

The Impact of Student-Initiated Interaction on EFL Reading Comprehension

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Abstract: The study reported in this paper aims to compare the reading comprehension of three groups of intermediate adult EFL learners on a reading selection under three input conditions: simplified condition (SC) characterized by both lexical and syntactic simplification, negotiated condition (NC) with no linguistic adjustments but with opportunities for interaction with the teacher, and unmodified condition (UC) without any modification or intervention. The results of the study revealed that the participants in both SC and NC groups significantly outperformed their peers in the UC group on the reading comprehension test. Moreover, the participants in the NC group achieved a significantly higher mean score than the participants in the UC group. This suggests that opportunities for negotiation of meaning facilitate reading comprehension more than linguistic adjustments. The conclusions drawn from the findings of this study highly recommend the use of authentic reading materials accompanied by negotiated interaction between the teacher and the learners.

Key words: interaction; negotiation; simplification; reading comprehension

INTRODUCTION

It is a widely accepted fact that in order to learn a language, one must receive the necessary data. This data is the language that the learner is exposed to through any medium such as listening, reading, or gestures in the case of sign languages (Gass & Mackey, 2006, 2007). In acquiring their first language, children receive a large quantity of L1 data from their parents and the surrounding environment. In learning a foreign language, the majority of the learners receive the L2 data from language classes. This data is provided to them through two main sources of input: the teacher and the textbook. A long-held debate among applied linguists as well as practicing teachers has been concerned with what kind of input is optimal for learning a foreign language. Should learners be exposed to authentic materials or simplified ones? If simplification works, how should it be brought about? These are the controversial issues that are still unresolved. While a number of studies have shown that modified input facilitates comprehension (Oh, 2001; Yano, Long & Ross, 1994), there is still ongoing debate as to what kind of modification is desirable. There are two important positions which ought to be examined in this respect. The first is Krashen's Input Hypothesis (1981, 1982, 1985), which maintains that comprehension is

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facilitated through simplification of input, and the other is Long's interaction hypothesis (1983, 1985), which argues for superiority of interactional modifications to simplification of input.

KRASHEN'S INPUT HYPOTHESIS

The Input Hypothesis is the central hypothesis of Krashen's Monitor Model. According to Krashen (1982), language acquisition occurs when an individual understands input that contains structures which are a bit beyond his or her current level of competence. In other words, if an individual is at stage i , the input that s/he needs to receive and understand should contain $i+1$. This suggests that if an individual is at stage 3, the input that s/he receives should not contain $i+5$, i.e. structures belonging to stage 5 or beyond. According to Krashen (1982), optimal input for language acquisition has the following characteristics:

- a. It is comprehensible.
- b. It is interesting and/or relevant.
- c. It is not grammatically sequenced.
- d. It must be in sufficient quantity.

Of the four characteristics mentioned above, it is the first one which is more relevant to the focal point of this paper, so it will be addressed below.

Comprehensibility is the most important input characteristic. As Krashen (1982: 63) put it, "It amounts to the claim that when the acquirer does not understand the message, there will be no acquisition." This suggests that incomprehensible input will not help. Krashen attributes the apparent failure of educational radio and TV programs in teaching foreign languages to the fact that the input these programs provide to the learners is nothing but noise.

My own children watched programs such as *Ville Allegre* faithfully for years, and acquired about as much as I did: They could count from one to ten in Spanish and recognize a few words such as *casa* and *mesa*! The comprehensibility requirement predicts that TV would, in general, be somewhat more successful than radio as a language teacher, but that even TV would be inadequate in beginning stages. (p. 63)

How can input become comprehensible to language learners? Krashen offers two solutions to this problem: first the use of context by the learner and second the provision of simplified input by the teacher.

According to Krashen (1982, 1985), learners can benefit from three sources of contextual information to make sense of the incoming input. These contextual clues are extra-linguistic information (pictures and realia), the learner's knowledge of the world and the learner's previously gained linguistic competence. Thus, for example, it is possible for a learner who does not know the passive structure to make sense of the sentence *John was robbed of his money by the criminal* simply because according to his or her world knowledge the act of robbery is committed by criminals. This sentence could, of course, become more comprehensible with the aid of pictures and employing the learner's previously acquired knowledge with respect to the meaning of the preposition *by*.

The second way in which input becomes more comprehensible is to simplify it. Hatch (1979) summarizes the characteristics of the simplified input as follows:

- a. Slower rate and clearer articulation,
- b. More use of high frequency vocabulary and fewer idioms
- c. Syntactic simplification aided by shorter sentences.

Now does this mean that teachers should consciously simplify their speech when they address their students? Should they be preoccupied with using simpler vocabulary and shorter sentences? The answer

to these questions according to Krashen (1982: 65) is “no” because “we make these adjustments automatically when we focus on trying to make ourselves understood.”

In brief, Krashen’s Input Hypothesis attaches too much importance to the role of comprehensible input and his main claim is that input that is slightly beyond one’s current level of linguistic competence is the *sine qua non* of language acquisition.

LONG’S INTERACTION HYPOTHESIS

Long’s Interaction Hypothesis is an extension of the Input hypothesis. Long (1983, 1985) argued that input becomes comprehensible not only through simplification and contextual clues, but also through modification of the interactional structure of conversation. These modifications occur when there is a communication problem, as a result of which the interactants negotiate to seek solutions to it. “As they negotiate, they work linguistically to achieve the needed comprehensibility, whether repeating a message verbatim, adjusting its syntax, changing its words, or modifying its form and meaning in a host of other ways” (Pica, 1994: 494). Negotiated interaction, therefore, makes input comprehensible, which, in turn, results in further acquisition of linguistic forms. This claim has been known as the Interaction Hypothesis, according to which second language acquisition is promoted if learners get an opportunity to solve communication problems by means of conversational modifications. The devices used to bring about conversational adjustments, according to Long (1983), are of two types: strategies and tactics. Strategies are devices used to avoid conversational trouble, while tactics are devices used to repair discourse when trouble occurs. Relinquishing topic-control, selecting salient topics, and treating topics briefly are examples of strategies, while requesting clarification, and confirming one’s own comprehension are instances of tactics. Three of the most important interactional devices used in NS-NNS conversations are illustrated in Ellis (2003: 71). These devices provide NNSs with opportunities to resolve their communication difficulties, and thus facilitate meaning negotiation.

a. Comprehension checks: any expression designed to establish whether the speaker’s own preceding utterance has been understood by the addressee, for example:

A: I was really chuffed. Know what I mean?

b. Clarification requests: any expression that elicits clarification of the preceding utterance, for example:

A: I was really chuffed.

B: Uh?

A: Really pleased.

c. Confirmation checks: any expression immediately following the preceding speaker’s utterance intended to confirm that the utterance was understood or heard correctly, for example:

A: I was really chuffed.

B: You were pleased?

A: Yes.

Needless to say, all the above sequences involve a language problem over the meaning of “chuffed.” Nevertheless, this problem is resolved through the negotiation process, a device that facilitates comprehension.

Long’s (1996) update of the Interaction Hypothesis goes beyond this and suggests that opportunities for interaction not only provide learners with comprehensible input but they also help them receive corrective feedback, notice gaps in their interlanguage and modify their output. In simple terms, as Gass and Mackey (2006) rightly argue, the new model of the Interaction Hypothesis connects exposure to language (input), production of language (output), and corrective feedback on production (interaction)

as important environmental factors for the tree of second language acquisition to grow. Recent updates on the Interaction Hypothesis are found in Philp and Tognini (2009) and Spada and Lightbown (2009).

INTERACTION STUDIES: A BRIEF REVIEW

Since the mid 1980s, a number of studies have been carried out in order to lend support to the claim that interaction containing negotiation of meaning is a better device to make input more comprehensible to learners than simplification. Pica, Young, and Doughty (1987), for instance, working with 16 nonnative speakers (NNSs) of English found that interactional adjustments increased comprehension more than linguistic adjustments. The participants in their study were asked to listen to a native speaker (NS) give directions for choosing and placing 15 items on a small board illustrated with an outdoor scene in two different input conditions. One group listened to a linguistically modified version of the script, with decreased complexity and increased quantity and redundancy. The second group listened to the same script without linguistic premodification, but with opportunities for interaction with the native speaker. The findings of the study revealed that “comprehension was best assisted when the content of the directions was repeated and rephrased in interaction; however, reduction in linguistic complexity in the premodified input was not a significant factor in NNSs’ comprehension” (Pica et al., 1987: 737).

In another study, (Gass & Varonis, 1994) compared prescribed modified and unmodified input with and without the opportunity for interactional modifications on both comprehension (measured by the learners’ performance when receiving directions on a task) and production (measured by their NS partner’s success in following the directions). They found that both negotiated and modified input positively affected NNS comprehension, compared with those who heard the unmodified script and could not negotiate about it. In a replication study, similar to that of Gass and Varonis (1994), Polio and Gass (1998) more strongly confirmed that interactional adjustments facilitate comprehension, providing further evidence for the assumption that interaction is the catalyst for positive changes in learner-language output.

There are a number of studies that have explored the effect of interactional adjustments on comprehension and vocabulary acquisition. Loschky (1994) focused on vocabulary items and locative constructions in Japanese as a second language. His study found a positive effect for comprehension of vocabulary but no effect on its subsequent retention and acquisition. Ellis, Tanaka, and Yamazaki’ (1994) study, however, found a more facilitative role for interactional adjustments in vocabulary acquisition than that of Loschky. They found that interactionally modified input, compared to premodified input, resulted in both better comprehension and acquisition of vocabulary.

The above review of interaction studies reveals that the majority of the studies made in this respect are concerned with listening comprehension tasks which involve learners to orally exchange information with NSs. There are very few studies which require learners to negotiate over written input. In this respect, Van den Branden’s (2000) study is one of the few innovative studies which examined the effect of negotiation for meaning on EFL children’s reading comprehension in primary schools. The children in this study read several chapters of an intriguing detective story and then answered a number of comprehension questions under four conditions, two of which involved negotiation of meaning, but the other two did not. The results of the comprehension tests revealed a significantly higher mean scores for the classes in which the students were allowed to negotiate for meaning.

THE STUDY

Given the small body of research on the role of negotiated interaction on written discourse, there is a need for studies which explore the impact of student-initiated interaction on reading comprehension of adult EFL learners. The present study, therefore, is intended to fill this void by answering the following research questions:

1. Does simplified input facilitate reading comprehension of adult EFL learners?

2. Does negotiated interaction triggered by student-initiated questions facilitate reading comprehension of adult EFL learners?
3. Does negotiated interaction triggered by student-initiated questions facilitate reading comprehension of adult EFL learners more than simplified input?

METHOD

Participants

The participants for this study were 90 EFL Iranian students (52 females and 38 males) who were studying English at a private language institute in Tehran. The majority of the participants were university students with an average age of 23 and their English language proficiency was on band score 5 of the IELTS. The participants were members of three intact classes taught by different teachers. The three classes were randomly assigned to three different conditions: simplified condition (SC), negotiated condition (NC), and unmodified condition (UC) described below.

Materials and Procedures

The reading passage, followed by 15 multiple-choice comprehension questions, was the main material used in this study (see Appendices A and C). This reading passage, an extract taken from Fowler (1974), was presented to the participants in three different modes. The participants in the simplified condition group (n=31) read the premodified version of the reading passage that had been simplified through employing more frequently used words and avoiding complex grammatical structures. The simplified version, an extract of which appears in Appendix B, was made by the researcher. The time taken to read the simplified version and answer the comprehension questions for this group, on average, was 20 minutes.

The participants in the negotiated condition group (n=31) read the unmodified version of the reading passage; however, before answering the comprehension questions they were given an opportunity to ask questions about any part of the passage they had difficulty with. In other words, they were invited to negotiate over the text with the teacher. To make sure that this procedure would be carefully performed, the researcher had a meeting with the teacher who taught the second class and explained to him the steps he was to follow. Then he attended his class as a non-participant observer to see how the procedure would be done. According to the given instructions, the teacher first handed the reading text out and asked the students to read it in ten minutes. At the end of this period, they were given an opportunity to ask questions about the meaning of unfamiliar words and phrases which they had difficulty with. This was the most important part of the experiment in which negotiation of meaning, in its true sense, was created as a result of the student-initiated questions. The interaction period, in which the teacher responded to the students' questions, lasted for no more than six minutes. The majority of the questions students asked were concerned with the meaning of unknown vocabulary. In replying to these questions, the teacher would first try to direct the attention of the students to certain contextual clues to guess the meaning of the unknown words and he would often invite the other students to participate in this guessing activity. The negotiation process was successful in almost all the cases and hence the participants were able to make accurate guesses. Finally, after this period of interaction, the comprehension questions were handed out and the participants were given ten minutes to answer them. Thus, the whole procedure for this group lasted for 26 minutes.

The participants in the unmodified condition group (n=28), which formed the control group of the study, read the unmodified version of the same reading passage and answered the same comprehension questions without any linguistic support. The time on task for this group, on average, was 22 minutes.

RESULTS

Table 1 shows the means and standard deviations for all the three groups.

Table 1: Descriptive statistics for the three groups

Groups	n	M	SD
SC	31	9.90	1.37
NC	31	11.58	2.55
UC	28	8.07	1.51

The result of the one-way ANOVA indicated that there is a statistically significant difference between the groups, $F(2, 78) = 25.09, p = .001$. Table 2 represents the related statistics.

Table 2: One-way ANOVA for reading comprehension scores

Source	df	SS	MS	F	Sig.
Between groups	2	181.17	90.58	25.09	.001
Within groups	78	314.11	3.61		

$p < .05$

In order to pinpoint the difference between the groups, a post-hoc Scheffe test was used. Table 3 displays the differences between the groups.

Table 3: Scheffe test of differences across the three groups

Groups	Comparison	Mean difference	Sig.
SC	NC	1.67	.003
	UC	1.83	.002
NC	UC	3.50	.000

$p < .05$

The results show that the mean score of the participants in the SC group is significantly higher than that of the participants in the UC group, who had read the original version of the text (mean difference=1.83). This suggests that simplification had a facilitative role in reading comprehension. Likewise, the mean score of the participants in the NC group is significantly higher than the mean score of the participants in the UC group (mean difference=3.50), which again indicates that the opportunity for negotiated interaction facilitated reading comprehension of EFL students. The interesting finding of the study, however, lies in the significantly higher mean score of the NC compared to SC (mean difference=1.67), suggesting that negotiated interaction had a more facilitative role than text simplification in promoting reading comprehension.

DISCUSSION AND CONCLUSION

The findings of the present study revealed that simplifying reading passages promotes reading comprehension. This is in line with the results of similar studies (Oh, 2001; Yano et al., 1994), yet inconsistent with the arguments advanced by other researchers (e.g., Honeyfield, 1977), who insist that simplification is a barrier, not an aid, to reading comprehension. Therefore, the first research question was answered in the affirmative. Another finding of the study is that giving learners an opportunity to negotiate over texts with their teacher is a giant help in promoting reading comprehension. Therefore, the second research question was answered in the affirmative, too. The third research question, however,

seems to be the most important one in that it seeks to explore which linguistic environment is more facilitative of reading comprehension, the one characterized by linguistic simplification or the one influenced by negotiated interaction. The obtained results revealed that the latter is a better environment than the former, suggesting that negotiation for meaning between the learners and the teacher is a better device for increasing reading comprehension than manipulating texts through simplifying them. Hence, the third research question was answered in the affirmative, too.

The results of this study are significant in three ways. First, they lend additional empirical support to the claim that interaction and negotiation of meaning facilitate the process of comprehension more effectively than linguistic simplification. It was mentioned earlier that the previous studies of this type were concerned with oral input, i.e. they examined this issue through listening comprehension tasks. This study, however, supports the Interaction Hypothesis from a new perspective.

Second, they suggest that if reading input is to become optimally comprehensible, there should be abundant interaction between the teacher and the learners, which, in turn, gives rise to negotiation of meaning. This new mode of making input more comprehensible no longer entitles teachers to the sole prerogative to ask questions; rather, it advises them to permit the learners to ask questions, which serve to clarify and confirm the challenging input. This new approach to teaching reading comprehension can be labeled as the *interactional* approach, which is rooted in Whitaker's (1983) proposal that it is learners rather than teachers who should think up and ask the questions in reading comprehension classes. Whitaker based his proposal on the general observation that in real life people normally interrogate the environment because they want to discover new things. Nevertheless, everything is different in the classroom, for there is always a supposedly omniscient teacher who has all the answers! The students' task, therefore, is to please the teacher by answering his or her display questions. Whitaker (1983) argued that by allowing learners to ask the teacher about the text, the questions they ask will be more relevant to their own developing understanding of the text. Therefore, given the chance to raise their own questions, the learners will mainly ask real questions (as opposed to display questions) about the issues unclear to them. This approach, as attested by the findings of the present study, gives rise to increased comprehension compared to when learners read simplified texts.

Finally, the findings of this study promote the widespread use of authentic reading materials in both EFL and ESL classes. Authentic reading texts have often been criticized on the grounds that they are difficult for learners and thus provide them with incomprehensible input, which is often discouraging. However, as the findings of the present study indicate, it is quite possible to make authentic texts comprehensible through opportunities for negotiated interaction. As Nuttall (1996) rightly argues, authentic texts not only encourage the use of text attack skills, but also exhibit characteristics of true discourse, often absent in simplified texts. The findings of the present study suggest that it is possible to benefit from authentic texts, even if their difficulty is beyond the learners' current level of competence, through adoption of an interactional approach to teaching reading comprehension.

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APPENDIX A (AN EXTRACT FROM THE UNMODIFIED TEXT)

A voluble hunter arrived carrying a small basket in which nestled a fat and beautiful Gaboon Viper. The skin of these plump, squat-looking snakes is covered with the most intricate and colorful pattern, and having purchased it, I carried it in for John to admire. The reptile had recently shed his skin, so the colors glowed with life, a lovely patchwork of pink, red, fawn, silver, and chocolate. John admired it, but implored me to keep it safely locked up.

APPENDIX B (AN EXTRACT FROM THE SIMPLIFIED TEXT)

A *talkative* hunter arrived carrying a small basket in which *there was* a fat and beautiful Gaboon Viper. The skin of these *wide and fat* snakes is covered with the most *complicated* and colorful pattern. *After buying* it, I carried it in for John to admire. The *snake* had recently *lost* his skin, so the colors *were bright*, a lovely patchwork of pink, red, silver, and chocolate. John admired it, but *asked* me to keep it safely locked up.

APPENDIX C (SAMPLE COMPREHENSION QUESTIONS)

1. The snake was particularly attractive to the narrator because
 - a. it was very expensive.
 - b. it had been very difficult to obtain.
 - c. its colors were seen at their best.
 - d. his friend was so fond of snakes.
2. The narrator's friend
 - a. was too frightened of the snake to look at it.
 - b. looked at the snake for a moment but did not like it.
 - c. thought it was very ugly and dangerous.
 - d. thought the snake was beautiful but asked the narrator to be careful with it.
3. According to the passage, the narrator,
 - a. put the snake in a normal cage.
 - b. made a special cage for it himself.
 - c. asked someone to make a cage for it.
 - d. used one of the monkey cages for it.