 & 8 by Negotiators (N=10)

Example (6) shows that the researcher provided a syntacticized model to the learner of the trigger message by adding plural -s to a countable noun (*seed*). The learner acknowledged this in her response (*yes*), but did not modify the trigger herself. In example (7), the researcher's syntacticized model (*didn't look*) of the learner's trigger (*didn't looking*) was acknowledged (*yes*), but the learner did not manipulate her interlanguage syntax. In the next exchange, however, the learner did syntacticize her message in response to the researcher's signal (*stand* → *stood*).

The third research question (To what extent does negotiation assist syntacticization over time?) was addressed with two hypotheses. Hypothesis 3a (Learners who manipulated their interlanguage syntax, i.e., syntacticized, during negotiation would continue to syntacticize over time) was supported. Figure 4 displays syntacticized responses over four time periods. Due to higher absenteeism by the learners on certain days, there was insufficient data to report for every time period. The Clarifiers and the Confirmers were combined into one group for this hypothesis (henceforth, the Negotiators).

From Figure 4, it is clear that the Negotiators proceeded in a stepwise fashion over time. Although they appeared to regress at Times 4 and 8, there was evidence of improvement at Time 6 and possibly at Time 10 as well. This type of variability is consistent with other SLA research on interlanguage development (Sharwood Smith & Kellerman 1989). Tests from an ANOVA showed no statistical significance for any time period. Therefore, we could say that learners continued to syntacticize at the level they began with. There was no significant change, either to increase or decrease syntacticization. Hypothesis 3a was thereby supported.