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QUARTERLY

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QUARTERLY

Editor's Note

■ Three of *TESOL Quarterly's* section editors are moving on to other professional responsibilities. Although the results of their editorial work will continue to appear in Brief Reports and Summaries over the next several issues, Rod Ellis and Karen E. Johnson will be stepping down as editors of that section. On behalf of all readers, I thank them for their excellent service over the past 5 years. Dan Douglas will pass on the position of Reviews editor to Roberta Vann beginning with the winter 2001 issue. I am grateful to Dan for his careful work over the past 3 years and to Roberta for her willingness to take on the editorship. Please note the Call for Abstracts on page 376 for the autumn 2003 special-topic issue on Corpus Linguistics and TESOL.

In This Issue

■ The articles in this issue report research focused on the language of L2 learners and on a variable of individual difference potentially relevant to L2 learning.

- Yuko Nakahama, Andrea Tyler, and Leo van Lier examine learners' language in two language learning tasks, an "unstructured" conversation and an information gap task. Focusing on how meaning was negotiated as three native speaker–nonnative speaker dyads completed each task, they found that, as expected, the information gap task produced more repair negotiation than the conversation did, although the difference was not statistically significant. However, their examination of the quality of the differences between the two task types revealed other differences (e.g., utterance complexity), which they suggested might favor the conversation for some aspects of language learning. Despite the small scale of the study, the methods of analysis offer a novel perspective into the multidimensionality of the potential

value of interaction in L2 learning tasks, suggesting the need to reexamine the merits of unstructured conversation for L2 learning.

- Rod Ellis, Helen Basturkmen, and Shawn Loewen add to the field's understanding of focus on form in the ESOL classroom through their review of this construct and their descriptive study of one type of focus on form in two classrooms in New Zealand. The review clarifies the meanings that focus on form has taken on in language teaching research, distinguishing among types of focus on form, such as *preemptive* and *reactive*. The study investigated instances of preemptive focus on form during meaning-centered instruction, that is, occasions during the lesson when, before any problem with the language had occurred, the meaning-focused activity was momentarily suspended while attention turned to the language. The researchers found that both students and teachers initiated such sequences and that students were more likely to incorporate the language of the focus into their own utterance if the sequence was student initiated.
- Ali Shehadeh looks at classroom learning tasks from another perspective by investigating the frequency of learners' modified output and the conditions under which modified output occurred during task-based interaction. Shehadeh reviews the hypothesized importance of modified output for second language acquisition (SLA) and then reports the results of research on three types of learning tasks performed by groups consisting of various combinations of native and nonnative speakers. Overall, many instances of modified output were found, but because a greater number of these were self-initiated, the author concludes that it is worthwhile to construct classroom tasks that provide learners with the opportunity to repair their utterances.
- Jeannette Littlemore takes up an issue of particular interest to TESOL professionals concerned with individual differences in SLA: Might metaphoric competence be a language learning strength of learners with a holistic cognitive style? Her article defines the construct of metaphoric competence and draws theoretical links between this construct and other constructs of individual difference. The research investigated relationships among four aspects of metaphoric competence and between metaphoric competence and communicative language ability, finding weak relationships between two of the aspects of the construct. Littlemore draws conclusions for future research and practice related to metaphorical competence.

Also in this issue:

- Teaching Issues: Two authors examine the influence of theory and research on teaching English to large classes. Virginia LoCastro discusses student learning in large classes, and Zakia Sarwar explains some of the innovations taking place in classes in Pakistan.

- Reviews and Book Notices: The following six books are reviewed: *Foreign Language and Mother Tongue*; *Managing Evaluation and Innovation in Language Teaching: Building Bridges*; *Identity and Language Learning: Gender, Ethnicity and Educational Change*; *The Phonology of English as an International Language*; *Interlanguage Refusals: A Cross-Cultural Study of Japanese-English*; and *Vanishing Voices: The Extinction of the World's Languages*. Five books are summarized in the Book Notices section.

Carol A. Chapelle

Erratum

In “Academic Language Learning, Transformative Pedagogy, and Information Technology: A Critical Balance,” by Jim Cummins (Vol. 34, No. 3[Autumn 2000], p. 538), the last sentence in the third paragraph should have read “The English language and its speakers are privileged, affluent populations are privileged—Dick and Jane have computers in their bedrooms—and more subtle gender expectations mean that Dick will be encouraged to become computer literate at a faster pace than Jane.”

We regret the error.

Negotiation of Meaning in Conversational and Information Gap Activities: A Comparative Discourse Analysis

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This article reports an investigation of how meaning is negotiated in two different types of interactions between native speakers (NSs) and nonnative speakers (NNSs): a relatively unstructured conversation and a two-way information-gap task. Three NS-NNS dyads were recorded as they engaged in these two activities, and the data were examined in detail. Negotiation exchanges, lexical and syntactic complexity, and various pragmatic issues were examined and compared qualitatively and quantitatively. The results suggest that conversational interaction has the potential to offer substantial learning opportunities at multiple levels of interaction even though it offered fewer instances of repair negotiation in the traditional sense than did the information gap activity. In addition, the NNS participants stated in subsequent interviews that they found the conversational activity to be more challenging than the information-gap activity because they had to pay attention to the entire discourse in the former but mainly focused on lexical items in the latter. This study thus raises questions about claims that conversational interactions do not provide learners with as much challenging language practice as do more highly structured interactional activities, such as information gap tasks.

A number of SLA studies on input and interaction have argued that unstructured interaction, or opened-ended conversational activity, provides relatively few opportunities for interlanguage development in comparison with more controlled, goal-convergent interactions (e.g., Doughty, 1996a; Long, 1980, 1983, 1996; Pica, 1992; Pica, Kanagy, & Falodun, 1993; Sato, 1988). The argument is that language learners are much more likely to notice the difference between their interlanguage and the target language when a communication breakdown triggers some sort of repair work—called a *repair negotiation*, defined here as interactional modifications resulting from communication problems. Numerous studies have found that controlled, task-based interactions, particularly those that have a single, convergent outcome, promote a greater number of such repair negotiations than does less structured interaction, whose goal is much more open-ended. The explanation is that the successful completion of certain controlled interactional tasks (particularly information gap tasks) requires a highly constrained outcome and consequently requires precise production. In contrast, in more open-ended conversation, interlocutors can quickly drop language and topics that cause communication difficulties or avoid them altogether, therefore sidestepping repair negotiation.

In this article, we present a preliminary examination of how meaning is negotiated in two types of face-to-face interactions between native-English-speaking (NS) and nonnative-English-speaking (NNS) interlocutors. One interaction is a relatively unstructured conversational activity in which the NS interlocutor is given the goal of trying to establish common ground with her NNS interlocutor; the second is an information gap activity in which the goal is to identify differences between two similar pictures. Incorporating insights from social-interactionist and discourse-analytic perspectives, we present a microanalysis of three NS-NNS dyads, each of which engaged in the conversational activity and the information gap activity. The results, although preliminary due to the small sample, suggest that conversation has the potential to offer substantial learning opportunities at multiple levels of interaction (e.g., discourse management, interpersonal dynamics, topic continuity) even though it offers fewer instances of repair negotiation than information gap activities do.

BACKGROUND

Repair Negotiation

Verbal interaction has long been seen as important to second language acquisition (SLA). For instance, as early as 1980, Long hypoth-

esized that interactional modifications made during the course of interaction help make input more comprehensible. In a comprehensive survey, Ellis (1994) concluded that interaction is helpful in making the linguistic data more salient to the learner. Long (1985) proposed that a theoretical connection exists among interactional modification, comprehension, and acquisition. Since then, research has expanded to include the examination of factors beyond comprehensible input that might offer insight into how and when elements of an L2 are acquired. For instance, Swain (1985) proposed that learners might need opportunities to produce *pushed output* (i.e., on-line language production modified as a result of feedback from the interlocutor) in order to restructure their interlanguage grammar. She argued that comprehension alone does not appear sufficient to focus learners on the differences between their interlanguage and the target construction. As Long (1996) states in an authoritative review, "Although necessary for L1 and L2 acquisition . . . there is abundant evidence that comprehensible input alone is insufficient" (p. 423).

Much recent work in this area (e.g., Izumi & Bigelow, 2000) has examined two additional factors involved in interaction and acquisition: the learner's attention and output. The emphasis on the three factors of input, attention, and output is expressed in Long's (1996) updated version of the interaction hypothesis:

I would like to suggest that negotiation, and especially negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capabilities, particularly selective attention, and output in productive ways. (pp. 451–452)

Repair negotiation is portrayed as a process of clarifying an utterance (or utterance part) that at least one interlocutor experiences as problematic or perceives as not mutually understood. Researchers have used various terms to refer to component features of negotiation (e.g., Long, 1980; Varonis & Gass, 1985a, 1985b). Pica, Holliday, Lewis, and Morgenthaler (1989) and Pica, Holliday, Lewis, Berducci, and Newman (1991) define two significant parts as a *trigger* and a *signal*. The speaker's perception of nonunderstanding acts as the trigger for the negotiation of meaning, and the overt signal of this perception of nonunderstanding is the observable clarification request, confirmation check, or comprehension check that the speaker produces. In other words, the term *signal* refers to utterances or nonverbal indicators made in response to a problematic utterance of the speaker (the trigger).

Doughty (1996a) argues that such a signal generally prompts the original speaker to attempt to repair the problematic utterance or utterance part; this modified utterance will in turn be followed by the

signaler’s reaction to the modified utterance or response. This cycle can be summarized as shown in Figure 1. Such sequences have been proposed as providing an optimal linguistic environment for language acquisition, and they have been shown to occur more frequently in certain types of controlled task interactions, particularly those requiring a single, convergent outcome, such as information gap tasks, than in more conversational activities, whose outcomes are opened-ended, such as opinion exchanges or free conversation (e.g., Doughty, 1996a; Pica, 1992; Pica et al., 1993; Long, 1996).

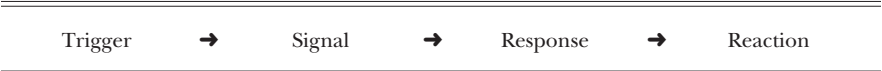
Studies of task-based interaction have found that the presence of repair negotiation appears to lead to better comprehension (e.g., Doughty & Pica, 1986; Pica, 1991, 1992; Pica & Doughty, 1985; Pica, Young, & Doughty, 1987). The crucial importance of this finding was clarified by the three steps Long (1985) suggested to indirectly connect negotiation with acquisition:

- 1. Show that (a) linguistic/conversational adjustments promote (b) comprehension of input.
- 2. Show that (b) comprehensible input promotes (c) acquisition.
- 3. Deduce that (a) linguistic/conversational adjustments promote (c) acquisition. (p. 378)

The Role of Tasks

Recognizing the indirectness of the link between negotiation and acquisition via comprehension, and the fact that not all comprehension will necessarily lead to acquisition, recent studies have more fully explored the relationship between negotiation and acquisition (e.g., Doughty, 1996b; Ellis, Tanaka, & Yamazaki, 1994; Gass & Varonis, 1994; Loschky, 1994; Mackey & Philp, 1998). These studies have shown mixed results concerning the effects of repair negotiation on SLA; thus the claim that repair negotiation directly leads to acquisition is not conclusive. In fact, Doughty (1996b) found that repair negotiation generally did not lead to more targetlike learner production and posited three possible explanations: (a) The tasks themselves may hinder negotiations that promote linguistic change; (b) any interlanguage changes that

FIGURE 1
Negotiation of Meaning in the Context of a Communication Breakdown



Source: Doughty (1996a).

occur might take a longer period of time to emerge (suggesting the need for longitudinal study); and (c) negotiation may be useful only for L2 comprehension. One of Doughty's most interesting findings emerged from her careful matching of the NS interlocutors' successful placing of pieces in the task and the talk produced by the NNS interlocutors. She found that the NS interlocutors did not necessarily attend to the NNS interlocutors' contributions as they completed the task. This unexpected result raises many questions about the nature of the discourse that emerges from controlled tasks.

In this article, we explore Doughty's first hypothesis, that is, that the tasks themselves may have additional, heretofore unrecognized effects on repair negotiations. We also broaden the range of interactional modifications to be examined beyond the repair negotiations, which in information gap activities focus primarily on the informational (or transactional; see Brown & Yule, 1983) plane of the talk. When researchers examine repair negotiation exclusively, they overlook a number of other features of naturally occurring interaction, such as those studied in the literature on discourse and conversation analysis, including discourse markers (Schiffrin, 1987), contextualization cues (Gumperz, 1982), discourse management (Sacks, Schegloff, & Jefferson, 1974), textuality (Halliday & Hasan, 1989; Johnson & Tyler, 1998), contingency (van Lier, 1996), and others (see Tyler, 1992, 1995, for further discussion).

Moreover, the study of repair negotiation tends to direct researchers' attention to local features of discourse required for the step-by-step completion of the information gap activity. Equally important is how the discourse emerging from the conversational activity attains a greater overall complexity as the talk progresses. Therefore, we examine the element of the talk that triggers some sort of further (e.g., clarifying) talk. Although a number of studies have investigated the signal-response elements of the four-part cycle identified in Figure 1, few have examined the triggers, which are claimed to initiate the cycle. An exception is the study by Chun, Day, Chenoweth, and Luppescu (1982), who studied trigger types that initiated response negotiations in free conversations and in gamelike tasks between NNS and NS friends. Chun et al. found that relatively few errors by the NNS friends were treated as triggers for repair negotiation, suggesting that in social settings error correction is avoided. More important, from our perspective, is Chun et al.'s finding that there was no difference between the types of triggers leading to corrective feedback in the conversation and in the gamelike task. This is surprising, as Nakahama (1997) found that the trigger types in conversation were quite distinct from those in information gap tasks. Specifically, information gap tasks contained primarily discrete types of triggers (e.g., lexical items and low-level morphosyntactic items) whereas in conversations more global types of triggers were more common (cf. the distinction

between local and global errors made by Burt & Kiparsky, 1972; see also James, 1998, for further discussion).

We suggest in this article that the distinction between trigger types appears to be closely related to the characteristics of the repair negotiation that is going on. From a discourse-analytic perspective, the precise linguistic environment that surrounds a repair negotiation offers crucial information concerning the interpretation of the repair itself. In other words, the interpretation as to whether a trigger-signal sequence addresses a local or global comprehension problem is crucially determined by the ongoing discourse and the particular context in which the sequence occurs. In addition, we propose an expanded definition of negotiation that goes beyond instances of repair to include other interactional phenomena. These insights follow from examining the differences between the two different interactions from several complementary perspectives.

METHOD

Participants

The NNS participants in the present study (Mika, Sumiko, and Mayumi) were female, intermediate-level ESL students whose L1 was Japanese.¹ Mika and Sumiko were placed in an intermediate-level ESL class at one U.S. university, and Mayumi was in an ESL class at another U.S. university. The participants were approximately at the same level as measured by their TOEFL scores (Mika, 545; Sumiko, 535; Mayumi, 550), and they had all received a college education in Japan as well as 6 years of mandatory English language education beforehand. All three participants had resided in the United States for approximately 1 month and were between 25 and 30 years old. The NS interlocutors for Mika, Sumiko, and Mayumi were Donna, Rita, and Mindy respectively, all graduate students in linguistics at U.S. universities. The NS and NNS participants met one another for the first time on the day of the data collection.

Interactions

The activity used in the information gap interaction was a spot-the-difference task taken from Ur (1990; see the Appendix). This particular activity was selected because none of the participants had seen it before

¹ Names of the six participants are pseudonyms.

and because there were numerous subtle differences in the pictures. The spot-the-difference task is categorized as a problem-solving task by Pica et al. (1993), who suggest that this type of task requires a single, convergent goal and outcome. Such tasks have been found to generate more opportunities for the interactants to negotiate than do tasks that do not require a convergent outcome, such as opinion exchange and free conversation.

Before starting the activity, the participants were informed that there were at least eight differences in the pictures, and they were prohibited from looking at each other's pictures. Because this was not a writing activity, the participants were not required to write down the differences; however, they were allowed to circle the differences if they so desired.

The conversational activity was designed to produce an engaged interaction but was relatively uncontrolled and open-ended. The participants were asked to discuss their common experiences related to the university where they were studying, their experiences living in the same city, and their mutual interests in a fairly general sense. In addition, the NS interlocutors were asked to focus on building common ground with the NNS interlocutors. They were specifically encouraged to reveal information about themselves as well as to find out about the NNS interlocutors. Finally, they were encouraged to try to project a sense of valuing the NNS interlocutors' contributions.

We hoped that setting up the conversational activity in this way would promote a reasonable level of mutual engagement and interactional symmetry, thus approximating the interactional processes of some naturally occurring conversation. We assumed that under these conditions the NNS interlocutors would have the opportunity to provide information about their own backgrounds and thus be in the role of *knower* (Tyler, 1995) for part of the conversation, thereby counterbalancing to some extent the superior status a native speaker tends to have in NS/NNS dyads (Woken & Swales, 1989; Yule, 1990; Zuengler & Bent, 1991).

Data Collection

The conversational activities were videotaped and the information gap activities were audiotaped for data analysis. Each recorded interaction was then transcribed. After the data collection was completed, one of the researchers met individually with Sumiko and Mika to obtain retrospective verbal reports in order to gain insight into the participants' perspectives on the interactions. (We were unable to hold a retrospective interview with Mayumi.) The researcher and participant reviewed the tapes together. The participants were encouraged to stop the tape whenever they had a question or wanted to comment on what was

happening in the interaction. If the participant did not stop the tape at certain points, the researcher did so and queried the participant. The researcher also asked more global questions, such as which interactions the participants found more challenging and why they did so.

Data Analysis

The data were analyzed both quantitatively and qualitatively in order to identify different ways in which repair negotiation took place in conversational and in problem-solving interactions. All the interactions lasted 20 minutes except for two, which were 15 minutes long. To establish comparability with the 20-minute interactions, the quantitative data from these two 15-minute interactions were multiplied by 1-1/3 (i.e., the data were normalized to 20 minutes). The qualitative analysis involved examining overall patterns of interaction, including the manner in which negotiation was carried out in both types of interaction.

For the quantitative analysis, we first located the signal (the *head* of the negotiation sequence), such as a clarification request. Then, looking back from the signal, we coded an earlier utterance as the trigger. The triggers were classified into four types: (a) lexical, (b) morphosyntactic, (c) pronunciation, and (d) global, referring to content and discourse (see Table 1 for examples).²

Lexical. As the name suggests, lexical triggers refer to discrete word groups, such as verb phrases and noun phrases. This category also includes word choices.

Morphosyntactic. Morphosyntactic triggers include verb inflections, partitives, and plural morphemes.

Pronunciation. Based on an analysis of the audiotaped conversations, we categorized triggers as lexical or pronunciation. For instance, if the NNS participant knew the word and attempted to say it, but her pronunciation of the words prevented the NS interlocutor from comprehending the word, it was classified as a pronunciation trigger.

Global (discourse, content, or both). Triggers that involved more than simple lexical items or local morphosyntactic elements were coded as

² Chun et al. (1982) classified trigger types into discourse errors, factual errors, word choice errors, syntactic errors, and omissions. In our data, we combined what Chun et al. called factual errors and discourse errors, referring to both as global triggers because they relate to the content of the discourse as a whole. Further, we treated omission errors as syntax errors.

TABLE 1
Types of Triggers

Trigger type	Examples		
Lexical	1.	Sumiko:	And there is a dart?
		Rita:	A dart board?
Morphosyntactic	2.	Mika:	One, two . . . five paper.
		Donna:	Pieces of paper?
Pronunciation	3.	Sumiko:	Preschool . . ? [prEskul]
		Rita:	Pre-school . . ? [priskul]
		Sumiko:	Pre-school. [priskul]
Global	4.	Mindy:	So how are you finding it?
		Mayumi:	How what? Sorry.
	5.	Donna:	But you were here last spring for the um . .
		Mika:	Naa
		Donna:	You were already here
		Mika:	I came here umm this umm this January 2
		Donna:	Oh just January

global. By *local*, we mean triggers that affected the interpretation only of an isolated segment of the turn in which it was uttered. Global triggers involved elements such as anaphoric reference, deixis, interpretation of an entire utterance, and elements that can cause a reanalysis of more than one turn.

As an illustration, in Example 4 in Table 1 Mindy's statement was analyzed as a global trigger because Mayumi's response indicated that she understood only the question word *how*. The idiom *how are you finding X* (which means roughly *what is your assessment of and response to X*) seems to have confused Mayumi. Moreover, *it* refers to Mayumi's assessment of living in the United States, which was the topic of discussion over a number of utterances prior to the trigger. Here *it* has a discourse-level referent rather than a simple lexical one. By contrast, in Example 5 in Table 1, Donna's statement "But you were here last spring for the um" was considered a global trigger because Mika's response indicated that misinterpretation began several turns earlier in the conversation and affected Donna's interpretation of a long stretch of the discourse. Note that the syntactic form in which the trigger occurs does not look like a request for clarification, a confirmation request, or an exact repetition of the interlocutor's immediately preceding utterance. Analyzing the exchange for these features would miss the fact that the misunderstanding and subsequent repair negotiation had taken place.

RESULTS AND DISCUSSION

The data from the two types of interactions were subjected to analysis to identify trigger types, repair negotiations, and other discourse strategies. Comparisons were made between the two interactions on the basis of these features.

Triggers and Repair Negotiation

Two raters independently coded the transcripts for trigger types and negotiation cycles. Interrater reliability (coefficient alpha) for both trigger types and negotiation cycles was 0.99, indicating a high level of agreement between the raters.³

A comparison of the occurrence of repair negotiations, or trigger-signal sequences, revealed that the information gap activity triggered more repair negotiation than the conversational activity in all three dyads, but especially for Sumiko/Rita and Mayumi/Mindy (see Table 2). We used *t* tests to compare the mean frequencies of negotiation in information gap (*M* = 42.67; *SD* = 14.64) and conversational (*M* = 29.67; *SD* = 17.04) tasks. To compare negotiation in the two different types of interactions, we used *t* tests, treating occurrences like test scores and calculating a mean for each type of interaction (information gap, 42.67; conversational, 29.67). By so doing, we could take into account the variation among the three dyads. Although the *t* test was not significant, *t* (*df* 4) = -1.0, *p* = .373, the mean difference was in the predicted direction. The nonsignificant results were most likely due to the small sample size.

TABLE 2
Repair Negotiations by Activity and Pair

Activity	Mika/Donna	Sumiko/Rita	Mayumi/Mindy	Total
Conversational	40	39	10	89
Information gap	45	56	27	128
Total	85	95	37	

³ The most commonly used index for interrater reliability is Cohen's kappa; however, it is appropriate only when the rating is on ranks with limited values. In our case, we need to indicate the raters' agreement on frequencies that may have many values. Thus, coefficient alpha is the appropriate index here. When only two raters are involved, coefficient alpha is similar to the moment correlation coefficient for the raters' frequencies.

TABLE 3
Trigger Types by Activity and Initiator of Negotiation

Trigger type	Activity			
	Conversational		Information gap	
	NNS	NS	NNS	NS
Lexical	0	9	19	52
Morphosyntactic	0	6	1	14
Pronunciation	1	9	0	6
Global	14	50	10	26
Total	15	74	30	98

An examination of the trigger types, however, reveals that the main trigger type for negotiation varied by activity type. Within the conversational activities, the primary trigger was global (an average of 76% across all three dyads; see Tables 3 and 4). In contrast, in the information gap activities, lexical items, which were generally local triggers, were the main trigger type (an average of 55% across the three pairs), whereas global triggers accounted for only one quarter (25.6% across the three pairs) of the repair negotiation initiations.

Comparing the quantity of repair negotiation across tasks thus does not seem to tell the whole story. If in the present analysis we attended only to the mean frequencies of repair negotiation, information-gap activity could once again be said to provide more learning opportunities

TABLE 4
Trigger Types by Pair and Activity

Trigger type	Mika/Donna				Sumiko/Rita				Mayumi/Mindy			
	Conversa- tional		Information gap		Conversa- tional		Information gap		Conversa- tional		Information gap	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Lexical	8	20.0	16	41.0	1	2.6	34	63.0	0	0.0	14	61.0
Morpho- syntactic	5	12.5	11	28.2	1	2.6	2	3.7	0	0.0	3	13.0
Pronunciation	3	7.5	3	7.7	5	13.2	3	5.5	1	12.5	0	0.0
Global	24	60.0	9	23.1	31	81.6	15	27.8	7	87.5	6	26.0
Total	40	100.0	39	100.0	38	100.0	54	100.0	8	100.0	23	100.0

than conversational activity, as the task-based interactions triggered more instances of repair even though the difference was not significant for this small sample. However, we argue that attending only to the overall numbers of repair negotiations masks important discourse dynamics and therefore masks important learning opportunities beyond the ideational or informational level.

These differences in trigger type may reflect different properties of repair negotiation present in conversational and information gap activities, which in turn are tied to differences in the interlocutors' goals and views of their roles in the two types of interaction. On the one hand, our analysis suggests that an ideational or strictly informational focus dominated in the information gap activity. On the other hand, in the conversational activity the focus was on aspects of overall discourse or textual coherence, the creation of shared schema and frame, the maintaining of face and the building of rapport, and the exchange of information. Thus in the information gap activity repairs involved primarily individual lexical items whereas in the conversational activity repairs focused on an overall understanding of the interlocutors' contributions. Because the goal in the information gap activity was to find the differences between two pictures, the interlocutors concentrated on understanding individual lexical items uttered by their partners that might signal a difference. Consequently, meaning was negotiated rather mechanically around lexical items, strictly at the ideational level.

Pushed Output

The quantity of repair negotiation has been a primary concern of SLA researchers because repair negotiations are assumed to provide the ideal locus for learners to recognize the gap between their interlanguage grammar and the target grammar. Thus, the more repair negotiations, the more opportunities for comprehension and learning. If in the present analysis we had attended only to the amount of repair negotiations, the data would support the assertion that information gap activities provide more learning opportunities than conversational activities do, as the information gap activity triggered more instances of repair. Subsequent analysis examined important discourse dynamics to reveal important learning opportunities beyond the ideational or informational level. In particular, we examined pushed output (Swain, 1985), looking for some evidence in terms of the length of turns, the complexity of utterances, pragmatic markers, and negotiation cycles.

Length of Turns

In the information gap activity, the NNS interlocutors' utterances tended to be short and characterized by repetition of lexical items or simple backchanneling (to answer the NS interlocutor's questions. In the conversational activity, on the other hand, all three NNS interlocutors produced utterances that were much longer (as measured in words per turn) than those seen in the information gap activities (see Table 5, top panel). We noted in the introductory section that Swain (1985) argued that NNSs may need pushed output, which requires the on-line production of longer, more complex utterances, for acquisition to take place. The significantly longer and more complex turns in the conversational activities suggest that these activities offered the contexts in which such pushed output could occur. We defined a turn as a stretch of speech of a single interlocutor; backchannels (e.g., *uh-huh*) were not considered to constitute turns unless they were uttered to answer the interlocutors' questions.

TABLE 5
Average Words per Turn, Complexity of Utterances, and Tense/Aspect and Modal Shifts by Pair, Activity, and Speaker

Speaker	Mika/Donna		Sumiko/Rita		Mayumi/Mindy	
	Conversa- tional	Information gap	Conversa- tional	Information gap	Conversa- tional	Information gap
Words per turn						
NS	8.9	8.9	12.1	6.8	9.9	7.0
NNS	10.1	5.6	7.2	3.2	9.6	3.3
Complexity of utterances						
NS						
Phrase	3	5	4	12	7	3
S1 ^a	42	33	27	22	35	32
S2+ ^b	10	10	9	8	27	2
NNS						
Phrase	11	7	0	5	2	7
S1 ^a	29	14	20	12	14	12
S2+ ^b	6	3	6	2	21	0
Shifts						
NS						
Tense/aspect	21	1	4	1	40	0
Modal	6	9	11	6	14	3
NNS						
Tense/aspect	14	0	4	0	25	0
Modal	8	1	0	3	4	0

^aUtterances with one verbal construction. ^bUtterances with more than one verbal construction.

Considering the NS and NNS interlocutors separately, we used *t* tests to compare the mean number of words per turn in the two types of interactions. For NNS interlocutors, the difference was statistically significant, $t(4\ df) = 4.14$, $p = 0.014$, $M = 8.96$ (conversational activity) and $M = 4.0$ (information gap activity). However, the difference was not significant for the NS interlocutors, $t(4\ df) = 2.36$, $p = 0.078$, $M = 10.3$ (conversational activity) and $M = 7.5$ (information gap activity). On average, all three NNS interlocutors produced utterances that were more than twice as long in the conversational activity as in the information gap activity whereas no specific patterns were discernible for the NS interlocutors.

Interestingly, in the information gap activities the NS interlocutors' turns were much longer on average than those of the NNS interlocutors (7.6 vs. 4.0 words, respectively), whereas both groups produced approximately equal amounts of speech per turn in the conversational activities (NS interlocutors, 10.3 words; NNS interlocutors, 9.0 words). This result suggests that, in this respect, the conversational activities evidenced a more symmetrical relationship between the NS interlocutors and the NNS interlocutors. Excerpts 1–4 are typical of the information gap activity and the conversational activity.

Information gap activity:⁴

1. Mindy: . . . there's something- a rectangle with four dots?
Mayumi: Yes.
Mindy: You have that?
Mayumi: Yes.
2. Mindy: The uh under under the table leg?
Mayumi: Yes.
Mindy: Under the desk leg?
Mayumi: Yeah, yeah.
Mindy: Yeah, I have that, too.

Conversational activity:

3. Mayumi: Hm. Um, do you know Tokyo?
Mindy: Well, I've heard of Tokyo, yeah.
Mayumi: All right. [laughs] and my hometown is near from Tokyo.

⁴Transcription conventions are as follows:

. brief pause of up to 1 second
- short pause
[] metacomment or longer pause; short backchannel by partner
(??) unintelligible
:: elongation

4. Mindy: So what made you decide to get into journalism?
Mayumi: Um, I think, uh, if I I may be a journalist . . .
Mindy: Uh-hunh
Mayumi: . . . so I can I can work by myself. Uh, I mean, uh, I don't need to, uh, work for a company?

Complexity of Utterances

As Excerpts 3 and 4 illustrate, the conversational activity provided learners with opportunities to produce longer and more complex utterances. Longer utterances often, but not necessarily, result in more complex morphology and syntax. To clarify the possible differences in morphosyntactic complexity elicited by the two interaction types, we coded 100 turns⁵ from each transcript (Turns 16–115) for occurrences of the following units: (a) phrases (defined as prepositional or adverbial phrases) and (b) number of sentence nodes per utterance (number of underlying sentence nodes, as demonstrated by verbs marked and unmarked for tense). An utterance was defined as a single intonational contour, forming a single propositional or meaning unit, and bounded by brief pauses or interlocutor change. A turn could thus contain more than one utterance (see Crookes, 1990, for a detailed discussion of such units). For instance, utterances with one verbal construction were coded as S1 (e.g., *Well, I've heard of Tokyo*), and utterances with more than one verbal construction were coded as S2+ (e.g., *uh, I don't need to work for a company*). (For similar measures of syntactic complexity, see Chaudron & Parker, 1990; Pica & Long, 1986.)

Consistently across all six pairs, the interlocutors produced more complex syntactic constructions (S1 and S2+) in the conversational activities than in the information gap activities (see Table 5, middle panel). This trend was true for both NS and NNS interlocutors and was more pronounced for the NNS interlocutors, who tended to produce utterances that were clearly more elaborated in grammatical terms in the conversational activity than in the information gap task. Overall, the conversational activity may have provided the NNS interlocutors with more opportunities to hear more complex input from the NS interlocutors and with more opportunities to produce syntactically complex output.

Another measure of increasing complexity in the linguistic code, and presumably concomitant cognitive demand, involves shifts between various tenses and verbal aspect. The transcripts were analyzed for shifts

⁵ The first 15 turns from each transcript were eliminated because they contained primarily introductions and a number of false starts.

in tense and aspect (see Table 5, bottom panel). We assumed that simple present was the default for both tense and aspect marking because it is the most unmarked verb form in the English language and tends to be used by learners who have not yet acquired more complex tense and aspect forms. Instances of either past or future tense were counted as marking a shift in tense. Instances of perfective and progressive aspectual marking were counted as shifts in aspect; the use of modals was included in the latter category for the sake of economy.

For both the NS and the NNS interlocutors, the conversational activity elicited far more instances of tense and aspect shift and modal use than did the information gap activity. The substantial increase in use of nonpresent tense and aspectual forms—as well as modals—in conversational activity suggests that this activity presented the interlocutors with more cognitive challenges. Shifts in tense and aspect reflect that the discourse involved content beyond the simple here and now and demanded that the interlocutors rely on language to communicate about events and activities that were not occurring in the immediate environment. The increased use of modals reflects that the interlocutors were attending to interpersonal dynamics and a more nuanced presentation of information. In the information gap activity, the discourse was primarily structured by the pictures, and the interlocutors' task was limited to describing the static visual representation. As a result, they were able to accomplish the task without shifting from the simple present tense. The patterns of tense, aspectual form, and modals indicate that in the conversational activity, the interlocutors were creating more complex discourse and also attending to more than just the informational level within the discourse.

In sum, by all three measures of complexity—turn length, syntactic complexity, and morphological complexity—the conversational activity provided the NNS interlocutors more complex input and led to more complex output.

Discourse Strategies

In Excerpt 3 above, the NNS interlocutor engages in several important discourse moves. She responds to the NS interlocutor's question, "Where are you from?" with the question, "Hm. Um, do you know Tokyo?" The NNS interlocutor does not just assume her interlocutor is or is not familiar with Japanese geography; she provides an opportunity to negotiate the extent of the NS interlocutor's background knowledge. This discourse strategy simultaneously reveals the NNS interlocutor's intention to build rapport by taking her interlocutor's perspective into account and directs the focus to a mutually shared schema in order to

appropriately anchor the information in her utterance to her interlocutor's background knowledge. Moreover, the NNS interlocutor's turn begins with two hesitation markers, "Hm. Um," which softens the question's potential to cause the NS interlocutor to lose face. Tokyo is a well-known city in a major Asian country, but Americans are notorious for their lack of geographical knowledge. Ascertaining the NS interlocutor's knowledge of Japan thus offers many opportunities for face-threatening missteps. The NNS interlocutor arguably uses hesitation markers to deftly downgrade the threat. Moreover, by posing a question the NNS interlocutor manages a change of footing. Although this segment of the exchange begins with the NS interlocutor asking a question that establishes the topic, thus placing the NS interlocutor in a position of higher status, the NNS interlocutor's question places her in the role of knower, thus raising her status in the conversation (Goffman, 1981; Tyler, 1995; Zuengler & Bent, 1991). The conversational activity provides numerous opportunities for changes of footing, which allow the NNS interlocutor to take context-appropriate initiative in the conversation.

In Excerpt 4 above, the NNS interlocutor uses a paraphrase cued by the pragmatic particle *I mean*. One important function of such pragmatic particles or discourse markers is to signal how the utterance should be integrated into the ongoing discourse (Schiffrin, 1987). Therefore, this use of *I mean* may indicate that the NNS interlocutor is attending to the textual plane. At the same time, the use of the marker shows the NNS interlocutor's concern that her first statement, "so I can work by myself," might not have been sufficient to convey her intended meaning. This use of the pragmatic particle illustrates simultaneous attention to the informational and the interpersonal planes. Thus, this excerpt shows the rich opportunities to attend to the textual, interpersonal, and informational planes offered by the conversational activity.

In sum, while engaging in the conversational activity, the learners attended and contributed to a number of discourse dimensions simultaneously rather than attending only to lexical information on the informational plane. These two exchanges from the conversational activity contrast sharply with the representative exchange from the information gap interaction (Excerpt 1), in which the NNS interlocutor answers informational questions with one or two words.

Negotiation

In the SLA literature, it has been argued that some types of negotiation (such as clarification requests) promote pushed output (Swain, 1985). For instance, a confirmation check does not require nonnative speakers to reformulate their own speech or that of others whereas an

open-ended clarification request by a native speaker encourages the nonnative speaker to modify a previous utterance (Pica et al., 1989). Pica et al. claim that when learners receive a clarification request from a native speaker, they are *pushed* to elaborate their interlanguage output.

As noted earlier, a number of studies have shown that information gap interaction triggers more repair negotiation than unstructured conversation; it is widely presumed that information gap interactions tend to push learners to produce more interlanguage. This perception is supported by Long's (1983) claim that in unstructured conversation learners and their interlocutors can drop troublesome topics and therefore avoid repair negotiation and pushed output. In contrast to this hypothesis, the data in the current study indicate that the conversational activity contained a good deal of pushed output. The NNS interlocutors produced longer, syntactically more complex utterances in the conversational activity than in the information gap interactions. In the stimulated recall sessions, the NNS interlocutors also stated that they found the conversational activities more challenging. They noted that in the conversational activity they felt the need to pay careful attention to the NS interlocutors and work to fit their comments to those of their interlocutors. They claimed that in the information gap interaction they relied heavily on the picture and listened primarily for key words to figure out how their picture differed from the NS interlocutor's.

As mentioned earlier in relation to Excerpt 4, the conversational activity provided an opportunity for all three NNS interlocutors to use a variety of discourse strategies (or markers of negotiation in the broader sense, as discussed earlier), such as hedges, reformulations, and demonstrations of understanding. In fact, all six participants used far fewer discourse strategies in the information gap interaction. Interestingly, then, the conversational activity was richer in terms of negotiation activity in the broader sense even though the information gap interaction contained more repair negotiation sequences.

Pragmatic Markers

In this section we discuss briefly three examples of pragmatic markers: silence, *okay*, and *oh*. This type of microanalysis could be extended considerably, but here we merely give some further evidence for the differences between the two types of activities. Work in discourse analysis (e.g., Schiffrin, 1987) has clearly established that native speakers use a wide variety of pragmatic markers to indicate such phenomena as the speaker's stance toward the information, text structure, and aspects of interpersonal dynamics. Discourse that lacks these pragmatic markers is likely to strike the NS interlocutor as odd or even incoherent (e.g., Tyler,

1992, 1995); thus, an understanding and appropriate use of pragmatic markers is an important part of attaining nativelike communicative competence. Comparing the occurrence of pragmatic markers across activities is an important way of gathering evidence on learning opportunities and the social and cognitive work that participants are doing, including issues of discourse control, initiative, and asymmetry.

Silence. An interesting difference between the two types of interaction is that, for one NNS interlocutor in particular, silence (defined as a pause that lasts more than 1 second) was observed more frequently in the information gap activity. In many instances, silence signaled some form of repair work. A typical example of the NNS interlocutor's silence and the help she received is shown in Excerpt 5, from Rita and Sumiko's information-gap activity.

5. 456 Rita: What does your floor look like?
457 Sumiko: mm . . . [2-second pause]
458 Rita: Mine has lines that go a bunch of different directions.
459 Sumiko: Um . . . the lines . . . [incomprehensible]

In Excerpt 5, silence signals nonunderstanding of the preceding utterance. Sumiko (in Line 457) was silent for about 2 seconds after her backchannel, *mm*, because she either did not understand Rita's question (Line 456) or did not know how to describe her floor. After the short silence by Sumiko, Rita took charge of the descriptions. Recall that NS interlocutors on average produced close to twice as much speech as the NNS interlocutors in the information gap interactions whereas in the conversational activity the ratio of NS interlocutors' to NNS interlocutors' words per turn was 10.3 to 9.0 (see Table 5). In fact, if any interlocutor was pushed to produce in the information gap interaction, it appears to have been the NS interlocutor, not the NNS interlocutor.

We suggest, however, that in the information gap activity neither NS nor NNS interlocutors are pushed to produce language. Instead, they are pushed to produce a task solution. In the context of the task, language is not constitutive but ancillary (Halliday & Hasan, 1989, p. 57) because it accompanies the activity of finding the differences between two pictures. Clearly, language use is essential for the completion of the task (because the participants are not allowed to see each other's pictures); however, at the same time, the picture and its components, rather than the language itself, determine the structure of the information gap activity. The post hoc interview with Mika supports this interpretation. She stated that she did not feel much pressure in the information gap interaction because the picture was there, and as long as she understood the location in the picture her interlocutor was talking

about, she could merely state vocabulary items around it to find the differences. In contrast, the structure of a conversation is directly determined by the language that constitutes the conversation as it progresses. Mika's comments on the conversation (translated into English) are as follows: "Since the questions or the topics of the conversation were continuous and not on a discrete basis, I had to pay attention to the whole discourse and tried to be understood as well as understand the interlocutor. So, I thought it was very difficult."

In the current data, the use of silence was insufficiently different in the two types of interaction to produce quantifiable results. As we mentioned, the use of silence was particularly marked in one pair, and there it predominated in the information gap activity. All silences observed were attributable to the NNS interlocutors and none to the NS interlocutors, but the number of silences overall does not warrant conclusions beyond the suggestions made above.

Use of okay. The use of *okay* was predominantly a feature of NS interlocutors' talk (overall, 109 NS versus 6 NNS occurrences in the information gap activities; 30 NS versus 1 NNS occurrences in the conversational activities), but its use did not discriminate between the two activity types. NS interlocutors appeared to use it to indicate *I get it*, and it may be a marker of asymmetry between NS and NNS interlocutors, particularly in the information gap activities, where it occurred much more frequently. (Further evidence of asymmetry between interlocutors in the information gap activity is the fact that NSs produced approximately twice as many words per utterance as NNSs in the information gap activity whereas production in the conversation activity was roughly equal; see Table 5.) In both types of interaction, but more frequently in the information gap activities, *okay* also functioned as a boundary marker, indicating *okay, got that, next item*. Using such markers, the NSs provided closure to an episode (e.g., identification of an object on the picture) and started the next one, thus demonstrating that they controlled the progress of the activity. However, we did not investigate the use of *okay* in exhaustive detail and leave it as a potentially interesting topic for further research.

Use of oh. The pragmatic particle *oh* is considered a linguistic resource used to signal mutual understanding in interactions (see van Lier, 1998, for further discussion). Furthermore, the analysis of pragmatic particles is a part of the study of discourse coherence, that is, how the interlocutors jointly integrate elements of discourse (e.g., meanings) in order to understand what is said (Schiffrin, 1987). If the two types of interaction produce different kinds of discourse, one might expect differences in the interlocutors' uses of these markers.

In the conversational activities, the NS interlocutors used *oh* quite frequently in their responses to the NNS interlocutors (112 times versus 38 by NNSs; in the information gap activities, there were 46 instances by NSs versus 21 by NNSs). The particle *oh* has several functions, and its most common use is to acknowledge receipt of information (Heritage, 1984; Schiffrin, 1987). Schiffrin states that although *oh* is a marker of cognitive tasks (i.e., acknowledging receipt of information), its use may also have various pragmatic effects in interaction, such as signaling subjective orientation and surprise. Heritage argues that *oh* is often used to display understanding.

Such uses of *oh* were observed quite frequently in the conversational data across the three pairs. Consider Excerpt 6, taken from Mika and Donna's conversational activity:

- | | | | |
|----|----|--------|--|
| 6. | 60 | Donna: | But you were here last spring for the um . . |
| | 61 | Mika: | Naa. |
| | 62 | Donna: | You were already here |
| | 63 | Mika: | I came here umm this umm this um January 2 |
| | 64 | Donna: | <u>Oh</u> just January <u>Oh</u> so you haven't been here for one year you've been you're going to |
| | 65 | Mika: | From |
| | 66 | Donna: | stay for a year |
| | 67 | Mika: | A ya |

The use of *oh* in this excerpt is quite similar to that in examples given by Heritage (1984), in that Donna uses *oh* to show that she has finally come to understand that Mika has not been in the United States for a year but instead has recently arrived. In prior discourse, Mika mistakenly mentioned that she had been in the country for a year. As Mika revealed to one of the researchers immediately after her conversation with Donna, Mika thought she had been asked how long she would stay; thus her answer, "for a year," meant that she would stay for a year. Later in the conversation the interaction did not make sense to the participants because of their misunderstanding, and Donna asked for clarification. The interlocutors engaged in this negotiation of meaning in order to clarify each other's discourse because they were trying to achieve mutual understanding. The work of clarifying information for the purpose of building mutual understanding may carry a much greater cognitive load in terms of processing the interlocutor's discourse and responding appropriately than information exchange about lexical items in an information gap task. The receipt token *oh* (Heritage, 1984) may play an important role in this process. As the following section suggests, such tokens may signal closure to negotiation cycles that stretch over varying lengths of discourse and are structured in different ways.

Negotiation Cycles

Both types of interaction were analyzed sequentially in a qualitative manner. We used the notion of *side sequences* (Jefferson, 1972) to interpret the negotiation cycles and determine how they related to the entire interaction. The term *sequence* refers to occurrences of incidents as serial units. Side sequences are sequences embedded into the main discourse, mostly to resolve misapprehension problems or as subtopics. After a side sequence, the discourse returns to the main topic. Jefferson showed the triplet structure commonly found in conversation to be *ongoing sequence, side sequence, return to ongoing sequence*, or (O)-(S)-(R). The following example is taken from Jefferson's data.

- 1 A: An' everybody's askin'im t'dance.
- 2 B: An' because he's scareda dancing he's gonna dance in private till he learns how.
- 3 A: And a good-looking girl comes up to you and asks you, y'know,
- 4 B: "Gi(hh)rl asks you —". . .
- 5 C: Well it's happened a lotta times,
- 6 B: Okay okay go ahead
(1.0)
- 7 B: So he says "no."
(1.0)
- 8 B: Cause he's scared to admit that he can't dance an'he's scared to try. Cause he's gonna make a fool of himself. (p. 317)

B (Line 4) interrupts the main topic, a story about a girl asking him to dance with her. Another interactant, C, responds to B's comment. Then B signals his understanding and his consent to go back to the main discourse. After a pause, B (Line 7) continues with the topic in force before the side sequence occurred. At the end of the (O) sequence and inside the side sequence is a *misapprehension sequence*, composed of "a statement of sorts, a misapprehension of sorts, and a clarification of sorts: (s)-(m)-(c)" (Jefferson, 1972, p. 316). In Line 4 (m), B shows surprise about A's statement (Line 3) (s), which is then clarified by C's explanation (Line 5) (c). This misapprehension sequence is superficially somewhat similar to the negotiation cycles discussed in the SLA literature, but a qualitative analysis reveals differences in the way it is realized in the two different types of interaction.

Excerpt 7, from Donna and Mika, is illustrative of the information gap interaction across the three pairs.

7. 111 Donna: Do you have a cobweb next to the clock on the wall?
112 Mika: Yes. A cobweb?
113 Donna: A spider makes a cobweb.

- 114 Mika: Spider!
 115 Donna: Spider web. A Spider's web.
 116 Mika: Web aa
 117 Donna: You have that?
 118 Mika: yes
 119 Donna: er you know a cobweb or spider web.
 120 Mika: (??) the spider's the making spider made it.
 121 Donna: Right, it's called a web.
 122 Mika: um . . . what can I say? Under the clock. Pee coo clock?
 123 Donna: Cuckoo clock?
 124 Mika: Cuckoo clock, um . . . There's two drawerr . . .
 125 Donna: Oh. Umhum I think it's a filing cabinet.
 126 Mika: Cabinet. There's cabinet with two draw . . .
 127 Donna: drawers
 128 Mika: drawers . . . and top of . . . Top one of these, are little bit open
 129 Donna: Little bit same here
 130 Mika: and I can see a little few piece of paper . . .

In Excerpt 7, Donna starts talking about a cobweb, which is followed by Mika's not understanding the word *cobweb*. The negotiation cycle begins in Line 112 and lasts until Line 121. Then Mika starts talking about a filing cabinet under the cuckoo clock (Line 122), which is not the item they were discussing before they began to discuss the spider web. After the discussion of drawers, they start discussing what is in them (not shown). Thus, this excerpt does not display the triplet structure described by Jefferson (1972). The talk in this information gap activity seems to contain no ongoing (O) sequence or resumption (R); instead, the whole interaction is composed of chained sequences, with the interlocutors moving from one sequence to another in order to find more differences between the pictures. This structure makes sense because "finding the differences" is the topic of the entire interaction, and after negotiating the misunderstanding and exchanging the information, the interlocutors proceed to another item, not worrying about what they were talking about before because they have already solved the previous problem. In that sense, it is the information gap activity that controls the discourse and determines the structure in these task-based interactions. Thus, in this type of interaction neither the NS nor the NNS interlocutor carries the burden to carry the talk forward because they need not pay much attention to the flow of the talk or to the shared meanings accumulated during its course.

In the conversational activity, on the other hand, the triplet sequence occurred in the same way as in Jefferson's (1972) data, as shown by Excerpt 8, from Rita and Sumiko's conversational activity:

8. 14 Rita: Um . . What do you think of Washington? Have you been here before?
- 15 Sumiko: Yes, Um . . My friend, she is American [uh huh]. She's :: she lived in Washington D.C. She's my old friend? when she was a high school student, [uh huh] she stayed in my house in Japan for two:: or three months, and then we are very good friend long time good friend, so she looked for this university and my dormitory for me.
- 16 Rita: Is she a student here, too?
- 17 Sumiko: No. she is student . . she is Size? Hopkins
- 18 Rita: Oh John Hopkins ?
- 19 Sumiko: Yeah.
- 20 Rita: Okay . . Oh. That's what made you pick Georgetown, too?
- 21 Sumiko: Um . . . I went to . . I visited here the . . 2 years ago. . [Uh huh] I went I visited my friend [Uh huh] We're. . we're we went went out Washington D.C. and we we we met here we thought this university it's very beautiful [oh yeah] I liked this place, so I want to study here [Uh huh] and then I came here.

In Excerpt 8, Rita's question regarding Sumiko's friend in Line 16 serves as a side sequence in the triplet structure (O)-(S)-(R). The negotiation cycle takes place in Lines 17–19. Next, Rita returns to the main discourse about the original discussion of Sumiko's experience and impressions of Washington, DC. *Okay* in line 20 is a preclosing device, offering the listener an opportunity to reinstate a previous topic or open another set of topics before conversational closure (Schegloff & Sacks, 1973). After stating *okay*, Rita returns to the main discourse, which is followed by Sumiko's continuing to explain why she came to Georgetown (Line 21). Although not shown in this excerpt, her ongoing sequence (Line 21) is followed by Rita's question, "To do English classes?" which serves as a side sequence. We observed such triplet structures in the conversational activities of all three pairs, which indicates that this activity type shared important features with the types of conversations studied by Jefferson (1972).

The striking differences between the two types of interactions in terms of negotiation cycles show that, in information gap interaction, negotiation cycles occurred locally and independently of one another. In other words, the participants negotiated in order to achieve local cohesion. In conversation, on the other hand, they negotiated meaning in order to achieve coherence in the entire interaction. This claim coincides with the findings on trigger types for negotiation in the information gap and conversational activities. Discrete items (especially lexical items) were

negotiated in the former type of interaction, whereas global items (content and discourse trigger combined) were the major triggers for the latter type (see Tables 3 and 4). Because the main purpose of negotiation was to achieve local cohesion in information gap interaction, local items such as lexical items served as triggers, whereas in the conversational activity more global triggers were the focus of signals in order to reach global cohesion and coherence.

CONCLUSION

This study suggests the kinds of learning opportunities information gap and conversational activities may offer nonnative speakers of English. Investigation of the quantity and quality of interactions revealed that the conversational activity provided NNS interlocutors with a larger range of opportunities for language use than the information gap activity did. First, the conversational activity provided learners with more opportunities to produce more complex utterances. Second, in the conversational activity learners tended to provide a context for their use of pragmatic knowledge, as demonstrated, for example, by their use of *oh*. Third, the retrospective interviews with the two NNS interlocutors revealed that the learners perceived themselves to be more challenged in the conversational activity because they felt that they had to understand their NS interlocutors' questions and statements in order to get to know the other person on the interpersonal plane. The information gap interaction did not place the same demands on the NNS interlocutors. The interlocutors focused on discrete items such as single words to complete the activity, and their focus shifted from one local item to the next so that meaning was negotiated on the basis of discrete (e.g., lexical) items in order to achieve local cohesion.

The finding that the conversational task appeared superior to the information gap task in these ways is contrary to the assertion that conversation allows learners to drop troublesome topics and switch to new ones instead of pursuing negotiation. Both the NS and the NNS interlocutors struggled to get their meanings across through negotiation in a broader sense instead of dropping the topic. This study found differences between conversational and information gap interaction not only in the quantity of negotiation sequences but also in their quality. In addition, the conversational activity required the interlocutors to pay close attention to and relate their utterances to the context of the other interlocutors' utterances and of the topics discussed. Based on these data, conversation should be studied in much more detail as a potential source of rich learning opportunities rather than being disregarded

because it does not trigger as much repair negotiation as information gap interaction does.

The interaction we investigated in the current study took place between NS and NNS interlocutors. However, NNS/NNS interaction might also offer opportunities to learn a variety of communication strategies (for relevant discussion, see, e.g., Donato, 1994; van Lier & Matsuo, 2000). Further, NNS/NNS interaction is more practical in the classroom setting. Although the current study was limited in scope and therefore does not provide definitive evidence, it raises important questions about the value of conversational activity, which appears to be worthy of further research.

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APPENDIX

Task for Information Gap Activity



Fig. 4c

From *Discussions That Work: Task-Centered Fluency Practice*, by P. Ur, 1990, Cambridge: Cambridge University Press. Copyright ©1990. Reprinted with the permission of Cambridge University Press.

Preemptive Focus on Form in the ESL Classroom

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This article contributes to the growing body of descriptive research investigating *focus on form*, defined as the incidental attention that teachers and L2 learners pay to form in the context of meaning-focussed instruction. Whereas previous research addressed reactive focus on form (i.e., corrective feedback), the study reported in this article investigated preemptive focus on form (i.e., occasions when either the teacher or a student chose to make a specific form the topic of the discourse). The study found that in 12 hours of meaning-focussed instruction, there were as many preemptive focus-on-form episodes (FFE) as reactive FFEs. The majority of the preemptive FFEs were initiated by students rather than the teacher and dealt with vocabulary. Students were more likely to *uptake* a form (i.e., incorporate it into an utterance of their own) if the FFE was student initiated. The preemptive FFEs were typically direct, that is, they dealt with form explicitly rather than implicitly. Despite this, they did not appear to interfere unduly with the communicative flow of the teaching. The article concludes by arguing that preemptive focus on form deserves more attention from classroom researchers than it has received to date.

It is now common to distinguish *meaning-focussed* and *form-focussed* approaches to teaching in discussions of language pedagogy (e.g., Ellis, 1997; Nunan, 1993). The former is evident in the *strong version* of communicative language teaching (Howatt, 1984), which is predicated on the assumption that linguistic knowledge is acquired through communication rather than through direct instruction. It is also reflected in the claims advanced for task-based language teaching (Skehan, 1996; Willis, 1996); tasks serve as devices for providing opportunities for learners to focus on meaning and, thereby, to acquire the target language. Form-focussed instruction, in contrast, involves attempts to intervene directly in the process of interlanguage construction by drawing learners' attention to or providing opportunities for them to practice specific linguistic features.

An issue of key theoretical and practical import is whether meaning-focussed language pedagogy is sufficient to ensure success in acquiring an L2. Here considerable differences of opinion can be found. Krashen (1981, 1994) argues that the necessary and sufficient conditions for second language acquisition (SLA) are the availability of comprehensible input and a low affective filter in the learner, and he claims that only meaning-focussed instruction can meet these conditions. Similarly, Prabhu (1987) has argued that attempts to focus learners' attention on grammatical form is "unhelpful" and that instruction should instead be concerned with "creating conditions for coping with meaning in the classroom" (p. 2) by following a task-based syllabus.

Though few teacher educators or researchers would currently deny the importance of meaning-focussed instruction, many now recognize that it needs to be complemented with form-focussed instruction of some kind (Lightbown, 1992; Long, 1991). Studies of immersion education (Genesee, 1987; Swain, 1985) have shown that despite plentiful meaning-focussed instruction, learners typically fail to develop high levels of grammatical or sociolinguistic competence, suggesting the need for some attention to linguistic form. Learners who experience only meaning-focussed instruction typically do not achieve high levels of proficiency, as measured by the American Council on the Teaching of Foreign Languages Test (Higgs & Clifford, 1982). If learners are to benefit from form-focussed instruction, TESOL professionals need to better understand when and how focus on form occurs in the classroom. The purpose of this study is to investigate the amount of preemptive focus on form, as revealed through occasions when either the teacher or a student chose to make a specific form the topic of the discourse during meaning-focused ESL classroom activities. Results add to previous research into reactive focus on form (i.e., corrective feedback) in L2 classrooms.

THE NEED FOR FOCUS ON FORM

Despite relatively broad acceptance of the need for focus on form, theoretical explanations for the value of form-focussed instruction vary. One claim, advanced by Felix (1985) and Schachter (1989), is that L2 learners (especially adults) do not have access (or complete access) to the same acquisitional mechanisms as do children acquiring their L1 (i.e., a specific language faculty), which operate solely on the basis of positive evidence, and thus L2 learners need to call on general inductive learning mechanisms. Such mechanisms make use of negative evidence (e.g., error correction). On the basis of this claim, one can argue that

form-focussed instruction that makes such evidence available is not only helpful but even necessary for adult learners to acquire an L2.

Another explanation draws on information-processing models, which posit that, due to limited processing capacity, learners—especially beginners—have difficulty in attending simultaneously to form and meaning. In contexts that require attention to meaning (as in task-based instruction), learners may find it difficult to give attention to form. Because of the need to process input in real time in such contexts, they may be forced to rely on top-down strategies such as guessing and predicting, which may be cost-effective where communication is concerned but which obviate the need to attend closely to form. VanPatten's (1990) experimental study of low-proficiency learners found clear evidence that "attention to form in the input competes with attention to meaning" (p. 296), suggesting that intake of new forms is possible only when input is easy to understand. Clearly, if learners do not or cannot easily attend to form in meaning-focussed instruction, they need specific activities that draw attention to form.

According to Schmidt's (1990, 1994) Noticing Hypothesis, such attention is necessary for acquisition to take place. Further, Schmidt argues that noticing is a conscious process. It follows that form-focussed instruction that induces learners to pay conscious attention to forms in the input, especially those that they might otherwise ignore (e.g., third-person *-s* in the present simple tense), can assist interlanguage development. This has led to proposals for form-focussed instruction based on input processing (VanPatten, 1996) and the use of interpretation tasks (Ellis, 1995). Taken together, these theoretical explanations provide a compelling rationale for including form-focussed instruction in second/foreign language curricula. The question remains, however, as to how best to achieve this.

ACHIEVING FORM-FOCUSSED INSTRUCTION

Any answer to this question needs to consider that form-focussed instruction cannot work unless the instructional syllabus matches the learner's built-in syllabus. This requirement, first raised by Corder (1967) and subsequently framed as the Teachability Hypothesis by Pienemann (1989), holds that teachers must be familiar with the order and sequence of acquisition that learners in general manifest and the developmental stage that individual learners have reached. Only in this way can teachers be certain that a learner will be ready to acquire the specific linguistic features they are targeting in their teaching. As Long (1985), among others, has pointed out, teachers are unlikely to achieve

this familiarity. One reason is that knowledge of developmental orders and sequences remains sketchy after 30 years of research in SLA. A second reason is the logistic problems teachers will experience in determining the precise stage of development that individual students have reached. Thus, the effective teaching of discrete linguistic forms might not be feasible even if it can be theoretically justified. Drawing on such arguments, Long (1988) comments,

I do not think . . . that there is any evidence that an instructional programme built around a series (or even a sequence) of isolated forms is any more supportable now, either theoretically, empirically or logically, than it was when Krashen and others attacked it several years ago. (p. 136)

Thus Long concludes that there is nothing to be gained by attempting to systematically teach isolated linguistic forms in accordance with a structural syllabus—an approach he characterises as *focus on forms*.

However, unlike Krashen, Long (1991) believes that some attention to form is needed. He argues that attention to form needs to be incorporated into meaning-focussed activity, an approach that he refers to as *focus on form*. He defines this as follows: “Focus on form . . . overtly draws students’ attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication” (pp. 45–46). Focus on form is seen as psycholinguistically plausible because it stimulates the kind of attention to form that occurs in natural language acquisition, because it addresses linguistic problems that individual learners are actually experiencing, and because it encourages the kind of noticing that has been hypothesized to aid acquisition. Long suggests that a focus on form occurs when learners participate in interactions in which communication problems arise, leading to attempts to negotiate for meaning, as in this example:¹

1. NS: with a small pat of butter on it
 NNS: hm hmm
 NS: and above the plate
 NNS: what is buvdaplate?
 NS: above
 NNS: above the plate
 NS: yeah

(Pica, 1992, p. 225)

¹ Transcription conventions are as follows:

S	student
T	teacher
CAPITALS	emphasis
()	extra information
(1)	timed pause
?	rising intonation
. . .	continuing discourse

Here the learner fails to decode the phrase *above the plate* and seeks clarification, as a result of which she is able to identify the constituents of the phrase and thus understand it. Through negotiation of this kind, learners' attention is drawn temporarily to form in ways that are hypothesized to aid acquisition. In contrast to a focus-on-forms approach, which involves an attempt to preselect specific forms for attention, focus on form occurs incidentally in meaning-centred interaction and is necessarily transitory. Thus, whereas a focus on forms requires a structural syllabus, a focus on form does not; it is achieved through attention to form when learners are performing a communicative task.

(RE)DEFINING FOCUS ON FORM

The term *focus on form* has since been stretched beyond the meaning that Long (1991) originally assigned to it. Doughty and Williams (1998b), for example, point out that "there is considerable variation in how the term 'focus on form' is understood and used" (p. 5). In many of the studies in the book they edited (Doughty & Williams, 1998a), focus on form has been reinterpreted as proactive attention to form (i.e., preselected forms are taught through communicative activities). For example, Doughty and Varela (1998) report a classroom experiment in which a science report task served to create contexts for the use of past tense. Teachers were instructed to provide focus on form by means of confirmation checks and recasts when learners failed to use the target structure. This task constitutes a clear example of what Loschky and Bley-Vroman (1993) have called a *structure-based communicative task*.² Such tasks constitute a very different kind of focus on form from the one Long initially envisaged in that attention to form is no longer incidental but proactive (i.e., planned), and it is intensive rather extensive (i.e., it involves repetitive exposure to a single preselected linguistic feature rather than nonrepetitive exposure to numerous linguistic features within a single lesson).

In the research reported here, we attempted to adhere closely to Long's (1991) original definition. Thus, in our definition, focus on form

1. occurs in discourse that is primarily meaning centred
2. is observable (i.e., occurs interactionally)
3. is incidental (i.e., is not preplanned)

² Loschky and Bley-Vroman (1993) suggest that structure-based communicative tasks should meet two criteria: (a) Structural accuracy is essential to meaning in the task, and (b) communicatively oriented feedback on structural accuracy needs to be incorporated into the design of the task. Doughty and Varela's (1998) task clearly meets both criteria.

4. is transitory
5. is extensive (i.e., several different forms are attended to in the context of a single lesson)

Criteria 1 and 4 figure in Doughty and Williams' (1998b) definition. The other three criteria distinguish our definition from their broader definition. In claiming that focus on form is observable, we wish not to intimate that it is not also a psycholinguistic phenomenon, as it clearly is (i.e., learners may notice the forms that are addressed interactionally), but to emphasize that from an instructional point of view focus on form must be defined behaviourally. In recognizing that focus on form is incidental, we are excluding proactive attempts to teach specific linguistic forms communicatively, as in studies by Doughty and Varela (1998) and Williams and Evans (1998). Incidental focus on form cannot be studied experimentally, as such studies necessarily require the preselection of a linguistic feature for investigation. Indeed, we believe that the main reason for the stretching of Long's initial definition was the desire of researchers like Doughty and Williams to conduct experimental studies. Finally, focus on form, as we have defined it, is extensive because it arises out of the various problems that occur in the context of meaning-focussed classroom interaction and not out of some preselected linguistic problem.

We have emphasised the differences between our definition of focus on form and that of Doughty and Williams (1998b) not to dispute the validity of their approach but to clarify the phenomenon we wish to study. Incidental, extensive focus on form is a very different phenomenon from planned, intensive form-focussed instruction, even when the latter occurs through discourse that is primarily meaning centred. The study of incidental focus on form requires an approach to research that is necessarily descriptive (i.e., entailing observation of meaning-focussed instruction to subsequently identify and analyze the focus-on-form episodes that occur) rather than experimental (i.e., constructing conditions in which focus on form is systematically varied across conditions).

Meaning-Focussed Instruction

In one key respect our definition of focus on form corresponds to that of Doughty and Williams (1998b)—like them, we see it as arising in instruction that is primarily meaning focussed. This raises the question of what is meant by meaning-focussed instruction.

To our minds, such instruction has two essential elements (Ellis, 2000a). First, it requires the classroom participants (teacher and students) to treat language as a tool for achieving some nonlinguistic goal

rather than as an object to be studied for the purposes of learning the language. Second, it requires the participants to function as users rather than as learners. We note that this definition of meaning-focussed instruction excludes any consideration of the quality of the instructional discourse. Thus, whether the exchanges that occur are didactic in nature, consisting of initiate-respond-feedback, as described by Sinclair and Coulthard (1975), or more natural, involving learner-initiated adjacency pairs (e.g., invite-accept), is not itself a criterion for meaning-focussed instruction although, of course, it may be a significant factor where acquisition is concerned (Ellis, 2000b). In meaning-focussed instruction, focus on form may or may not occur. As Seedhouse (1997b) has shown, instruction can lead to discourse that is entirely meaning focussed whereas at other times it can incorporate a dual focus. Our concern is with classroom discourse in which the primary concern is message conveyance but in which, from time to time, attention to form arises.

Reactive Versus Preemptive Focus on Form

Two kinds of focus on form can be identified whether the focus on form is proactive (planned) or incidental: reactive and preemptive (Long & Robinson, 1998). Reactive focus on form arises when learners produce an utterance containing an actual or perceived error, which is then addressed usually by the teacher but sometimes by another learner. Thus, it supplies learners with negative evidence. As Long and Robinson point out, this evidence can be *explicit* (e.g., the learner is told directly what the error is or is given metalingual information relating to the correct form) or *implicit* (e.g., the learner's deviant utterance is recast in the target language form). Doughty and Varela's (1998) study provided reactive focus on form of the implicit kind. There is a considerable literature on teachers' corrective feedback, including a number of recent descriptive studies (Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Oliver, 2000) and a review (Seedhouse, 1997a). These studies show that corrective feedback is common even in meaning-focussed language instruction (such as that found in immersion classrooms); that teachers typically favour indirect, implicit correction rather than direct, explicit correction; and that learners often do not *uptake* correction (i.e., they make no attempt to produce the correct utterance that has been modelled for them).³

³ Uptake is, of course, not the same as acquisition. The fact that a learner responds to a focus on form by producing the form correctly does not mean that the learner has acquired the form. However, it does indicate that the form has been noticed. Furthermore, pushing learners to produce language has been hypothesized to aid acquisition (Swain, 1985).

Reactive focus on form occurs in episodes that involve negotiation. Pica (1992), for example, defines *negotiation* as applying “to those interactions in which learners and their interlocutors adjust their speech phonologically, lexically, and morphosyntactically to resolve difficulties in mutual understanding that impede the course of their communication” (p. 200). In other words, negotiation arises as a response to a communicative problem. Two types of negotiation have been identified. The *negotiation of meaning* is entirely communicative in orientation, as it is directed at enabling the participants to achieve mutual understanding in order for communication to proceed. Example 1 above illustrates this type of negotiation. The *negotiation of form* is didactic in orientation, as it is directed at improving accuracy and precision when no problem of understanding has arisen. As Lyster and Ranta (1997) point out, both types of negotiation occur in meaning-focussed instruction (e.g., immersion classrooms), and both involve corrective feedback and thus are reactive in nature.

Like reactive focus on form, preemptive focus on form is problem oriented. However, the nature of the problem that is addressed is somewhat different. Whereas reactive focus on form involves negotiation and is triggered by something problematic that an interactant has said or written, preemptive focus on form involves the teacher or learner initiating attention to form even though no actual problem in production has arisen. To put it another way, reactive focus on form addresses a performance problem (which may or may not reflect a competence problem) whereas preemptive focus on form addresses an actual or a perceived gap in the students’ knowledge. The type of discourse that arises in preemptive focus on form differs from that found in reactive focus on form. Thus, whereas the latter takes the form of sequences involving a trigger, an indicator of a problem, and a resolution (Varonis & Gass, 1985; see Example 1), the former consists typically of exchanges involving a query and response.

Some examples of preemptive focus on form will make this distinction clear. Teachers sometimes predict a gap in their students’ knowledge and seek to address it, as in Example 2:

2. T: what’s the opposite of landing?
 S: take off
 T: take off
 SS: take off

Here the class is talking about a student’s upcoming airplane journey. The teacher takes time out from focussing on meaning to address a perceived gap in the students’ lexical knowledge—the item *take off*. Borg (1998) has shown that the experienced teacher he studied often pre-

empted grammar problems in this way. He notes that this teacher's approach to grammar was largely unplanned and that "he took decisions about what language points to focus on interactively" (p. 23). One of the problems of such teacher-initiated preemption, of course, is that the perceived gap may not be an actual gap. Thus, in the example above, the fact that the student is able to answer the teacher's question suggests that in fact the student already knows the meaning of *take off*. In student-initiated preemptions, however, the gap is presumably real (unless, of course, a student elects to focus on a form that he or she already knows). In the following example from an information-gap activity, it seems reasonable to suppose that the learner really does not know the meaning of *sacked*:

3. S: what's sacked?
 T: sacked is, when you lose your job, you do something wrong
 maybe, you steal something, and your boss says, right, leave the
 job

Williams (1999) examined preemptive focus on form in collaborative group work. She found that learners did not initiate attention to form very often but that the more proficient learners did so more frequently than the less proficient. The most likely context for preemptive focus on form by students was requests about vocabulary that were directed at the teacher.

What Is Form?

These two examples raise the question of what is meant by the term *form*. The term is often taken to refer exclusively to grammar, but in fact it need not and, indeed, in our opinion should not. Focus on form can be directed at phonology, vocabulary, grammar, or discourse. In Example 1 above the focus was on the segmentation of the phrase *above the plate*, a phenomenon that is in part phonological and in part grammatical. In Examples 2 and 3, the focus was on vocabulary—the meanings of the lexical forms *landing* and *sacked*. At first sight, these examples may appear to show a focus on meaning rather than a focus on form. However, this interpretation would be mistaken. The participants are primarily engaged in comprehending and producing messages in which they treat language as a tool and function as language users (i.e., there is a focus on meaning). Temporarily, they step out of this meaning-centred activity in order to treat the lexical forms *landing* and *sacked* as objects whose meanings can be learned. Thus, explicit attention to the meanings of specific lexical forms in the context of meaning-focussed activity

constitutes focus on form. We note that the term *focus on form* has always been used to refer not just to form but also to the meaning(s) that a form realises, in other words, to form-meaning mappings.

The purpose of the study reported below is to examine how preemptive focus on form was accomplished in the meaning-focussed lessons taught by two experienced ESL teachers. We observed ESL lessons that were meaning focussed with a view to gaining insight into whether, to what extent, and how the classroom participants engaged in preemptive focus on form. The study addressed the following research questions:

1. How frequently did preemptive focus-on-form episodes (FFE) occur?
2. What did the preemptive FFEs consist of?
3. What aspects of language did the preemptive FFEs address?

METHOD

The research was descriptive in Seliger and Shohamy's (1989) sense of this term. That is, it sought to "describe naturally occurring phenomena without experimental manipulation" but had a "narrower scope of investigation" (p. 124) than qualitative research. The study consisted of two main stages. The first stage was identification of FFEs in a corpus of audio recordings taken from naturally occurring language lessons. The second stage was a detailed description of the FFEs found in the data, including quantification of aspects of them.

Instructional Setting

Two intact classes in a private English language school in Auckland, New Zealand, were selected as the site for data collection. One of these classes was an intermediate class (Class 1), and the other, a preintermediate class (Class 2). Classes at this language school are divided into eight proficiency levels, with intermediate and preintermediate representing Levels 5 and 4, respectively.

Reflecting the common practice in private language schools in Auckland of structuring class time into two parts, the lessons consisted of 3 hours of instruction divided by a 30-minute break. In the first part, comprising 60 minutes, the teacher focused primarily on grammatical forms. The instruction in this part, therefore, was of the focus-on-forms type. The second part of the lesson, comprising 90 minutes, occurred after the break, and in this part the instruction was primarily meaning focussed in that it had no predetermined linguistic focus, although there was some concern to provide opportunities for the students to practice

the structure taught in the first part of the lesson. The types of activities occurring in the second part of the lessons included role plays (e.g., a policeman interviewing a suspect about a robbery), jigsaw tasks (e.g., solving a murder mystery), general class discussions (e.g., a discussion of movie and story genres), opinion-gap tasks (e.g., making predictions about the future), reading comprehension activities (e.g., using information in a passage to fill in a hotel reservation form), listening activities, and talk about approaches to language learning (e.g., how to learn vocabulary). The data for the present study come entirely from the meaning-focussed activities in the second part of the lessons.

Participants

Each class consisted of 12 students, although attendance varied from day to day. Each class contained 5 male and 7 female students. Additionally, the nationalities represented in the two classes were very similar, with Class 1 consisting of 6 Japanese, 2 Koreans, 2 Swiss, 1 Thai, and 1 Brazilian, and Class 2 consisting of 4 Japanese, 3 Koreans, 3 Swiss, 1 Taiwanese, and 1 Brazilian. The students were fee paying and generally highly motivated. Some of them were studying English with a view to enrolling in English-medium academic programmes whereas others were interested in developing their general English.

Teacher 1 had taught full-time at the language school for 4½ years. She had completed the Cambridge Certificate in English Language Teaching to Adults (CELTA) at the school and had started teaching upon passing the course. She was concurrently finishing a diploma course offered by the school. Teacher 2 had also completed the CELTA and had been teaching part-time at the language school for 2 years. The teachers were not made aware that the researchers intended to examine focus on form. They were simply told that the aim of the study was to examine classroom interaction during meaning-centred lessons.

Procedure

Data Collection

A wireless, clip-on microphone was attached to the teacher in each class to record whole-class interaction as well as the teachers' interaction with individuals and small groups. This procedure provided data relating to any interaction involving the teacher but not to interactions between learners when the teacher was not present. This constitutes a limitation of the study but perhaps not a major one, given Williams' (1999) finding

that relatively little focus on form occurs in such interactions. Using this method, we collected 14 hours of classroom instruction, 7 from each of the two teachers' classes.

Data Review

Two researchers reviewed the recordings to determine whether the instruction was in fact meaning focused. This process resulted in the exclusion of 2 hours of recordings of activities explicitly focused on pretargeted forms (e.g., filling in the correct verb forms in a story, choosing between active and passive forms). Thus, the final data for this study comprised 12 hours of meaning-focused classroom instruction.

Identification of FFEs

We then identified episodes in the instruction when participants took time out to deal with issues of linguistic form—termed *focus-on-form episodes*. Because the study was limited to focus on form that was interactionally accomplished, we excluded three types of episodes from the analysis. We did not consider episodes involving a problem related to content rather than to linguistic form (e.g., on one occasion the teacher asked a closed question about a date, and a student responded with the wrong date). Nor did we consider episodes involving a linguistic error with no attempt to address it or episodes in which an individual self-corrected an error.

Once identified, the FFEs were transcribed. A broad transcription was used, but pauses of any length were noted. The researcher subsequently listened to the recordings on several further occasions to check that (a) all FFEs had been identified, (b) the beginnings and endings of the FFEs had been correctly identified, and (c) each FFE had been accurately transcribed. Furthermore, two of the researchers independently coded a lesson sample of 45 minutes, with a resulting 91% agreement rate in the identification of FFEs.

Data Analysis

The FFEs were next subjected to detailed analysis. This led first to the identification of two broad categories of FFEs—reactive and preemptive. Reactive episodes were those that arose as a result of an actual or perceived error in something that a student had said. Thus they involved corrective feedback by means of the negotiation of meaning or form. Negotiation of form refers to attempts to establish a correct form interactionally even though no breakdown in communication has oc-

curred. For the purpose of this study, reactive FFEs were excluded from subsequent analyses. Preemptive episodes were those in which either the teacher or the student drew attention to a linguistic form even though no error in the use of this form had occurred. A further distinction was made between preemptive FFEs initiated by students and preemptive FFEs initiated by teachers.

Example 4 illustrates two student-initiated preemptive FFEs (underlined) in the data. This extract is taken from interaction in an information gap activity in which students had to decide if two people would make suitable partners. First, one student wants to know what *seeking* means. Then another student wants to know what *desperately* means. Having taken time out from the activity to deal with these two language items, the class then returns to discussing the compatibility of the two people.

4. T: just look here (pointing to title) desperately seeking someone, okay desperately
 S: what does seeking mean?
 T: anyone? What does seeking mean?
 S: seeking, like find?
 T: seeking, look for
 SS: ahh
 T: yep, very good
 S2: what desperately?
 T: anyone? What's desperately?
 S: eh, I know what mean, I don't know
 S3: no, don't give up
 T: don't give up, yes, but okay, looking for someone (acts it out)
okay looking for someone,
 S4: don't give up
 T: desperately looking for someone (acts) (gasp, gasp)
 S: ah
 T: yeah, you're very strong, you must find someone now
 S: now, quickly
 T: yeah, good

To check the reliability of coding into reactive and student- and teacher-initiated preemptive FFEs, a second researcher coded a random sample of 10% of all episodes, with a reliability level of $\kappa = .97$.

Examination of FFEs

In order to answer Research Questions 2 and 3, we examined the preemptive FFEs in fuller detail to determine the exact discourse moves they consisted of and their linguistic foci (e.g., vocabulary, grammar, or pronunciation). In a data-driven approach, we identified categories,

then validated them by returning to the data again and again to see if the categories could account for all the data. Once we were satisfied that they could, the data set was coded for the categories (described in detail in the Results section, where reliability measures are also reported). In order to determine if there were differences in the distributions of the categories, we subjected the raw frequency data to Pearson's chi-square tests using SPSS (1998). The alpha level was set at $p < .05$ (two-tailed).

RESULTS

How Frequently Did the Preemptive FFEs Occur?

Overall, 448 FFEs were identified in the 12 hours of message-focused teaching. Thus a focus on form occurred at a rate of 1 every 1.6 minutes. The FFEs were evenly divided between reactive and preemptive (223 and 225, respectively; see Table 1). There was a small difference between the two classes. In Class 1 the majority of FFEs were reactive, and in Class 2 the majority were preemptive. However, this difference is not significant, $\chi^2(2\text{ df}, n = 448) = 1.941, p = .329$. Of the preemptive FFES, the majority were student initiated in both classes (76 out of 99 in Class 1, and 89 out of 126 in Class 2).

What Did the Preemptive FFEs Consist Of?

We consider student-initiated and teacher-initiated FFEs separately as their interactional structure was quite different.

Student-Initiated FFEs

Preemptive student-initiated FFEs consisted of two obligatory moves, *trigger* and *response*, and one optional move, *uptake* (see Figure 1 for definitions). The trigger move was generally performed by a student,

TABLE 1
Frequency of Reactive and Preemptive FFEs

Category	Class 1	Class 2	Total
Reactive FFEs	108	115	223
Preemptive FFEs	99	126	225
Total	207	241	

Note. $\chi^2(2\text{ df}, n = 448) = 1.941, p = .329$.

FIGURE 1
Structure of Preemptive Student-Initiated FFEs

1.	Trigger	A student asks a question about a specific linguistic item.
2.	Response	The teacher answers the question.
3.	Uptake	The student acknowledges the response, attempts to use the information provided, or tries to produce the target item.

although sometimes the teacher began the exchange by inviting students to ask about forms they found problematic. The teacher invariably performed the response move. Uptake, when it occurred, was always a student move. The interrater reliability for coding these categories, based on a random sample of 10% of all the FFEs, was trigger (Move 1), $\kappa = .85$; response (Move 2), $\kappa = .84$; and uptake (Move 3), $\kappa = .90$.

Uptake in these preemptive FFEs differs from uptake reported elsewhere (e.g., Lyster & Ranta, 1997) because, to date, it has been studied only in relation to reactive feedback, in which it typically involves a learner's attempt to reformulate an initial utterance (e.g., by means of a recast). Uptake in preemptive FFEs was seen to be different. Minimally, it could consist of an acknowledgment. More substantially, it could involve an attempt to incorporate the information that had been provided (e.g., by summarising or paraphrasing it) or to actually produce the target form. We continue to refer to this as uptake on the grounds that the move (a) is optional and (b) provides evidence of whether the learner has attended to and incorporated information about a target form. In these respects it resembles uptake in reactive FFEs.

Student-initiated exchanges are illustrated in Examples 5 and 6. In Example 5 the participants address a grammatical problem (the choice of the present or past form of copula *be*). In the trigger in Turn 1, the student formulates the problem. The teacher's response occurs in Turns 2 and 4, with Turn 2 indicating the correct form and Turn 4 providing a metalingual explanation. The student's uptake move consists of an acknowledgment of the teacher's answer (i.e., the student makes no attempt within the FFE to incorporate or use the correct form).

- | | | | |
|----|---|----|--|
| 5. | 1 | S: | I have a question. I met one of my friends who WAS or who IS from Thailand |
| | 2 | T: | IS from Thailand |
| | 3 | S: | ah |
| | 4 | T: | because it's always true she's always from Thailand |

Example 6 illustrates a more extended student-initiated FFE, but the basic structure is the same. The focus this time is on vocabulary (the meaning of the word *spoil*). The trigger is again a student question. Interestingly, even though this move contains an error (i.e., *means* instead of *mean*), the teacher ignores it in favour of addressing the student's question. The teacher's response covers several turns (i.e., Turns 2, 4, and 6). The student's uptake moves occur in Turns 7 and 9, the first consisting of an acknowledgment, and the second, of an attempt to incorporate the information supplied by the teacher.

- | | | | |
|----|---|----|---|
| 6. | 1 | S: | excuse me, T, what's spoil means? |
| | 2 | T: | spoil means |
| | 3 | S: | spoil |
| | 4 | T: | if you are my child |
| | 5 | S: | mhm |
| | 6 | T: | and you keep saying give me, give me sweets, give me money, give me football, let me watch TV, and I say yes all the time, yes, I spoil you, I give you too much because you always get what you want |
| | 7 | S: | ah, ah |
| | 8 | T: | so |
| | 9 | S: | they spoil them, mm, they always get whatever |

Teacher-Initiated FFEs

Preemptive, teacher-initiated exchanges were found to fall into two patterns. In one, the teacher raised a question about a linguistic item; in the other, the teacher drew attention to a linguistic form by modelling or reminding the students about it. When the teacher initiated a linguistic query, one of two moves followed: (a) A student might answer the question, in which case no gap in the student's knowledge was evident, or (b) students might fail to answer the question. If no student response to the question was forthcoming, the teacher might choose to answer the question herself, or she might choose not to respond. If the teacher provided a response, then students had the option of reacting to that response with an uptake move. Thus, uptake could occur in teacher-initiated queries only if a student's failure to answer the query was followed by the teacher's provision of a response. When the teacher drew attention to a linguistic item through modelling or by reminding students, the students might respond; however, this was not coded as an uptake move because there was no evidence of a gap in the students' knowledge in such FFEs.

Example 7 illustrates the structure of a teacher-initiated query. The teacher begins with a query (Turn 1) to check whether the students know

what an *alibi* is. This is reiterated in Turns 2 and 3 in the form of clues. However, when no student volunteers an answer, the teacher herself provides the response in Turn 4. There is no uptake move in this exchange.

7. 1 T: what's an alibi?
(4)
- 2 T: S has an alibi
(3)
- 3 T: another name for a girlfriend?
(4.5) (laughter)
- 4 T: an alibi is a reason you have for not being at the bank robbery, okay, not being at the bank robbery

Frequency of Uptake Moves

Given the importance that is currently attached to uptake as a potential mechanism of acquisition (see, e.g., Lyster, 1998a; Swain, 1995), we calculated the frequency of the uptake moves in the teacher-initiated and student-initiated exchanges for each class (see Table 2). For this analysis we excluded teacher-initiated FFEs in which students supplied responses, as these episodes provide no opportunity for an uptake move. An uptake move was clearly much more likely to occur in student-initiated exchanges: In Class 1 and in Class 2, more uptake moves occurred in student-initiated FFEs than in teacher-initiated FFEs, and in both classes the difference was statistically significant.

TABLE 2
Frequency of Uptake Moves in Teacher- and Student-Initiated FFEs

Category	Class 1 ^a			Class 2 ^b		
	Teacher-initiated FFEs ^c	Student-initiated FFEs	Total	Teacher-initiated FFEs ^c	Student-initiated FFEs	Total
Uptake move	8	63	71	3	75	78
No uptake move	8	13	21	22	14	36
Total	16	76		25	89	

^aFisher's exact test resulted in $p = .008$ (1 *df*, $n = 92$). The robustness of the chi-square with small cell frequencies is questionable, so the Fisher's exact test was used instead of the chi-square. Like the chi-square, it tests the probability of independence among observations but calculates the probability directly rather than returning a statistic whose probability is checked. ^b $\chi^2(1 \text{ df}, n = 114) = 47.179$, $p = .001$. ^cExcludes teacher-initiated FFEs in which students supplied response moves.

In looking at the uptake moves, we also noticed that some seemed more successful than others. *Successful uptake* was defined as uptake in which learners clearly demonstrated an ability to incorporate the information provided (e.g., by paraphrasing it) or to use the item correctly in their own utterances. *Unsuccessful uptake* was defined as uptake consisting of just an acknowledgment or a simple repetition of something the teacher had said or of the incorrect use of the item. Although such acknowledgments and repetitions were coded as uptake because they constituted a reaction to the information provided, they were coded as unsuccessful because they did not clearly indicate that students had processed the information. Interrater reliability for identifying uptake was $\kappa = .90$, and for coding successful uptake was $\kappa = .82$. In both classes, uptake in student-initiated FFEs was more successful than in teacher-initiated FFEs (see Table 3). This difference was statistically significant in Class 2 but not in Class 1.

What Aspects of Language Did Preemptive FFEs Address?

From the data, we observed that participants targeted the following types of linguistic items in their FFEs:

- *grammar*: for example, determiners, prepositions, pronouns, word order, tense, verb morphology, auxiliaries, subject-verb agreement, plurals, negation, question formation
- *vocabulary*: the meaning of open-class lexical items, including single words and idioms
- *spelling*: the orthographic form of words
- *discourse*: textual relations, such as text cohesion and coherence, and pragmatics, such as the appropriate use of specific forms according to social context

TABLE 3
Frequency of Successful and Unsuccessful Uptake Moves

Uptake moves	Class 1 ^a			Class 2 ^b		
	Teacher-initiated FFEs ^c	Student-initiated FFEs	Total	Teacher-initiated FFEs ^c	Student-initiated FFEs	Total
Successful	5	50	55	0	48	48
Unsuccessful	3	13	16	3	27	30
Total	8	63		3	75	

^aFisher's exact test resulted in $p = .368$ (1 *df*, $n = 71$). ^bFisher's exact test resulted in $p = .053$ (1 *df*, $n = 78$). ^cSee Table 2, Note c.

- *pronunciation*: suprasegmental and segmental aspects of the phonological system

Interrater reliability for identifying the linguistic focus of the FFEs, based on coding a random 10% of all FFEs, was $\kappa = .90$. The vast majority of preemptive FFEs in the two classes combined focussed on vocabulary (see Table 4). Of the total teacher-initiated FFEs, 60% addressed vocabulary. In the case of student-initiated FFEs, the percentage was even higher—66%. The only other aspect of language to receive much attention was grammar, accounting for nearly 27% of teacher-initiated FFEs and 19% of student-initiated FFEs.

DISCUSSION

The purpose of this study was to examine incidental focus on form as it arose naturally in the course of meaning-focussed ESL lessons involving adult students from mixed language backgrounds. To what extent were the lessons we observed meaning centred? Because the lessons followed on from lessons that involved an explicit focus on forms, they may not have been as meaning centred as they might have been without such a prelude. The initial focus on forms could have influenced the way the subsequent meaning-focussed tasks were conducted by inducing the classroom participants to pay special attention to form. However, we do not believe that this was the case for a number of reasons. First, relatively few (9.4%) of the FFEs in the second part of the lesson concerned the linguistic feature that was the target of the focus-on-forms part. The participants, then, did not seem to treat the second part as an opportunity to practise the structure targeted in the first part. Second, post-observation interviews with the teachers showed that their mind-set was

TABLE 4
Linguistic Focus of Preemptive FFEs

Linguistic focus	Teacher-initiated FFEs		Student-initiated FFEs		All FFEs	
	No.	%	No.	%	No.	%
Grammar	16	26.7	31	18.8	47	20.9
Vocabulary	36	60.0	109	66.1	145	64.4
Discourse	0	0.0	8	4.8	8	3.6
Pronunciation	6	10.0	7	4.2	13	5.8
Spelling	2	3.3	10	6.1	12	5.3
Total	60	100.0	165	100.0	225	100.0

on fluency rather than accuracy. For example, they specifically stated that they did not attend to form intentionally in the meaning-focussed activities. Third, the tasks that the teachers used were clearly meaning focussed. Finally, our observations indicated that the activity that arose out of these tasks was indeed predominantly meaning focussed. We are confident, therefore, that the data we collected were representative of instruction that was primarily meaning centred.

Frequency of Preemptive FFEs

The first research question addressed the frequency of occurrence of preemptive FFEs. In the classes investigated in this study, focus on form in general was a common occurrence, there being one FFE every 1.6 minutes. However, this level is similar to that reported in other studies of teacher-centred communicative instruction. Lyster (1998a), for example, reports that FFEs occurred at a rate of one every 1.97 minutes in immersion classrooms. This rate is slightly lower than in this study, but Lyster examined only reactive FFEs. Oliver (2000) reports 614 teacher responses to nontargetlike learner turns (i.e., reactive focus on form) in four meaning-centred ESL lessons (two with adults and two with children). Unfortunately, she does not indicate the length of the lessons, but from the descriptions provided it is unlikely they exceeded 12 hours (the length of the lessons in this study). Williams' (1999) study of learner-generated focus on form in small-group work suggests that the rate may be lower in this kind of instructional context.

A key question that can be asked of this study, and of Lyster's (1998a) and Oliver's (2000) studies, is: To what extent does the relatively high incidence of focus on form interfere with the overall focus on meaning? This question is not easy to answer as it relies on observers' judgments as to whether the interactions were primarily meaning focussed. According to Lyster and Ranta (1997), the kind of reactive feedback they studied "clearly does not break the communicative flow" (p. 57). Oliver (p. 141) also states that the high level of reactive focus on form she found in teacher-centred lessons occurred within the context of ongoing meaning-focussed exchanges. Seedhouse (1997b) illustrates how a teacher can accomplish a "dual focus" (i.e., focussing on meaning and form within a single exchange) without interrupting the "flow of the lesson" (p. 343). We also considered that the FFEs we observed were not unduly obtrusive. Typically, they consisted of very short side sequences in which the participants momentarily abandoned using language as a tool to treat it as an object. We believe that such behaviour is quite normal for adult, motivated learners, who quite naturally look for opportunities to learn about form even in activities that are meaning centred.

Inevitably, though, the question arises as to whether the type of attention to form we found in the preemptive FFEs differs in any real way from form-focussed instruction of the focus-on-forms kind. In fact, there are two important differences. The first is that, as we have already emphasized, the forms addressed in the preemptive FFEs all derived from meaning-focussed activity, which, as noted above, is what distinguishes focus on forms and focus on form. The second is that they involved the extensive rather than intensive treatment of form. That is, in focus on form, many forms are treated briefly within a single lesson whereas in focus on forms a single form is practised on multiple occasions within the same lesson. Both kinds of treatment have potential advantages and disadvantages. Intensive treatment is more likely to result in immediate gains in acquisition, but these gains will be limited to the relatively few forms that there will be time to treat in most courses of study. Extensive treatment provides an opportunity to acquire a large range of forms, but given the superficial and shallow treatment of each item, such an opportunity may not be effective in many cases. The two types of treatment are, of course, not mutually exclusive.

One of the main findings of the study, and one that we wish to emphasize, is that in the classrooms we investigated preemptive focus on form occurred as frequently as reactive focus on form. This finding is important because it suggests that researchers (and teachers) need to pay more attention to preemptive focus on form than has been the case to date. There is not a single study of preemptive focus on form in Doughty and Williams's (1998a) edited volume, although its existence is acknowledged. Likewise, pedagogic discussions of how to incorporate a focus on form into communicative teaching (e.g., Willis, 1996) do not refer to this type of focus on form. Both researchers and teacher educators have given attention almost exclusively to reactive focus on form (and in particular the treatment of error). We wish to argue that the fact that teachers and students deal with form in the context of meaning-focussed lessons by raising them preemptively as topics to be talked about constitutes a phenomenon of considerable significance.

Discourse in Preemptive FFEs

The second research question concerned the nature of the discourse observed in preemptive FFEs. We observed a number of differences between teacher-initiated and student-initiated preemptive focus on form. In initiating a focus on form, teachers need to decide which forms to attend to. Presumably, they use their experience to predict which forms are problematic. However, these forms constitute potential rather than actual gaps in the student's knowledge—the students may already

know the forms. In contrast, as we noted earlier, student-initiated focus on form is likely to involve actual gaps in the students' knowledge. This contrast suggests that student-initiated focus on form may be more efficient than teacher-initiated focus on form.

There are other grounds for preferring student-initiated focus on form. Slimani (1989) found that the students she investigated were more likely to report learning items if the items occurred in exchanges during a lesson in which a student rather than the teacher topicalized. Slimani found that students benefited not just from the exchanges they personally initiated but also from other students' topicalizations. A further advantage of student-initiated focus on form is that it appears to lead to a higher level of uptake than teacher-initiated focus on form does. Thus even though uptake was no more likely to be successful in student-initiated than in teacher-initiated FFEs, the actual number of successful uptake moves was greater because of the greater overall number of FFEs containing uptake. Also, in one of the classes, successful uptake was clearly more likely to occur in student-initiated exchanges.

Linguistic Focus of Preemptive FFEs

The final question addressed the linguistic focus of the preemptive FFEs. As in studies of reactive focus on form (e.g., Chaudron, 1977), the forms attended to are almost entirely lexical or grammatical. Over 60% of both the teacher-initiated and the learner-initiated FFEs addressed vocabulary. Williams' (1999) study of learner-generated focus on form in small groups reports an even higher percentage of lexically oriented FFEs (about 80%). Typically, lexical FFEs involve requests for the meanings of words. Such requests fit easily into meaning-centred activity and account, perhaps, for why we did not feel the focus on form interfered unduly with the communicativeness of the lessons.

Finally, we address a number of general issues. First, we note that the linguistic queries that initiated preemptive focus on form did not typically arise because of a communication breakdown but because the participants wanted to *learn* about a form, in Krashen's (1981) sense. Thus, the preemptive focus on form we observed in this study was generally not an emergent property of the attempt to communicate, as in studies of reactive focus on form (e.g., Doughty & Varela, 1998), but rather "time-outs" from communicating in which, briefly, the participants engaged in form-focussed instruction by functioning as learners and by treating language as an object. In the case of teacher-initiated FFEs, these time-outs were conducted in much the same way as traditional form-focussed instruction—through the use of display questions. However, in the case of student-initiated FFEs, which were in the

majority, the time-outs involved learners asking referential questions about forms that, presumably, constituted “holes” in their competence. This study did not address the question of whether such attention to form contributes to acquisition. Recent research by Swain and Lapkin (1998), however, suggests that it may do so.

Second, almost invariably, the type of information about form that learners gain from preemptive focus on form is of the explicit rather than the implicit kind. In all the examples of preemptive FFEs we have considered, learners often received metalingual information typically consisting of an explanation of a grammatical point or a definition of a lexical item. If, as Ellis (1993) has argued, explicit knowledge constitutes a valid target for instruction because it helps improve performance through monitoring and facilitate acquisition through noticing, preemptive focus on form may serve as an important source of such knowledge for students. The kind of explicit information provided in preemptive focus on form may be important for another reason—it promotes uptake, which current theories of SLA (e.g., Swain, 1995) hypothesize to be important for acquisition. One of the findings of Lyster’s research into reactive feedback (e.g., Lyster, 1998a; Lyster & Ranta, 1997) is that such feedback is much more likely to lead to learner uptake when it is explicit than when it is implicit. For example, Lyster and Ranta (1997) report that whereas uptake occurred only 31% of the time following recasts (a type of implicit feedback), it occurred 86% of the time following metalinguistic feedback. The provision of explicit information would seem to be more effective in promoting uptake. In this respect, then, preemptive focus on form may be more effective than reactive focus on form, which, as Seedhouse (1997a) has shown, is typically of the indirect, implicit kind.

CONCLUSION

This article has explored a neglected aspect of classroom teaching—preemptive focus on form. This exploration has been motivated by theories of SLA that emphasize the importance of attention to form in the context of meaning-centred activity. To date, researchers and teacher educators have concentrated on reactive focus on form as the main discourse mechanism for achieving such attention during instruction. On the basis of the study reported here, we wish to argue that preemptive focus on form may be just as important.

Clearly, a study of 12 hours of teaching involving two teachers does not permit generalizations about preemptive focus on form. Preemptive focus on form may feature less in other types of classrooms or with other teachers. We wonder, for example, whether immersion teachers and

younger students in a public school context are as likely to raise matters of form quite so frequently as the participants in this study did. Nevertheless, the results of this study indicate a need for researchers and teacher educators to recognize the potential importance of preemptive focus on form.

This study has not attempted to investigate in what ways and to what extent preemptive focus on form contributes to acquisition. In this respect, it is no different from descriptive studies of reactive focus on form (e.g., Lyster & Ranta, 1997; Oliver, 2000; Williams, 1999). This is an obvious limitation of the research to date. However, before investigating the effects of incidental focus on form, one would need detailed descriptive information about how it is accomplished. This study contributes to that goal by providing information about the nature of preemptive focus on form as it takes place in actual classrooms.

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Self- and Other-Initiated Modified Output During Task-Based Interaction

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This study examines the role self- and other-initiations play in providing opportunities for modified output (MO), which Swain (1995, 1998) and Swain and Lapkin (1995) suggest is important for successful second language acquisition. Thirty-five adult participants—8 native speakers (NSs) and 27 nonnative speakers (NNSs) of English representing 13 different L1 backgrounds—performed three tasks (picture description, opinion exchange, and decision making). The first two tasks were performed in NS-NNS and NNS-NNS pairs and were audiotaped, and the third was completed in NNS groups and was audio- and videotaped. The results showed that both self- and other-initiations provided NNSs with abundant opportunities to produce MO. However, in four of the five interactional contexts examined in the study, significantly more instances of MO resulted from self-initiation than from other-initiation. These results suggest that self-initiations play an important role in prompting MO and that learners need both time and opportunity to initiate and complete repair of their own messages.

After decades of emphasis on the role of input in second language acquisition (SLA), some researchers have shifted their attention to the value of nonnative speaker (NNS) production in the SLA process (e.g., Crookes, 1991; Pica, Holliday, Lewis, Berducci, & Newman, 1991; Pica, Kanagy, & Falodun, 1993; Swain, 1985, 1995). In her seminal paper based on findings from studies of immersion contexts in Canada, Swain (1985) argued that comprehensible input is not sufficient for successful SLA but that opportunities to produce comprehensible output are also necessary. Swain (1984, 1985) concluded that although immersion students were provided with a rich source of comprehensible input, their interlanguage (IL) performance was still off target; that is, they were clearly identifiable as nonnative speakers or writers. In particular, Swain

found that the expressive performance of these students was far weaker than that of same-aged native speakers (NSs) of French. For example, the students evidenced less knowledge and control of complex grammar, less precision in their overall use of vocabulary and morphosyntax, and lower accuracy in pronunciation. Thus, Swain (1985) argued that understanding new forms is not enough; learners also need the opportunity to produce them. She therefore suggested that SLA is promoted if and when learners are given the opportunity to negotiate meaning and modify their output during conversation with their interlocutors (p. 252).

Swain (1985) proposed a hypothesis relating to L2 learner production, termed the “comprehensible output hypothesis” for SLA (p. 249), that is comparable to Krashen’s (e.g., 1985, 1994) comprehensible input hypothesis. Swain acknowledged the role of comprehensible input in SLA but argued that the role of learners’ production of comprehensible output is in many ways independent of the role of comprehensible input, which she claimed is also necessary for SLA:

Its role is, at minimum, to provide opportunities for contextualized, meaningful use, to test out hypotheses about the target language, and to move the learner from a purely semantic analysis of the language to a syntactic analysis of it. (p. 252)

Similarly, other SLA researchers drew attention to the modifications that NNSs make to their performance when interlocutors signal difficulty in understanding (e.g., Hatch, Flashner, & Hunt, 1986; Lyster & Ranta, 1997; Pica, 1994; Sato, 1986; Swain & Lapkin, 1995; Tarone & Liu, 1995). For instance, in her review article, Pica (1994) argues that research on negotiation has shown that when NNSs are asked by interlocutors to clarify their output, they reprocess and modify their IL utterances (in terms of phonology, morphosyntax, and lexis) in the direction of greater message comprehensibility (p. 498).

More recently, several SLA researchers have further argued that learning depends partly on L2 learners’ ability to restructure knowledge (Dekeyser, 1998) and to focus on form when they notice a “hole” in their IL (Doughty & Williams, 1998; Wright, 1996), on the extent to which noticing is learner initiated (Long & Robinson, 1998), and on language production that gives learners the opportunity to expand their IL capacity by reprocessing and restructuring their utterances to produce modified output (MO) (Swain & Lapkin, 1995). Swain and Lapkin in particular argue that when learners produce the target language, external or internal feedback leads them to notice a gap in their existing IL knowledge. This noticing pushes them to consciously reprocess their utterances to produce MO. Swain and Lapkin state,

In producing the L2, a learner will on occasion become aware of (i.e. notice) a linguistic problem (brought to his/her attention either by external feedback (e.g., clarification requests) or internal feedback). Noticing a problem “pushes” the learner to modify his/her output. In doing so, the learner may sometimes be forced into a more syntactic processing mode than might occur in comprehension. Thus, output may set “noticing” in train, triggering mental processes that lead to modified output. (pp. 372–373)

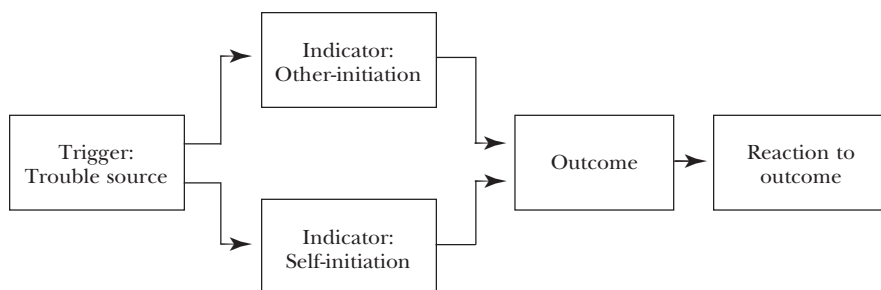
Empirical research on MO has only examined the role of other-initiations (instances in which interlocutors request clarification; make an explicit statement of nonunderstanding; or request explanation, expansion, paraphrase, or elaboration) in giving NNSs the opportunity to modify their IL performance toward comprehensibility (Nobuyoshi & Ellis, 1993; Pica, 1988; Pica, Holliday, Lewis, & Morgenthaler, 1989; Pica, Lincoln-Porter, Paninos, & Linnell, 1996; Van den Branden, 1997). Pica et al. (1996) looked at the effect of other-initiation on NS-NNS and NNS-NNS dyadic interaction, but previous research on MO has not considered the role of other-initiation in dyadic or group interaction among NNSs. In theory, self-initiations should prompt MO as well, but without empirical investigation that seeks to distinguish self- from other-initiated modifications, this remains as speculation. Past research has not investigated whether self-initiations provide opportunities for NNSs to modify their output when they notice a gap in their IL capacity. Examining the role of self-initiations is important to further substantiate the comprehensible output hypothesis and the related claims about IL modification and L2 learning.

A MODEL FOR SELF- AND OTHER-INITIATED MODIFIED OUTPUT

This study examines the role of self- and other-initiations in providing opportunities for MO in the contexts of NS-NNS and NNS-NNS dyadic interaction and NNS group interaction. A model adapted from Varonis and Gass's (1985) model, which considered other-initiations only, served as a framework for describing MO and as a guideline for coding and analyzing the data. The model includes four functional primes (see Figure 1): (a) a trouble source or trigger; (b) an initiator, which can be either other-initiation or self-initiation; (c) the outcome that can result from other- or self-initiation; and (d) the interlocutor's reaction to the outcome.

Interlocutors either ignore or react to a trouble source. When they ignore the trouble source, the investigator often has no way to recognize that a breakdown in comprehension or communication has occurred,

FIGURE 1
A Model for Self- and Other-Initiated Modified Output



Adapted from Varonis and Gass (1985, p. 75).

although something later in the discourse may indicate that in fact the listener has not understood¹ or that the speaker ran into difficulty but did not initiate repair (Hawkins, 1985; Varonis & Gass, 1985). On the other hand, the listener may react to the trouble source (i.e., other-initiation), or the originator of the trouble source may do so (i.e., self-initiation). This reaction is an optional unit of the routine that helps tie it up in some way before the interlocutors return to the main flow of conversation. The outcome can take various forms, including failing to repair, expressing difficulty in repairing or communicating the intended meaning, appealing for help, repeating the trouble-source utterance without modification, inserting new but not directly relevant information, switching the topic, or successfully reprocessing and reformulating the utterance (i.e., producing other-initiated MO).

Other-initiations indicate to the NNS that his or her utterance has not been understood, has been misunderstood, or was ill-formed in some way (Lyster & Ranta, 1997; Spada & Fröhlich, 1995). Other-initiations therefore “can refer to problems in either comprehensibility or accuracy, or both” (Lyster & Ranta, 1997, p. 47). Self-initiations reflect the NNS’s noticing that the interlocutor has not understood or has misunderstood an utterance, or part of it, or that the utterance was ill-formed in some way. In either case, the NNS realizes that successful transmission of the message will require a reformulation or modification of output toward comprehensibility.

¹ Aston (1986) points out that interlocutors sometimes feign comprehension in order to keep the conversation going, reaffirm satisfactory communication, and maintain a satisfying rapport (p. 139).

MO can therefore be operationally defined as the modifications that NNSs make to their output in order to make an initial utterance or part of an utterance more accurate or more comprehensible in response to (a) other-initiation or (b) self-initiation.² On the basis of this definition, the MO model above operates according to two different but closely related sequences. The first sequence implies the presence of interpersonal negotiation of information units, and therefore this sequence may provide evidence of IL modification toward comprehensible output in which negotiation of meaning takes place between interlocutors (see Appendix A for a complete description of the steps in the sequence). In Example 1, two NNSs negotiate meaning according to this sequence:³

1. NNS1: the bed the bed (1.0) iss low iss triangle
 NNS2: a slow? (0.8) a triangle?
 NNS1: no no (1.0) is low is is rectangular?
 NNS2: yeah yeah rectangular

Example 2 shows an extended negotiation of meaning in which a NNS produces modified, more comprehensible output after two signal-response exchanges.

2. NNS: one bottle (1.0) and a keettle err a kittle
 NS: a what?
 NNS: a kittle
 NS: what's that for?
 NNS: for contain water (1.0) a kettle a kettle
 NS: ahah right yes (0.7) kettle that's a kettle

The second sequence implies that an interlocutor may provide information units without negotiation of meaning, and therefore this sequence displays instances of IL modification toward comprehensible output in which no actual negotiation of meaning takes place (see Appendix B for a complete description of the sequence). Example 3 illustrates a series of self-initiated attempts by a NNS that lead toward MO.

3. NNS: yes because if the woman is (0.8) the wife always go out (0.6) goes out and left his his husband eh (1.0) her husband and her son in the home (0.7) at home it's it's not reasonable for for . . .

² Output that is comprehensible may not necessarily be always accurate or correct, and vice versa, because interlocutors' reactions are sometimes unreliable indicators of comprehension or noncomprehension (Aston, 1986). However, the model assumes that NNSs' attempts to provide more accurate or more comprehensible output will force them to reprocess and restructure their IL performance toward MO (see Lyster & Ranta, 1997, p. 47; Spada & Fröhlich, 1995, p. 25, for a similar argument).

³ Numbers in parentheses indicate pauses in seconds.

The reason self-initiated modifications have not been previously studied within the task-based framework used in the present study is that investigations of repair and its various outcomes (e.g., modified input, feedback, and MO) take place within the context of negotiation, which is seen as a mutual activity occurring during episodes of mutual attempts to clarify the meaning of a message (see, e.g., Pica, 1988; Pica et al., 1989; Pica et al., 1996; Van den Branden, 1997; Varonis & Gass, 1985). In this sense, self-initiations appear to fall slightly out of the operationalized definition of negotiation moves. However, the present study looks at both initiation types because, as demonstrated above, both give NNSs the opportunity to produce MO (see also Izumi & Bigelow, 2000; Izumi, Bigelow, Fujiwara, & Fearnow, 1999; Swain & Lapkin, 1995, for a similar position).

Following the findings of previous studies on negotiation of meaning and learner modification of output as factors in message comprehensibility, the first research question sought results predicted from previous research on other-initiation: Does other-initiation successfully elicit MO on the part of NNSs?

NNSs sometimes modify their output to make it more comprehensible when they realize that their current or previous utterance was not sufficient to communicate the intended message successfully. These modifications are normally referred to in the literature (e.g., Kasper, 1985) as *self-initiated*, *self-completed repairs*. Ethnomethodological researchers of NS-NS interaction (Schegloff, 1979; Schegloff, Jefferson, & Sacks, 1977) as well as SLA researchers of NS-NNS interaction (Brock, Crookes, Day, & Long, 1986; Chun, Day, Chenoweth, & Luppescu, 1982; Day, Chenoweth, Chun, & Luppescu, 1984; Gaskill, 1980) and NNS-NNS interaction (Kasper, 1985; Schwartz, 1980) have observed that self-initiations in most cases lead to successful self-repair. For this reason, the second research question asked about the opportunities self-initiations give NNSs to produce MO in the contexts outlined earlier: Does self-initiation result in NNSs' producing MO?

The third question was developed because of the observation that the organization of conversation favors self-initiation over other-initiation of repair (e.g., Kasper, 1985; Schegloff, 1979; Schegloff et al., 1977; Schwartz, 1980). Schegloff et al. argue that this is because self-initiations may occupy three positions in a conversational exchange (same turn, transitional space, and third turn) whereas other-initiations occupy one place only (the turn immediately subsequent to the trouble source). According to Schegloff et al., this placement gives the speaker of the trouble source more opportunities for self-initiation than for other-initiation. By extension, it is reasonable to predict that self-initiations would lead to greater opportunities for MO than other-initiations would: Does self-

initiation result in utterances exhibiting MO more frequently than other-initiation does?

METHOD

Participants

Thirty-five adults (4 male and 4 female NSs, 12 male and 15 female NNSs) ranging in age from 22 to 37 years participated in the study. The NNS participants represented 13 different L1 backgrounds: Afrikaans, Arabic, Bengali, Cantonese, Farsi, French, Greek, Italian, Korean, Mandarin, Portuguese, Serbo-Croat, and Spanish. The NS participants were university teachers and postgraduate students experienced in talking to NNSs.

At the time of the study, the NNS participants had lived in the United Kingdom for 2–3 months. While pursuing their respective postgraduate studies in the various departments of the university, they were simultaneously enrolled in a 5-hour-per-week, communicatively oriented English for academic purposes program at the language center of a British university. The program had three levels of instruction, ranging from a beginning course (Level 1) to a course for advanced students (Level 3). The 27 NNS participants were enrolled in Level 2, the intermediate ESL class.

Communication Tasks

Three communication tasks were developed for the purpose of the study: a picture description task, an opinion exchange task, and a group decision-making task. The selection of the three tasks was motivated by Pica et al.'s (1989) remark that "there is a great deal of consensus regarding the value of these tasks in providing data on interaction in general and negotiated interaction in particular" (p. 72). (For discussion of the value of these and other communication tasks in L2 research and instruction, see Crookes & Gass, 1993a, 1993b.)

In the picture description task, a NNS described a picture to a NS or NNS partner, who had to reproduce the picture as precisely as possible solely on the basis of the NNS's description. Successful completion of the task thus depended in part on the NNS's ability to describe the picture clearly and accurately. The procedure for this task drew on past research (e.g., Gass & Varonis, 1985; Van den Branden, 1997) using a similar task. For this study, the picture was a postcard having clear, easily recognizable

features describable in a simple vocabulary. Color copies of the same postcard were distributed to all NNSs, who were asked orally to describe the picture to their partners. Each NNS speech partner with the picture was also given a written set of instructions and guidelines.

In the opinion exchange task, interactants were required to discuss their opinions on a short newspaper article. The task was open-ended; the speech partners did not have to limit themselves to information in the article or adhere to any specific aspect(s) of the theme of the article. For this task, every participant received a photocopy of a controversial and stimulating newspaper article entitled “Chauvinist Husband Divorced.” This text was carefully selected to match the proficiency level of the NNS participants, taking into account such criteria as the length of the text (200–250 words), the length of the sentences, the complexity of the content, and the participants’ likely familiarity with the vocabulary. Participants were given 10 minutes to read the article and formulate their views, opinions, and arguments.

The group decision-making task marks a departure from previous research on NNSs’ ability to modify their IL performance toward comprehensibility. This task was designed to investigate the opportunities for MO in response to self- and other-initiations in a group discussion, which is a common type of speech event in and out of the classroom. The 11 NNS students who participated in the group activity represented 7 L1 backgrounds: Afrikaans, Arabic, Cantonese, Korean, Mandarin, Serbo-Croat, and Spanish. The group task took the form of a consensus-reaching (decision-making) task because it was likely to give all participants equal opportunities to supply and request information.

In the activity, the participants were to draw up part of the constitution of a newly independent country, named here *Freedonia*. Participants received written instructions as well as an oral explanation of the procedure. As in the opinion exchange task, they were given 10 minutes to read and to formulate their views, opinions, and arguments.

Data Collection

The picture description and the opinion exchange tasks (performed in pairs) were audiotaped, and, to ease coding, the decision-making task (performed in groups) was both audio- and videotaped. In the picture description task, the partners sat back-to-back to prevent paralinguistic or nonlinguistic interference. In the videotaping rooms, members of each group sat informally around a table to ensure a relaxed and informal context, which minimized the effect of the presence of the camera.

The data were collected in three sessions over a 1-week period. In the

first and second sessions respectively, 10 pairs and 6 pairs performed the picture description and the opinion exchange tasks. The total number of audiotape recordings was therefore 32 (i.e., two tasks performed by 16 pairs). These tasks took 6–10 minutes to complete. In the third session, 11 NNS participants, divided into two groups, performed the decision-making task. Of these participants, 8 had completed the first two tasks. One group took 45 minutes to complete the activity, and the other, 38 minutes. As Table 1 shows, the study involved five different interactional contexts: (a) NNS-NNS pairs and (b) NS-NNS pairs in the picture description task, (c) NS-NNS pairs and (d) NNS-NNS pairs in the opinion-exchange task, and (e) NNS groups in the decision-making task.

Data Transcription

Systematically selected 5-minute samples (Minutes 2–6) of each audiotaped activity were later transcribed for analysis. Several factors played a part in the selection of these samples. First, drawing on earlier studies (e.g., Duff, 1986; Gass & Varonis, 1985, 1986; Pica & Long, 1986; Varonis & Gass, 1985) that selected samples ranging between 5 and 10 minutes, I believed that a 5-minute sample would yield sufficient data

TABLE 1
Participation in the Three Tasks

Participants	Task			Total
	Picture description	Opinion exchange	Decision making	
NS-NNS pairs				
Male-male	4	4	—	8
Female-female	4	4	—	8
Total	8	8		16
NNS-NNS pairs				
Male-male	4	4	—	8
Female-female	4	4	—	8
Total	8	8		16
NNS groups				
Group 1				
Males	—	—	3	
Females	—	—	3	
Total			6	
Group 2				
Males	—	—	3	
Females	—	—	2	
Total			5	

for analysis. Second, as 1 picture description encounter and 3 opinion exchange encounters ended after 6–7 minutes, only the first 6 minutes of the other 28 dyadic encounters were transcribed to maintain systematicity. Third, I did not analyze the first minute of each dyadic encounter in order to minimize the effect of conversational preliminaries to the tasks (Aston, 1986, p. 132). As for the group decision-making task, the length of the transcribed portion was adjusted to 20 minutes (Minutes 10–30) to account for the length of the activity and to give each participant several opportunities to contribute to the task.

After the selected audio- and videotaped segments had been transcribed and double checked, a team of nine NSs of English who had been briefed on their task rechecked and verified the transcriptions to ensure their accuracy. When transcription difficulties still remained, the original participants were invited to interpret.

Coding of Data

All data were divided into c-units, defined by Brock et al. (1986) as utterances (i.e., words, phrases, and sentences, grammatical and ungrammatical) that provide linguistic or pragmatic meaning. Interrater reliability for coding the categories was .88. Three raters (two of the nine NS raters referred to above and I) independently coded a 25% sample of the data; interrater reliability was .93.

Each c-unit was categorized as one of the following:

1. other-initiation, in which interlocutors requested clarification; made an explicit statement of nonunderstanding; or requested explanation, expansion, paraphrase, or elaboration
2. self-initiation, in which NNSs themselves attempted to clarify an utterance or part of an utterance by lexical means or nonlexical means
3. NNS's response to other-initiation, including the particular response type (i.e., ignoring other-initiation, failing to repair, expressing difficulty in repairing, repeating the trouble-source utterance without modification, inserting new but not directly relevant information, switching the topic, or successfully modifying output toward comprehensibility)
4. NNS's response to self-initiation, including the particular response type (i.e., failing to repair, appealing for help, expressing difficulty in repairing or communicating the intended message, repeating the trouble-source utterance without modification, switching the topic, or successfully modifying output toward comprehensibility)

Instances in which neither the interlocutor nor the originator of the trouble-source utterance reacted to the trouble source (e.g., *left* in “goes out and left” in Example 3 above) were not considered for analysis even if the transcribers noticed them during the transcription process.

RESULTS

Other-Initiation and MO

The first research question asked whether other-initiation would successfully elicit MO by NNSs. The results point to an affirmative answer: Other-initiations were followed by NNS MO in all contexts taken together (81%) and across individual tasks (on the picture description task, 73% for NS-NNS interaction and 84% for NNS-NNS interaction; on the opinion exchange task, 93% for NS-NNS interaction and 82% for NNS-NNS interaction; and on the decision-making task, 83% for NNS group interaction). Of 224 other-initiated indicators across all contexts, 181 cases (81%) resulted in MO, and 43 cases (19%), in other responses (see Table 2).⁴

A further analysis was carried out to investigate the proportion of MO produced after one signal and after extended negotiation, which enabled comparisons of the findings of this study with those of previous studies. Of the 181 cases of successfully produced MO, in 126 cases (70%) NNSs responded after one signal with a modified version of their trigger utterances, and in 55 cases (30%) NNSs required extended negotiations (two signals or more) to produce MO (see Table 3).

Self-Initiation and MO

The second research question involved the extent to which self-initiation successfully resulted in NNSs’ producing MO. Self-initiations overwhelmingly resulted in MO by NNSs on all tasks combined (93%) and on the individual tasks (on the picture description task, 89% for NS-NNS interaction and 92% for NNS-NNS interaction; on the opinion exchange task, 92% for NS-NNS interaction and 96% for NNS-NNS

⁴ Additional analysis of the data, involving an independent and a more detailed analysis of NNSs’ IL modifications—including the use of self-reports and retrospective interviews—would show what portions of the MO produced were phonological, morphosyntactic, lexical/semantic, or pragmatic in nature. Such analysis may be important in showing how MO aids L2 learning, but it falls beyond the scope of the present report.

TABLE 2
Modified Output Resulting From Other-Initiation

Task and participants		Outcome															
		Responses not resulting in modified output															
		Modified output		Ignore other-initiation		Fail to repair		Express difficulty in repairing		Repeat trouble source without modification		Insert irrelevant information		Switch topic		All	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Picture description	NS-NNS	74	54	73	3	4	2	3	3	4	7	9	5	7	0	20	27
	NNS-NNS	108	91	84	3	3	5	5	0	0	7	6	2	2	0	17	16
Opinion exchange	NS-NNS	14	13	93	1	7	0	0	0	0	0	0	0	0	0	1	7
	NNS-NNS	16	13	82	1	6	1	6	0	0	1	6	0	0	0	3	18
Decision making	NS-NNS	12	10	83	2	17	0	0	0	0	0	0	0	0	0	2	17
	NNS groups	224	181	81	10	5	8	3	3	1	15	7	7	3	0	43	19
All																	

TABLE 3
Production of Other-Initiated Modified Output
After One Signal and After Extended Negotiations

Task and participants	After one signal		After extended negotiations		Total <i>n</i>
	<i>n</i>	%	<i>n</i>	%	
Picture description					
NS-NNS	44	81	10	19	54
NNS-NNS	58	64	33	36	91
Opinion exchange					
NS-NNS	9	69	4	31	13
NNS-NNS	8	62	5	38	13
Decision making					
NNS groups	7	70	3	30	10
All	126	70	55	30	181

interaction; and on the decision-making task, 94% for NNS group interaction). Of 535 self-initiated attempts by NNSs across all contexts, 496 attempts (93%) resulted in MO, and 39 attempts (7%), in other responses (see Table 4).

A further analysis was carried out to investigate the proportion of instances of MO produced after one attempt and after multiple attempts. Of the 496 cases of successfully produced instances of MO, in 383 cases (77%) NNSs produced a modified version of the utterances that had triggered self-initiation, and in 113 cases (23%) the NNSs required multiple attempts (two or more) (see Table 5).

Comparison of MO From Self- and Other-Initiation

The third question investigated whether MO resulted more often from self-initiation than from other-initiation. To answer this question, I compared the number of successfully produced MO instances resulting from self-initiation with the number resulting from other-initiation, using a paired *t* test with the level of significance set at .05 (see Tables 6 and 7). The number of self-initiated instances of MO was significantly greater than the number of other-initiated instances on four of the five interactional contexts examined in the study: NS-NNS interaction on picture description, NS-NNS and NNS-NNS interaction on opinion exchange, and NNS group interaction on decision making.

TABLE 4
Modified Output Resulting From Self-Initiation

Task and participants		Outcome														
		Responses not resulting in modified output														
		Modified output		Fail to repair		Appeal for help		Express difficulty in repairing		Repeat trouble source without modification		Switch topic		All		
	Self-initiations	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Picture description	NS-NNS	115	89	102	4	3	1	1	7	6	1	1	0	0	13	11
	NNS-NNS	117	92	109	3	3	0	0	3	3	2	2	0	0	8	8
Opinion exchange	NS-NNS	97	92	89	4	4	3	3	1	1	0	0	0	0	8	8
	NNS-NNS	106	96	102	4	4	0	0	0	0	0	0	0	0	4	4
Decision making	NNS groups	100	94	94	3	3	0	0	2	2	1	1	0	0	6	6
	All	535	93	496	18	3	4	1	13	2	4	1	0	0	39	7

TABLE 5
NNS Production of Self-Initiated Modified Output
After One Attempt and After Multiple Attempts

Task and participants	After one attempt		After multiple attempts		Total <i>n</i>
	<i>n</i>	%	<i>n</i>	%	
Picture description					
NS-NNS	82	80	20	20	102
NNS-NNS	81	74	28	26	109
Opinion exchange					
NS-NNS	70	79	19	21	89
NNS-NNS	84	82	18	18	102
Decision making					
NNS groups	66	70	28	30	94
All	383	77	113	23	496

DISCUSSION

The overall findings showed trends in the predicted direction in all cases. As for the first question, NNSs did indeed modify their output when a NS or NNS speech partner asked for clarification of an utterance or part of an utterance. This finding is partially consistent with previous research on MO conducted by Pica (1988), Pica et al. (1989), and Nobuyoshi and Ellis (1993), who reported that 54%, 58%, and 73%,

TABLE 6
Instances of Modified Output Produced by NNSs in Response to
Self-Initiation and Other-Initiation

Task and participants	Self-initiated modified output		Other-initiated modified output		Total <i>n</i>
	<i>n</i>	%	<i>n</i>	%	
Picture description					
NS-NNS	102	65	54	35	156
NNS-NNS	109	55	91	45	200
Opinion exchange					
NS-NNS	89	87	13	13	102
NNS-NNS	102	89	13	11	115
Decision making					
NNS groups	94	90	10	10	104
All	496	73	181	27	677

TABLE 7
Comparison of Instances of Self- and Other-Initiated Modified Output by NNSs

Task and participants	<i>n</i>	Instances of MO resulting from				<i>M</i> _{diff}	<i>SD</i> _{diff}	<i>t</i>	<i>df</i>	<i>p</i>
		Self-initiations		Other-initiations						
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Picture description										
NS-NNS	8	12.75	3.45	6.75	1.67	6.00	4.60	3.68	7	< .005
NNS-NNS	8	13.63	4.37	11.38	2.39			1.26	7	ns
Opinion exchange										
NS-NNS	8	11.13	4.88	1.63	1.19	9.50	4.90	5.49	7	< .0005
NNS-NNS	8	12.75	5.99	1.63	1.92	11.13	7.08	4.44	7	< .005
Decision making										
NNS groups	2	8.55	5.87	0.91	1.22	7.64	5.22	4.85	10	< .0005

respectively, of the NNSs' total responses to NS clarification requests resulted in MO. In present study, an even higher percentage of such responses (81%) resulted in MO.

Rather than the failure of negotiated interaction to provide a context for MO, several features of the study design may account for the infrequency of NNSs' modifications in Pica's (1988) and Pica et al.'s (1989) studies relative to the present study and that of Nobuyoshi and Ellis (1993). Pica et al. summarize these features as follows:

1. The NNSs' low L2 proficiency level meant that they had a limited linguistic repertoire on which to draw in modifying their output toward comprehensibility when asked to do so by NSs. In view of the NNSs' low proficiency, the NSs may also have felt reluctant to ask the NNSs to repeat or rephrase their unclear messages and may have been more inclined to seek confirmation of the NNSs' intended meanings by supplying the learners with target models.
2. The NS interactants, who were ESL teachers familiar with IL production and classroom feedback conventions, constituted a biased sample of NSs uniquely adept at supplying learners with target models.
3. The exclusive use of interviews and conversations for data collection set up conditions whereby the NSs could select and control discourse topics. When confronted with unclear utterances from the NNSs, the NSs could therefore make reasonable guesses about what the NNSs were trying to tell them and ask for a quick confirmation rather than invite a drawn-out explanation. (p. 66)

However, the findings of this study are consistent with Pica's (1988) findings with respect to single-signal routines versus extended negotiations. In Pica's study, NNSs successfully supplied modified versions of their output after one trigger in 34 (72%) of 47 cases, and in 13 cases (28%) they did so after extended negotiations; in the current study 126 (70%) of 181 cases required one signal, and 55 (30%) required extended negotiations. Clearly, the results obtained here are neither entirely consistent with nor notably inconsistent with those of previous studies.

With regard to the second question, NNSs in this study modified their output when they noticed that their speech partner(s) misunderstood or did not understand an utterance, or part of it, or noticed that the utterance was ill-formed in some way. I am not aware of any studies that investigated self-initiated MO by NNSs; therefore, it is not possible to compare the findings relating to this question with those of other studies. However, the results with regard to this question provide support for earlier observations (by, e.g., Day et al., 1984; Kasper, 1985; Schegloff, 1979; Schegloff et al., 1977; Schwartz, 1980) that self-initiations systematically lead to successful self-repair. In this study, self-initiation by NNSs overwhelmingly (in 93% of all instances of self-initiation) resulted in output modification toward comprehensibility but only rarely (in 7% of instances) resulted in other response types (failing to repair, appealing for help, expressing difficulty in communicating or repairing the intended message, or repeating the original trouble source or part of it without modification).

As for the third question, the results provide evidence in support of the assumption that self-initiations by NNSs lead to greater opportunities for MO than other-initiations do. The significant differences found between the amount of self-initiated and other-initiated MO (see Table 7) support the observation (e.g., by Brock et al., 1986; Kasper, 1985; Schegloff et al., 1977) that the organization of conversation favors self-initiation over other-initiation and show that the instances of MO resulting from the former can be significantly more frequent than those resulting from the latter.

It is not clear why the NNS-NNS pairs who completed the picture description task showed no significant differences between the frequency of self-initiated MO and the frequency of other-initiated MO. On the face of it, neither the type of task (picture description) nor the type of dyad (NNS-NNS) alone seems responsible because differences between the frequency of self- and other-initiation reached significance in NS-NNS interaction on that same task and for NNS-NNS pairs on a different task (opinion exchange). Perhaps the reason lies partially in coupling this particular task (picture description) with these participants (NNS-NNS).

MODIFIED OUTPUT AND L2 LEARNING

SLA researchers have argued that NNSs' production of MO is important for L2 learning (Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Pica et al., 1989; Pica et al., 1996; Shehadeh, 1999; Swain, 1995, 1998; Swain & Lapkin, 1995; Tarone & Liu, 1995; Van den Branden, 1997). For example, Lyster (1998a, 1998b) and Lyster and Ranta (1997) argue that NNS-based repair can benefit L2 learning in at least two ways: (a) by providing opportunities for learners to proceduralize target language knowledge already internalized in declarative form, and (b) by drawing learners' attention to form in ways that allow them to reanalyze and modify their nontarget output toward comprehensibility. Swain and Lapkin (1995) also assert that the activity of producing the target language promotes L2 learning in that it enables learners to notice a gap in their IL. This noticing pushes them to consciously reprocess their performance to produce MO. Swain and Lapkin argue that this conscious reprocessing of output leads to mental processes that "may represent the internalization of new linguistic knowledge, or the consolidation of existing knowledge" (p. 374).

By the same token, Swain (1995, 1998, in press) argues that learning depends partly on language production that gives learners the opportunity to expand their IL by reprocessing and modifying their output toward comprehensibility. In particular, she maintains that language production enables learners to notice the gap between what they can say and what they want to say when they formulate and test out hypotheses about the target language, when they consciously reflect on the language they are producing, and when they move from semantic analysis of the target language to a more syntactic analysis of it (Swain, 1998, p. 79). According to Swain (1995), language production thus prompts learners to stretch their current IL in order to fill in the gap, "enabling them to control and internalize linguistic knowledge" (p. 126).

These arguments are important in the light of well-established observations that explicit corrections, confirmation requests, and recasts tend not to elicit NNS-based repair and thus are not as conducive to modification of NNS output as, for instance, elicitation and clarification requests are (e.g., Ellis, 1997; Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Pica et al., 1989). It follows that the interactional contexts that encourage repair by NNSs are more conducive to language learning than those which provide NNSs with model utterances in the target language and invite them to confirm. Such repair forces learners to expand their IL in order to fill in the gap they notice in their performance, which, according to Swain (1998, in press) and Swain and Lapkin (1995), will enable them to control and internalize or consolidate linguistic knowl-

edge. It also follows that if production of MO is integral to successful L2 learning (as suggested by Swain, 1995, 1998; Swain & Lapkin, 1995), self-initiations as well as other-initiations matter because, as this study has shown, instances of MO resulting from the former are significantly greater than those resulting from the latter.

In terms of classroom interaction, this finding implies that learners need both time and opportunity for self-initiated, self-completed repair of their messages. This implication is important in view of studies (e.g., McHoul, 1978, 1990) reporting that students were not given sufficient time or opportunity to self-correct in a classroom situation. For instance, McHoul (1990) observed that teachers initiated corrections “either (a) immediately [when] a trouble-source is over, with usually no gap occurring or (b) immediately [when] the repairable [i.e., the trouble source] itself is spoken/heard” (p. 375). He goes on to say,

The latter cases of other-initiations either (i) overlap the trouble-source turn or (ii) interrupt it. In instances of (i), teacher and student can both be heard to be speaking, albeit briefly, at the same time. In instances of (ii), the student immediately yields the floor to the teacher. (p. 375)

This, however, does not mean that learner-based adjustments should always be encouraged over teacher- or other-based adjustments. Rather, the type of adjustment to some extent depends on the proficiency level of the learner. For instance, Lyster and Ranta (1997) point out that self-initiated, self-completed repair “is . . . feasible in L2 classrooms only where learners already possess an adequate level of proficiency” (p. 58). Further, teacher- or other-based adjustments can also be qualitatively important, serving as models for more accurate modification and a greater degree of message accuracy.

CONCLUSION

This study has shown that under three different task conditions NNSs modified their output in response to both self- and other-initiations in NS-NNS and NNS-NNS dyadic interaction and in NNS group interaction. More importantly, the study has shown that instances of MO resulting from self-initiation were significantly greater than those resulting from other-initiation in four of the five interactional contexts examined. The main conclusion to be drawn from these results is that if NNSs’ production of MO is integral to successful L2 learning, both self-initiations and other-initiations matter for L2 learning.

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APPENDIX A

The First Sequence: Trouble Source—Other-Initiation— Outcome—Reaction to Outcome

1. NNS Trouble Source

2. Other-Initiation

The NS or NNS speech partner signals total or partial lack of understanding of the NNSs' trouble-source utterance by

- a. indicating partial or complete nonunderstanding
NNS: annd on the table you have two flask
NS: (1.0) flask?
- b. partially repeating the trouble-source utterance with a question word
NNS: on the table there's two fask . . .
NS: two two what?
- c. requesting elaboration, expansion, or paraphrase
NNS: two fas fas
NS: what is it for?
- d. explicitly indicating nonunderstanding
NNS: both of them is not hope this thing divorce happen
NS: I didn't understand sorry

3. Outcome

The NNS may

- a. ignore the signal to repair
NNS: (6.0) annd on the back have two pillow
NS: at the back?
NNS: (6.0) and between the window and towel above the table
- b. fail to repair
NNS: annd there is a hannn
NS: a what?
NNS: a hannker
NS: what is it for?
NNS: which hanging coat and jacket a hannkker
NS: a hanger?
NNS: yes (0.8) err also there is two two . . .
- c. express difficulty in repairing
NNS: you have a plaete
NS: a plaete?
NNS: emm emm I don't know how how to say in English
- d. repeat the original trouble-source utterance without modification
NNS: there emm (1.0) they put it in paile
NS: sorry?
NNS: paile (0.8) understand?
- e. insert new but not directly relevant information
NS: can you see the door er full view?
NNS: it's err rectangular door in the whole
- f. switch to a new topic
[no example in the data]
- g. modify the trouble-source utterance (i.e., produce other-initiated MO) through
 - phonological modification
NNS1: it's a betroom
NNS2: a bed whom?
NNS1: a bedroom a bedroom

- morphosyntactic modification
NNS1: two small bottle
NNS2: two small what?
NNS1: bot (1.0) small bottles
- semantic modification
 - synonyms and paraphrasing
NNS2: a table?
NNS1: no towel er handkerchief er for washing or bathing
 - substitution
NNS2: above?
NNS1: you have yeah above on the top of the
 - paraphrase, description, or both
NNS2: wha' is it?
NNS1: desk bedt bed bed bed is used for to sleep in

4. Reaction to Outcome

The reaction of the outcome may take the form of a

- a. comprehension signal
NNS1: annnd two small bottle
NNS2: two small what?
NNS1: bot (0.6) small bottles
NNS2: yeah
- b. continuation move
NS: is the bed at the top or the bottom of the picture?
NNS: emm (2.0) it's on the right side of the picture
NS: right carry on

APPENDIX B

The Second Sequence:

Trouble Source—Self-Initiation—Outcome

1. Trouble Source

The source of trouble in the NNS's utterance may be

- a. phonological
NNS: . . . there is a dtoor door
- b. lexical
NNS: . . . on the right of the fo (0.8) of the picture there's
- c. morphosyntactic
NNS: but he want wanted her to be at home . . .

2. Self-Initiation

Self-initiation may occur through

- a. lexical means
NNS: . . . just in front of me (0.7) I mean behind the door
- b. nonlexical means
 - a pause:
NNS: . . . the wife always go out (0.6) goes out and left his his husband eh (1.0) her husband . . .
 - a cutoff
NNS: . . . just to describe just the woo the direct wall
 - the use of *eh*
NNS: . . . they have to be eh (1.0) to get divorced . . .

- the use of *er*
NNS: . . . to take er err to have some independence

3. Outcome

After the self-initiation, the NNS may

- fail to self-repair
NNS: . . . beside the door there is a there is a cloat clo clo
NS: a coat?
- appeal for help
NNS: eh eh what you call on the wood before putting something hanging something?
- express difficulty in repairing or communicating the message
NNS: not not emm I don't know how to say (laughs)
- repeat the original trouble-source utterance or part of it without modification
NNS: there's two fas (1.0) two fas and a cup
- switch to a new topic
[no example in the data]
- modify the trouble-source utterance (i.e., produce self-initiated MO) through
 - phonological modification
NNS: . . . on the left-hand side there is a dtoor door
 - syntactic modification
NNS: goes out and left her son in the home (0.7) at home it's it's not . . .
 - morphological modification
NNS: . . . the wife er just only want wanted to to divorce
 - semantic modification through
 - synonyms
NNS: I think it's also it's picture or postcard . . .
 - exemplification
NNS: . . . in our case in Somalia emm always man likes exactly that the way he thinks but eh for the women emm they do all the activity (0.8) for example if they are farmers they look after the animals . . .
 - reordering or restructuring
NNS: . . . but the question of independence for me is not emm (1.0) I don't agree with the people . . .

Metaphoric Competence: A Language Learning Strength of Students With a Holistic Cognitive Style?

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This article examines metaphoric competence and its relationship to L2 learning and teaching. The study described measured four aspects of metaphoric competence in the participants' L1 and L2: (a) originality of metaphor production, (b) ability to find meaning in metaphor, (c) speed in finding meaning in metaphor, and (d) fluency of metaphor interpretation. Two of the four aspects were found to be weakly related whereas the other two were independent. Speed in finding meaning in metaphor was significantly related to the holistic cognitive style, and all four aspects had positive yet statistically nonsignificant relationships with communicative language ability. The implications of these findings are discussed.

Theory and practice suggest that the ability to acquire, produce, and interpret metaphors¹ in the target language is important for language learning (e.g., Cameron & Low, 1999). Showing the significance of metaphor for comprehension and acquisition of vocabulary, Hoffman (1983) pointed out that words often have substantially more connotative (metaphoric) meanings than denotative meanings and that these connotative meanings are often in frequent usage. For example, the word *cup* denotes a drinking vessel but is also used, metaphorically and metonymically, to refer to a part of an acorn, a hip joint, a part of a bra, and a sporting competition. Cognitive linguists such as Lakoff and Johnson (1980) believe that conceptual metaphors form the basis of much human thought because they allow all language users to think about

¹ Burke (1945) defines a metaphor as "a device for seeing something in terms of something else" (p. 503). For example, the metaphor *evolution is a lottery* is an attempt to describe how evolution works. *Evolution* is the topic of the metaphor, *lottery* is the vehicle, and whatever they have in common is the *ground* (Brown, 1958; Richards, 1936). Here the ground (or means of comparison) would be that both are unpredictable and beyond human control.

abstract concepts in concrete terms. Referring to L2 learners in particular, Danesi (1986) claims that "the true sign that the learner has developed communicative proficiency is the ability to metaphorize in the target language" (p. 9), and Low (1988) argues that the ability to produce and comprehend metaphor is essential in L2 learning, as metaphor can be used to aid comprehension, extend thought, shed new light on old issues, compel attention, and clarify ideas. The use of metaphor also enables language learners to express their creativity and originality of thought (Gardner, Kircher, Winner, & Perkins, 1974) and opens up new areas of conversation (Dirven, 1985).

Language educators seek to help language learners develop their metaphoric competence (see, e.g., Boers, 2000; Lazar, 1996) because the conceptual metaphors on which languages are based vary across languages (Boers & Demecheleer, 1995), the same conceptual metaphors in different languages are realized through different linguistic expressions, and L2 learners find it difficult to use metaphors appropriately (Deignan, Gabrys, & Solska, 1997). Despite the apparent value of helping learners develop metaphoric competence, individuals may vary in their ability to produce and understand metaphors (e.g., Johnson & Pascual-Leone, 1989; Kogan, 1983). Moreover, some evidence suggests that metaphoric competence is a relatively stable cognitive trait (Kogan, 1983). In the L2 classroom, then, some students are likely to find it easy to produce and understand metaphors in the L2 whereas others might experience difficulties in doing so.

Despite the apparent importance of metaphoric competence, little research has been carried out into this construct and its relationship to individual differences or to language learning. It is not clear whether metaphoric competence is a unitary construct or whether it consists of several components. Investigation of individual differences associated with metaphoric competence may yield evidence as to whether some learners are endowed with personality or cognitive traits that allow them to develop this competence more easily than others do. Finally, despite speculation that metaphoric competence plays a role in language learning, no study has yet demonstrated an empirical relationship between metaphoric competence and communicative language ability. In the hope of laying the groundwork for ultimately understanding and addressing metaphoric competence better in the ESOL classroom, the research reported in this article looks at whether metaphoric competence is a unitary concept, identifies cognitive traits that may help it develop, and investigates its relationship with communicative language ability.

METAPHORIC COMPETENCE

Definition

Theory and research suggest that metaphoric competence consists of four components: (a) originality of metaphor production, (b) fluency of metaphor interpretation, (c) ability to find meaning in metaphor, and (d) speed in finding meaning in metaphor.² Originality of metaphor production refers to the ability to think up one's own unconventional metaphors. Fluency of metaphor interpretation refers to the ability to find more than one possible meaning for a single given metaphor; in other words, to identify several possible grounds for comparison between the topic and the vehicle (see Footnote 1). Ability to find meaning in metaphor refers to the ability to think up a plausible meaning for a novel metaphor. Speed in finding meaning refers to the ability to think up a plausible meaning rapidly and under pressure.

Pollio and Smith (1980) have identified the first three components—originality, fluency, and ability to find meaning in metaphor—as distinct aspects of the overall construct. In their study, they asked a group of 70 adults to complete a battery of 11 tests of figurative competence. These included tests of original metaphor production (e.g., participants were asked to complete, in a novel way, sentences such as “The other was a softer voice, as soft as _____”), of metaphor comprehension (e.g., participants were asked to explain oxymorons such as *delicate armour*), and of metaphoric fluency (e.g., participants were asked to find as many endings as possible for a given simile). They also administered tests of associative fluency (e.g., participants were asked to think of as many uses as possible for a particular object) and creativity (e.g., participants were asked to write a short composition comparing themselves to an animal). Through a factor analysis on all 11 tests, Pollio and Smith identified five task-specific factors. Three of these factors, namely, *innovative figurative use*, *associative fluency*, and *sylogisms*, contain tests that focus on or are related to originality of metaphor production, fluency of metaphor interpretation, and ability to find meaning in metaphor, respectively. The two remaining factors (sensitivity to poetic diction and a Torrance factor) are not easily related to distinct aspects of metaphoric competence. The relationship of speed in finding meaning in metaphor to the other components has not been investigated. This aspect of metaphoric

² The definition of metaphoric competence used in this article is limited to fluid mental processes involved in metaphor production and comprehension. This definition is narrower than that proposed by Low (1988), who includes aspects of crystallized intelligence, such as knowledge of the boundaries of conventional metaphor, awareness of acceptable topic and vehicle combinations, and awareness of socially sensitive metaphors.

competence is discussed in more detail in the section Metaphoric Competence and Communicative Language Ability.

Individual Variation in Metaphoric Competence

Learners may vary in the degree to which they have each of the four aspects of metaphoric competence. Of particular interest for TESOL is the extent to which the four components are related to other aspects of individual differences, such as cognitive style, that are relevant for L2 learning and teaching.

Cognitive Style and L2 Learning

Cognitive style, an individual's characteristic and consistent approach to perceiving, organising, and processing information (see Schmeck, 1988), is claimed to influence a student's general approach to learning (Pask, 1988; Riding & Douglas, 1993; Schmeck, 1988; Willing, 1987) and to language learning in particular (Reid, 1995; Skehan, 1998). Cognitive styles are usually referred to in terms of bipolar continua (Moran, 1991), such as holistic/analytic, loose analogical reasoning/tight analogical reasoning, field dependent/field independent (FD/I), simultaneous/successive, holist/serialist, verbaliser/imager, convergent processing/divergent processing, and levelling/sharpening (for in-depth studies of these continua, see Holyoak, 1984; Oxford & Anderson, 1995; Pollio & Smith, 1979).

Some analysts view these cognitive style dimensions as different manifestations of the same basic cognitive style continuum (Miller, 1987; Willing, 1987; see also Skehan, 1998). At one end of the continuum is the analytic, reflective, convergent, tight-analogical-reasoning, analysis-based, field-independent (FI) student, and at the other is the holistic, impulsive, divergent, loose-analogical-reasoning, memory-based, field-dependent (FD) student. A number of researchers describe this style dimension by focusing on the holistic/analytic dimension (see, e.g., Miller, 1987; Riding & Cheema, 1992; Schmeck, 1988), which contrasts holistic processing (i.e., considering parts together as a whole) with analytic processing (i.e., breaking down the whole into parts). In other words, holistic processing involves drawing together pieces of information and treating them as a whole, perceiving similarity and togetherness, whereas analytic processing emphasises the perception of difference and separateness.

The holistic/analytic dimension is similar to FD/I, which refers to a person's ability to disembed a single item from a larger context. FD/I is

usually measured by the Group Embedded Figures Test (GEFT), in which the participant must locate simple figures within more complex ones. Those participants who can complete the task quickly and successfully are labeled FI, and those who are less successful are labeled FD. An FI person would be expected to find it easier to overcome the distracting influence of the larger context whereas an FD person would be expected to have more difficulty in doing so. The definition of FD/I has been extended to include a social dimension (Witkin & Goodenough, 1977). FD people are alleged to perform better in social contexts given their superior interpersonal orientation.

The problem with FD/I is that it lacks an adequate (and symmetrical) means of measurement (Chapelle, 1992). FD individuals are simply less able to complete the test than FI individuals are. The holistic/analytic construct has a more symmetrical means of measurement, namely, the Cognitive Styles Analysis (CSA), which is described in detail in the Tests section. It may therefore prove to be a more useful construct for use in second language acquisition (SLA) research. Furthermore, Chapelle and Green (1992) draw attention to three important aspects of the FD/I construct that may not be adequately measured by the GEFT: (a) reliance on internal versus external referents, (b) cognitive restructuring abilities, and (c) interpersonal competencies. Reliance on internal versus external referents appears to be a matter more of style than of ability. Internally referenced (FI) people are more likely to trust their own judgment whereas externally referenced (FD) people are more likely to seek the opinions of others. Cognitive restructuring abilities allow a person to deal flexibly with incoming information, manipulating and transforming it when necessary. FI individuals are more likely to possess these abilities than FD individuals are. On the other hand, FD individuals are more likely than FI individuals to possess interpersonal competencies, which allow a person to interact with other people comfortably and skillfully. In the context of SLA research, the GEFT appears to be good at measuring cognitive restructuring abilities (an aspect of fluid intelligence) but not so good at measuring reliance on internal versus external referents and interpersonal competencies (Skehan, 1998). As shown below, the CSA appears to be better than the GEFT at evaluating these styles and abilities.

As the definition of the analytic style is virtually the same as that of field independence (see Witkin, Moore, Goodenough, & Cox, 1977, and below), the analytic cognitive style is likely to be related to language learning success, particularly when it is measured by structure tests, cloze tests, and dictations (see, e.g., Hansen & Stansfield, 1981). Because the definition of the holistic style provides a cognitive perspective on the holistic (FD) pole, the definition of holistic/analytic proves useful in

drawing hypotheses about cognitive language strengths that may be associated with the holistic cognitive style.

Metaphoric Competence and Holistic Cognitive Style

One source of relevant data about the relationship between the holistic style and metaphoric competence comes from research on field dependence/independence. Johnson and Rosano (1993) observed a significant relationship between the cognitive style of field dependence, as measured by a block designs test,³ and fluency of metaphor interpretation in the L2 (the number of interpretations a participant can give for a particular metaphor).⁴ They attributed this finding to the fact that the responses had been elicited in an interactive context and that, in general, FD individuals have superior interactive skills, but it is equally plausible that Johnson and Rosano's findings resulted from the holistic cognitive style of the FD participants.

A second, more theoretical argument suggests a relationship between holistic style and metaphoric competence because each may be associated with loose analogical reasoning. The tight/loose analogical reasoning dimension of cognitive style refers to the way in which individuals use related knowledge to shed light on a new subject (Holyoak, 1984). Holyoak makes a distinction between literal analogies, which rely on close similarities (e.g., saying of a dragonfly that it is similar to a butterfly), and deep, metaphorical analogies, which involve the comparison of disparate types of information. Henderson (1986) gives a good example of a deep, metaphorical analogy, reporting an experiment in which he encouraged a group of members of the clergy to describe the Roman Catholic Church in terms of a multinational company. He notes that this analogy initially caused shock among his students but that they were gradually able to see points of comparison.

Goatly (1997) argues that analogical reasoning forms the core of the metaphor interpretation process, and the ability to find meaning in unusual loose, incomplete analogies has been found to vary significantly between subjects (Pollio & Smith, 1979). As these loose, incomplete analogies form the basis of the majority of metaphors, it is reasonable to suggest that individuals who can perceive loose analogies are more likely

³ Johnson and Rosano (1993) argue that the block designs test is similar to the GEFT in that the participant is obliged to overcome a gestalt. They do not give any evidence for the validity of this claim, although they point out that in factor analytical studies the block designs test has consistently been shown to load with measures of field independence (p. 164).

⁴ Johnson, Prior, and Artuso (2000) failed to replicate these findings, and they therefore question the reliability of the test used to measure fluency of metaphor interpretation.

to be able to produce and interpret metaphors. This contention gains some empirical support from Pollio and Smith's (1980) factor analysis of tests of figurative competence, which yielded an analogical reasoning factor that included both a test requiring loose analogical reasoning and a test of metaphor comprehension.

A third source of hypotheses about a connection between the holistic style and metaphoric competence is the convergent/divergent cognitive style continuum (Guilford, 1967). Convergent thinkers, who deal with problems requiring one correct answer, differ from divergers, who are better able to deal with problems that require numerous varied, original answers. Guilford (1968) identified a number of subcategories of divergent thinking, one of which he labeled *associational fluency* (the ability to discover a large number of relationships, given an original stimulus). This ability is likely to be linked to fluency of metaphor interpretation. Miller's (1987) description of divergent search strategies for retrieval from memory provides theoretical support for a link between divergent thinking and fluency of metaphor interpretation. He claims that divergent searches are broad and associational rather than logical and that they rely on vague search criteria.

Burbules, Schraw, and Trathen (1989) maintain that, in order to create or to understand metaphor, an individual must search for areas of overlap in the network of associations that surrounds each of the components of the metaphor. How prepared one is to do so is likely to be a function of the extent of how divergent one's thinking style is. Empirical support for a relationship between associational fluency and fluency of metaphor interpretation is given by Carroll (1993) who, like Guilford, identified an associational fluency factor. Among the tests that loaded on this factor was one in which participants were asked to think up a number of ways of completing unfinished similes. If fluency of metaphor interpretation is related to associational fluency, and if associational fluency is an aspect of divergent thinking, then fluency of metaphor interpretation may be related to divergent thinking.

A number of researchers (Miller, 1987; Riding & Cheema, 1992; Schmeck, 1988) have provided theoretical and empirical evidence that both loose analogical reasoning and divergent retrieval are closely related to the holistic cognitive style. Because analogical reasoning and divergent thinking are likely to underlie metaphoric competence, metaphoric competence may develop most readily in individuals with a holistic cognitive style.

Metaphoric Competence and Communicative Language Ability

Metaphoric competence is important for foreign language learners, as it is likely to contribute to their overall communicative language ability. Communicative language ability combines knowledge of grammatical rules with knowledge of how language is used to achieve communicative goals through a dynamic process (Bachman, 1990, p. 83). Bachman maintains that the ability to interpret figures of speech (which include metaphors) is an important aspect of communicative language ability, as it shows an appreciation of images or meanings that are “deeply rooted in the culture of a given society or speech community” (p. 98).

This aspect of communicative language ability is likely to be of particular importance to foreign language learners, as metaphors have been shown to be a serious stumbling block for nonnative speakers when they attempt to follow spoken discourse (Littlemore, 2001). To understand a metaphor as it is intended by the speaker, a listener must have access to the same contextual information that is available to the speaker. Many foreign language students listening to native speakers (e.g., in university lectures) do not have immediate access to this information. Often they do not have time to draw on the necessary resources for interpretation before the speaker moves on to the next topic. In these situations, fluency of metaphor interpretation and speed in finding meaning in metaphor might be particularly useful skills. If learners can think of a number of possible meanings for a particular metaphor, then they are more likely to access the speaker’s intended meaning. An ability to interpret metaphors quickly should help them keep up with the lecture. In situations where there is two-way interaction, the ability to interpret metaphors rapidly should help learners keep up with the interlocutor and maintain the communicative flow.

Furthermore, metaphors are a key device through which cohesive relationships are marked in discourse. Both spoken and written discourse often contains groups of underlying conceptual metaphors that are used to establish a degree of lexical cohesion. For example, the metaphor *money is a liquid* underlies much financial discourse, which might contain expressions such as *cash flow*, *the funds have dried up*, *he’s sponging off me again*, or *a capital reservoir*. A more metaphorically competent student may be more likely to detect these underlying conceptual metaphors and gain better access to the type of thinking that lies behind the discourse.

Metaphoric competence is also likely to contribute to illocutionary competence (called “functional knowledge” by Bachman & Palmer, 1996, p. 69), which, according to Bachman (1990), consists of an ability

to use and understand the ideational, manipulative, regulatory, and heuristic functions of language. The ideational function refers to the use of language to exchange information about knowledge or feelings. Elsewhere (Littlemore, 2001), I have shown that speakers and writers often use metaphors to convey their attitude toward a given subject and that nonnative speakers who interpret the metaphors incorrectly often misjudge this attitude. A student who can find meaning in metaphor, or even access several possible meanings, will perhaps be less likely to make this kind of mistake. Furthermore, the fact that metaphors often serve manipulative, regulatory, or heuristic functions (Mio, 1996) may mean that metaphorically competent students can use metaphors to express their ideas more persuasively.

Metaphoric competence is thus likely to contribute to overall communicative language ability. Therefore, more research is needed on the relationships between different aspects of metaphoric competence and communicative language ability. The study described here examined four aspects of metaphoric competence: originality of metaphor production, fluency of metaphor interpretation, ability to find meaning in metaphor, and speed in finding meaning in metaphor. The study addressed the following three research questions: (a) Are originality of metaphor production, fluency of metaphor interpretation, ability to find meaning in metaphor, and speed in finding meaning in metaphor statistically related? (b) Are originality of metaphor production, fluency of metaphor interpretation, ability to find meaning in metaphor, and speed in finding meaning in metaphor related to the holistic cognitive style? (c) Are originality of metaphor production, fluency of metaphor interpretation, ability to find meaning in metaphor, and speed in finding meaning in metaphor related to L2 communicative language ability?

METHOD

To answer the research questions above, I administered tests of four aspects of metaphoric competence, a test of cognitive style and a test of communicative language ability to Belgian university students studying ESL.

Participants

The 82 participants were 18- to 20-year-old native speakers of French majoring in English at a large Belgian university. All had spent at least 8 years learning English and were at the intermediate to upper-immediate

level. Due to the limited number of participants available, both first-year ($N = 39$) and second-year ($N = 43$) students took part in the study.

Tests

Test of Ability to Find Meaning in Metaphor, Speed in Finding Meaning in Metaphor, and Fluency of Metaphor Interpretation

To measure the ability and speed of participants in finding meaning in metaphors, I created a computer-based test using SuperCard (n.d.). In this test, which was partly based on one devised by Pollio and Smith (1979),⁵ participants were shown a rubric in their L1 explaining the terms *metaphor* and *anomaly* (see Appendix A). This rubric also told them that they would be shown a series of metaphors and that their task was to rate, on a scale of 1–5, the extent to which they thought each metaphor made sense. This scale, which appeared on the screen throughout the test, is translated below.

- (5) It's obviously a metaphor. The relationship between the two elements is clear.
- (4) The metaphor is less convincing. One can see that there is a relation, but it's not immediately obvious.
- (3) This is the middle of the scale. You're really not sure if it's a metaphor or not.
- (2) There could be a metaphorical meaning, but you can't see it.
- (1) It's obviously an anomaly. It is not possible to find a relationship between the two elements.
- ? There are words I do not understand in this sentence.

A message displayed throughout the test explained that the task was not to evaluate the quality of the metaphor. Then 25 L1 and 25 L2 metaphors were displayed one after another at the top of the screen (see Appendix B). Participants were asked to click on the appropriate part of the scale for each response.

⁵ In Pollio and Smith's (1979) test, participants were shown a series of sentences of the form *The _____ is a _____* and asked to classify them as synthetic (e.g., *The dog is a poodle*), analytic (e.g., *The tulip is a flower*), contradictory (e.g., *The dog is a cat*), anomalous (e.g., *The mountain is a frog*), or metaphoric (e.g., *The mind is a mirror*). They found that participants who made a large number of metaphoric categorizations produced fewer logically correct categorizations for each of the remaining sentence types, concluding that "in general, where there is metaphor, strong logical analysis is not" (p. 326).

The computer recorded the participants' response for each item as well as their response latencies and produced two scores. The average response on the scale from 1 to 5 was taken as an indication of their ability to find meaning in metaphor. The average response latency when selecting Answers 4 and 5 (which indicate that they believed the sentence to be a metaphor) was taken to indicate their speed in finding meaning in metaphor.

When the participants had completed the computer-based test, they were asked to go straight on to the second part of the test, which was designed to measure fluency of metaphor interpretation. In this part of the test, they wrote down as many interpretations as they could think of for five L1 and five L2 metaphors (see Appendix C), using the language in which the metaphor was given. The mean number of interpretations given by each participant was taken as a measure of fluency of metaphor interpretation (Johnson & Rosano, 1993).

Originality of Metaphor Production Test

The test of original metaphor production was adapted from a technique originally used by Gardner et al. (1974) to test children's capacity to create and appreciate novel metaphors and subsequently used by Trosborg (1985) to investigate the ability of foreign language students to produce novel metaphors.

Participants were given two examples, one in English and one in French, and then 16 very short expressions (8 in French and 8 in English; see Appendix D). These items had been selected on the basis of statistical reliability (using Cronbach's alpha) from an original 20 items used in a pilot test ($n = 43$). Participants were asked to complete the sentences as creatively as possible. The average score was then calculated for each participant (see Table 1 for the scoring criteria, which were adapted from Gardner et al., 1974). A high score indicates that the participant had a preference for original metaphor production, and a low score indicates that the participant had a preference for literal production (inappropriate responses are rare). The mean score over the 8 items was therefore considered to be a measure of originality of metaphor production.

Cognitive Styles Analysis

Riding's (1991) computer-based Cognitive Styles Analysis (CSA), an objective, bipolar, computer-based test of the holistic/analytic cognitive style continuum, was used as a measure of participants' holistic/analytic cognitive style. In the analytic part of the CSA the participants attempted

TABLE 1
Criteria Used in Scoring Test of Originality of Metaphor Production

Score	Criteria	Examples
4: novel metaphor completion	At least one of the following: ^a (a) The topic is projected onto a sensory domain where it is not literally applicable, and the resulting metaphor is not a familiar English or French saying. (b) The topic, which is typically associated with the physical world, is projected onto a psychological state or the reverse, and the resulting metaphor is not a familiar English or French saying. (c) The topic remains in its customary domain (sense modality or physical reference), but a radical shift in perspective is required, and the resulting metaphor is not a familiar English or French saying.	Dr. Livingstone had been walking across the Sahara for five days without any water. His throat was beginning to feel as dry as . . . <i>a sheet of paper in Moses' bible.</i> We could tell by the look on the teacher's face that his anger was . . . <i>like a rocket searching its target.</i> When I was a child, I was frightened of my grandma's teeth soaking in the glass in the bathroom. They made me think of . . . <i>an old wreck forgotten in the sea.</i>
3: conventional metaphor completion	The resulting metaphor is a familiar English or French saying.	It's true that now she's old and ugly, but when she was young she had skin . . . <i>like a peach.</i> ^b
2: literal completion	The adjective remains in its customary domain.	What a beautiful day! The clear sky reminds me of . . . <i>my home country.</i>
1: inappropriate completion	Neither of the two judges can find a meaning.	Agnes is always knocking things over. You might say . . . <i>that it's a bit for her.</i>

^aIf a participant provided a completion that was basically a conventional metaphor, the simple addition of a novel word or phrase did not qualify the response as novel. ^bA familiar French saying.

to find a simple shape embedded in a more complex one. A simple figure (e.g., a triangle or a square) and a complex figure were displayed side by side on the computer screen. The question "Is shape 'A' contained within shape 'B'?" appeared at the bottom of the screen. If the participant thought that it was, then he or she had to press a "correct" key; if not, he or she had to press an "incorrect" key. This procedure was repeated 19 times with different shapes, some contained within another, others not. In theory, analytic participants should respond quickly to this part of the test, as they will automatically focus on the details (see, e.g.,

Kirby, 1988). This test is similar to the GEFT, which is used to measure field independence (see, e.g., Witkin et al., 1977). The important difference between the two tests is that the computer-based CSA automatically records the reaction times whereas the GEFT is a pen-and-paper test; the administrator must calculate the length of time that the participant takes to complete it.

In the part of the test designed to measure holistic processing, the participants judged whether pairs of complex geometric figures were the same or different. Two images were presented side by side on the screen. This time the question “Is shape ‘A’ identical to shape ‘B’?” appeared at the bottom of the screen. This procedure was repeated 19 times with different shapes, some identical, others not. Again, the participant had to press a “correct” key if he or she thought the answer was yes or an “incorrect” key if the answer was no. In theory, holistic participants should respond quickly to this part of the test, as they would automatically focus on the whole picture.

In both parts of the test the computer recorded the reaction times of the participants and produced these times in the form of a ratio (see Figure 1). The CSA does not take account of the level of correctness of the participants’ responses when allocating scores because the test items are fairly undemanding, and participants generally take adequate time to answer correctly (R. J. Riding, personal communication, March 2000). As the level of correctness in this study was high (96%), taking account of the correctness of the answers would probably not have had a significant effect on the overall scores.

The content validity of the CSA is difficult to assess because the part of the test that is designed to measure analytic processing is similar to the GEFT. As noted above, the GEFT may be little more than a test of cognitive restructuring ability, a type of fluid intelligence (Chapelle & Green, 1992; Skehan, 1998). The CSA overcomes this problem, as it includes a test of holistic processing and is therefore bipolar. Nevertheless, the problem remains that both parts of the CSA are tests of ability

FIGURE 1
Performance on Cognitive Styles Analysis Expressed as a Holistic/Analytic Ratio

$$X = \frac{\text{Reaction time on analytic test}}{\text{Reaction time on holistic test}}$$

If $X < 1$, the participant is assumed to process better analytically than holistically.
 If $X > 1$, the participant is assumed to process better holistically than analytically.

rather than of style preference. It contrasts individuals who can extract relevant information from background information with individuals who can consider images as a whole in order to decide whether they are similar or different. Whether these skills reflect opposite poles of the same construct is not yet certain. This notion is, however, supported by Morais's (1982) finding that the psychological process of template matching (which is used in the CSA) is complementary to analytic processing.

A true test of style preference would present the participants with a single task that could be completed in more than one way. The way in which they went about completing the task might then be a truer reflection of their cognitive style. However, no such test exists at present, and the advantage of using the CSA as a measure of the holistic/analytic cognitive style, as I show below, is that it appears to have a high level of predictive validity (Douglas & Riding, 1993; Riding & Caine, 1993; Riding & Read, 1996; Riding & Sadler-Smith, 1992). Riding and his coworkers have found the holistic/analytic cognitive style dimension to be a successful predictor of learning preferences among high school children. For example, Douglas and Riding (1993) showed that, when asked to recall a text, holistic participants were significantly more likely than analytic participants to benefit from the presence of a title. This finding is in keeping with Witkin et al.'s (1977) argument that FI (analytic) individuals are more able to impose structure upon learning material. Riding and Read (1996) found that, when asked about their learning preferences, holistic participants preferred group work and closed learning tasks whereas analytic participants were more likely to prefer working alone and completing open learning tasks. These findings indicate that the CSA can measure three constructs that should be but are not measured by assessments of field dependence/independence: reliance on internal versus external referents (as exemplified by a preference for open versus closed tasks), cognitive restructuring abilities (as exemplified by the need for a text to have a title), and interpersonal competences (as exemplified by a preference for group work versus individual work).

Test of Communicative Language Ability

Communicative language ability was measured by means of a 15-minute oral interview that formed part of the participants' end-of-semester examinations. In this interview, which was audio recorded, participants discussed a range of social, ethical, and moral issues arising from an article in *Time* magazine. Twenty minutes before the oral examination, the participants were led into a classroom where 10 articles

from *Time* were laid out on a desk. They were asked to choose one that interested them and had 20 minutes to read the article before coming into the interview room. They were interviewed for 15 minutes by two experienced interviewers, both teachers of English at the university; one was a native speaker, and the other, a near-native speaker. The participants were first asked to briefly outline what was in the text and then were encouraged to discuss a range of social, political, and moral issues arising from the article (e.g., with regard to the family, cultural differences, and youth culture). The emphasis of the examination was not on the participants' ability to understand the text but on their ability to discuss the issues raised. If they had little to say on the topics covered, then the interview moved to different topics. Either the participant or the interviewers could initiate topic changes.

When the interview was in midflow, the interviewers independently gave the participant a score based on the communicative language ability profiles in Appendix E. After the interview, the interviewers reached an agreement on an overall score for the participant. Half-point scores (e.g., 3.5) were permitted when the interviewers could not decide on a whole number. In cases of disagreement, the examiners listened again to the recording of the interview before agreeing on a final score.

Procedures

All the tests were piloted at least once to remove ambiguities and to ensure that the participants could follow the instructions. They were then administered to the main population of 82 participants.

Piloting

Forty-three university students specialising in English took a 70-item version of the computer-based test designed to measure ability to find meaning in metaphor and speed in finding meaning in metaphor. The metaphors were from Katz, Paivio, Marschark, and Clark's (1988) list of 464 metaphors that have been normatively rated on 10 scales by 634 raters. Only metaphors that scored highly on this comprehensibility scale were included. Based on this pilot test, I selected 50 metaphors that contributed most strongly to the overall reliability (as estimated by Cronbach's alpha). I also included 6 nonsense metaphors to control for random response, but none was found.

Another pilot test consisted of a 20-item version of the test of fluency of metaphor interpretation (selected from Katz et al., 1988, on the basis of their comprehensibility). After this pilot session, I selected the

10 items that contributed most strongly to the overall reliability as estimated by Cronbach's alpha. Finally, I piloted-tested a 24-item version of the test of originality of metaphor production and selected 16 items on the basis of their contribution to statistical reliability as estimated by Cronbach's alpha.

With the aid of five French-speaking Belgian consultants, two translators created a French version of the CSA, which was piloted twice on 15 French-speaking Belgians and then on 43 students specialising in English. The test/retest reliability of the CSA was measured during the first two pilot sessions, which were separated by a 3-month interval. There was a strong correlation between the two sets of scores ($r = .87$), indicating 76% shared variance. The test/retest reliability was therefore considered to be sufficiently high for the purposes of the current study.

The third pilot CSA revealed that the English language students needed to be told clearly that their reactions were being timed. In addition, many of the participants had never used a computer before and as a result were nervous during the pilot test. Therefore, in the main study, the participants were reminded that their performance was not being assessed. As they were only required to use two keys throughout the duration of the test, keyboard training did not seem necessary.

Main Study

Seven groups of up to 12 participants took the tests in 2½-hour periods that consisted of two sessions, one in a computer lab and one in a classroom. The order of these sessions was reversed for three of the groups. In the computer lab, the participants completed the CSA as well as the tests of ability to find meaning in metaphor, speed in finding meaning in metaphor, and fluency of metaphor interpretation. In the classroom, they completed the test designed to measure originality of metaphor production. The participants took the oral examination designed to measure communicative language ability at the end of the academic year.

The computer lab session. The participants were seated 1.5 metres apart in the computer lab, and opaque screens were inserted between them. A high ratio of supervisors to participants (1:3) was maintained, and the participants were encouraged to ask for assistance. Four of the groups completed the CSA first, and three of the groups completed the metaphor test first.

Before completing the CSA, the participants were asked to type in their names. They then worked through the tasks and did not ask for

assistance. As soon as the participants had completed the test, the results were calculated automatically by the program in the way described above and communicated on-screen to the participants, who were told to wait quietly until the entire group had finished.

Before completing the metaphor test, participants were trained briefly in the use of a mouse. They were also told orally that at the end of the test they would be asked to write their interpretations of some of the metaphors in the test and were shown the booklets in which they would be asked to write. When they had read the rubric, they were told to click on a button in the corner of the screen, and at this point the test began. Half of the participants were shown the French metaphors first, and half the English metaphors first. The response latencies were recorded by the computer but were not shown to the participants.

When the participants had completed the computer-based test, they were given the pen-and-paper test of fluency of metaphor interpretation. Two independent judges (who had served as judges during the pilot test) counted the interpretations produced by each participant. The judges began by working together on 10 of the scripts to ensure that they agreed on the scoring criteria, and then worked separately on the remaining 72 scripts. Comparison of their scores revealed an 87% level of agreement; areas of disagreement were resolved through discussion.

The classroom session. In this session, the participants sat far enough apart that they could not see each other's answers. They were then given a booklet containing the test for originality of metaphor production. Three of the groups began with the English sentences, and four with the French sentences. They were asked to complete the sentences as creatively as possible.

Subsequently, two independent native speakers of English and of French scored the English part and the French part of the test, respectively. All of the judges were instructed carefully in the scoring criteria. They achieved full agreement in their assessment of responses.

The communicative language ability interview. The communicative language interview took place a few weeks after the main testing session (6 weeks for the second-year students, 2 weeks for the first-year students). In 71 of the 82 cases, the interviewers arrived independently at the same score. In the remaining 11 cases, the interviewers discussed reasons for their decision, listened to the recording of the interview, and then reached agreement on an appropriate score. In keeping with the university's examinations policy, each participant's score was multiplied by 4 to give a score out of 20.

Data Analysis

A series of independent sample *t* tests was used to test for significant gender differences in performance on the cognitive style test, the test of communicative language ability, and the eight metaphor tests. The tests showed no significant differences (see Table 2). Furthermore, no patterns could be detected in the direction of the differences.

TABLE 2
Performance of Male and Female Participants on Tests of Cognitive Style,
Communicative Language Ability, and Metaphoric Competence

Group ^a	<i>M</i>	<i>SD</i>	<i>t</i> ^b	<i>p</i>
Cognitive style				
Males	1.17	0.38		
Females	1.13	0.45	0.35	0.73 (ns)
Communicative language ability				
Males	14.23	4.62		
Females	12.91	4.07	1.05	0.30 (ns)
Originality of metaphor production				
L1				
Males	2.82	0.35		
Females	2.77	0.29	0.46	0.65 (ns)
L2				
Males	2.82	0.33		
Females	2.83	0.33	-0.18	0.86 (ns)
Fluency of metaphor interpretation				
L1				
Males	1.63	0.52		
Females	1.77	0.61	-0.84	0.40 (ns)
L2				
Males	1.40	0.40		
Females	1.35	0.48	0.37	0.72 (ns)
Ability to find meaning in metaphor				
L1				
Males	2.74	0.68		
Females	2.95	0.47	-1.13	0.28 (ns)
L2				
Males	2.94	0.53		
Females	3.05	0.46	-0.82	0.42 (ns)
Time taken to find meaning in metaphor				
L1				
Males	8.54	3.25		
Females	6.15	2.88	1.1	0.29 (ns)
L2				
Males	6.20	2.61		
Females	6.54	2.36	-0.49	0.63 (ns)

^aFor males, *n* = 15; for females, *n* = 67. ^bFor all tests, *df* = 80.

To minimize any differences between these two sets of students, I tested the second-year students toward the beginning of their academic year, in October, and the first-year students toward the end of their academic year, in June. Independent-sample *t* tests showed no significant differences between first- and second-year students on any of the cognitive style or metaphor tests (see Table 3), and no patterns were detected in the direction of the differences. Therefore, I treated the two groups as a single population ($N = 82$).

TABLE 3
Comparisons of Performance by Year 1 and Year 2 Participants on Tests of Cognitive Style, Communicative Language Ability, and Metaphoric Competence

Group ^a	<i>M</i>	<i>SD</i>	<i>t</i> ^b	<i>p</i>
Cognitive style				
First-year students	1.09	0.38		
Second-year students	1.19	0.48	−0.98	0.33 (ns)
Communicative language ability				
First-year students	12.51	4.84		
Second-year students	13.65	3.44	−1.20	0.24 (ns)
Originality of metaphor production				
L1				
First-year students	2.87	0.25		
Second-year students	2.72	0.33	2.32	0.15 (ns)
L2				
First-year students	2.82	0.31		
Second-year students	2.84	0.35	−0.19	0.85 (ns)
Fluency of metaphor interpretation				
L1				
First-year students	1.67	0.48		
Second-year students	1.81	0.68	−1.04	0.30 (ns)
L2				
First-year students	1.37	0.41		
Second-year students	1.35	0.52	0.1	0.92 (ns)
Ability to find meaning in metaphor				
L1				
First-year students	2.87	0.57		
Second-year students	2.94	0.48	−0.61	0.55 (ns)
L2				
First-year students	2.96	0.44		
Second-year students	3.08	0.50	−1.14	0.26 (ns)
Time taken to find meaning in metaphor				
L1				
First-year students	6.24	2.51		
Second-year students	6.69	2.29	−0.71	0.48 (ns)
L2				
First-year students	6.23	3.71		
Second-year students	6.90	4.98	−0.86	0.39 (ns)

^aFor first-year students, $n = 39$; for second-year students, $n = 43$. ^bFor all tests, $df = 80$.

Descriptive statistics and reliabilities were calculated for all of the measures, and correlations were calculated among scores on the four aspects of metaphoric competence to assess the degree of relationship among them. Following the approach customarily used by Riding and his coworkers (see, e.g., Riding & Read, 1996), I then divided the population into *holistics* ($N = 46$), who had scored above the mean on the CSA, and *analytics* ($N = 36$), who had scored below the mean. Breaking down the group in this way places less emphasis on individuals scoring in the middle range (R. J. Riding, personal communication, March 2000).⁶ I then compared the performance of the analytic participants on all the metaphor tests with that of the holistic participants and used *t* tests to calculate the significance of the differences.⁷ Finally, correlations were calculated between each aspect of metaphoric competence and communicative language ability.

RESULTS

As shown in Table 4, the reliabilities of two of the metaphoric competence tests (originality of metaphor production and fluency of metaphor interpretation) were quite low. In the test of originality of metaphor production, the relatively low number of items may explain this low reliability. In fact, a pilot study using 12 items for each language yielded much higher measures of reliability (Cronbach's $\alpha = 0.85$ for the English version and 0.88 for the French version). However, the addition of more items may have had a demotivating effect, given the number of tests that the participants were being asked to carry out. Caution should be exercised in interpreting any findings made with regard to these two tests.

The scores on the test of communicative language ability ($M = 13.12$, $SD = 4.16$) correlated highly with the class teachers' expectations of their

⁶ One of the weaknesses of the CSA is that participants who fall into this middle range may have performed either well or badly on both the holistic and the analytic parts of the test. It is therefore something of a mixed category and, as such, may confuse the findings.

⁷ The practice of carrying out multiple *t* tests when there is more than one group has been criticised (Howell, 1996; Rosenthal, Rosnow, & Rubin, 2000) because they necessarily extract redundant, overlapping information from the data and do not take account of the interdependency between the tests. This phenomenon is referred to as *multiple contrasts*, and the levels of significance need to be adjusted, such as with the Bonferroni adjustment (Rosenthal et al., p. 174). However, this phenomenon appears to be a problem only when several independent variables are combined in different ways to look for a significant effect on a single dependent variable. As this study involved only two independent variables (the holistic and the analytic cognitive styles), and as the *t* tests were carried out on a series of dependent variables, the problem of multiple contrasts did not arise. Adjustments to the levels of significance were therefore unnecessary.

TABLE 4
Mean Scores, Standard Deviations, and Reliabilities of the
Tests of Metaphoric Competence and the Cognitive Styles Analysis (CSA)

Test	<i>M</i>	<i>SD</i>	Reliability
Originality of metaphor production			
French	2.79	0.30	0.58 ^a
English	2.83	0.33	0.53 ^a
Fluency of metaphor interpretation			
French	1.74	0.59	0.65 ^a
English	1.36	0.47	0.31 ^a
Ability to find meaning in metaphor			
French	2.90	0.52	0.83 ^a
English	3.03	0.47	0.90 ^a
Speed in finding meaning in metaphor			
French	6.59	4.42	0.84 ^a
English	6.48	2.40	0.88 ^a
CSA			
Holistic	19.22	1.91	0.84 ^b
Analytic	19.18	1.90	0.83 ^c

^aCronbach's alpha. ^bKR 21, implying KR 20 > 0.84. ^cKR 21, implying KR 20 > 0.83.

students' performances (assessed by asking the teachers to predict, 3 weeks before the examination, what scores their students would receive; $r = .92$, $p < 0.01$). This means that 84% of the variance was shared, suggesting good criterion-related evidence for validity.

Relationships Among Measures of Metaphor

To answer the first research question, which asked whether the different aspects of metaphoric competence are related, I calculated correlations between the four sets of data both in the L1 and the L2. In the L1, speed in finding meaning in metaphor shared 11.4% of the variance with originality of metaphor production and 18.1% of the variance with ability to find meaning in metaphor in metaphor (see Table 5). In the L2, it shared 0.07% of the variance with originality of metaphor production. This result suggests that relationships among some aspects of metaphoric competence are slightly stronger in the L1 than in the L2 but that overall the aspects of metaphoric competence are not strongly related.

TABLE 5
Pearson Correlations Between Aspects of Metaphoric Competence in the L1 and the L2

Aspect	1	2	3	4
L1 (<i>n</i> = 82)				
1. Originality of metaphor production	—	.145	.338**	-.119
2. Ability to find meaning in metaphor		—	.426**	.023
3. Speed in finding meaning			—	.087
4. Fluency of interpretation				—
L2 (<i>n</i> = 82)				
1. Originality of metaphor production	—	.129	.257*	.180
2. Ability to find meaning in metaphor		—	.089	.164
3. Speed in finding meaning			—	.156
4. Fluency of interpretation				—

* $p < 0.05$, two-tailed. ** $p < 0.01$, two-tailed.

Relationships Between Cognitive Style and Aspects of Metaphoric Competence

To answer the second research question, whether the holistic cognitive style is related to aspects of metaphoric competence, I calculated the differences between the mean scores of holistic and analytic participants on each of the four tests of metaphoric competence and carried out independent-sample *t* tests to measure the significance of these differences. All of the differences were in the predicted direction (see Table 6). On all four tests in both languages, holistic participants scored higher than analytic participants.

One of these relationships was statistically significant: Holistic participants were significantly faster than analytic participants at finding meaning in metaphors in the L1 (for holistics, $M = 5.72$, $SD = 2.19$; for analytics, $M = 7.70$, $SD = 2.64$); $t = -2.04$, $p < 0.05$, $\eta^2 = 0.90$, observed power = 0.97). To investigate why the relationship was found to be significant in the L1 but not in the L2, I examined the participants' performance on the L2 version of the test in more detail by dividing them into three groups according to an approach used frequently by Riding and his coworkers (see, e.g., Riding & Douglas, 1993):⁸ those

⁸ The decision to divide the participants into three groups may have led to the problem of multiple contrasts referred to above. According to Hays (1973, p. 478), the probability of finding at least one significant result by chance alone as a result of this procedure is $1 - (1 - S)^G$, where $G = (J/2)$, S = the significance level, and J = the number of groups. With three groups, the probability of finding at least one significant result by chance alone is $1 - (1 - 0.05)^{1.5} = 0.07$. Although this probability is low, readers should exercise extra caution when interpreting the findings.

TABLE 6
Comparison of Performance by Holistic and Analytic Participants on
All Tests of Metaphoric Competence

Group ^a	<i>M</i>	<i>SD</i>	<i>t</i> ^b	<i>p</i>
Originality of metaphor production				
L1				
Holistic	2.81	0.25		
Analytic	2.76	0.36	0.52	0.60 (ns)
L2				
Holistic	2.83	0.34		
Analytic	2.82	0.32	0.05	0.96 (ns)
Fluency of metaphor interpretation				
L1				
Holistic	1.83	0.61		
Analytic	1.62	0.56	1.57	0.12 (ns)
L2				
Holistic	1.37	0.51		
Analytic	1.35	0.42	0.21	0.83 (ns)
Ability to find meaning in metaphor				
L1				
Holistic	2.96	0.51		
Analytic	2.85	0.53	0.94	0.35 (ns)
L2				
Holistic	3.03	0.43		
Analytic	3.01	0.52	0.17	0.87 (ns)
Time taken to find meaning in metaphor				
L1				
Holistic	5.72	2.19		
Analytic	7.70	2.64	-2.04	0.04 (ns)
L2				
Holistic	6.23	2.18		
Analytic	6.79	2.64	-1.06	0.30 (ns)

^aFor holistic group, *n* = 46; for analytic group, *n* = 36. ^bFor all tests, *df* = 80.

scoring (a) above the mean plus half a standard deviation, (b) below the mean minus half a standard deviation, and (c) within half a standard deviation on either side of the mean. This division yielded the following three holistic/analytic cognitive style groups: (a) *holistics+* (*N* = 28), (b) *holistic/analytic neutral* (*N* = 34), and (c) *analytics+* (*N* = 20).

One-way analyses of variance carried out for these groups on all eight metaphor tests showed a significant difference for the L2 version of the speed of interpretation test ($F = 3.0$, $df = 2,79$, $p < 0.05$; $\eta^2 = 0.79$, observed power = 0.66). Post hoc tests (least significant differences and the Duncan test) revealed that the significance lay between the *holistics+* group and the *analytics+* group. Note that the reliability of this test was low and that therefore this finding must be treated as tentative.

Relationships Between Metaphoric Competence and Communicative Language Ability

The third research question, concerning whether or not the aspects of metaphoric competence are related to communicative language ability, was tested by means of correlational analyses. The correlations between communicative language ability and all four aspects of metaphoric competence, in both languages, varied around zero (see Table 7), indicating no relationship.

DISCUSSION

The first research question asked whether originality of metaphor production, ability to find meaning in metaphor, speed in finding meaning in metaphor, and fluency of metaphor interpretation are related. This study found weak relationships between some of the aspects of metaphoric competence. Speed in finding meaning in metaphor shared some of its variance with other aspects of metaphoric competence (see Table 5 above). Note, however, that the relative values of these shared variances are influenced by the variable reliabilities of the tests (see Table 4 above).

One interesting comparison that can be made because of adequate reliabilities involves the relationship between speed in finding meaning in metaphor and ability to find meaning in metaphor, which existed in the L1 but not in the L2. Perhaps the process of finding meaning in

TABLE 7
Pearson (Two-Tailed) Correlations Between Communicative Language Ability and the Four Aspects of Metaphoric Competence

Aspect and language	Correlation
Originality of metaphor production	
L1	.012
L2	.129
Fluency of interpretation	
L1	.156
L2	.078
Ability to find meaning	
L1	.071
L2	.146
Time taken to find meaning	
L1	-.036
L2	-.110

metaphor is much less automatic in the L2 than in the L1. If ways could be found to increase the automaticity of this process among L2 learners, then their metaphoric comprehension ability, which is likely to form part of their communicative language ability, may start to approximate that of native speakers.

The only aspect of metaphoric competence that was completely independent of all others was fluency of metaphor interpretation. This corresponds to Pollio and Smith's (1980) finding that fluency of thinking is distinct from flexibility of thinking and originality of thinking. This result is perhaps unsurprising, given that in tests of fluency of thinking there is no control over the quality of the responses accepted. Another explanation could be that this metaphor test had the lowest reliability (0.65 in the L1, 0.31 in the L2). A more reliable measure of fluency of thinking might reveal that it is more closely related to the other aspects of metaphoric competence.

The second research question investigated the possibility that holistic participants may have higher levels of metaphoric competence than analytic participants do. The direction of the differences of means was as predicted for all four aspects in both English and French. I had hypothesized that participants with a holistic cognitive style would be quicker at finding meaning in metaphor and could come up with more interpretations for the metaphors than analytic participants could. The finding of a significant difference for speed in finding meaning in metaphor partially supports this hypothesis.

This finding can probably be attributed to the nature of the tests used to measure these traits. As noted above, the CSA, which was used to place the participants on this cognitive style dimension, measures speed of processing. Speed in finding meaning in metaphor was the only metaphor test in which response times were measured. The implication of this finding is that the ability to decide quickly whether shapes are the same or different is related to the ability to decide quickly whether or not metaphors are meaningful. Other tests of the holistic cognitive style might have revealed relationships between this style and other aspects of metaphoric competence. It may be fruitful to repeat the experiment using tests of cognitive styles that are thought to be related to the holistic cognitive style. For example, to reveal whether tests of divergent thinking are related to metaphoric competence, one could use Guilford's (1968) dots test, in which participants look at vague shapes made up of dots and must list all the possible images that they might represent. It would also be interesting to look for relationships between metaphoric competence and tests of analogical reasoning, such as Pollio and Smith's (1980) analogies test, in which the participants respond to items such as *picture is to crime as pillow is to _____*. Of all the tests of metaphoric competence, speed of metaphor interpretation was the most reliable.

With more reliable measures of metaphoric competence, investigation of the relationships between metaphoric competence and the holistic cognitive style would be possible.

The fact that no statistically significant difference was found in the participants' fluency of metaphor interpretation supports Johnson and Rosano's (1993) speculation that the interpersonal orientation of FD students in their study, rather than their cognitive abilities, likely led them to give higher numbers of metaphor interpretations. The finding that holistic students could interpret metaphors more quickly than analytic students suggests that these students may have been gifted in related areas of L2 learning. As I pointed out at the beginning of the article, the ability to interpret metaphors quickly in conversation can be a crucial element of interaction. Often, in conversation, learners do not have enough time to process every L2 utterance analytically before responding. When an interlocutor uses an unfamiliar metaphor, the listener must process the metaphor spontaneously and holistically, rapidly identifying one or more possible meanings in order to respond quickly and thus maintain the flow of the conversation. The findings of this study suggest that holistic students may have an advantage over analytic students in this area of communicative language ability.

The positive direction of the differences in the mean scores for the three other aspects of metaphoric competence might indicate that a test of the holistic cognitive style not relying on reaction times might find relationships between this test and other aspects of metaphoric competence. This possibility merits further investigation.

The third research question investigated the possibility that aspects of metaphoric competence are related to communicative language ability. The lack of findings might be due to the fact that the tests of metaphoric competence were very different from the examination-based test of communicative language ability. The stressful nature of the oral examination and the fact that I did not attempt to measure the participants' use of metaphor in that examination may have masked relationships between metaphoric competence and communicative language ability. On the other hand, these findings could simply mean that metaphoric competence does not contribute to communicative language ability to the extent that was suggested at the beginning of this article.

IMPLICATIONS FOR THE L2 CLASSROOM

At the beginning of this article, I suggested that metaphoric competence forms an important part of communicative language ability. The findings of this study with regard to this suggestion were inconclusive, as no significant correlations were found between them.

The findings do suggest that metaphoric competence consists of different aspects and that students who have a holistic cognitive style may process metaphors more quickly than those with an analytic cognitive style. Thus language teachers should not be surprised if the different aspects of metaphoric competence develop independently and at different rates in different learners. The fact that speed in finding meaning in metaphor was significantly related to the holistic cognitive style suggests that this skill might rely, to some extent, on loose analogical reasoning and divergent processing. These are thought to be important components of creative thinking (Guilford, 1967, 1968; Henderson, 1986), and the findings of this study suggest that holistic students may perform well on tasks that involve them, particularly when a time factor is involved. Including such tasks in class may usefully boost the confidence of holistic students, who may perceive themselves to be weak language learners due to the fact that analytic students are more likely to perform better on traditional language learning activities and tests.

Tasks that involve loose analogical reasoning include one discussed by McCarthy (1990), in which students are encouraged to consider the implications of the various metaphors used to describe the mental lexicon (e.g., a dictionary, a thesaurus, a computer). In another task, suggested by Rinvold and Davis (1995), students visualize and mime the different tenses that are used in target language sentences. Tasks that involve divergent processing include those in which students are encouraged to come up with alternative, metaphoric meanings for pieces of vocabulary and think of situations in which these meanings make sense. For example, they might know that an eye is an organ of sight in humans and other animals, but they might not know that potatoes, needles, and hurricanes can also have eyes. They might also be encouraged to carry out word association and encyclopedic web tasks, such as those described by McCarthy. Teachers may find that their weaker students tend to do well in these types of activities.

LIMITATIONS OF THE STUDY AND SUGGESTED RESEARCH

One limitation of this study is that the reliabilities of some of the tests of metaphoric competence were low; therefore, the relationships found between the various aspects of metaphoric competence and between metaphoric competence and communicative language ability may be stronger than the tests could detect. As noted in the Results section, one of the main reasons for these low reliabilities appears to have been the small number of items in the tests. Future studies should use more items to overcome this problem.

Another limitation, which has already been briefly mentioned, is that the test of communicative language ability was part of an examination, and the participants may have felt under too much pressure to experiment with novel metaphor production or with the use of metaphorically based communication strategies. In future studies, the interviews should be held in more informal conditions so that pressure to succeed does not prevent metaphorically competent participants from taking unnecessary risks.

Finally, this study did not investigate the relationship between different aspects of metaphoric competence and the receptive side of communicative language ability. Future studies could investigate students' abilities to interpret speakers' metaphors in a culturally appropriate way. This ability could then be related to their ability to judge the speaker's attitude toward the topic under discussion. The study has shown L2 metaphoric competence to be a complex phenomenon. Its relationship with communicative language ability now needs to be explored in more depth and in a wider variety of situations.

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APPENDIX A

English Translation of Instructions in Computer-Based Metaphor Test

A metaphor is a statement which is not literally correct, but which establishes a relationship between two parts of a sentence. The ease with which this relationship can be interpreted can vary.

For example, the statement “snow is a Winter coat” is an obvious metaphor—snow is not a coat, but the idea of a coat provides relevant information about snow—it covers everything, it keeps you warm, it’s thick . . .

On the other hand, the sentence “the piano is a spoon” cannot really be considered to be a metaphor: it is difficult to see what kind of information a spoon can give about a piano. This kind of expression is known as an anomaly.

You are going to be presented with two sets of sentences, in French and in English.

Your task is to decide to what extent each sentence can be said to be a metaphor, in other words, to what extent one element can be said to provide information about the other.

You are not being asked to judge the quality of the metaphors, but simply to decide whether you think they are metaphors or not.

Please indicate your response as soon as you have decided whether or not there is a relationship between the two elements.

APPENDIX B

Metaphors Used to Test of Ability to Find Meaning and Speed in Finding Meaning

English

A dog is a walking stick.
A dog’s stomach is his master’s alarm clock.
A dream is a solar eclipse.
A photograph is a one-sided skin of truth.
A smile is a knife.
A soft-boiled egg is a guillotined aristocrat.
A sugar-cube melting in coffee is the fading of a ghost.
Aeroplanes are angry birds.

French

L’esprit createur est une bouilloire sur le feu.
L’esprit est une éponge.
L’histoire est un sport d’hiver.
L’hiver est un oiseau avec des dents.
L’homme est un collier qui cherche un chien.
L’humiliation est un rideau.
La liberté est un deuxième soleil.

Beaches are grills.
 Creativity is a toaster.
 Death is a fat fly.
 Death is the cruel singing of deathless
 mosquitoes.
 Evolution is a lottery.
 History is a sponge.
 Memory is a snake.
 Mimes are wooden statues.
 Music is death.
 Nature is a vast laboratory.
 Night is a castle.
 Smiles are the channels of future tears.
 The sky is a parliament.
 The wind is a cat.
 Time is a bird.
 Win is the warm south.
 Wisdom is a weatherman.

La lune est un chat dansant.
 La mort est un joueur de tambour.
 La parole est la semence de la misère.
 La sagesse est un météorologiste.
 La terre est une bouche parfumée.
 Le ciel est un ordinateur.
 Le clair de la lune est de l'eau de javel.
 Le subconscient est une arène.
 Les étoiles errantes sont des enfants qui ne
 connaissent pas leur arithmétique.
 Les nuages sont des mondes en laine.
 Les panneaux d'affichage sont des verrues
 sur le paysage.
 Un éléphant est une petite serre.
 Un chirurgien est un décorateur
 d'intérieurs.
 Un désir est un arc-en-cile.
 Une île est un bouchon.
 Une armée est une mer vivante.
 Une dynastie est une pièce de théâtre.
 Une station d'essence est une oasis.

APPENDIX C

Metaphors Used to Test Fluency of Interpretation

1. A dog is a walking stick.
2. Nature is a vast laboratory.
3. Smiles are the channels of future tears.
4. A dream is a solar eclipse.
5. Evolution is a lottery.
6. L'esprit créateur est une bouilloire sur le feu.
7. La liberté est un deuxième soleil.
8. Les panneaux d'affichage sont des verrues sur le paysage.
9. Une armée est une mer vivante.
10. Une station d'essence est une oasis.

APPENDIX D

Sentence Starters Used in the Test of Original Metaphor Production

English

1. In Winter, the weather in Scotland is extremely cold. As soon as you go out of the house your face starts to feel
2. Tom hasn't cleaned his room for ages and it's starting to smell. The smell reminds me of
3. We could tell by the look on the teacher's face that his anger was
4. The lake was a shining . . . at the bottom of the valley.
5. Peter's violin playing isn't marvellous, but compared to that of Alf it sounds like
6. Dr. Livingstone had been walking across the Sahara for five days without any water. His throat was beginning to feel as dry as

7. What a beautiful day! The clear sky reminds me of
8. When I was a child, I was always frightened of my grandma's teeth soaking in the glass in the bathroom. They made me think of

French

1. Pierre était dans la salle. Il était évident qu'il avait vu quelque chose d'effrayant. Il tremblait comme
2. Agnès renverse tout le temps quelque chose. On dirait
3. Les deux garçons entraient dans la hutte. Ils avaient très peur car il y faisait noir
4. Après sa maladie, mon père est devenu sourd
5. La police l'avait presque rattrapé. Il se sentait
6. La sorcière était très âgée; elle semblait presque avoir la peau
7. Il faut faire attention si tu sors avec ce mec là. J'ai entendu dire qu'il boit
8. C'est vrai que maintenant elle est vieille et laide, mais quand elle était jeune, elle avait une peau

APPENDIX E

Communicative Language Ability Profiles

5. Student participates and initiates interaction in a natural and spontaneous manner. Helps the interview to develop into a conversation or debate by initiating, maintaining, and elaborating as necessary. The fact that the student is not using his/her L1 does not tangibly affect the interaction. Has a strong sense of "appropriateness" revealing humour, irony, etc. where needed.
4. The student is able to gain and retain interest and communicate opinions about the subjects discussed. Interaction is reasonably appropriate, but foreign background shows. This student would probably cope in an English-speaking environment.
3. The student is able to answer questions and put over his/her point of view but is not able to develop the subject to much depth. Interaction sometimes feels a little "forced."
2. Poor interaction; subject is able to answer questions but is unable to develop answers to any depth. Interviewer has to intervene to keep interview going. Student is sometimes unable to express his/her ideas: sympathetic interlocutor needed.
1. The student is unable or unwilling to interact. The interviewer has continually to intervene. Student is unable to understand or answer some of the questions.

PLEASE CIRCLE:

1 2 3 4 5

TEACHING ISSUES

TESOL Quarterly publishes brief commentaries on aspects of English language teaching. For this issue, we asked two educators the following question: To what extent does theory and research inform the teaching of English to large classes?

Edited by **BONNY NORTON**

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Teaching English to Large Classes

Large Classes and Student Learning

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■ Between 1986 and 1992, at annual TESOL conventions as well as at two specialists' conferences, in Karachi, Pakistan (1991), and Bangkok, Thailand (1992), a group of researchers from various parts of the world presented papers and discussed issues addressing the topic of large classes. The group, initiated by Dick Allwright of Lancaster University, was known as the Lancaster-Leeds Language Learning in Large Classes Research Project, and one of the organizers, Hywel Coleman, obtained funding from Leeds University to publish several monographs (e.g., LoCastro, 1989). In addition to reporting on country-specific concerns, the publications addressed theoretical issues, including such questions as: How large is too large? When is a group of learners considered large? By whom? For what purposes? Although these questions at first seemed to be relatively easy to answer, we soon realized that we had opened up an area that could not be explained simplistically as the result of institutional or governmental concerns about expenditures for education. The purpose of this report is to survey what I suggest is the main theoretical issue that a large class, more so than small classes, makes salient: How much learning can take place in a class of 300, for example, as opposed to a class of half a dozen learners? In order to begin to answer that question, I draw from research evidence.

Any serious discussion of the effect of class size on learning in a classroom environment has to be informed by a model of the sort

proposed by Gardner (1985) to account for a variety of factors involved in attitudes and motivation in language learning. Class size is at least as complex. Below I review some of the components of a possible model of the interaction of class size and successful language learning.

HOW DOES CLASS SIZE AFFECT LANGUAGE LEARNING AND TEACHING?

First, many teachers in all parts of the world from whom at least self-report data (LoCastro, 1989) were collected claimed that having a large class prevented them from doing what they wanted to do to help learners make progress in developing their language proficiency. Yet what class size is large or too large depends to a great extent upon the individual teacher's perceptions and experiences. Teachers who have taught classes of 6–12 students in what might be described as elite contexts, such as company language programs or private language schools, complain when suddenly faced with a group of 22. Those who have coped with 40 in language learning classes cease to find that number large. As is well known, language education in developing countries is typically carried out in classrooms with 150–300 learners and sometimes more.

Teacher respondents to a questionnaire of the Lancaster-Leeds research group (see LoCastro, 1989, p. 113) generated this list of problems related to class size and language learning, organized into three categories:

Pedagogical

- more difficulties in carrying out speaking, reading, and writing tasks
- difficulties in monitoring work and giving feedback
- problems with individualizing work
- difficulties in setting up communicative tasks
- tendency to avoid activities that are demanding to implement

Management-Related

- correction of large numbers of essays virtually impossible
- pair and group work often cumbersome to execute
- noise level high, affecting neighboring classes
- difficulties in attending to all students during class time
- discipline problems more acute

Affective

- difficulties in learning students' names
- impossibility of establishing good rapport with students

- concerns for weaker students who may get lost
- crowd phenomenon: students' not listening to teacher and other students
- problems in assessing students' interests and moods

WHEN IS A CLASS TOO LARGE?

A second important question asks for what purposes a class becomes too large. As the list above suggests, the most likely answer presumably would be that with a group of more than 15, it is difficult to give all the learners chances to practice the target language. And certainly most research in second language acquisition (SLA) since Barnes' (1976) and Long and Porter's (1985) early papers have emphasized the role of meaningful interactions in promoting proficiency in the target language. Krashen's (1982) well-known hypotheses all address the importance of learners' interacting with the language. More recently, Long's interaction hypothesis (1996) and Swain's output hypothesis (1985) are attempts to conceptualize the need for learners to negotiate comprehensible input and the role of their own output in driving their language development. Outside SLA, the work of Vygotsky (1978) emphasizes the importance of the zone of proximal development, and the teacher's role in scaffolding and reconceptualizing learners' output to push not only language development but also cognitive gains. In addition, there have been major contributions from the field of learning strategies. More and more, the emphasis is on teachers' training learners to increase their awareness of a variety of learning strategies so that they can achieve their language learning goals.

CLASS SIZE AS A SOCIOCULTURAL VARIABLE

Equally important with regard to effective language learning, if not more so, is the fact that classrooms are social constructions where teachers, learners, dimensions of the local educational philosophy, and more general sociocultural values, beliefs, and expectations all meet. Class size is part of a collection of essentially sociocultural variables that underlie a culture's educational system. Until recently in many parts of the world, only a relatively small number of individuals from elite groups were formally educated. The worldwide movement toward democratization of education is one of the societal forces that has increased class size and thus is another factor contributing to the issue of developing educational systems that successfully address the needs of all learners irrespective of socioeconomic background.

Clearly, an evaluation of the importance of class size in language education will require comprehensive empirical studies. Such studies might include comparisons of successful and not-so-successful learners in both large and small classes in one sociocultural context. Another related study would encourage teachers, ideally the same teachers, to look at their classroom practices in both types of classes—again in the same cultural environment. Such research studies would bring together colleagues across boundaries, those in the more privileged areas of the world and those who struggle on daily with 150 or more students in classrooms.

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Innovations in Large Classes in Pakistan

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■ The globalization of English has made classes of more than 100 students a challenging reality for many teachers of English—especially in developing countries. These teachers are also required to cope with obsolete syllabi and, as a result of time constraints, have very little freedom to innovate. In the late 1980s, the research reports of the Lancaster-Leeds Language Learning in Large Classes Research Project (Coleman, 1989) looked at the problems of large classes, based on responses from nonnative teachers of English from Indonesia, Japan, Nigeria, Senegal, and South Africa. Such responses can be considered fairly representative of countries with similar conditions. Coleman lists four problems identified by teachers around the world (pp. 2–10). First, teachers feel self-conscious, nervous, and uncomfortable under the constant focus of more than 100 pairs of eyes. Second, discipline and classroom management are problems, especially if the teacher uses communicative methodology. Third, evaluating or reviewing students' oral and written work is difficult. Last, teachers feel that because they cannot give individual attention in large classes, very little learning takes place.

Taking up this final issue, four colleagues and I piloted and then ran a project to investigate innovative ways of bringing about effective learning in large classes (Sarwar, 2000, 2001). The program was introduced both at the tertiary and undergraduate level in a women's college in Pakistan in classes of over 150 adult students of mixed ability between the ages of 16 and 21. Both the teachers and learners were nonnative speakers of English. At the initial stages, we asked ourselves the following questions:

1. How can large classes provide learners with meaningful occasions to use English?
2. How can teachers of large classes break the vicious circle in which students with low proficiency do not use English and their proficiency and self-esteem remain low?
3. How can learners in large classes become independent?
4. How can teachers create rapport in a large class?

These challenges led my team and me toward project-based learning (PBL), which differs from project work as commonly defined (e.g., Booth, 1986). Our operational definition (Sarwar, 2000) was as follows:

Project based learning is a voluntary collaborative or individual educational process initiated by a teacher to provide EFL learners a context for meaningful use of the target language outside the classroom. The content of the project may or may not directly relate to the learners' prescribed curriculum. The focal aims are to give them opportunities to become fluent and confident in using English by utilizing and expanding their existing language repertoire through projects. (p. 41)

Because it involves voluntary, out-of-class activity, which is not necessarily syllabus driven, PBL as we define it addresses the needs of the local context. In the Pakistani context, PBL took the form of an out-of-class activity because the strict regimen of the syllabus did not allow many meaningful tasks in the classroom. It was made voluntary in light of the reality of large classes, in which no single activity can be attempted with complete success due to the large numbers of students with varying proficiency levels. However, PBL motivated the majority of learners to participate in it. The following five-step process was covered in one academic year.

STAGE 1

Students were made aware that language learning is a skill and that in a large class teachers are unable to give students enough practice; teachers, however, were willing to guide students if they wanted to take initiative to learn. Students were also exposed to the methods and advantages of independent learning and encouraged to form their own groups to compose a newspaper or compile a booklet on a topic of interest. At this stage, students asked themselves questions about what they wanted to do and why. In an EFL situation this questioning was novel and brought out their social and analytical skills. Student feedback indicated that they felt more confident as speakers of English as a result of the activity; therefore, it appeared to raise their self-esteem. The cohesiveness of the large class also improved as groups worked together for their final display.

STAGE 2

Students gathered appropriate information, which involved looking in encyclopedias, taking notes, and so on. These activities are similar to work done in traditional projects. However, for EFL learners, information gathering was an important event as they saw the value of the skills for their studies.

STAGE 3

The process approach (self-editing, peer checking, and rewriting the final product) generated much excitement. At least 20 groups worked on different projects. Some studied the newspaper format and compiled one for their group, complete with advertisements, while others took up a theme like the Indus Valley civilization and made a booklet about it, decorated with illustrations and pictures. Some discords did occur. On the whole, though, the novelty of peer checking and group discussions provided training in editing and presenting work in a logical sequence. In the present EFL context, it was a new experience and brought out students' potential.

STAGE 4

Students needed to think and reorganize materials for the final presentation. English had suddenly stepped out of their textbooks to become a living language. Students also felt ownership of their work as they had invested time and effort in it.

STAGE 5

Students' work was displayed and evaluated on preset criteria, which included language, handwriting, and presentation. The evaluation was not part of the final grade, but students still felt motivated to follow this path of learning. Students' management skills were also involved as they were responsible for displaying their work and sharing it with fellow students. The confidence of students at this point was remarkable. They could see English not as a subject to be learned by rote but, in their own words, as "fun" and "a very interesting and creative thing to do." Certificates were awarded to the groups with the three highest grades, but everyone received a certificate of participation.

A review of the procedures demonstrates that PBL addresses the questions my team and I (Sawar, 2000, 2001) raised. Making a class newspaper or book involved the learners in a meaningful activity and provided them with a purpose and with exposure to real-world English. It also built up students' self-esteem, developed independent learning habits, and created rapport in the classroom. As one student commented, "We gained confidence with the realization that we too could do something and write on our own." A sample reflection by one of the team members is similarly positive: "The enthusiasm of the students was contagious for the whole English department. Other subject teachers said that the project work made students more alert and cheerful and

the atmosphere of their classes also changed. So we can say our project paid dividends" (Rizvi, Fawad, & Sadiq, 1996, p. 31).

Although this appears to be a success story, the team members recorded some problems. As Yasmin noted, "At times students did not understand what they were expected to do. Some did not take to project based learning at all as they felt they were not being taught English" (Sarwar, 2000, p. 52). Mahmooda also found it difficult to convince students to undertake an activity that was not part of the prescribed course (Sarwar, 2000).

The TESOL-initiated Tailor-Made Professional Development¹ project in Pakistan (1999–2000) investigated a revised model of PBL. The research question was, What happens when PBL is introduced in large EFL classes? Five teachers in different institutions in Karachi have used PBL as a regular strategy in their large classes. Preliminary analysis suggests that the majority of learners find PBL a good way of learning English. Some students who did not favour it were either high achievers or were not accustomed to group activities. The teachers who administered PBL also reported that it created more interest and challenge in their teaching and that the enthusiasm of students uplifted their spirits. Such findings suggest that classroom practitioners with large classes might consider PBL as a strategy.

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¹In TESOL's Tailor-Made Professional Development initiative, affiliates around the world identify their professional needs and work on them with TESOL. In a pilot project carried out in Pakistan through the Society of Pakistani English Language Teachers (SPELT, the Pakistan TESOL affiliate) in 1999–2000, teachers reported on action research done in their classrooms.

REVIEWS

TESOL Quarterly welcomes evaluative reviews of publications relevant to TESOL professionals.

Edited by **DAN DOUGLAS**
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Foreign Language and Mother Tongue.

Istvan Kecskes and Tunde Papp. Mahwah, NJ: Erlbaum, 2000.
Pp. xxv + 148.

■ *Foreign Language and Mother Tongue* considers the language development and competence of multilinguals. Kecskes and Papp argue that multilinguals not only develop multicompetence (Cook, 1992) but also have a different knowledge of their L1. Adopting Cummins' (1986) interdependence hypothesis, the authors use empirical data to demonstrate that transfer occurs from L1 to L2 and from L2 to L1. Moreover, they claim that transfer can occur between any two languages an individual may know. Kecskes and Papp suggest that the monolingual view of language, dominant for several decades, and the use of monolinguals to support theory building have led to an impoverished understanding of the cognitive processes of second language acquisition and the expression of pragmatic functions by multilinguals.

The book comprises a preface and seven chapters. In the preface, the authors discuss terminology, the sociohistorical context of their work, and their theoretical framework. Chapter 1 discusses the mother tongue and subsequent languages by introducing concepts such as *conceptual fluency* and *metaphorical competence*. A Hungarian experiment to assess the influence of foreign language (FL) learning on the learners' L1 is described in chapter 2. The third chapter explains the language processing device (LPD) of adult speakers of more than two languages. Adapting Levelt's (1989) speech production model, the authors claim that a common underlying conceptual base forms an important part of the LPD. Chapter 4 is an exploration of the development of the mental lexicon of bilinguals, and in chapter 5 the authors explain the transfer of such skills as metalinguistic awareness in an FL learning environment. Language distance and multicompetence are the focus of chapter 6,

where the authors note that typological closeness and cultural distance can affect multilinguals' LPD. Finally, the nature of the pragmatic knowledge of multilinguals is covered in chapter 7. The authors consider the influence of sociocultural experience—in this case, of the school environment—on the academic essays of learners. They found that the training the learners had received in the FL influenced their L1 written discourse.

The authors illustrate concepts such as *multicompetence* and *transfer* through the Hungarian study mentioned above, which investigated learners 14–16 years of age, a significant period for cognitive development. Data were collected on their writing skills in three settings: intensive, immersion, and control classes, representing different degrees of exposure to the FL and levels of motivation. Kecskes and Papp found that “intensive FL learning helps the internalization of L1 because linguistic operations on conscious ways of thinking based on FL learning can be transferred to L1 activities” (p. 20).

Any theory about the nature of the mind of multilingual speakers must consider cognitive and sociocultural dimensions. Kecskes and Papp's multidimensional view of the classroom setting, therefore, offers a provocative contribution particularly for TESOL by linking classroom processes to the development of multicompetence.

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Managing Evaluation and Innovation in Language Teaching: Building Bridges.

Pauline Rea-Dickins and Kevin Germaine (Eds.). London: Longman, 1998. Pp. xxi + 294.

■ *Managing Evaluation and Innovation in Language Teaching: Building Bridges* is a collection of 11 articles published in Longman's Applied Linguistics and Language Study series (edited by C. N. Candlin). Given

the paucity of books on ESL program evaluation, this publication is a welcome contribution.

After an introductory article, the book is divided into three sections: "Evaluating Innovation" (three articles), "Managing Evaluation" (three articles), and "Views From the Bridge" (four articles). The first two sections contain articles from on-site evaluation studies, and "Views From the Bridge" includes perspectives on evaluation, methodology, and philosophy.

The articles in the third section are uniformly insightful and helpful. For example, "Evaluating and Researching Grammar Consciousness-Raising Tasks," by Rod Ellis, offers a means of conducting an evaluation. Many evaluations hinge on a questionnaire measuring student response. If the students come out in favor of the course (or an innovation in the course), then the course is judged a success. Ellis points out three choices available in any evaluation: student-based evaluation on opinions and feelings, response-based evaluation on task outcomes, and learning-based evaluation on the acquisition of new knowledge. These distinctions allow evaluators to more closely specify what they are and are not evaluating.

The articles in the first two sections, in contrast, tend to be very difficult to follow. For example, Richard Kiely's "Programme Evaluation by Teachers: Issues of Policy and Practice" gives 16 purposes without indicating which represents the controlling purpose of the report. Kiely states 3 purposes of the study (p. 79), then 4 functions of evaluation (p. 84), then 6 additional concerns (p. 85), and, finally, another 3 purposes of the study (p. 86). Kiely gives no research questions to help the reader understand what issues are being addressed. Kiely apparently has three evaluations in mind: (a) his evaluation of teacher and student interaction, (b) teacher evaluation of student needs, and (c) student self-evaluation. As a result, when Kiely talks about evaluation, it is not always obvious which of the three he is referring to.

Despite the confusing reports, every teacher interested in course evaluation should read the articles in "Views From the Bridge" and the introductory article by the editors because they contain novel and useful perspectives. The field study articles might also be useful, but they are best viewed with a critical eye toward improving future reports of on-site evaluations.

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Identity and Language Learning: Gender, Ethnicity and Educational Change.

Bonny Norton. Harlow, England: Pearson Education, 2000.
Pp. xxi + 173.

■ At the heart of *Identity and Language Learning* is Norton's narrative of five female immigrants and the idiosyncratic and changing identities of their lives as they learned the language of their new community. The book's theme is that second language acquisition (SLA) theory needs to incorporate a notion of identity and examine identity in relation to the language learning context, which is constructed by inequitable power relations in terms of ethnicity, gender, and class. Norton explores these power relations through in-depth interviews, participants' diaries, and her own observations and reflections.

One of the book's major accomplishments is the effective challenging of several leading SLA theories hitherto conceived as orthodox. Drawing on the findings from her study, Norton questions Spolsky's natural language learning theory, Schumann's acculturation model, and Krashen's affective filter. For example, she claims that learners have difficulty gaining access to natural settings or a supportive atmosphere in which to negotiate meaning. In critically examining the acculturation model and the motivation model, Norton argues that learners' attitudes toward the target language group, their motivation, and their language practice do not necessarily work in tandem, and that their relations are more complex than theorists claim. She suggests that one of the tragic by-products of acculturation is subtractive bilingualism, which happens when learners give up their values in blind pursuit of assimilation into a target language group. Norton further argues that motivation, anxiety, and self-confidence, which have been defined in traditional SLA theory as major factors affecting language learners' oral production, are not part of the invariant predisposition of learners but change depending on the time, the place, and the interlocutors' attitudes.

Another significant contribution of Norton's research is the diary study methodology she uses for both critical ethnography and L2 pedagogy. As a critical ethnographer, Norton tries to help her participants become aware of the unfair power relations of society and raise their voices against them (Creswell, 1998). As an L2 researcher, she aids the participants in improving their English skills and proposes that L2 educators use learners' diaries as instructional tools in classroom-based social research.

Norton acknowledges that she has faced difficulties in generalizing multidimensional facets of an individual's experience to a larger context. She writes, "Under these conditions, while I could capture the complexities of individual experience, it was difficult to link individual experience

to larger social structures" (p. 34). Apparently, however, she found a way out of this dilemma even though she did not address it explicitly. In interpreting the data, she recognized the learners' subjectivity, and she therefore attempted to describe the representative experience of the learner in an extensive account of each language learner's experiences.

From a theoretical perspective, this book can help educators understand the reality of learners' language practice outside the classroom through critical analysis of the relationship between language learners and the language learning context. From a practical perspective, the book provides language teachers with clear guidelines to use in helping language learners increase their opportunities to practice language outside the classroom. Overall, the book's powerful contribution to SLA grows out of the convincing case Norton makes for how L2 learners operate in terms of their social constraints and ever-changing identities formed by the target language society and out of the roles it proposes for language educators in accommodating these variations.

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The Phonology of English as an International Language.

Jennifer Jenkins. Oxford: Oxford University Press, 2000. Pp. vi + 258.

■ *The Phonology of English as an International Language* is an invaluable book on a timely subject. Its stimulating and innovative treatment of pronunciation teaching is based on the fact that "for the first time in the history of the English language, second language speakers outnumber those for whom it is the mother tongue, and interaction in English increasingly involves no first language speakers whatsoever" (p. 1). The book's central theme is that neither the traditional model for teaching English pronunciation (sounding like a native speaker [NS]) nor the current model (being intelligible to a NS) is relevant to modern realities. Instead, Jenkins asserts that models should be based on what nonnative speakers (NNSs) do when they use English as a lingua franca with other NNSs.

The book has eight chapters. The first reviews the changing role of English for international communication. Chapter 2 focuses on variation in performance between speakers of different language backgrounds,

and chapter 3 examines variation in performance in different communicative contexts. Chapter 4 reviews research on intelligibility, setting the stage for examining teaching priorities discussed in chapters 6–8, and chapter 5 examines the role of phonological transfer. Chapter 6 provides arguments for a Lingua Franca Core (LFC), chapter 7 discusses teaching priorities in light of accommodation theory, and chapter 8 suggests changes in pronunciation teaching and teacher education.

The book has many strengths, including its serious attempt to address the role of intelligibility and its well-argued framework, supported by data, for a common core in pronunciation teaching. Teaching for intelligibility entails limiting pedagogical goals. In a field that has been notoriously data poor and anecdote rich, Jenkins has made a major contribution by basing her proposed curriculum on research data about actual breakdowns in NNS-NNS talk. Her data suggest that segmental errors (errors in individual sounds) are often more serious than suprasegmental (rhythm and pitch) errors, although the most serious breakdowns involve both kinds of errors. Various aspects of the proposed LFC curriculum are certain to arouse controversy, particularly the significantly increased role for segmentals and sentence focus, and the significantly decreased role for many suprasegmentals (e.g., rhythm, weak forms, and final intonation). However, the strength of the proposed LFC curriculum is its basis in actual data on miscommunication.

Like all innovative books, this one will provoke both further thinking and disagreement. For instance, the book strongly dismisses the importance of the NS model in international communication, arguing that English's "L1 speakers have . . . forfeited the right to dictate standards of pronunciation for L2 use" (p. 16) because they are outnumbered by NNSs of English. If by this she means that NSs do not have the right to determine norms for communication that does not involve them, there can be no disagreement. However, numbers have never really determined pronunciation models, and therefore native varieties seem likely to remain an important factor in determining appropriate models. In addition, the assertion that the NS model should have no role in setting standards ignores the fact that many learners, especially immigrants, need to communicate with NSs.

Whatever the goals of learners, pronunciation teaching urgently needs a more carefully prioritized curriculum. This provocative and exciting book makes a valuable contribution in that direction.

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Interlanguage Refusals: A Cross-Cultural Study of Japanese-English.

Susan M. Gass and Noel Houck. Berlin & New York: Mouton de Gruyter, 1999. Pp. x + 264.

■ Since the introduction of the concept of *communicative competence* (Hymes, 1972), researchers and language educators have recognized the importance of pragmatic aspects in L2 learning, leading to the development of the study of *interlanguage pragmatics* (Blum-Kulka, House, & Kasper, 1989). The field of interlanguage pragmatics has devoted much attention to learners' pragmatic failure (Thomas, 1983) in speech acts due to linguistic limitations (i.e., pragmalinguistic failure) and incorrect judgments about social conventions and values in the target culture (i.e., sociopragmatic failure). Consequently, in the past two decades a substantial body of empirical research has provided a detailed account of nonnative speakers' speech act performance and their deviations from native speech act behavior (for reviews, see Ellis, 1994; Kasper & Rose, 1999). However, many of these studies have focused primarily on verbal analysis of individual speech act turns, overlooking the series of interactions involved in completing the speech act. In this book, Gass and Houck examine the refusals of three Japanese learners of English, analyzing dynamic discourse involved in complete refusal sequences. The authors illuminate the complexity of interactions in interlanguage refusals by examining both verbal and nonverbal behaviors and discuss a range of topics important to the study of interlanguage pragmatics.

The book consists of nine chapters. Chapter 1 reviews previous studies on refusals. In chapter 2, discussion of advantages and disadvantages of different research methodologies and their effects on data interpretation leads to the rationale for the authors' use of videotaped open role plays. Chapter 3 analyzes an extended refusal interaction sequence within an analytical unit of an episode, illustrating the development of the learners' responses across multiple turns. Chapters 4 and 5 concern the role of backchannels and nonverbal behavior in delivering meaning and affecting the tone of an interaction. Successive chapters discuss such topics as pragmatic communication strategies (e.g., bluntness, indications of linguistic or sociocultural inadequacy, use of the L1, sequential shifts in goal, semantic formula or content, and nonverbal expressions of affect) used by learners for effective refusal interactions (chapter 6), the notion of *negotiation of discourse* (chapter 7), and the relationship of language learning and language use (chapter 8). The final chapter summarizes and synthesizes the diverse topics addressed in this book.

As the authors intend to cover a variety of topics pertinent to refusals, depth of coverage has been sacrificed for breadth. Many of the discussions in the chapters assume background knowledge of both second

language acquisition in general and interlanguage pragmatics in particular. For example, the first chapter lacks a detailed account of the empirical studies undertaken to date in interlanguage pragmatics (e.g., apologies, requests), focusing only on studies of refusals.

Interlanguage Refusals offers researchers and graduate students a new perspective on speech act research, going beyond linguistic analysis of individual refusal turns to consider both verbal and nonverbal aspects in the discourse of refusals. For language educators, this book provides a clear rationale for the importance of learning pragmatic aspects of the L2.

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Vanishing Voices: The Extinction of the World's Languages.

Daniel Nettle and Suzanne Romaine. Oxford: Oxford University Press, 2000. Pp. x + 241.

■ In the next 100 years, it is predicted, 90% of the world's languages will disappear. With this bold assertion, Nettle and Romaine begin their landmark study of the state of the world's biolinguistic diversity. The authors claim that ESL, unwittingly or not, will continue to play a central role in this degradation unless the trend is corrected by considerable public, scholarly, and professional attention. To explore these issues, Nettle and Romaine extend the biological terms of *diversity*, *survival*, and *extinction* to describe languages and cultures.

This metaphor of language as a living entity resonates with the authors' thesis that an interdependent relationship exists among ecology, culture, and language, and that conserving linguistic diversity is critical to sustaining global cultural and biological diversity. Nettle and

Romaine demonstrate that knowledge mediates this connection by carefully documenting specific examples of knowledge accompanying the death of a language that in turn led to the loss of biological diversity. The authors describe this process as the loss of biolinguistic diversity.

The book is divided into eight chapters covering the following topics: (a) why and how languages die; (b) biolinguistic diversity; (c) the language-knowledge connection; (d) the ecology of language; (e) biological, prehistorical roots of linguistic dominance; (f) economic, recent historical roots of linguistic dominance; (g) language rights; and (h) sustainable futures. Each chapter is exactly researched and offers a scholarly treatment of topics ranging from the agricultural revolution and its impact on global population and biolinguistic diversity to the correlation of levels of biological and linguistic diversity. Photographs and illustrative maps are included.

The authors combine comprehensive research on global language extinctions with insightful analyses of the historical and colonial roots leading to the dominance of the English language in such places as Ireland, Wales, Scotland, North America, Australia, New Zealand, and Hawaii, and of more recent cases in tropical regions of the Amazon, East Timor, and Papua New Guinea.

The authors identify three principal causes for language death: (a) population loss (from genocide or disease; e.g., Tasmanian), (b) forced language shift (from official policies; e.g., Scottish Gaelic), or (c) voluntary language shift (giving up a mother tongue to adopt a dominant language; e.g., Cornish). They also distinguish two patterns of voluntary language death worth noting: top-down loss (elimination of a language of the public domain) or bottom-up loss (elimination of a language spoken in homes).

The final chapter identifies three ways to counteract the loss of biolinguistic diversity: rural support and development, sustainability, and cultural-linguistic pluralism. For the authors, this requires decision making both above and below the level of the nation-state and funding from bottom-up sources to ensure commitment at the household level to the maintenance of the language. Home use of an endangered language, supported by effective bilingual intercultural education programs, is key to minority language conservation.

This book provides a blueprint for exploring diverse contexts of language erosion. It is an excellent introduction to biolinguistic conservation in the face of globalization and is indispensable for presenting the relationship among ecological, cultural, and linguistic conservation.

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BOOK NOTICES

TESOL Quarterly prints brief book notices of 100 words or less announcing books of interest to readers. Book Notices are intended to inform readers about selected books that publishers have sent to TESOL and are descriptive rather than evaluative. They are solicited by the Book Review Editor.

Individual Freedom in Language Teaching.

Christopher Brumfit. Oxford: Oxford University Press, 2001.
Pp. xvi + 207.

■ This book represents the author's attempt to set forth principles for the ways language is used to educate, developed over 20 years of teaching and research. He starts from a number of premises, including the paradox that although the rules of language use are inherently fluid and negotiable, the teaching of languages has to act as if they are stable and nonnegotiable. The book is thus aimed at reflecting on ways teachers can help learners use language creatively to express individual and group differences. The 14 chapters, grouped into six parts, discuss language and education, L2 learning, language in British education, literature and education, the politics of language teaching, and research and understanding.

ICT and Language Learning: A European Perspective.

Angela Chambers and Graham Davies (Eds.). Lisse, Netherlands: Swets & Zeitlinger, 2001. Pp. 185.

■ Information and communication technology (ICT) in relation to language learning is a rapidly emerging subfield of teaching and research. The editors of this collection of 11 papers aim to focus not on technological innovation in language learning itself but rather on the role of innovative technology in the language learning process. The European perspective is especially valuable given the current practical emphasis in Europe on multilingualism as a tool facilitating the mobility of workers within a political context of increasing integration among Europeans. The authors see themselves first as language teachers and second as experts in ICT, and their papers provide a much-needed

integration of research and practice in computer-assisted language learning.

***Foreign Language Program Articulation:
Current Practice and Future Prospects.***

Carolyn Gascoigne Lally (Ed.). Westport, CT: Bergin & Garvey, 2001.
Pp. x + 187.

■ TESOL practitioners will find much of interest in this collection of 10 papers concerned with the problems of students' transition between levels of language study in secondary and tertiary programs. Topics discussed include placement testing; the American Council of Teachers of Foreign Languages' national standards; the articulation of composition, literature, and language programs; and three case studies of statewide articulation efforts. The chapters bring together both theoretical and practical insights into the problems of the sequencing and coordination of language instruction to meet educational goals.

***The Power of Tests: A Critical Perspective on the
Uses of Language Tests.***

Elana Shohamy. Harlow, England: Pearson Education, 2001.
Pp. xxvi + 182.

■ As the author puts it, this book is not about tests but rather about their uses, effects, and consequences. It is the result of many years of thinking about and studying how tests are used, not as isolated events, but embedded in educational, social, political, and economic contexts. The author, an internationally recognized scholar in language testing research, first argues for the power of tests, the way they are used in society, and their consequences for various stakeholders. She then reports on empirical studies of the uses and impact of tests, arriving at a model for the use of tests. She concludes the book by proposing a critical agenda for limiting the power of tests and protecting the rights of test takers.

Reflections on Multiliterate Lives.

Diane Belcher and Ulla Connor (Eds.). Clevedon, England: Multilingual Matters, 2001. Pp. vii + 211.

■ This book is a fascinating collection of personal reflections on their own multilingualism and professional lives by 18 academics: 10 language educators and 8 professionals from other disciplines. Authors include many well known to the TESOL community, including Vijay Bhatia, Suresh Canagarajah, Andrew Cohen, Nils Erik Enkvist, Ryuko Kubota,

Adina Levine, Jun Liu, Håkan Ringbom, Miyuki Sasaki, and Anna Söter. The editors have also included reflections, some in the form of interviews with one or the other of them, by multilingual professionals in the fields of chemistry, mathematics, electrical engineering, nursing, human and community resource development, social work, and biology. The result is a book that helps the reader better understand how advanced L2 literacy can be achieved.

INFORMATION FOR CONTRIBUTORS

EDITORIAL POLICY

TESOL Quarterly, a professional, refereed journal, encourages submission of previously unpublished articles on topics of significance to individuals concerned with the teaching of English as a second or foreign language and of standard English as a second dialect. As a publication that represents a variety of cross-disciplinary interests, both theoretical and practical, the *Quarterly* invites manuscripts on a wide range of topics, especially in the following areas:

1. psychology and sociology of language learning and teaching; issues in research and research methodology
2. curriculum design and development; instructional methods, materials, and techniques
3. testing and evaluation
4. professional preparation
5. language planning
6. professional standards

Because the *Quarterly* is committed to publishing manuscripts that contribute to bridging theory and practice in our profession, it particularly welcomes submissions drawing on relevant research (e.g., in anthropology, applied and theoretical linguistics, communication, education, English education [including reading and writing theory], psycholinguistics, psychology, first and second language acquisition, sociolinguistics, and sociology) and addressing implications and applications of this research to issues in our profession. The *Quarterly* prefers that all submissions be written so that their content is accessible to a broad readership, including those individuals who may not have familiarity with the subject matter addressed. *TESOL Quarterly* is an international journal. It welcomes submissions from English language contexts around the world.

GENERAL INFORMATION FOR AUTHORS

Submission Categories

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Carol A. Chapelle
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The following factors are considered when evaluating the suitability of a manuscript for publication in *TESOL Quarterly*:

- The manuscript appeals to the general interests of *TESOL Quarterly*'s readership.
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- The content of the manuscript is accessible to the broad readership of the *Quarterly*, not only to specialists in the area addressed.
- The manuscript offers a new, original insight or interpretation and not just a restatement of others' ideas and views.
- The manuscript makes a significant (practical, useful, plausible) contribution to the field.
- The manuscript is likely to arouse readers' interest.
- The manuscript reflects sound scholarship and research design with appropriate, correctly interpreted references to other authors and works.
- The manuscript is well written and organized and conforms to the specifications of the *Publication Manual of the American Psychological Association* (4th ed.).

Reviews. *TESOL Quarterly* invites succinct, evaluative reviews of professional books. Reviews should provide a descriptive and evaluative summary and a brief discussion of the significance of the work in the context of current theory and practice. Submissions should generally be no longer than 500 words. Submit **two copies** of the review to the Review Editor:

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Review Articles. *TESOL Quarterly* also welcomes occasional review articles, that is, comparative discussions of several publications that fall into a topical category (e.g., pronunciation, literacy training, teaching methodology). Review articles should provide a description and evaluative comparison of the materials and discuss the relative significance of the works in the context of current theory and practice. Submissions should generally be no longer than 1,500 words. Submit **two copies** of the review article to the Review Editor at the address given above.

Brief Reports and Summaries. *TESOL Quarterly* also invites short reports on any aspect of theory and practice in our profession. We encourage manuscripts that either present preliminary findings or focus on some aspect of a larger study. In all cases, the discussion of issues should be supported by empirical evidence, collected through qualitative or quantitative investigations. Reports or summaries should present key concepts and results in a manner that will make the research accessible to our diverse readership. Submissions to this section should be 7–10 double-spaced pages, or 3,400 words (including references, notes, and tables). If possible, indicate the number of words at the end of the report. *Longer articles do not appear in this section and should be submitted to the Editor of TESOL Quarterly for review.* Send **one copy** of the manuscript to:

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The Forum. *TESOL Quarterly* welcomes comments and reactions from readers regarding specific aspects or practices of our profession. Responses to published articles and reviews are also welcome; unfortunately, we are not able to publish responses to previous exchanges. Contributions to The Forum should generally be no longer than 7–10 double-spaced pages or 3,400 words. If possible, indicate the number of words at the end of the contribution. Submit **three copies** to the Editor of *TESOL Quarterly* at the address given above.

Brief discussions of qualitative and quantitative **Research Issues** and of **Teaching Issues** are also published in The Forum. Although these contributions are typically solicited, readers may send topic suggestions or make known their availability as contributors by writing directly to the Editors of these subsections.

Research Issues:

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Special-Topic Issues. Typically, one issue per volume will be devoted to a special topic. Topics are approved by the Editorial Advisory Board of the *Quarterly*. Those wishing to suggest topics or make known their availability as guest editors should contact the Editor of *TESOL Quarterly*. Issues will generally contain both invited articles designed to survey and illuminate central themes as well as articles solicited through a call for papers.

General Submission Guidelines

1. All submissions to the *Quarterly* should conform to the requirements of the *Publication Manual of the American Psychological Association* (4th ed.), which can be obtained from the American Psychological Association, Book Order Department, Dept. KK, P.O. Box 92984, Washington, DC 20090-2984 USA. Orders from the United Kingdom, Europe, Africa, or the Middle East should be sent to American Psychological Association, Dept. KK, 3 Henrietta Street, Covent Garden, London, WC2E 8LU, England. For more information, e-mail order@apa.org or consult <http://www.apa.org/books/ordering.html>.
2. All submissions to *TESOL Quarterly* should be accompanied by a cover letter that includes a full mailing address and both a daytime and an evening telephone number. Where available, authors should include an electronic mail address and fax number.
3. Authors of full-length articles, Brief Reports and Summaries, and Forum contributions should include **two copies** of a very brief biographical statement (in sentence form, maximum 50 words), plus any special notations or acknowledgments that they would like to have included. Double spacing should be used throughout.
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9. The views expressed by contributors to *TESOL Quarterly* do not necessarily reflect those of the Editor, the Editorial Advisory Board, or TESOL. Material published in the *Quarterly* should not be construed to have the endorsement of TESOL.

Informed Consent Guidelines

TESOL Quarterly expects authors to adhere to ethical and legal standards for work with human subjects. Although we are aware that such standards vary among institutions and countries, we require authors and contributors to

meet, as a minimum, the conditions detailed below before submitting a manuscript for review. TESOL recognizes that some institutions may require research proposals to satisfy additional requirements. If you wish to discuss whether or how your study met these guidelines, you may e-mail the managing editor of TESOL publications at tq@tesol.org or call 703-535-7852.

As an author, you will be asked to sign a statement indicating that you have complied with Option A or Option B before TESOL will publish your work.

- A. You have followed the human subjects review procedure established by your institution.
- B. If you are not bound by an institutional review process, or if it does not meet the requirements outlined below, you have complied with the following conditions.

Participation in the Research

1. You have informed participants in your study, sample, class, group, or program that you will be conducting research in which they will be the participants or that you would like to write about them for publication.
2. You have given each participant a clear statement of the purpose of your research or the basic outline of what you would like to explore in writing, making it clear that research and writing are dynamic activities that may shift in focus as they occur.
3. You have explained the procedure you will follow in the research project or the types of information you will be collecting for your writing.
4. You have explained that participation is voluntary, that there is no penalty for refusing to participate, and that the participants may withdraw at any time without penalty.
5. You have explained to participants if and how their confidentiality will be protected.
6. You have given participants sufficient contact information that they can reach you for answers to questions regarding the research.
7. You have explained to participants any foreseeable risks and discomforts involved in agreeing to cooperate (e.g., seeing work with errors in print).
8. You have explained to participants any possible direct benefits of participating (e.g., receiving a copy of the article or chapter).
9. You have obtained from each participant (or from the participant's parent or guardian) a signed consent form that sets out the terms of your agreement with the participants and have kept these forms on file (TESOL will not ask to see them).

Consent to Publish Student Work

10. If you will be collecting samples of student work with the intention of publishing them, either anonymously or with attribution, you have made that clear to the participants in writing.

11. If the sample of student work (e.g., a signed drawing or signed piece of writing) will be published with the student's real name visible, you have obtained a signed consent form and will include that form when you submit your manuscript for review and editing (see <http://www.tesol.org/pubs/author/consent.html> for samples).
12. If your research or writing involves minors (persons under age 18), you have supplied and obtained signed separate informed consent forms from the parent or guardian and from the minor, if he or she is old enough to read, understand, and sign the form.
13. If you are working with participants who do not speak English well or are intellectually disabled, you have written the consent forms in a language that the participant or the participant's guardian can understand.

Statistical Guidelines

Because of the educational role the *Quarterly* plays modeling research in the field, it is of particular concern that published research articles meet high statistical standards. In order to support this goal, the following guidelines are provided.

Reporting the study. Studies submitted to the *Quarterly* should be explained clearly and in enough detail that it would be possible to replicate the design of the study on the basis of the information provided in the article. Likewise, the study should include sufficient information to allow readers to evaluate the claims made by the author. In order to accommodate both of these requirements, authors of statistical studies should present the following.

1. a clear statement of the research questions and the hypotheses that are being examined;
2. descriptive statistics, including the means, standard deviations, and sample sizes, necessary for the reader to correctly interpret and evaluate any inferential statistics;
3. appropriate types of reliability and validity of any tests, ratings, questionnaires, and so on;
4. graphs and charts that help explain the results;
5. clear and careful descriptions of the instruments used and the types of intervention employed in the study;
6. explicit identifications of dependent, independent, moderator, intervening, and control variables;
7. complete source tables for statistical tests;
8. discussions of how the assumptions underlying the research design were met, assumptions such as random selection and assignment of subjects and sufficiently large sample sizes so that the results are stable;
9. tests of the assumptions of any statistical tests, when appropriate; and

10. realistic interpretations of the statistical significance of the results keeping in mind that the meaningfulness of the results is a separate and important issue, especially for correlation.

Conducting the analyses. Quantitative studies submitted to *TESOL Quarterly* should reflect a concern for controlling Type I and Type II error. Thus, studies should avoid multiple *t* tests, multiple ANOVAs, and so on. However, in the very few instances in which multiple tests might be employed, the author should explain the effects of such use on the probability values in the results. In reporting the statistical analyses, authors should choose one significance level (usually .05) and report all results in terms of that level. Likewise, studies should report effect size through such strength of association measures as omega-squared or eta-squared along with beta (the possibility of Type II error) whenever this may be important to interpreting the significance of the results.

Interpreting the results. The results should be explained clearly and the implications discussed such that readers without extensive training in the use of statistics can understand them. Care should be taken in making causal inferences from statistical results, and these should be avoided with correlational studies. Results of the study should not be overinterpreted or overgeneralized. Finally, alternative explanations of the results should be discussed.

Qualitative Research Guidelines

To ensure that *Quarterly* articles model rigorous qualitative research, the following guidelines are provided.

Conducting the study. Studies submitted to the *Quarterly* should exhibit an in-depth understanding of the philosophical perspectives and research methodologies inherent in conducting qualitative research. Utilizing these perspectives and methods in the course of conducting research helps to ensure that studies are credible, valid, and dependable rather than impressionistic and superficial. Reports of qualitative research should meet the following criteria.

1. Data collection (as well as analyses and reporting) is aimed at uncovering an emic perspective. In other words, the study focuses on research participants' perspectives and interpretations of behavior, events, and situations rather than etic (outsider-imposed) categories, models, and viewpoints.
2. Data collection strategies include prolonged engagement, persistent observation, and triangulation. Researchers should conduct ongoing observations over a sufficient period of time so as to build trust with respondents, learn the culture (e.g., classroom, school, or community), and check for misinformation introduced by both the researcher and the researched. Triangulation involves the use of multiple methods and sources such as participant-observation, informal and formal interviewing, and collection of relevant or available documents.

Analyzing the data. Data analysis is also guided by the philosophy and methods underlying qualitative research studies. The researcher should engage in comprehensive data treatment in which data from all relevant sources are analyzed. In addition, many qualitative studies demand an analytic inductive approach involving a cyclical process of data collection, analysis (taking an emic perspective and utilizing the descriptive language the respondents themselves use), creation of hypotheses, and testing of hypotheses in further data collection.

Reporting the data. The researcher should generally provide “thick description” with sufficient detail to allow the reader to determine whether transfer to other situations can be considered. Reports also should include the following.

1. a description of the theoretical or conceptual framework that guides research questions and interpretations;
2. a clear statement of the research questions;
3. a description of the research site, participants, procedures for ensuring participant anonymity, and data collection strategies, and a description of the roles of the researcher(s);
4. a description of a clear and salient organization of patterns found through data analysis—reports of patterns should include representative examples, not anecdotal information;
5. interpretations that exhibit a holistic perspective in which the author traces the meaning of patterns across all the theoretically salient or descriptively relevant micro- and macrocontexts in which they are embedded;
6. interpretations and conclusions that provide evidence of grounded theory and discussion of how this theory relates to current research/theory in the field, including relevant citations—in other words, the article should focus on the issues or behaviors that are salient to participants and that not only reveal an in-depth understanding of the situation studied but also suggest how it connects to current related theories.