

# Input and Interaction:

—Classroom Implications for Second Language Acquisition—

Charles Browne

Various theories have been put forth by researchers to explain why some learners are able to achieve success in learning a new language while others fail. Such theories must necessarily account for the conditions under which successful second language acquisition occurs. In recent years, much emphasis has been placed on the role of input and interaction as key variables in successful SLA. This article will attempt to review several of the key theories which have input and interaction as a central theme and briefly discuss some of the related pedagogic implications.

## **The Input Hypothesis**

Although the theories and research of Stephen Krashen are by no means universally accepted, he has arguably influenced the debate on the role of input and interaction in the classroom more than any other researcher in recent years. According to Krashen's Input Hypothesis (1983, 1985), human beings acquire language in only one way—by understanding messages, or by receiving “comprehensible input”. Learners progress along a natural order by understanding input that contains structures a little above their current level of understanding (what Krashen calls “ $i+1$  input”). They are able to understand language which contains unacquired grammar through the help of contextual clues such as extra-linguistic information, knowledge of the world, and previously acquired competence.

Krashen (1985) strongly downplays the role of interaction and learner output with his claim that comprehensible input is both necessary and sufficient for second language acquisition. He states that

speaking is a result of acquisition and not its cause. Speech cannot be taught directly but emerges on its own as a result of building competence via comprehensible input (p. 2) .

Although Krashen's assertion that language production doesn't play a role in language acquisition is controversial, his claim that comprehensible input is an essential ingredient for acquisition seems to be widely accepted within the field of applied linguistics (for example, see Long, 1983a, Swain, 1981, Brown, 1985, Ellis, 1985). How, then is input made more comprehensible to learners? Krashen lists simplified speech at the "i + 1 level", context, extra-linguistic information (e. g. visual aids), discussion of familiar topics, knowledge of the world, and previously acquired linguistic competence, as the chief ways to make input comprehensible.

### **Acquisition Order**

The morpheme count studies of the early 1970 s reflected researchers concern with the form of syntactic structures used by learners. One assumption which has gained acceptance among many second language acquisition theorists as a result of these studies is that of an 'invariant' order of acquisition of language forms. One of the hypotheses that make up Krashen's 'Monitor Model' is the Natural Order Hypothesis. Krashen (1985), states that;

we acquire the rules of language in a predictable order, some rules tending to come early and others late. The order does not

appear to be determined solely by formal simplicity and there is evidence that it is independent of the order in which rules are taught in language class (p. 1).

Hatch (1983), however, contends that order of acquisition is really a reflection of conversation growth, in which children and adults go through a topic clarification process with the adult asking questions of the child. Adults intuitively know that children can't answer questions with complex syntactic forms, and therefore simplify the questions to the child. Hatch (1983), points out that;

the frequency of what/where/whose, etc. is controlled by the child's conversation topics. The constraints that conversation puts on questions explain their frequency in the input. That the child uses (acquires) these same questions first should not be surprising (p. 412).

Since adult learners also have similar difficulties with perceiving and nominating topics, and must engage in some level of negotiation to participate in discourse, it is possible that conversations could also determine the order of acquisition of morphology for adults as well.

### **Conversation Analysis & the Negotiation of Meaning**

In a reaction to these studies of acquisition order and form, an increasing amount of research was conducted on functions of language use. Since the late 1970s, increasing attention has been paid to the relationship between conversation and second language acquisition. Hatch (1978, Hatch, Flasher & Hunt, 1986) and Long (1980, 1983a, 1983b, 1985, Long & Porter 1985) have proposed that learners and their interlocutors negotiate the meaning of messages by modifying and restructuring their interaction in order to reach mutual

understanding. As a result of this negotiation, learners come to comprehend words and grammatical structures beyond their current level of competence and ultimately incorporate them in their own production. Long and others have claimed that interactional modification is the chief mechanism which brings about comprehension (Pica, Young & Doughty, 1987).

Hatch (1978) argues that what has been missing in the research is an explanation of the *process* of second language acquisition. She calls for a shift to discourse analysis (conversational analysis in particular), studies of children L1 acquisition, and SLA to answer the question of 'how' children learn language. She points out that:

It is not enough to look at input and to look at frequency; the important thing is to look at the corpus as a whole and examine the interactions that take place within conversations to see how the interaction, itself, determines frequency of forms and how it shows language functions evolving (p. 403).

The basic premise had long been that children start by learning basic syntactic structures; moving from one-word phrases to two-word phrases, to more complex structures, eventually putting these structures together in order to carry on conversations with others. However, based on findings in the area of discourse analysis, Hatch argues that for both first language acquisition and second language acquisition, language learning evolves primarily from learning how to carry on conversations.

From an examination of evidence from studies of children acquiring first and/or second languages, Hatch compiles a sequence of steps that children go through when talking to others. First, the child must get the attention of the adult, and identify a topic. The child then relies on the adult to help him build the conversation whenever he encounters any difficulties perceiving and nominating topics. Adults

often help by asking clarification questions. The child's "conversation" is semantically linked (vertically) by the adults interaction (horizontal constructions). This then becomes a prototype for future syntactic development for the child.

The same process generally holds true for adult second language learners, although adults have more difficulty in understanding and nominating topics unless they know the necessary vocabulary (since adult discourse contains topics that are much more diverse and abstract). Adults also tend to rely upon their partners to build conversations. When clarifying or nominating a topic, adult learners often solicit vocabulary. Hatch feels that it is out of these interactions from which conversational ability develops, which in turn leads to language development.

### **The Importance of Redundancy in Input**

Pica (1992, Pica et al., 1987) conducted a study involving native-speaker (NS)—nonnative-speaker (NNS) interactions to measure what effects, if any, interactional modifications (requests for clarification and confirmation), would have on comprehension. One group of learners received pre-modified sets of input (Condition 1), while the input for the second group was modified during the course of interaction (Condition 2). The mean score for Condition 2 learners was greater than for the Condition 1 (88% vs. 69% respectively). It was found that there were 50% more words per direction and twice as many occurrences of redundant input for Condition 2 groups than for Condition 1. Furthermore, the Condition 2 interactions tended to result in input that was more complex than input that was modified according to conventional criteria of linguistic simplification. Pica argues that it is redundancy of input that aids comprehension;

...it was believed that these moves may have been the mechanism

that triggered the increase in repetitions and hence overall quantity of input, which helped subjects to comprehend the more difficult directions (pp. 750-751).

In a study of university students in Canada who were taking introductory psychology courses in an L2 (one group in English and another in French) where the language of instruction was the L1 of the instructor, Wesche and Ready (1985) found that in parallel situations, both instructors made systematic deviations from native-speaker speech in attempts to ensure that content was understood when addressing students. The main characteristics of these foreign/teacher talk adjustments were: simplification, well-formedness (standard usage), explicitness, regularization, redundancy, and pragmatic grammar expectancy (which was defined as gearing the form and content of the presentation to what the speaker thinks the learner's expectancy system will be able to handle). The instructors used comprehension checks and non-verbal feedback from learners, as well as unsolicited feedback to fine tune adjustments at different points in the discourse.

L2 student performance in the course (they took the same exams as L1 students with L1 instructors), as well as an analysis of their regular meetings with language teachers concerning the psychology course work, provided indirect evidence that these adjustments aided second language acquisition. As in the Pica et al. (1987) study, Wesche and Ready (1985), credited redundancy with making modified input comprehensible, since

it goes beyond the linguistic code and adjustments made in surface forms of language and deals as well with semantic and non-verbal adjustments at other levels of communication behavior (p. 111).

### **The Importance of Topic Selection**

In a nine month longitudinal study of NS-NNS interaction involving children, Ellis (1985) found that learners were most likely to produce 'new' forms when they were able to nominate the topics of conversation and when the teacher helped them by supplying crucial chunks of language at the right moment.

Ellis argues that "by providing feedback via expansions the teacher helped the learners to assimilate and further develop these 'new' forms" (p. 81). In this light, comprehensible input can be seen as a negotiated, rather than 'absolute phenomenon', in which there is a 'dynamic' utterance-by-utterance adjustment by both partners in the conversation. Here, speech adjustments are made in light of the continuous feedback about the success of the discourse with which they provide each other.

### **The Role of "Foreigner Talk"**

As these and other studies have shown, native speakers often make interactional modifications to assist learners with comprehension. These interactional features, as reported by Long in a discussion of his Interaction Hypothesis (1983b), are; confirmation checks, comprehension checks, clarification requests, self-repetitions, other repetitions, and expansions. In the Wesche and Ready (1985) study of immersion students, one of the characterizations made of foreigner talk was "simplification". Ellis (1985), however, argues that it may not be appropriate to conclude that input facilitates SLA due to the process of simplification. He cites a study by Scarcella and Higa (1981) which reports that children, who tend to receive simpler input than adolescent learners do, also tend to learn at a slower rate than adolescents:

They hypothesize that it is the negotiation that results from the adolescent learner's more active involvement that contributes to their faster development. This involvement is manifest in the strategies they use to obtain native speaker explanations for just those parts they do not understand and the extra work they do in sustaining discourse (p. 82).

Thus, a complete picture of how input is made comprehensible cannot be obtained simply by counting up the number of native speaker adjustments. Ellis (1992), argues that comprehensible input needs to be understood in terms of "the mutuality of understanding between interactants rather than in terms of simplified input" (p. 33).

### **The Interaction Hypothesis**

While it has not yet been empirically established that comprehension causes acquisition, Long's (1983a) Interaction Hypothesis seems to rely on a variety of studies which suggest that the interactional modifications which take place during conversation assist comprehension of input. He argues that increases in input translates into increases in the amount of negotiation. This, in turn, increases the number of repetitions in the input, which ultimately helps learners to comprehend. Support for this position can also be drawn from Seliger's (1983) "high input generators", who showed a significant correlation between quantity of interaction in the classroom and achievement scores received at the end of the course.

If increases in the amount of input is beneficial to SLA, what about the quality of input? Is input from other learners less beneficial than input from native-speakers? Will they learn mistakes from each other? Porter (1986) found that, while learners cannot provide each other with the accurate grammatical and sociolinguistic input that

native-speakers can, learners can offer genuine communicative practice, including opportunities for negotiation of meaning. Porter's study showed that there were similarities in the repairs and prompting by native-speakers, and the repairs and promptings of advanced and intermediate learners. Input from L2 learners was also found to be as comprehensible as NS input. Learners did not pick up each others mistakes, nor did they miscorrect each other. Slightly different results were obtained in Filmore's (1982) study of sixty kindergarten L2 learners. Here, it was found that classrooms which provide more comprehensible input and opportunities for students to negotiate meaning with the teacher and native speaking children, did better than classrooms where there was more L2 student to student interaction.

### **The Role of Output**

Although the Interaction Hypothesis has received much attention over the past few years, the results of a 10 month longitudinal study of two Vietnamese students conducted by Sato (1986), seems to call into question Long's claim that conversational interaction facilitates language acquisition. Her analysis of the two learner's interlanguage development within the specific semantic domain of past time reference (PTR) reveals that while conversational interaction did seem to facilitate communicative *performance*, there was no clear evidence that these interactions facilitated *acquisition* of all of the linguistic devices which encode PTR.

The debate surrounding the Interactional Hypothesis also extends to the role of error correction ("corrective feedback", "negative input"). Brock (et al. 1986), hypothesize that corrective feedback occurring in side sequences which disrupt interactions, would influence subsequent NNS output to a greater degree than corrective feedback that does not disrupt the main line of conversational dis-

course. In their study, they found no observable effects of corrective feedback, suggesting the weakness of corrective feedback as an aid to acquisition.

Schmidt and Frota (1986), however, take an opposing view of the role of negative feedback in aiding acquisition with their proposal of a conscious, notice-the-gap principle. According to this principle, corrective feedback “juxtaposes” the learner’s form (i) with the target form (i+1), putting the learner in an “ideal position” to notice the gap between the two.

Although comprehensible input may be essential to SLA, some researchers maintain that it is not sufficient. Swain (1985) cites data from Canadian immersion programs which suggests that even though learners had been given seven years of “comprehensible input”, the target language system was never “fully acquired”. Swain argues that the problem was that these learners had had little opportunity to engage in two-way negotiated exchanges in the classroom. What was missing was ‘comprehensible output’. She points out that;

to achieve native-speaker competence, the meaning of ‘negotiating meaning’ needs to be extended beyond the usual sense of simply ‘getting one’s message across’. Simply getting one’s message across can and does occur with grammatically deviant forms and sociolinguistically inappropriate language (p. 248).

According to Swain, negotiating meaning needs to incorporate the notion of being ‘pushed’ toward the delivery of a message that is not only conveyed, but conveyed precisely, coherently and appropriately. This “comprehensible output” complements the “i+1” of comprehensible input and can help to move the learner from a purely semantic analysis of the target language to a syntactic analysis of it.

Schmidt and Frota (1986), propose the Autoinput Hypothesis, which states that the learner’s own output is a very significant part

of his/her input. Through production (i. e. practice), L2 structures become more automatic and easily produced. Increased occurrences of correct production would become available to the learner as feedback (autoinput) into the acquired knowledge. According to the authors, Auto input theory's greatest contribution to our understanding of SLA is that;

it preserves the integrity of a view that holds (correctly, we think) that there is only one basic cause of language acquisition, understanding what is presented through input. The only difference here is that what is presented through input and learned is not produced by native-speaker models but by the language learners themselves (p. 319).

In the Input and Interaction paradigm for second language acquisition, comprehensible input is a necessary ingredient. However, as Hawkins (1985) states, "if we are to find out how comprehension comes about, we must know exactly what is comprehended." (p. 162). The issue here, then, is with regard to the methodology used to determine comprehension on the part of the learner. Studies that have examined foreigner-talk discourse, have used the criterion of "appropriate response", where comprehension is assumed to have occurred if the learner's response is appropriate in the context of surrounding discourse. Hawkins quotes a statement made by Long about the nature of this assumption:

This does not guarantee, of course, that all of the input is understood, simply that enough of it for the purpose of communication is, which means that the researcher will be operating with some margin of error (p. 163).

Hawkins takes issue with the validity of this assumption and

questions whether what is determined to be comprehensible input to the learner, is truly comprehensible according to the criterion of "appropriate response". Examination of data from conversations between NS and NNS showed that the two NNS studies gave many appropriate responses that did not in fact signal comprehension to the NS. That is, they made appropriate responses for what they understood, but they, in fact, had not understood the NS. Based on these findings, she warns that we cannot base our analysis completely on what we judge, from discourse, to be comprehended by learners, and therefore, cannot make strong claims about how foreigner-talk aids learners.

### **Summary**

Evidence from research and claims made by researchers surveyed in this article indicate that comprehension of input is a necessary (although not sufficient) condition for second language acquisition. This input is made comprehensible through conversational interaction with native-speakers and advanced L2 learners. It is through interactional modification with an interlocutor, such as confirmation and comprehension checks, clarification requests, repetitions and expansions made during the negotiation of meaning that input is made comprehensible. Interaction with other nonnative-speakers, especially those who are more advanced, can be as beneficial as interaction with native-speakers. As with most issues concerned with SLA, there isn't a consensus concerning corrective feedback during conversational interactions. Some researchers report that it plays no role in the learning process, while others argue the necessity of pointing out the gap between a learner's present state and more target like states. According to these researchers, comprehension of input, while necessary, is not sufficient to guarantee second language acquisition. The learner must also be encouraged to produce lan-

guage that includes “comprehensible output” for target-like SLA to occur.

### **Implications For Pedagogy**

While it is possible for teachers to assist student’s understanding through adjustments in quantity and redundancy of teacher talk without requiring requests for clarification or confirmation from the students, the evidence seems to suggest that this is not enough to ensure comprehension.

Teachers should encourage students to initiate requests for clarification of meaning and to check with the teacher, and other learners as well, that they have understood. For this to come about, there is a need for a change in the pattern of teacher-student relationships within the classroom, as stated by Pica (et al., 1987). There also seems to be a need for a realignment of traditional teacher and student roles, in order to allow students to take greater initiative and assume more responsibility for their own learning. This would encourage more in-class interaction, which can further increase the amount of comprehensible input learners receive.

Group work, as proposed by Long and Porter (1985) is a scheme that seems to have the potential for increasing the quantity of language practice opportunities. Long and Porter found that in learner interactions, especially in dyads, there is much more negotiation work than in typical NS-NNS interactions.

As for the type of tasks that appear to stimulate an increase in negotiation, two-way tasks, in which both partners have part of the necessary information, are likely to produce more negotiation (and thus more language acquisition) than one-way tasks.

## REFERENCES

- Brock, C., Crookes, G., Day, R., & Long, M. (1986). The differential effects of corrective feedback in native speaker-nonnative speaker conversation. In R. Day (ed.), *Talking to Learn* (pp. 229-236). Rowley, MA: Newbury House.
- Brown, C. (1985). Requests for specific language input: Differences between older and younger adult language learners. In S. Gass & C. Madden (eds.), *Input in Second Language Acquisition* (pp. 272-284). Rowley, MA: Newbury House.
- Ellis, R. (1985). Teacher-pupil interaction in second language development. In S. Gass & C. Madden (eds.), *Input in Second Language Acquisition* (pp. 69-88). Rowley, MA: Newbury House.
- Ellis, R. (1992). *Second Language Acquisition and Language Pedagogy*. Avon, England: Multilingual Matters.
- Fillmore, L. (1992). Instructional language as linguistic input: second language learning in classrooms. In L. Wilkerson (ed.), *Communicating in the Classroom*. New York: Academic Press.
- Hatch, Evelyn. (1978). Discourse analysis and second language acquisition. In E. Hatch (ed.), *Second Language Acquisition*. Rowley, MA: Newbury House.
- Hatch, E. (1983). *Psycholinguistics: A Second Language Perspective*. Rowley, MA: Newbury House.
- Hatch, E., Flashner, V. & Hunt, L. (1986). The experience model and language teaching. In R. Day (ed.), *Talking to Learn* (pp. 5-22). Rowley, MA: Newbury House.
- Hawkins, B. (1985). Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly*, 19(2), 207-227.
- Krashen, S. D. & Terrell, T. D. (1983). *The natural Approach*. New York: Pergamon Press.
- Krashen, S. D. (1985). *The Input Hypothesis*. London: Longman.
- Long, M. (1980). Inside the 'black box': methodological issues in classroom research on language learning. *Language Learning*, 30(1): 1-42.
- Long, M. (1983a). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4(2): 126-141.
- Long, M. (1983b). Does second language instruction make a difference? A review of research. *TESOL Quarterly*, 17(3): 359-382.
- Long, M. (1985). Input and second language acquisition theory. In S. Gass & C. Madden (eds.), *Input in Second Language Acquisition* (pp. 377-393). Rowley, MA: Newbury House.
- Long, M., & Porter, P. (1985). Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly*, 19(2): 207-228.

- Pica, T., Young, R. & Doughty, C. (1987). The impact of interaction on comprehension. *TESOL Quarterly*, 21(4): 737-758.
- Pica, T. (1992). The textual outcomes of native speaker-non-native speaker negotiation. In C. Kramsch, & S. McConnell-Ginet (eds. ), *Text and Context: Cross-disciplinary Perspectives on Language Study*. Lexington, MA: D. C. Heath & Co.
- Porter, P. (1986). How learners talk to each other: input and interaction in task-centered discussions. In R. Day (ed.), *Talking to Learn* (pp. 200-224). Rowley, MA: Newbury House.
- Sato, C. (1986). Conversation and interlanguage development : rethinking the connection. In R. Day (ed.), *Talking to Learn* (pp. 23-48). Rowley, MA: Newbury House.
- Scarcella, R. & Higa, c. (1981). Input, interaction and age differences in second language acquisition. *Language Learning*, 31: 409-437.
- Schmidt, R. & Frota, S. N. (1986). Developing basic conversational ability in a second language: a case study of an adult learner of Portuguese. In R. Day (ed.), *Talking to Learn* (pp. 237-326). Rowley, MA: Mewbury House.
- Seliger, H. (1983). Does practice make perfect? A study of interaction patterns and L2 competence. In H. Seliger and M. Long (eds.) *Classroom Oriented Research in Second Language Acquisition*. Rowley, MA : Newbury House.
- Swain, M. (1985). Communicative competence : some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (eds.), *Input in Second Language Acquisition* (pp. 235-256). Rowley, MA : Newbury House.
- Wesche, M. B. & Ready, D. (1985). Foreigner talk in the university classroom. In S. Gass & C. Madden (eds.), *Input in Second Language Acquisition* (pp. 89-114). Rowley, MA: Newbury House.