Negotiation of Meaning in Child Interactions

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This research examines conversational interactions between children, a group generally overlooked in second language acquisition (SLA) research. Specifically, the research focuses on (a) whether children can negotiate for meaning, (b) what strategies they use, and (c) whether there are differences between the ways adults and primary school children negotiate for meaning. Some possible effects of negotiation for meaning on child SLA are also explored. Students (n = 192) from age 8 to 13, were paired to form 96 age- and gender-matched dyads. The pairs worked together on 2 communication tasks: a one-way and a two-way task. From the transcriptions made of their conversations it was apparent that, like adults, children also negotiate for meaning and use a variety of strategies to do so. Although the pattern of use by children seems to differ from that of adults, the differences are not categorical but, rather, are manifest in the proportional use of particular strategies. Further, the evidence indicates that, like adults, primary school learners also benefit from the process of negotiation for meaning. It appears to provide them with the opportunity to receive comprehensible input, to produce comprehensible output, and to obtain feedback on their attempts. The results show that tasks that promote negotiation for meaning can be undertaken successfully by primary school second language (L2) learners, and provide evidence that there is a valid argument for making use of such pedagogical practice in L2 teaching for this age group of learners. The differences between the child and adult findings (see Oliver, 1995) highlight the fact that findings from adult studies cannot be generalized to child studies without adequate and appropriate research involving child learners.

BACKGROUND

The vital role of interaction in the process of second language acquisition (SLA) has been recognized for some time. The seminal work of Long (1980, 1981) has been the focus of extensive research (e.g., Braidi, 1992; Gass & Varonis, 1985a, 1985b, 1994; Pica, 1987, 1991, 1992, 1994; Pica & Doughty, 1985a, 1988). In turn, the important role of interaction has been translated into pedagogical practice, as reflected in the development of various teaching methods.

A great deal of this research has centered on a particular type of interaction, namely negotiation for meaning. This is the process whereby interactions are modified between or among conversational partners to help overcome communication breakdowns (Long, 1983a, 1983b; Long & Porter, 1985; Porter, 1986). Thus, it is cooperative interaction that often results in mutual understanding (Pica, 1987, 1992; Pica, Holliday, Lewis, & Morgenthaler, 1989; Scarcella & Higa, 1981; Varonis & Gass, 1985).

Cooperative interaction is beneficial because it provides learners with the opportunity to obtain comprehensible input that is uniquely modified

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for learners' individual circumstances (Gass & Varonis, 1985a, 1985b; Long, 1983b, in press; Pica, 1991, 1992; Pica & Doughty, 1985a). It also allows them to modify their own contributions to a conversation in order to make themselves understood; that is, to manipulate comprehensible output (Swain, 1985, 1995). Finally, through the process of negotiating for meaning, learners receive feedback about their attempts at the target language. These three factors—comprehensible input, comprehensible output, and feedback—are crucial elements in SLA (Long, 1996; Pica, 1992, 1994).

Given the apparent importance of negotiation for meaning, it is not surprising that a vast quantity of research has resulted from examining the learning conditions that promote such interaction (Pica, 1994). For instance, investigations have been undertaken on the effect of such factors as native speaker (NS) and nonnative speaker (NNS) pairings, proficiency, task type, gender, and other sociolinguistic factors on the amount of negotiation strategies used (e.g., Pica & Doughty, 1985a, 1985b, 1988). More recently, research has been undertaken to measure the outcomes of the process. Studies such as those by Loschky (1989, 1994), Gass and Varonis (1994), and Mackey (1995) have shown a direct relationship between interactional modifications, such as those that occur in negotiated interactions, and SLA.

Despite these studies, many factors surrounding the negotiation process are not understood fully. For example, the process has not been adequately studied in child populations. Therefore, the generalizability of the research findings with regard to age is yet to be determined.

Although the differences between adults and children are well recognized in SLA research, the results of adult negotiation studies have been used with little modification as the basis for teaching methodologies in child SLA. And yet, it is unclear at present how valid it is to use findings from adult studies for determining pedagogical practice in child SLA settings. Therefore, from a pedagogical perspective it is important to determine whether such a practice is appropriate and useful for child second language (L2) learners.

A study by Scarcella and Higa (1981) of adult—child and adult—adolescent dyads, found that greater modification was provided by adult NSs to child NNSs, than to adolescent NNSs. Whether this was a result of perceived or actual need is unclear; however, the indications are that the amount of negotiation for meaning is affected by the age of the participants (Plough & Gass, 1993), although the extent of the effect is uncertain.

One hypothesis is that children may need to negotiate less than older learners (Hatch, 1983). However, another is that children may need to negotiate more because their lower level of cognitive and linguistic development would lead to more communication breakdown and, therefore, to a greater need to negotiate for meaning. For instance, children may have a greater need to negotiate for meaning because they are more context-dependent, but are less metalinguistically and sociolinguistically aware (Harley, 1986; Scarcella & Higa, 1981). Also, children have less developed memory heuristics, and different underlying experiences and cognitive abilities (Ervin-Tripp, 1981; Faerch & Kasper, 1986; Freed, 1980; Hirvonen, 1985; Long, 1983c; Ramirez & Politizer, 1978; Wong-Fillmore, 1976). However, whether children are able to translate this need into reality is unclear from the literature.

Therefore, the purpose of the current research is to examine child—child interactions to determine whether primary school children are able to negotiate for meaning with age peers, and, if it is found that they do, to investigate the type of strategies they use to do so. It also seeks to determine if there are any apparent differences in the pattern of negotiation for adults and children. Finally, it seeks to examine whether the process of negotiation has a contribution to make to child SLA.

RESEARCH QUESTIONS

The present study is designed to answer the following questions:

1. Do primary school children negotiate for meaning with age-matched peers?
2. What strategies do they use to do this?
3. Are these results similar or different from the findings of adult studies?
4. Can the use of these strategies contribute to SLA in children?

METHOD

Participants

The participants in this study were students in middle and upper primary school aged 8 to 13 years. The total sample ($n = 192$), consisted of 128 NNSs and 64 NSs. The participants were selected and then later paired into 96 dyads according to language background, English language proficiency, gender, and age.

NNS Participants. These participants were selected from the four primary Intensive Language

Centers (ILCs)[1] in Perth, Western Australia, and were students who had arrived in Australia within the last 2 years and whose language proficiency was deemed insufficient for participation in regular mainstream classes. As self-reported, they came from a variety of first language (L1) backgrounds (see Appendix A).

For the purposes of this study, their proficiency was judged using a modified version of the Australian Second Language Proficiency Rating (ASLPR) scale (Department of Immigration and Ethnic Affairs, 1984) (see Appendix B).[2] The students were rated by their teachers as well as by the researcher. The researcher engaged in participant observation, for 1 week in each class, prior to the rating in order to become familiar with the students. A Pearson Product Moment Correlation showed a correlation between the teachers' and the researcher's ratings of 0. 91 ($p < 0.001$), which was considered adequately high. The students who participated in this study had proficiency ratings ranging from 2.0 to 3.5 on the modified ASLPR scale, as those with ratings below 2.0 were deemed not to have sufficient proficiency to participate in the study.

NS Participants. These participants were drawn from the mainstream classes of the four schools where the ILCs were located. The NSs were selected according to their ability, status, and Foreigner Talk (FT)[3] experience, so that those with an exceptional level of any of these qualities, either too high or too low, were excluded from the study. It was necessary to rely on their teachers' subjective assessment for the judgment of students' ability and status. However, FT experience was determined by the use of a short questionnaire administered to the mainstream students to determine the level of contact with L2 learners in class, in the playground, and at home, and by the teachers' rating of the same (see Appendix C).

Research Design

Participants were paired with age- and gender-matched peers and assigned to different groupings. These included three types of NS and NNS pairings: (a) NNS—NNS, (b) NNS—NS, and (c) NS—NS. There was a total of 96 dyads. Each grouping was subdivided into an equal number of male and female and younger (8 to 10 years) and older (11 to 13 years) pairs. In the NNS—NNS dyads, participants did not share the same L1.

Procedure

The pairs of participants were audio- and video-recorded while completing both a one-way and a two-way task (Long, 1980; Pica, Holliday, Lewis, & Morgenthaler, 1989) on two occasions, 1 week apart. Half the pairs completed the one-way task, and half the two-way task, first. To maintain consistency, in the one-way task the less English proficient of the dyad was always the provider rather than the receiver of information. Where both members of the pair were of similar proficiency, one member was nominated to be the "holder of information." This was held constant for both the first and second week. The first recording session was used to familiarize the students with the activity, the recording equipment, and the situation. The recordings from the second week were the basis for the transcriptions.

For each task, the students sat at desks, facing each other on either side of a barrier. The barriers were 40 centimetres high, allowing the participants to see each others' faces but not each others' task sheets. During the recording sessions, either the researcher or a trained assistant sat at one end of the desk supervising the tasks. The researcher's presence at the recording sessions had a two-fold purpose: (a) to allow direct observation and (b) to reduce the risk of "cheating."[4] A script outlining the tasks was read to the students at the beginning of each task. The students were allowed 30 minutes to complete each task, with most participants taking less than 20 minutes. At the conclusion of each task, the barrier was briefly removed to allow participants to see their partner's task sheet.

Tasks

The tasks were selected from commercially produced materials so that they would be typical of activities encountered by students in English as a second language (ESL) classes. A number of tasks were piloted with different ESL students prior to the study, and two were selected as most appropriate for this middle and upper primary age group. The one-way task involved the NNSs describing a simple black outline picture for their partners to draw. The two-way task was a jigsaw task where each participant had an outline of a kitchen with cut-outs and items to be placed in the kitchen. Each partner had half of the items already in position, whereas the remaining items were in position only on his or her partner's kitchen outline.

ANALYSIS

Transcriptions

Transcriptions were made by the researcher from the audio recordings. The transcripts were checked by the researcher against the video recordings, and details of the pragmatic situation and gestural moves were noted. The transcripts consisted of the first 100 utterances[5] from each task and were unedited representations of the spoken exchanges written in conventional English orthography, including all speech signals, such as hesitations and repetitions. All the transcriptions were checked by a trained observer against the video recordings for (a) segmentation of the utterances and (b) the content of each utterance. When discrepancies were found they were rechecked by the researcher using the video recordings. The researcher then made the final decisions about the content of the transcriptions. Based on a 5% sample of the data, interrater reliability between the researcher and trained observer (using simple percentage agreement) was 91%.

Analysis was based on the first 100 utterances of the transcripts for each of the two tasks. Therefore, 200 utterances were analyzed for each dyad—100 from the one-way task and a further 100 from the two-way task. Where the dyads completed the tasks in fewer than this number of utterances, their raw scores were scaled up to 100.

Although negotiation for meaning can be determined in several ways, the following features were the basis of the analysis, being selected as most representative of analyses undertaken in adult studies and, therefore, most useful for comparison. Each strategy is illustrated using examples taken from the data of the current study.

Percentage of Clarification Requests. Clarification requests were those utterances made by the listener to clarify what the speaker had said, and included statements such as "I don't understand," wh- questions, yes/no questions, and tag questions (see Long, 1980, 1983b; Pica & Doughty, 1985b), as in Example 1.

Example 1:

NNS: A little line in the leave.
NS: A what?

The percentage ratio in this and subsequent analyses was calculated by dividing the number of negotiation strategies (e.g., clarification requests) by the number of utterances and multiplying by 100.

Percentage of Confirmation Checks. Confirmation checks were those utterances made by the listener to establish that the preceding utterance had been heard and understood correctly, but they included repetition of all or part of the utterance accompanied by rising intonation (Long, 1980; Pica & Doughty, 1985b), as in Example 2:

Example 2:

NNS 1: Where does the um, glasses go?
NNS 2: The glasses?

Percentage of Comprehension Checks. Comprehension checks were those utterances made by the speaker to check whether a preceding utterance had been correctly understood by the listener and consisted primarily of questions, either tag questions, repetition with rising intonation, or questions such as "Do you understand?" (Long, 1980, 1983b; Pica & Doughty, 1985b), as in Example 3:

Example 3:

NNS: You know what, you know? [OK]?

Percentage of Total Conversational Adjustments (Total of the Above Three). This consisted of the combined use of the strategies described above.

Percentage of Partial, Exact, Expanded, and Total Self-Repetition. This consisted of the speaker's partial and exact repetitions of lexical items from their own preceding utterances within five speaking turns (Pica & Doughty, 1985b), as in Example 4:

Example 4:

NNS: How long centimetres?
How long centimetres? (Exact)
You know?
How long? (Partial)

Repetition also included expanded forms of a speaker's own utterances, as in Example 5:

Example 5:

NNS: And a half.
Four and a half.

Percentage of Partial, Complete, Expanded, and Total, Other-Repetition.[6] These included partial and exact repetitions of lexical items from an interlocutor's preceding utterances within five speaking turns (Pica & Doughty, 1985b). They also included expansions of the other's utterances, as in Examples 6 through 8:

Example 6:

NNS 1: A man have, a man have er two arm?
NNS 2: Yes, two arm. (Partial)

NNS 1: Two foot?
NNS 2: Two foot and two leg (Expanded)

Example 7:
NNS 1: Two metres from the edge?
NNS 2: Two metres from the edge. (Exact)

Example 8:
NNS: The cups?
NS: The cups? (Exact)
NS: The cups and the saucers? (Expanded)

Reliability

After training, a second rater coded 10% of the sample. The interrater reliability (calculated as percentage agreement) was 94%.

RESULTS AND DISCUSSION

Children and Negotiation of Meaning

A calculation of the means and standard deviations of the various strategies used by the dyads on the tasks, illustrates clearly that children negotiate for meaning with age-matched peers (see Table 1). This is also illustrated by the results and the examples from the transcripts cited in the text so far (i.e., examples 1 through 8). Further, as shown in Table 1, they utilize a variety of negotiation strategies in their conversation to negotiate for meaning. Similar to the findings from adult studies, the current study shows that the strategies used by children include repetition, both of their own utterances and those of their partners, as well as conversational adjustments. This can be seen in Table 1 where the results show that children use similar proportions of self-repetition (23.98%) and other-repetition (23.62%). It also shows that they used more clarification requests (5.71%) and confirmation checks (5.72%) than comprehension checks (0.86%), which were used rarely.

TABLE 1
Mean Percentage of Negotiation Strategies Used by Child Dyads

Strategy	*M*	*SD*
Clarification requests	5.71%	3.50
Confirmation checks	5.72%	2.93
Comprehension checks	0.86%	1.00
Conversational adjustments	11.99%	4.92
Self-repetition	23.98%	5.75
Other-repetition	23.62%	6.83

These results support the prediction that in spite of children's inherently egocentric nature, they can fulfill their responsibility in a conversation. In particular, evidence from the data suggests that, like adults, primary school children work cooperatively to facilitate mutual understanding. Therefore, it is apparent that (a) children can and do negotiate for meaning with age-matched peers and (b) they use a variety of strategies to do so.[7]

Adults versus Children

Although at a general level the process of negotiating for meaning is similar for adults and children in that they use similar types of strategies to overcome communication breakdown, differences are evident in the proportional use of these strategies. For example, it was apparent from observations made during the data collection that, unlike adults, children used comprehension checks only rarely. This is clearly shown in Table 1, where the mean use of this strategy across the total sample was 0.86%.

On the assumption that other differences may also occur in the use by adults and children of particular negotiation strategies, Table 2 has been constructed using the results of the current study and those reported by Long (1983a). The first three columns of the table show the results from the current study for each of the three types of NS and NNS pairings. The fourth and fifth columns show the results from Long's study of adults and include only NNS—NS and NS—NS dyads.

Long's (1983a) study was selected for comparison because many of the definitions he used for each of the negotiation strategies were the basis for those used in the current study. However, a statistical comparison of the two studies was not undertaken[8] as it would not have been appropriate because of differences in methods of data collection and differences in the type of tasks given to the participants (e.g., Long's results were based on six tasks,[9] including free conversation, directions for communication games, two com-

TABLE 2
Mean Percentage of Negotiation Strategies Used by Children and Adults

Strategy	Child NNS—NNS dyads	Child NNS—NS dyads	Child NS—NS dyads	Adult* NNS—NS dyads	Adult* NS—NS dyads
Clarification requests	7.71	3.97	3.19	10.35	1.83
Confirmation checks	6.27	6.44	2.62	18.15	3.83
Comprehension checks	1.25	0.41	0.62	18.15	4.09
Self-repetition	26.98	21.66	19.62	41.06	5.97
Other-repetition	26.27	22.91	17.06	15.09	6.67

Note. Asterisk (*) indicates data from Long (1983a).

munication games, and a discussion of the research).

Table 2 suggests that although adults and children use the same strategies to negotiate for meaning, there is a proportional difference in the degree to which each strategy is used by adults and children. Further, the indication from this simple comparison is that the nativeness or nonnativeness of the participants affects the pattern of interaction differently for adults and children and for each negotiation strategy. For example, clarification requests and confirmation checks are employed in similar proportions by both child and adult NS—NS dyads, 3.19% and 2.62% respectively for children, and 1.83% and 3.83% for adults. However, the same strategies are used more frequently by adult NNS—NS dyads (10.35%, 18.15%) than by either child NNS—NS (3.97%, 6.44%) or NNS—NNS dyads (7.71%, 6.27%). As can be seen, the differences appear more marked for confirmation checks than for clarification requests.

With respect to comprehension checks, and consistent with the observations made during the data collection, the results suggest that regardless of whether they are paired with NSs or NNSs, children use this type of negotiation strategy far less than adults do. As this particular conversational adjustment is overtly concerned with assisting one's partner to construct meaning, rather than just clarifying or confirming meaning for oneself, the egocentricity of children may account for these differences, suggesting a developmental effect for this type of conversational adjustment.

Similarly, there appears to be greater use made of "other-repetition" by children regardless of whether the dyads were NS—NS (children, 17.06%; adults, 6.67%) or NNS—NS (children, 22.91%; adults, 15.09%). This feature also may be affected by the developmental stage of the interlocutors; however, further research investigating negotiated interactions between children of a variety of ages is required for this claim to be substantiated.

A less straightforward result than "other-repetition" is the interesting difference in the pattern of use of self-repetition by adults and children. Adult NNS—NS dyads use this particular negotiation strategy more than any of the three types of child NNS—NS pairings. However, all the child dyad types use self-repetition more frequently than adult NS—NS.

Therefore, although children can and indeed do negotiate for meaning using the same type of negotiation strategies as adults, this simple comparison would seem to suggest that the patterns of use of these strategies may be different for adults and children. However, for this claim to be substantiated, future studies need to test this empirically. The evidence from the current study suggests that, similar to the claims made in adult studies, the process of negotiating for meaning provides primary school children with the opportunity to (a) receive comprehensible input uniquely modified for the individual, (b) produce comprehensible output, and (c) receive feedback about their attempts.

Comprehensible Input. Previous studies report that through the process of negotiation for

meaning, input is made comprehensible for the adult learners (e.g., Gass & Varonis, 1985a, 1985b; Long, 1983b, 1996; Pica, 1991, 1992; Pica & Doughty, 1985b; Scarcella & Higa, 1981; Varonis & Gass, 1985; Yule & MacDonald, 1990). The present data indicate that this is also true for primary school learners. For instance, in Example 9 below, the child NNS seeks clarification about what his partner has said by asking "Huh?" and "Can spell it?" As a consequence, he is provided with additional information that appears to make the input understandable, in this case the spelling of an unknown word, which he can match to the written label on his own task sheet. The fact that the unknown lexical item becomes understandable is signalled by his response, which is an answer to the original question.

Example 9:

NS: Where's the plant?
NNS: Huh?
NS: The plant. *(Exaggerated intonation)*
NNS: Plant. *(Said quietly to self)* Can spell it?
NS: P-L-A-N-T.
NNS: Oh. Plant is left side near the window.

Similarly, in Example 10, the use of repetition with expansion, supported by gestures from the second NNS, clarifies the meaning of the word "tall," changing what initially appears to be incomprehensible, into comprehensible input:

Example 10:

NNS 2: How tall is the tree?
NNS 1: How - tall?
NNS 2: Yer.
NNS 1: Just this one?
NNS 2: How tall?
NNS 1: That one or the other one?
NNS 2: No, this one how tall. *(Draws a line going upwards.)* I mean it's like this. How tall?
NNS 1: Oh. Yer, ah, seven.

These examples show that primary school children are capable of modifying their interactions to develop mutual understanding, and in so doing it would seem that they provide comprehensible input for their conversational partners. It remains difficult to ascertain whether comprehensible input in this particular form is necessary for acquisition. However, if negotiation for meaning is facilitative of adult SLA, this study suggests that it is similarly facilitative for primary school learners.

Comprehensible Output. There are many examples in the data of cases, as in Example 11 below, where the process of negotiation appeared to provide children with opportunities to manipulate their production, and in so doing to produce comprehensible output.

Example 11:

NNS 1: This girl hand a like this.
NNS 1: The boy, this boy er like a straw too.
NNS 2: Mm?
NNS 1: They are thin like last time.
NNS 1: You know?
NNS 2: Is-is it, is it girl and-and on other side is a boy?
NNS 1: No.
NNS 1: This one.
NNS 1: The, from the -the same place, and, from the left side to boy is a five centimetres.
NNS 2: Do-do they have a girl in the picture?
NNS 1: Yer.
NNS 1: Here is girl and here is boy.

In the first instance in Example 11, use of the clarification request "Mm?" resulted in NNS 1 reformulating his utterance, replacing "like a straw" with "thin." In the second instance, the existence of two people and their relative positions in the drawing is ambiguous, but through negotiation the first NNS 1's meaning is clarified.

Similarly, in Example 12, an obvious[10] pronunciation error leads to communication breakdown. As a result, NNS 2 uses a clarification request and then a confirmation check. As a consequence, the first NNS repeats the word "knife" until a target-like production is attained.

Example 12:

NNS 1: Where is the-the, where is the [life] go?
NNS 2: *(Pause)*
NNS 2: What you say?
NNS 1: The [life].
NNS 2: The life?
NNS 1: The b[r]ead knife.

Thus, through the process of negotiating for meaning learners are "pushed" to produce comprehensible output (Swain, 1985), and as a consequence, appear to move along their own interlanguage learning continuum.

Although it is not the intention of the current article to explore the effect of situational variables, the examples above show that with respect to interaction between NNS—NNS dyads it

seems that primary school learners when paired together negotiate toward the target language form, not away from it. This is similar to the results found in adult studies (e.g., Gass & Varonis, 1989). Thus, it appears that, similar to the adult SLA context, age-matched peers are also a valuable resource for child SLA.

Feedback. Researchers who have focused on adults negotiating for meaning claim that learners are given feedback about their productive attempts at the target language, which in turn may result in changes to their output (as described above). Given the social and psychological differences between adults and children, it may be that children are more likely to offer explicit feedback to each other than are adults. In the current data there were instances where this occurred, as in Examples 13 and 14.

Example 13:

NNS 1: Where do I put -?
NNS 2: What ?
NNS 1: The pl[a]nt.
NNS 2: The pl[a]nt?
NNS 2: What's that pl[a]nt?
NNS 1: Pl[a]nt.
NNS 2: Ah, plant.
NNS 2: It's not a pl[a]nt, it's plant.

Example 14:

NNS 1: Oh, [tree].
NNS 2: Tree?
NNS 1: Yes.
NNS 2: [Say it] properly.
NNS 1: Huh?
NNS 2: Say it properly.

However, instances of explicit feedback were rare. Anecdotal evidence based on in-class participant observation, and observations made during the negotiation tasks, seems to suggest that the occurrence of such feedback was related more to the personality of the participants than to their age and developmental level. It is interesting that the few such explicit corrections occurred only when learners were paired with each other, not with a NS. It would seem that even at primary school, children are not as uninhibited as some would assume and that they strictly observe social propriety. Like most adults, most primary school children recognize that correcting a conversational partner is impolite.[11]

Indeed the evidence from the data indicates that the feedback provided by the children was generally implicit, rather than explicit. In particular, negotiation strategies were used to indicate that there was a problem with the transmission of a message. As described earlier, these strategies included repetition and conversational adjustments, especially clarification requests and confirmation checks. Implicit feedback was also provided in the form of recasts. The database of the current study was previously analysed to specifically examine the provision and use of implicit negative feedback (Oliver, 1995). The results of this earlier study indicated that NSs respond differentially to the grammaticality and ambiguity of their NNS peers' conversational contributions, so that overall it was more likely that negative feedback would be provided, rather than errors being ignored. In addition, there was evidence that such feedback was used by the NNSs in their subsequent language production.

CONCLUSION

The results from this research show that, like adults, primary school children can, and indeed do, negotiate for meaning with age-matched peers when working on communication tasks. Also like adults, they employ a variety of negotiation strategies when they undertake this process. The results suggest that even children of this age are aware of their conversational responsibility and attempt to work toward mutual understanding. Through their responses, it was also evident that they were cognizant of the rules of social propriety.

Notwithstanding the difficulty in making comparisons across studies, it appears that the differences between the way primary school children and adults negotiate for meaning lie not so much in their awareness of the need to negotiate for meaning, nor in their ability to do so, but rather in the proportional use of particular negotiation strategies.

Possibly because of their level of development and their purported egocentric nature, primary school children tend to focus on constructing their own meaning, and less on facilitating their partner's construction of meaning. Thus, they are more likely to use clarification requests, confirmation checks, and repetition, but tend not to use comprehension checks. Such a finding seems to indicate that the pattern of exchange that occurs may be influenced in some way by the developmental[12] level of the participants.

However, there appears to be a similar benefit for adult and child learners. Just as in adult studies, data from the current research indicate that negotiating for meaning also provides child learners with comprehensible input, the opportunity to manipulate comprehensible output,

and feedback about their attempts. Although debate continues about the necessity and sufficiency of these processes, at the very least each is deemed to be facilitative of SLA. Therefore, because negotiation for meaning provides opportunities for these features to occur, it must be viewed as a valuable source of data for language learning, not just for adults, but as the current study suggests, also for primary school students.

From a theoretical perspective, if it is true that primary school learners interact in much the same way as adults, and that they benefit from the modified interactions in a similar way that adults do, it would seem that the nature and impact of the L2 environment may not vary greatly for learners of different ages. This supports evidence from earlier input studies (e.g., Hatch, 1983; Oliver, 1990) that show marked similarities in characteristics of the input to language learners, regardless of age.[13] Further research is required before such claims can be made with certainty. It does appear to be the case that for learners in general, environmental explanations alone are insufficient to account for the large differences in ultimate attainment achieved by those who begin SLA as children[14] and those who begin as adults.

Finally, although the current study suggests a positive contribution for negotiation of meaning in child interactions, a great deal more research is necessary to determine the precise nature of the outcomes obtained through the process of negotiating for meaning. To prove that acquisition results from such interactions and, therefore, that it is directly attributable to negotiation for meaning, it would first be necessary to pretest learner knowledge and thereby ascertain whether the change was a result of learning, not simply a correction of a "slip." To examine negotiation outcomes adequately, studies need to be conceived and conducted carefully, either as experimental designs with a pretest, posttest structure (e.g., Ellis, Tanaka, & Yamazaki, 1994; Loschky, 1994; Mackey, 1995), or preferably as longitudinal studies (see Pica, 1994, for discussion). Therefore, with respect to the current study, caution must be exercised when drawing conclusions about the relationship between acquisition and interaction for primary school learners. Further, until the outcomes of negotiation for meaning are tested for learners from a variety of age groups, the universality of these outcomes remains uncertain.

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NOTES

[1] These Intensive Language Centers (ILCs) cater for newly arrived non-English-speaking background students to provide them with an intensive course in English before entering mainstream classes. One of the enrollment criteria for ILC students is that they must be newly arrived to Australia or have been born in Australia, but speak little or no English on entering Year 1, the first year of formal schooling. Students are generally restricted to 12 months' enrollment in an ILC; however, in exceptional circumstances this may be extended to 2 years.

[2] In view of the problems associated with the validity of "subjective" proficiency ratings scales (Pienemann & Johnson, 1987), a second comparison of the scores was also undertaken. The proficiency scores of 32 NNSs (25% of total) were compared to a rating of the learners' production of morphosyntactic features as determined by the researcher and indicated on a developmental continuum known as "Rapid Profile" (Mackey, Pienemann, & Thornton, 1991; Pienemann & Johnson, 1987). A score of 0.79 ($p < 0.05$) was determined using a Pearson Product Moment Correlation. Given that proficiency and L2 morphosyntactic development would be symbolically represented as intersecting and not overlapping circles, this correlation appeared to validate use of the modified version of the ASLPR.

[3] Given the fact that an ILC was located in their school, it was quite surprising to find that many "mainstream" students had only a small degree of foreigner talk (FT) experience. However, there were a few notable exceptions and it was deemed preferable to control for this variable by excluding those who had either a great deal or almost no FT experience.

[4] Participation of the observer was avoided. However, there were instances where the researcher needed to intervene because a communication breakdown had become so threatening to the students that the completion of the task was put in jeopardy.

[5] The following definition of an utterance was used: "an utterance [is] defined as a stream of speech with at least one of the following characteristics: (1) under one intonation contour, (2) bounded by pauses, and (3)constituting a single semantic unit" (Crookes & Rulon, 1985, p 9).

[6] With regard to the question of optimal coding of

multifunctional utterances (eg., other repetition and confirmation checks) it was decided to enter these for each of the functions. Although such coding may have led to an overestimation of the use of total negotiation strategies, its consistent application ensured that figures for each of the pairings were affected equally.

[7] However, some caution must be exercised when testing hypotheses using data such as these because they represent overall scores (Pica & Doughty, 1985a).

[8] Although terms such as "more" and "less" are used in the following comparison, they should not be read as "significantly more" or "significantly less."

[9] This number of tasks was found in a pilot study to be far too onerous for primary school children.

[10] Only errors that were noted in the transcripts in square brackets [ ] independently by both the researcher and by the second trained observer were labelled as obvious pronunciation errors.

[11] An anonymous MLJ reviewer has suggested that participants, whether adults or children, do not engage in explicit error correction because they are focused on the task at hand and, hence, are responding to the meaning, not the form, of their partners' utterances. However, studies investigating implicit negative feedback (e.g., Mackey & Philp, this issue; Oliver, 1995) indicate that participants can, in fact, respond to the form of their partners' contributions.

[12] Developmental not only in terms of L2 learning, but also socially, psychologically, and cognitively.

[13] It is interesting to note that Hatch (1983) hypothesized that children would negotiate for meaning less than adults.

[14] Although these differences are much greater for those beginning SLA before the age of 6 years, marked differences are also apparent for those who begin at primary school age when compared to those beginning when they are older.

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APPENDIX A
First Language Background of NNS Participants

Language Background	Number	Percentage in Sample
Afghan	2	1.6%
Arabic	1	0.7%
Cantonese	5	3.9%
Chinese*	15	11.7%
Czech	1	0.8%
Dutch	2	1.6%
Farsi	9	7.0%
French	4	3.1%
Indonesian	6	4.7%
Japanese	6	4.7%
Korean	1	0.8%
Macedonian	5	3.9%
Polish	7	5.5%
Portuguese	2	1.6%
Romanian	1	0.8%
Russian	6	4.7%
Serbo-Croat	4	3.1%
Spanish	12	9.4%
Swedish	2	1.6%
Tagalog	3	2.3%
Tongan	2	1.6%
Thai	3	2.3%
Vietnamese	29	22.6%
Total	128	100%

Note. *This generic title was the one used by most children. The majority of participants in this group were speakers of Mandarin or Cantonese.

APPENDIX B
English Proficiency Rating for ILC Students: A Modified Version of the ASLPR

Background Information

Name

Date of birth

First language(s)

Gender M or F

Length of time in Australia
(approximate number of months)

Class teacher

Room number

Please rate the student's oral English language proficiency on a scale of 1 - 5 by circling one of the numbers below (for guidance please refer to the attached description of levels).

1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Description of Levels: Speaking and Listening

1.0 Unable to speak or comprehend oral English.

1.5 Able to produce and comprehend only a very restricted range of simple utterances within the most predictable areas of need (e.g., give name, age and address). Understands simple requests for such information.

2.0 Able to satisfy immediate needs using utterances which consist of simple sentences. Speech is often short and memorized or formulaic. Understands utterances that are thoroughly familiar or predictable within the area of immediate survival needs.

2.5 Able to satisfy survival needs and minimum courtesy requirements and maintain simple conversations about familiar topics or areas of interest. Can comprehend short utterances and longer ones if the content is familiar.

3.0 Able to understand and express all needs at "survival" and limited level of social interaction because of a reasonable oral language repertoire. For comprehension, may require language to be modified (e.g., with clear articulation and slower rate of delivery). May be able to guess the meaning of unknown words if the topic is familiar.

3.5 Able to satisfy routine social demands and limited mainstream class requirements. Has sufficient oral English to understand conversations about topics related to everyday life.

4.0 Able to understand and use language in most conversational situations, both formal and informal. Although errors in expression occur, they do not interfere with the ability to convey meaning.

4.5 Able to use oral language fluently and accurately, although "slips" or errors still occur. Understands oral English in a wide variety of contexts. Understands colloquial and idiomatic forms but may experience difficulties in comprehension and expression due to differences in sociocultural and linguistic background.

5.0 Equivalent to a native speaker of English at the same age level.

Note. To maintain confidentiality, teachers were asked to supply only the students' first names and the initial of their family names. For the same reason, only the month and year of birth were required here. The description of levels is adapted from the Australian Second Language Proficiency Ratings (1984).

APPENDIX C
Questionnaire for Mainstream Students

Instructions to Teachers

1. Read the introduction to students.
   Allow students sufficient time for relevant discussion.

2. Read each question aloud to students.
   Read each response aloud.
   Additional comments are written in italics on the teacher's copy.
   Allow time for students to circle their response.
   NB: Just first name and family name initial are all that are required.

3. Rate each student's level of contact with ESL learners on the sheet provided.
   Please **do not** look at the student's own rating of themselves before completing this sheet.

Introduction

In this questionnaire we are going to find out some things about you and about other people who speak English as their second language. English is the language that we usually speak at school. It's how we are talking now. Some people talk differently. Do you know the names of any other languages?

Allow time for students to respond.

Now I want you to take your pencil and fill in the questionnaire. We're going to do it together. Take your time and ask questions if there is anything you don't understand.

Read each question and allow time for the students to write in their response.

Questionnaire
Teacher's Copy

Name
Age (*How old will you be at the end of the year?*)
Year level

Circle the answer

1. What do you speak at home:
   English
   Both English and another language
   Another language

2. What other language do you speak? (*Other than English*)
   (Write here)
   If you just speak English leave this blank.

3. Do you know anyone who speaks a language other than English?

   (*This might be a person you know at school, at home, or some other place.*)
   Yes
   No

4. Do you know anyone who has only learnt to speak English recently, say in the last year or two?
   Yes
   No

5. Have you spent much time with them?
   (*This means have you talked or played games with them or worked with them in school.*)

   Yes, a lot of time.
   Yes, some time.
   Yes, a little time.
   No.

6. Have you ever sat next to a person in class who has only recently learnt to speak English?

   (*Remember recently means that they have only learnt to speak English in the last year or two.*)

   Yes, for a long time.
   Yes, for a short time.
   No.

7. Do you ever play at recess or lunchtime with a person who has only recently (*in the last year or two*) learnt to speak English?

   Yes, I often do.
   Yes, sometimes.
   No.

8. Do you have a friend who has only learnt to speak English recently (*in the last year or two*)?

   Yes No

9. Do you ever work together in class with a person who has only recently (*in the last year or two*) learnt to speak English?

   Yes No

10. Do you find it easy to talk to a person like this?

    Yes No

Rating Sheet

Teachers please rate the level of contact each student in your class may have had with somebody who has recently learned English (only in the last year or two). For the purpose of this study contact means communication: talking in order to share ideas or to interact in order to participate in a task or activity.

Please **do not** look at the student's own rating of themselves.

The ratings are as follows:
1. Little if any contact.
2. A moderate level of contact.
3. A lot of contact.
? Don't know.

Name	Level of contact in class	Level of contact in the playground	Level of contact at home

When you have completed this could you place an asterisk (*) next to the names of any children in your class who may be exceptional in academic ability or "social acceptability." This includes both those children whose ability or social position with peers could be described as extremely *high or low*, e.g., they may have a learning difficulty or alternatively they may be described as gifted and talented, they may be ostracized by their peers or they may be the most popular child in the school.

Forthcoming in *The Modern Language Journal*

Christine Uber Grosse, Walter V. Tuman, & Mary Anne Critz. "The Economic Utility of Foreign Language Study"

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