This study examines task-based, synchronous computer-mediated communication (CMC) among intermediate-level learners of English. The research specifically explores (a) whether learners engage in negotiated interaction when they encounter new lexical items, (b) whether task type has an effect on the amount of negotiation that transpires, and (c) how this computer-mediated negotiation compares to that noted in the face-to-face literature. Fourteen nonnative–nonnative dyads collaboratively completed 4 communicative tasks using ChatNet, a browser-based chat program. Each dyad completed 2 jigsaw and 2 decision-making tasks, which were each “seeded” with 8 target lexical items. The chatscripts reveal that learners do in fact negotiate for meaning in the CMC environment when nonunderstanding occurs. Furthermore, task type was found to have a definite influence on the extent to which learners engaged in negotiation, but not necessarily in the same way that has been observed in the face-to-face literature. Though the negotiation that occurs in the CMC environment proceeds in ways that are roughly similar to face-to-face negotiation, the observed differences call for a new model of computer-mediated negotiation. This new model is presented as a more accurate tool for describing computer-mediated negotiated interaction than those offered to chart face-to-face negotiation episodes.

AS THE PROLIFERATION OF COMPUTERS IN the language learning classroom continues, it is important for language teachers embracing the use of computer technology to understand the norms of language use during computer-mediated interaction and their potential relationship to second language acquisition (SLA). The use of synchronous computer-mediated communication (CMC) in particular has recently increased in the communicative language classroom through freeware and readily-available Web-based “chat” programs such as AOL Instant Messenger and Yahoo Messenger, among countless others. In general, CMC appears to be a potentially useful tool for language teaching and learning as well as for research into both second language use and acquisition. Research suggests that CMC may elicit more (and more equitable) learner participation (Beauvois, 1992; Kelm, 1992; Kern, 1995; Kim, 1998; Warschauer, 1996), as well as better quality language (Chun, 1994; Kelm, 1992; Kern, 1995; Warschauer, 1996) than that found in face-to-face interaction. Computer-mediated communication may also help create a less stressful environment for second language practice (Chun, 1998). Furthermore, because of the “logging” capabilities of most CMC programs, we may capture and readily access this interaction for both research and pedagogical purposes. Indeed, the computer as a data collection instrument seems to be less intrusive in many ways than traditional procedures for recording face-to-face student interaction.

Though the use of well-crafted communicative activities, which promote learner-learner interaction, is generally considered sound pedagogical practice, the theoretical and empirical support for the efficacy of such activities for facilitating SLA is less than conclusive. Nevertheless, it is widely held that communicative interaction...
among nonnative speakers (NNS–NNS), especially that which promotes negotiated interaction, is especially facilitative for SLA. Negotiation episodes have been shown to abound in face-to-face learner interaction (Brock, Crookes, Day, & Long, 1986; Ellis, Tanaka, & Yamazaki, 1994; Gass, 1998; Gass & Varonis, 1985b; Long, 1985; Loschky, 1994; Mackey, 1999; Pica, 1994; Pica, Doughty, & Young, 1986; Pica, Holliday, Lewis, Berducci, & Newman, 1991; Pica, Young, & Doughty, 1987; Sato, 1986), especially when learners are engaged in certain types of tasks (Doughty & Pica, 1986; Duff, 1986; Gass & Varonis, 1985a; Long, 1981, 1983; Nobuyoshi & Ellis, 1993; Pica & Doughty, 1985; Pica, Kanagy, & Falodun, 1993). Perhaps seduced by the increasing presence and popularity of computers in second language classrooms, we may be tempted to assume that computer-mediated (negotiated) interaction among learners occurs to the same degree and in the same fashion as that found in a face-to-face environment. However, such an assumption requires a leap of faith, to be sure, given the differences reported between face-to-face and CMC discourse and interactional patterns (see Blake, 2000; Fernández-García & Martínez-Arbelaiz, 2002; Pellettieri, 1999; Smith, 2001).

Research has found CMC discourse to exhibit features of both oral and written language. Among those characteristics similar to spoken language is the real-time nature of the communication, the ability to provide stress to words and phrases (via italics or bolding), the use of the first person, and the clear informality found in CMC discourse. Characteristics of CMC resembling writing include the lack of intonation, the permanent record of the discourse, the lexical density, and the use of punctuation and textual formatting in messages. Computer-mediated communication possesses many unique characteristics as well. For example, learners, when communicating in a CMC environment, make use of simplified registers, including shorter sentences, abbreviations, simplified syntax, the acceptance of surface errors, and the use of symbols and emoticons to express emotion. Furthermore, openings and closings in discourse have been reported to be largely optional in CMC (Murray, 2000). Moreover, turn-taking includes many more overlaps than in face-to-face exchanges. This overlapping is largely due to a short time delay (even in synchronous CMC) between the actual initiation of the message and its receipt by the addressee. These overlaps are also due in part to the fact that only one message at a time may traverse the CMC interface. A heightened degree of learner uptake, large amounts of learner self-correction, and clear lexical and syntactic development have also been observed during computer-mediated negotiation interaction as has a perceived sense of communicative urgency and frequent, yet inconsequential misspellings (Smith, 2001).

Indeed, synchronous CMC may provide an ideal medium for students to benefit from interaction primarily because the written nature of computer-based discussions allows a greater opportunity to attend to and reflect upon the form and content of the message, while retaining the conversational feel and flow as well as the interactional nature of verbal discussions. Beauvois (1992) has described such “chatting” as conversation in slow motion because the CMC interface slows down the communicative interaction while largely retaining its real-time interactive nature. From an interactionist perspective on SLA, this is considered one of the most beneficial aspects of synchronous CMC—that learners are afforded more processing time while reading and typing messages, though the “feel” of the interaction remains similar to that of face-to-face oral interaction. From this theoretical perspective, negotiated interaction in particular is viewed as beneficial for SLA as learners elicit modified input from one another, are pushed to modify their own linguistic output, and receive important feedback on their target language use, thus potentially focusing their attention on their problematic utterances.

Determining the nature of computer-mediated negotiated interaction and establishing the degree to which such negotiation is similar to that reported in traditional interactionist studies is essential if we are to use a theoretical rationale based on face-to-face interaction to justify the use of similar activities in a CMC environment. The present study was exploratory in nature in that it sought to determine how far computer-mediated negotiation resembles face-to-face negotiation. To this end, the most widely used model of negotiation (Varonis & Gass, 1985) was employed to evaluate these computer-mediated negotiation routines. This study also attempted to determine whether the role of task type has a similar effect on computer-mediated NNS–NNS interaction as has been noted in the face-to-face literature.

ESTABLISHING NEGOTIATED INTERACTION IN CMC

The potential benefits of meaning negotiation include making input more comprehensible
through input modifications, eliciting pushed output, providing feedback, and forcing learners to focus attention on certain aspects of their speech. Evidence suggesting a positive relationship between negotiation and SLA continues to emerge in areas of lexical acquisition (Ellis et al., 1994; Smith, 2001), morphosyntax (Loschky, 1994), and question formation (Mackey, 1999). Despite the plentiful evidence that shows that learners negotiate for meaning in the language learning classroom, there are some studies that question whether negotiated interaction is alive and well at all (Foster, 1998). With regard to computer-mediated communication, the modest amount of research to date suggests that learners negotiate for meaning in some ways that are similar to the traditional classroom and in other ways that are quite different (Blake, 2000; Darhower, 2002; Fernández-García & Martínez-Arbelaitz, 2002; Pellettieri, 1999; Smith, 2001).

RESEARCH QUESTIONS

The present study was designed to answer the following research questions:

1. How do learners negotiate for meaning during task-based CMC?
2. Does task type affect how learners negotiate for meaning during CMC?
3. How do these negotiation routines compare to those found in the face-to-face negotiation literature?

METHOD

Participants

Online synchronous chat conversations from 14 nonnative-nonnative dyads form the data base for this study. Participants consisted of two intact classes of nonmatriculated, intermediate-level students enrolled in intensive English classes at a large Midwestern university. They ranged in age from 19 to 28 ($M = 23.36$, $SD = 3.25$) and represented five countries and four languages (Japan/Japanese, Korea/Korean, Taiwan/Chinese, People’s Republic of China/Chinese, and Qatar/Arabic). Based on a pretreatment background questionnaire, learners were determined to have similar previous experience working with computers, ranging from 1 to 4 years ($M = 2.17$, $SD = .87$).

Procedures

The participants met once a week for 5 weeks in a campus computer lab during regularly scheduled class meetings. All computer lab sessions were part of the regular class syllabus. During the first meeting, the students participated in a training session where they received an introduction to the ChatNet Internet Relay Chat (IRC) program, which was to be used in the study. During this session, the students were able to practice interacting with an unidentified partner online in real time. ChatNet is a basic IRC program that allows users to type messages in one window and read messages in another window. It was chosen as the interface because it resembles various free chat software and Web-based programs available today. After this introductory session, the participants were given two practice tasks to complete that corresponded to the two task types to be used in the data collection. These tasks were shortened versions of similar tasks used in the treatment. The learners completed four tasks in total over the duration of the study, two jigsaw tasks and two decision-making tasks. During each of the subsequent meetings (meetings 2 through 5), the learners completed a short warm-up task where they had to log on to the program and chat online about the day’s activities or plans for the rest of the day with one other student. This warm-up was followed by the day’s task, which was limited to 30 minutes. All student discourse was logged and collected later by the researcher. The computer lab was set up in such a way that the learners could not easily view the screens of their classmates or talk with one another without drawing attention to themselves. Specifically, each computer station was outfitted with a privacy guard on either side of the station. Furthermore, the terminals were located either along the outer perimeter of the classroom facing the wall or in an inner circle facing toward the center of the classroom.

Tasks

Pica et al. (1993) cited two recurrent features common to virtually all discussions of task in the literature. The first feature is that tasks are oriented toward goals. Participants are expected to arrive at an outcome accomplished through their talk. The second feature is activity, which suggests that the participants take an active role in carrying out tasks. Pica et al.’s task typology is perhaps the most informative of typologies within the interactionist framework because the researchers delineated task type along the two categories—
goals and activities—in relation to the task’s impact on opportunities for learner comprehension of input, feedback on production, and interlanguage modification. The two task types chosen from this typology for use and comparison in this study were the jigsaw task and the decision-making task. While keeping to the specifications outlined in Pica et al. (1993), appropriate and relevant original tasks were sculpted for each task type (see Appendixes A and B for examples)—two jigsaw tasks and two decision-making tasks. Though the task design was essentially pedagogical in nature (Nunan, 1989), the researcher strove to maintain a certain degree of real-world authenticity in the tasks. These tasks were tested in a pilot study with several native and nonnative speakers of English who were consistently able to accomplish all four tasks in the intended manner.

**Jigsaw Task**

According to Pica et al. (1993), the jigsaw task type should elicit a high degree of negotiation of meaning. In the jigsaw task, the participants were to arrange a series of six pictures in the correct sequence (see Appendix A for example). Based on an earlier pilot study, a sequence of six pictures was determined to be the optimal number for computer-mediated dyadic interaction with intermediate level English as a Second Language (ESL) students. Under this structure, each participant worked with a task sheet (A or B). The instructions on sheets A and B were identical; the difference between the two sheets was that the participants had different parts of a six-part pictorial story. The three pictures held by each student were arranged in random order and were labeled A, B, C or D, E, F, respectively. The tasks were designed to reflect a similar “problem-solution” framework, while being moderately humorous. It was also important that the learners be able to proceed through the tasks by drawing on their existing English language competence. The topics sought for each task were neutral in nature and common to the general life experience of the participants in the study.

The structure of both jigsaw tasks was essentially the same in that they initially showed the protagonist(s) facing a mild problem, then showed them taking action to solve that problem, and culminated in a humorous ending. In an effort to ensure that negotiation would occur, the tasks were seeded with low-frequency, unknown items (objects) with each participant receiving four different target lexical items. For example, in the messy garage task, the pictorial sequence included objects or items such as a rake, a thermos, overalls, and so forth. These lexical items (concrete nouns) were selected based on the results of a pretest that was administered 2 weeks before the treatment and that followed the method reported in Ellis and He (1999). Those items that were least known by the students were selected for inclusion in the tasks.

The two jigsaw tasks employed in this study fit unambiguously into Pica et al.’s (1993) typology in terms of the two chief defining features of task type, interactional activity and communication goal. In each of these tasks each interactant held a different portion of information and supplied or requested this information as needed to complete the task. Each interactant was also required to request and supply information because without such an exchange, there was no reasonable expectation that a dyad could put the six pictures in a logical sequential order. The goal of arranging the pictures in the proper sequence of events was common to both participants and therefore convergent in nature. Finally, great caution was taken during the preparation of the jigsaw tasks to ensure that only one reasonable solution or outcome was possible for each task. As mentioned, the series of pictures was pretested on several native speakers as well as on learners of English in order to validate this assumption. For each of the four areas described, learner comprehension of input, feedback on production, and interlanguage modification were expected (Pica et al., 1993).

**Decision-Making Task**

The decision-making task type was chosen to contrast against the jigsaw task because it lies near the opposite end of Pica et al.’s (1993) task typology and should, thus, elicit a much smaller amount of negotiation. Like the jigsaw tasks, these decision-making tasks attempted to draw on the learners’ life experiences, including their recent experience in the United States. The structure was similar for both decision-making tasks. The learners were faced with a situation where a larger list of items (8 items) needed to be culled to a list half its size. Based on the task scenario, the participants were required to come to a mutually agreeable joint decision regarding the appropriateness or usefulness of the target lexical items. The decision-making tasks consisted of version A and version B, with each participant (dyad half) possessing one or the other version. That is, the participants had exactly the same task, with the exception of four target lexi-
cal items listed at the bottom of their task sheet (see Appendix B for example).

In the two decision-making tasks, both interactants had convergent goals given that they had to select and agree upon four items from a larger list of eight. In contrast to the jigsaw tasks, though, multiple outcomes were possible. That is, each dyad could have theoretically come up with a unique, yet perfectly valid, solution to the task. Unlike the jigsaw tasks, which required interactants to request and supply information, the decision-making tasks allowed the participants to seek, withhold, or exchange information as they saw fit. That is, it was technically possible for the learners to complete these tasks successfully without actually sharing information.

ANALYSIS

All turns involving negotiated interaction were calculated from the chatscripts. As mentioned, the model outlined in Varonis and Gass (1985) was used to identify negotiation routines. Varonis and Gass (1985) defined instances of negotiation as exchanges that begin with an explicit indication of nonunderstanding and that result in a temporary “push down” in the conversation, away from the main line of discourse. This difficulty can be real or perceived by the participants and can be caused by any number of factors. For example, a learner may use the wrong word, which causes the interlocutor a problem in understanding the intended message. In contrast, the same learner may correctly use a word that is beyond the lexicon of his or her interlocutor. This usage of an unknown word may also result in an indication of nonunderstanding. Finally, an utterance may be problematic because of task-related issues or ambiguities, which arise during the co-construction of the task discourse.

In addition, a ratio of negotiated turns to total turns was calculated in order to make the data from all dyads comparable. It is important to establish a ratio of negotiated turns to total turns because the comparison of the instances of negotiation around target lexical items alone may be sensitive to the quantity of discourse produced by the dyads.

Turns

A turn was counted each time there was a transfer of the “floor” from one participant to the other. In Excerpt 1, there is a total of seven turns.

Excerpt 1

1. C: He is in the garage and has an ax.
   C: that’s all i have
2. A: I don’t know as.
   A: ax
3. C: you use it, when you cut down trees
   C: it’s made of steal, i guess
4. A: ok, I got it
5. C: alright
6. A: let’s start to make a order
7. C: ok

This somewhat conservative approach was taken rather than simply counting each line of text as a turn because the researcher believed it would be presumptuous to claim to be able to distinguish accurately when a participant intended a new line to be a genuinely new turn and when the new line simply reflected a highly individualized technique of keyboarding. Furthermore, the structure of CMC discourse is often quite different in many ways from face-to-face interaction. Aside from the unique structure of participation and its effect on the way topics are explored, CMC discourse often develops in a multilinear and associative fashion. Indeed, turn-taking in the sense conceived of by Sacks, Schegloff, and Jefferson (1974) is often not present in CMC largely because Sacks et al. assume that all potential speakers have access to the same channel(s) of communication at once. Most CMC systems, including the one used in this study (ChatNet) are one-way in nature meaning that only one interactant at a time can use a given channel. Thus, disrupted turn adjacency is the rule rather than the exception.

Negotiation Routines

Varonis and Gass (1985) suggested that negotiation episodes occur during NNS–NNS interaction largely due to a lack of shared background as well as a “shared incompetence” in the target language. These routines essentially serve to help interactants maintain an equal footing in the conversation once explicit problems in communication occur and are explicitly acknowledged. According to this model, negotiation episodes are responses to instances of nonunderstanding, as opposed to misunderstandings, and are comprised of three obligatory phases and one optional phase. Figure 1 illustrates this sequence.

Given that the research questions asked whether learners negotiate for meaning when problems in communication arise and sought to
characterize the nature of such negotiation, each of the four component parts of the negotiation routines was broken down into predetermined categories (see Figure 2) that were based on the existing interactionist research (e.g., Bremmer, Broeder, Roberts, Simonot, & Vasseur, 1988; Pellettieri, 1999; Pica et al., 1991; Rost & Ross, 1991; Varonis & Gass, 1985).

**Triggers.** A trigger \(<T>\) is the catalyst of a negotiation routine. Many types of triggers have been noted in the interactionist literature including lexical/semantic, structural (morphological/syn-tactic), content- and task-related, discourse, and pragmatic. Research consistently shows that most triggers of negotiation routines are lexical in nature. However, in an effort to account for non-lexical item negotiation, additional categories—syntactic, discourse, and content—were used to classify the additional triggers. **Lexical triggers** are those cases where the problematic utterance can be clearly linked to a specific lexical item. **Syntactic triggers** are those cases where the problematic utterance can be clearly attributed to a structural or grammatical construction. **Discourse triggers** are related to the general coherence of the discourse or conversation. For example, noncommunication caused by an inability to reference correctly the antecedent of a pronoun during interaction would be categorized as a discourse trigger. **Content triggers** are those instances where the entire content of a previous message is in some way problematic, including cases when the preceding message was vague. That is, when the problem could not be attributed to one of the other trigger types listed above, it was classified as a content trigger.

**Indicators (Signals).** The second part of the negotiation routine is called the indicator \(<I>\) or signal. According to Varonis and Gass (1985), these signals can be explicit or implicit. In this model, signals can also take the form of confirmation checks or clarification requests that repeat the problematic part of the previous phrase (the trigger). Indicators or signals are executed by the initiator of the negotiation routine. Following Rost and Ross (1991), each indicator was classified here as global, local, or inferential. **Global strategies** are those in which the respondent indicates nonunderstanding in a way that does not identify the trigger specifically. An example of a global indicator is the question (clarification request) “What?” or the statement “I don’t understand.” **Local strategies** are those in which the respondent explicitly identifies the trigger or indicates its precise location in the preceding discourse. Examples of local strategies are “What does wrench mean?” (clarification request) and “What was his name again?” Local strategies can also include confirmation checks such as “Do you mean machine?” (after the interlocutor wrote “mascien”). **Inferential strategies** occur when learners test out hypotheses and in doing so indicate
noncomprehension. An example of this type of strategy is when a participant says or writes, “OK, so that means he is tired?” after his interlocutor has attempted to describe a man that is bored.

Response. The third component of a negotiation routine is the response <R>. A response, quite simply, is any utterance by the respondent that replies to a signal or indicator of nonunderstanding. Various types of responses have been noted in the literature, including (a) minimal responses, (b) simply repeating the trigger with or without lexical or syntactic modifications, (c) stating an inability to respond, and (d) rephrasing or elaborating (expansion of) the problematic element. Essentially these types of responses can be categorized as minimal responses, modification responses, and elaborative responses.

Based on pilot study data, only the three different response types elaborated below were anticipated in the data. A minimal response by definition provides little new input to the initiator of the negotiation routine. This response may consist of merely repeating the trigger or simply responding “yes” to the indication of nonunderstanding. Therefore, in this study, any response that provided no new information to the interlocutor and was a short, one- or two-word response was considered minimal. Repeating the trigger (in most cases a lexical item) with lexical modification to the surrounding text is a learner’s attempt to clarify his or her intended meaning, but the respondent does not address the fundamental problem signaled in the indicator phase. In this category, the length of the response utterance is about the same as the trigger phrase. The final alternative, rephrasing and elaborating, seems intuitively the most helpful to learners who have signaled nonunderstanding. By rephrasing the prior utterance, the respondent may better illustrate the nature of the problematic lexical item, and by elaborating on the previous discourse, more context may be provided.

Reaction to the Response. The fourth component of the negotiation routine, the reaction to the response <RR>, is optional. As Varonis and Gass (1985) noted, this phase serves to signal that learners are ready to resume the main line of discourse. This phase normally takes the form of an explicit statement of understanding such as “OK,” “Good,” or “I understand.” These short reactions to the response are called minimal responses in the present study. Another possibility noted in the literature is metalinguistic in nature. In these types of utterances, learners comment explicitly on what the cause of the problem had been.

Two new categories emerged from the present data. Task appropriate responses <TAR> are “utterances” that are contextually relevant to the preceding stretch of discourse and that implicitly show a degree of understanding of the target element. The second type of reaction to the response found in the data was testing deductions <TD>. Testing deductions strategies are similar in many ways to inferential indications of nonunderstanding during the signal phase of negotiation and may result in a confirmation or nonconfirmation of correctness by the respondent. Testing deductions occurs when, during the reaction to the response, learners, reacting to the recent input provided in the response phase, make certain inferences, testing out their current state of understanding regarding the original problematic utterance. The term hypothesis testing, though fitting in some respects, is intentionally not used here because it has been traditionally associated with learners’ building of a hypothetical grammar (Corder, 1981), which seems inappropriate for the current context.

RESULTS AND DISCUSSION

Table 1 shows the raw number of turns, negotiated turns, and relative number of turns negotiated to total turns for all dyads across all tasks. In this way, we are able to determine the relative amount of negotiation that occurred while the learners were engaged in task-based CMC. From Table 1 we can see that the learners were involved in negotiated interaction about one-third of the time. This result also supports the finding of Pellettieri (1999), who reported that negotiation routines accounted for 34% of the total turns generated by all dyads engaged in task-based CMC in her data. This result suggests that learners, when engaged in CMC tasks designed to facilitate negotiation, engage in negotiated interaction in about one-third of their total turns. Therefore, a full two-thirds of their discourse is focused on collaborative progression toward task completion. It appears, then, that even when tasks are designed to elicit negotiation around new vocabulary, not an excessive amount of the overall discourse is spent on negotiation, nor should it be. This finding may allay some of the concerns about tasks that promote too much negotiation (Aston, 1986).

Task type did indeed seem to have an effect on how much learners negotiated for meaning. Ta-
Table 2 shows the results of a paired groups t test with percentage of turns negotiated and task type as the dependent and independent variables, respectively. From this table, we see that the learners negotiated a significantly higher percentage of turns when they were engaged in the decision-making tasks than when they worked on the jigsaw tasks. The effect size statistic of 1.37 (Cohen’s d), which measures the magnitude of the treatment effect, suggests a large effect.

Table 3 provides a breakdown by task type of the target lexical items that triggered negotiated interaction among learner dyads. From this table we can see that 78% of these items were negotiated during the decision-making tasks whereas only 22% were negotiated during jigsaw tasks. These findings are consistent with the data presented in Tables 1 and 2.

The findings above seem to run contrary to the expectations outlined in Pica et al.’s (1993) study, which posited that jigsaw tasks should facilitate negotiation over information gap, problem-solving, decision-making, and opinion exchange tasks. However, when we consider only the nontarget lexical item triggers (n = 20), we see that the results, though modest in numbers, are consistent with the expectations of Pica et al. (1993) as well as those of Robinson (2001). Table 4 shows the detailed breakdown of all nontarget item triggers in the data by trigger type for both task types. From this table we see that lexical items made up 60% of all nontarget triggers. Furthermore, the jigsaw tasks elicited more negotiation around nontarget items than the decision-making tasks, though the modest numbers preclude further statistical analysis.

Thus the current data are not entirely at odds with previous research predicting more negotiation during jigsaw tasks because there is some evidence that jigsaw tasks may elicit more “incidental” negotiation as predicted by earlier studies. However, when target lexical items are infused into the task, the scale tips toward the decision-making task type. That is, when performing lexically seeded jigsaw tasks, the participants may often relegate the target lexical items to a level of secondary importance. This result may be due to a learner perception of these target items as less salient for task completion. Though the jigsaw task required an information exchange for completion, it seems that the degree of target item saliency elicited by the decision-making tasks may supercede this task parameter of interaction requirement (Pica et al., 1993) when it comes to generating negotiated interaction around specific target lexical items. Indeed, there may very well be a task-induced saliency (or nonsaliency in this case) at work here regarding the seeded lexical items. The notion of saliency has been explored to some degree in regard to morphosyntax (Doughty, 1991; Loschky & Bley-Vroman, 1993; Mackey, Gass, & McDonough, 2000) but not in connection with lexis. Though the learners were encouraged to use the lexical items provided in order to help them complete each task speedily, it seems that these items were viewed as secondary during the picture-sequencing tasks (jigsaw), despite the fact that these tasks were designed so that the use and understanding of the target lexical items would help determine a definitive chronological sequence of events and thus facilitate the correct ordering of the picture sequence.

<table>
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<tr>
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<th>Turns Total</th>
<th>Mean Percentage of Turns Negotiated</th>
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### Table 1
Total Turns and Negotiated Turns during CMC

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Thus the current data are not entirely at odds with previous research predicting more negotiation during jigsaw tasks because there is some evidence that jigsaw tasks may elicit more “incidental” negotiation as predicted by earlier studies. However, when target lexical items are infused into the task, the scale tips toward the decision-making task type. That is, when performing lexically seeded jigsaw tasks, the participants may often relegate the target lexical items to a level of secondary importance. This result may be due to a learner perception of these target items as less salient for task completion. Though the jigsaw task required an information exchange for completion, it seems that the degree of target item saliency elicited by the decision-making tasks may supercede this task parameter of interaction requirement (Pica et al., 1993) when it comes to generating negotiated interaction around specific target lexical items. Indeed, there may very well be a task-induced saliency (or nonsaliency in this case) at work here regarding the seeded lexical items. The notion of saliency has been explored to some degree in regard to morphosyntax (Doughty, 1991; Loschky & Bley-Vroman, 1993; Mackey, Gass, & McDonough, 2000) but not in connection with lexis. Though the learners were encouraged to use the lexical items provided in order to help them complete each task speedily, it seems that these items were viewed as secondary during the picture-sequencing tasks (jigsaw), despite the fact that these tasks were designed so that the use and understanding of the target lexical items would help determine a definitive chronological sequence of events and thus facilitate the correct ordering of the picture sequence.

### Table 2
Comparison of Mean Percentage of Negotiated Turns to Total Turns across Task Type

<table>
<thead>
<tr>
<th>Task Type</th>
<th>N (Dyads)</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jigsaw</td>
<td>14</td>
<td>.23</td>
<td>.12</td>
<td>-3.63</td>
<td>13</td>
<td>.003</td>
<td>1.37</td>
</tr>
<tr>
<td>Decision-Making</td>
<td>14</td>
<td>.44</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus the current data are not entirely at odds with previous research predicting more negotiation during jigsaw tasks because there is some evidence that jigsaw tasks may elicit more “incidental” negotiation as predicted by earlier studies. However, when target lexical items are infused into the task, the scale tips toward the decision-making task type. That is, when performing lexically seeded jigsaw tasks, the participants may often relegate the target lexical items to a level of secondary importance. This result may be due to a learner perception of these target items as less salient for task completion. Though the jigsaw task required an information exchange for completion, it seems that the degree of target item saliency elicited by the decision-making tasks may supercede this task parameter of interaction requirement (Pica et al., 1993) when it comes to generating negotiated interaction around specific target lexical items. Indeed, there may very well be a task-induced saliency (or nonsaliency in this case) at work here regarding the seeded lexical items. The notion of saliency has been explored to some degree in regard to morphosyntax (Doughty, 1991; Loschky & Bley-Vroman, 1993; Mackey, Gass, & McDonough, 2000) but not in connection with lexis. Though the learners were encouraged to use the lexical items provided in order to help them complete each task speedily, it seems that these items were viewed as secondary during the picture-sequencing tasks (jigsaw), despite the fact that these tasks were designed so that the use and understanding of the target lexical items would help determine a definitive chronological sequence of events and thus facilitate the correct ordering of the picture sequence.
The notion of task-induced saliency of lexical items is similar in some respects to what Laufer and Hulstijn (2001) have referred to as task-induced involvement. The basic assumption in Laufer and Hulstijn’s (2001) study is that the retention of unknown vocabulary words is dependent on the degree of involvement in processing these words. Though their model specifically addresses incidental vocabulary learning, it seems that many of the concepts are appropriate for task-based, form-focused intentional vocabulary learning as well. According to this model, words processed with higher involvement loads will be retained better than those processed with lower involvement loads. The involvement load is determined by the presence or absence of three involvement factors: need, or the drive to comply with the task requirements; search, or the attempt to find the meaning of an unknown target language word by looking in a dictionary or consulting another authority; and evaluation, or the comparing or combining of a given word with other words and meanings. According to this model, teacher-/researcher-designed tasks with a higher involvement load will be more effective for vocabulary retention than tasks with a lower involvement load.

The findings in the present study can be partially explained in terms of Laufer and Hulstijn’s model in that the target lexical items in the jigsaw tasks may have had a perceived lower need. The various messages sent back and forth among the dyads may have been understandable without employing many of the target lexical items. This relatively low need also seems to affect negatively the degree of search and evaluation necessary. The decision-making tasks yielded quite different results, with the bulk of negotiation occurring here. This same notion of item saliency may help explain this occurrence as well. Unlike the participants performing the sequential ordering tasks, the learners working on the decision-making tasks seemed to view their list of lexical items (objects) as instrumental for task completion. This perception led to an explicit introduction of many of the target lexical items, resulting oftentimes in nonunderstanding and negotiation.

Establishing the Nature of Task-Based Computer-Mediated Negotiation

Thus far it has been demonstrated that negotiated interaction does, in fact, occur during task-based CMC among learners of English and that task type seems to influence whether the learners engage in negotiated interaction in a computer-mediated environment. But what exactly is the nature of this negotiation and how do existing models of charting negotiation hold up in an electronic environment?

The chatscripts examined in this study yielded a total of 79 explicit indicators of nonunderstanding surrounding target lexical items. Table 5 presents the various stages of negotiation reflected in the chatscripts. The raw number of instances of each stage, as well as the relative percentage of negotiation episodes this number represents, is presented.

Table 5 shows that overall, close to 94% of all signals of nonunderstanding were followed through by a complete negotiation routine, based on Varonis and Gass’s (1985) model. That is, they consisted of at least a trigger, an indicator, and a response. Also, 82% of all negotiation routines begun around target lexical items eventually culminated in a reaction to the response, the optional fourth part of Varonis and Gass’s model.

<table>
<thead>
<tr>
<th>Trigger Type</th>
<th>Jigsaw</th>
<th>Decision-Making</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexical</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>Discourse</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Content</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>(Total)</td>
<td>12</td>
<td>8</td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. All lexical triggers.

In contrast, only 11% of negotiation routines initiated end at the response phase. It seems, then, that in a CMC environment learners feel highly compelled to bring the routine to some explicit closure, perhaps even more so than during face-to-face interaction. Though the present author is unaware of any NNS–NNS face-to-face data that would allow for a direct test of this assertion, Foster (1998) and Pica, Holliday, Lewis, and Morgenthaler (1989) permit us to make some tentative inferences in this regard. Foster’s (1998) study of task-based classroom interaction among NNSs suggested that less than 23% of negotiation moves are followed by modified responses. Likewise, Pica et al. (1989), in a study of native speaker (NS)–NNS interaction, found that NNS interlocutors made modified responses to NS-initiated negotiation moves about 35% of the time. If we assume that an optional reaction to the response will occur less often than the response itself, then we may reasonably assume that the percentage of negotiation sequences that reach this optional phase would fall somewhere below 23% and 35% respectively in the studies by Foster (1998) and Pica et al. (1989), discussed above. In perhaps the only other CMC study to address this issue explicitly, Fidalgo-Eick’s (2001) exploration of NS–NNS interaction found that learners completed all four stages of the negotiation sequence 70% of the time.

One possible explanation for the high occurrence of reaction to the response phases in computer-mediated negotiated interaction may be that CMC removes, or at least reduces, many of the para- and nonlinguistic aspects of face-to-face speech that facilitate verbal communication. Thus in CMC, a certain degree of support is stripped away, concentrating the entire burden of communication on written characters. As a result, a more explicit marking of understanding and nonunderstanding, as well as turn boundaries, is required in CMC than in face-to-face interaction.

### Components of the Negotiation Routine

Although various trigger types have been documented in both traditional and CMC interactionist research, only lexical triggers are addressed from this point forward because the tasks in this study were seeded with largely unknown lexical items in an effort to elicit negotiated interaction. Table 6 shows the breakdown of each phase of negotiation based on the chatscript data for target lexical items. The response and reaction to the response phases take into account those extended negotiation routines that resulted in two and, in some cases, three passes through the response and reaction to the response phases.

It is interesting to note the clear tendency by the learners to indicate nonunderstanding (of a lexical trigger) through a local indicator, supporting recent research by Fernández-García and Martínez-Arbeláiz (2002). The reason for this tendency is likely related to the need for the learners to be very explicit during communication in a CMC environment due to the absence of nonlinguistic cues. A global indicator could prove ambiguous in relation to the surrounding text, which occupies the screen. The learners overwhelmingly opted for rephrasal/elaboration in the response phase. A minimal response in the response phase, by definition, provides little new input to the initiator of the negotiation routine. Similarly, by simply repeating the trigger, in this case a lexical item, and lexically modifying the surrounding lexical items, the respondent may not address the fundamental problem signaled in the indicator phase. By rephrasing the prior utterance, the respondent may illustrate the nature of the problematic lexical item better, and by elaborating on the previous discourse, may provide more context. By contrast, little more than a minimal response is required in the reaction to the response phase because the function of this optional phase is, in large part, simply to acknowledge understanding. This phase is essentially a signal that the initiator is ready to “pop back up” to the main topic of the conversation. It is, then, not surprising that learners (initiators) overwhelmingly opt for a minimal response in the final phase of the negotiation routine. Though metalinguistic talk may prove helpful in uncovering the root of the problem, it is not essential for task completion and may divert valuable time.

### Table 5

Stages of Negotiation Routines Completed by Dyads

<table>
<thead>
<tr>
<th>Negotiation Sequence</th>
<th>Total Number (Relative Percentages) of Routines Terminating at This Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>T → I</td>
<td>5 (6%)</td>
</tr>
<tr>
<td>T → I → R</td>
<td>9 (11%)</td>
</tr>
<tr>
<td>T → I → R → RR</td>
<td>65 (82%)</td>
</tr>
<tr>
<td>Total</td>
<td>79 (100%)</td>
</tr>
</tbody>
</table>

Note. T = Trigger; I = Indicator; R = Response; RR = Reaction to the Response.
away from the task. Task-appropriate responses and testing deductions strategies were also present in the data. These strategies show a heightened degree of student involvement, even in this optional phase of negotiation, and will be discussed in detail below.

An Expanded Model of Negotiation of Meaning for Task-Based CMC

In broad terms, the negotiation patterns in this CMC study were similar to those observed in face-to-face communication, fitting loosely into the Varonis and Gass (1985) model. It appears, though, that this model is insufficient to deal adequately with negotiation in a CMC environment in a detailed manner and must be expanded. The inadequacy of the Varonis and Gass model when applied to CMC has also been noted elsewhere. Pellettieri (1999), for example, found that the negotiation routines among learners of Spanish could occur in slightly different ways. Specifically, she argued that the Varonis and Gass model does not account for the use of (spontaneous) appeals for assistance.

The data from the current study suggest that any CMC model of negotiation must allow for a delay, sometimes a long delay, between the initial trigger <T> and the indicator. This allowance for delay is needed largely because of the lack of strict turn adjacency in CMC compared to that found in face-to-face communication. The lack of turn adjacency causes many triggers to go unanswered initially and often results in episodes getting sidetracked. However, as mentioned above, it is rare for a trigger to be ignored permanently. The proposed model allows for the regular occurrence of split negotiation routines, which often begin with a trigger and are followed by an indicator of nonunderstanding, whose response may only occur after a second (or third) repeat indicator some time later in the discourse. In these cases, the trigger remains the same, the nonacknowledged signal(s) or indicator(s) are referred to as Indicator 1 <Ii> and Indicator 2 <Iii> respectively, with the eventual response signified by <R>. The following excerpt shows an example of a split negotiation routine. This episode differs from a normal negotiation routine in that the initial indicator of nonunderstanding of the word ax comes long after the trigger. The permanence of the CMC discourse in the form of a scrolling chat log allows for such split routines, which were very common in the present data.

Excerpt 2

Example of Split Negotiation Routine

J: There are Ax, Rake, and so on. [11 lines of text]
<T> J: He hold ax in a clean garage, and everything is in order in everywhere. [43 lines of text]
<I> B: ax mean is hammer? J: no J: That’s different B: what is it?
<R> J: Ax is used to cut tree J: or wood

<table>
<thead>
<tr>
<th>TABLE 6</th>
<th>Subcategories and Relative Occurrence of Each Element of Negotiation Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negotiation</td>
<td>Element Subcategory</td>
</tr>
<tr>
<td>Trigger</td>
<td>Lexical</td>
</tr>
<tr>
<td>Indicator</td>
<td>Global</td>
</tr>
<tr>
<td></td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>Inferential</td>
</tr>
<tr>
<td>Response</td>
<td>Minimal</td>
</tr>
<tr>
<td></td>
<td>Repeat Trigger with Lexical Modification</td>
</tr>
<tr>
<td></td>
<td>Rephrasing/Elaboration</td>
</tr>
<tr>
<td>Reaction to Response</td>
<td>Minimal</td>
</tr>
<tr>
<td></td>
<td>Metalinguistic Talk</td>
</tr>
<tr>
<td></td>
<td>Task Appropriate Response</td>
</tr>
<tr>
<td></td>
<td>Testing Deductions</td>
</tr>
</tbody>
</table>
In addition, careful examination of the chat-scripts suggests that the reaction to the response phase of computer-mediated negotiation routines appears to be more dynamic than previously reported. Furthermore, the data reveal a strong tendency for learners to carry on negotiation routines well past this reaction to the response stage. Two additional phases were characteristic of the CMC negotiation routines in the present study. These will be referred to as the confirmation <C> and reconfirmation <RC> phases.

The optional reaction to the response <RR> phase largely serves the purpose of closing out the negotiation routine through an overt indication of understanding. It is at this point that the interactants can return to the main trajectory of the conversation. Indeed, the present data have shown that in 82% of the negotiation routines the learners did in fact follow through with a reaction to the response. Clearly, though, not all reactions to the response bring the routine to a clean and appropriate finale. That is, as is the case in face-to-face interaction, in CMC we may expect the occasional reaction to the response to serve as an indicator <I> of continued lack of understanding or incomplete understanding (Varonis & Gass, 1985). Excerpt 3 illustrates this point.

Excerpt 3

1. C: and he hold the dust-pan
2. O: I don’t understand what it is?
3. O: how look like?
4. C: dustpad os collecting the trash.
5. C: is
6. C: dustpan is collecting the trash
7. O: m... it... looks like finger?
8. C: no
9. O: ?
10. C: it was invented before baccom.
11. O: ok...
12. C: old people used the Dustpan

In Excerpt 3, we see that in line 7, the student, O, makes an implicit showing of her incomplete understanding of the target item dustpan. This strategy in line 7, aside from filling the reaction to the response slot in the negotiation routine, serves to test a working hypothesis of what a dustpan is, a step labeled here as testing deductions <TD>. This testing deductions strategy employed by O also indicates or signals to C that she has an incomplete understanding of the target item, hence the negative reaction to the response <RR–> categorization. Reactions to the response that indicate a proper understanding (or those in which there is no evidence of nonunderstanding) of the negotiated item(s) are represented by <RR+> in the new model. This is an important and often overlooked distinction to make because it directly influences the subsequent discourse. What follows is a model of computer-mediated negotiated interaction (see Figure 3). This model is essentially based on that proposed by Varonis and Gass (1985), but it expands the former model in order to incorporate the patterns observed during computer-mediated negotiated interaction.

As mentioned, a reaction to the response can be either positive or negative. That is, it can indicate understanding or continued non- or partial understanding. In either case, the reaction to the response can be either explicit or implicit. An example of an explicit positive reaction to the response is “OK” or “I understand.” Similarly, an explicit negative reaction to the response is something like “I don’t understand” or “Can you explain more?” In the latter case, the flow of the negotiation routine tends to jump immediately back to a second round of the response phase <R²>, where the respondent provides more information. Alternatively, initiators may use an implicit reaction to the response. In the current data, there were two types of implicit reactions to the response. These consisted of testing deductions and task appropriate responses <TAR>. The testing deductions strategy was found in both positive and negative reaction to the response phases, but task appropriate responses were present only in the former.

Testing deductions occurs in the reaction to the response phase of the negotiation routine when learners (initiators) believe they have some idea regarding the nature of the element under negotiation. This idea may range from a fairly certain notion of the target element to a vague “stab in the dark” based on the available input provided by the interlocutor. Most important, this strategy shows a heightened degree of learner involvement that the minimal response and metalinguistic talk lack. It is quite easy simply to acknowledge one’s understanding with a simple “OK,” as witnessed in the high percentage of
minimal reactions to the response, but it is quite another matter to insist on an explicit confirmation of one’s hunch, regardless of how strong, by opting for the testing deductions strategy.

In contrast, task appropriate responses are “utterances” that are contextually relevant to the preceding stretch of discourse and that implicitly show a degree of understanding (or, theoretically, nonunderstanding, though there were no cases in the present data) of the target element. Examples of the testing deductions and task appropriate response strategies are listed in Excerpts 4 and 5.

Note. Adapted and expanded from Varonis and Gass (1985).

Excerpt 4
Testing Deductions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P: ok what is razor</td>
<td>C: Razor? This is very useful for guys.</td>
</tr>
<tr>
<td>&lt;R&gt; Explicit</td>
<td>P: can describ it more</td>
</tr>
<tr>
<td>C: If the guy want to cut his hair, he can cut use Razor.</td>
<td>C: Most of guys use it in the morning.</td>
</tr>
<tr>
<td>&lt;TD+&gt; P: you mean for shaving</td>
<td>C: That’s right!</td>
</tr>
<tr>
<td>C: ok . . .</td>
<td></td>
</tr>
</tbody>
</table>
Excerpt 5
Task Appropriate Response

<T> C: if u like the tree, you need the chainsaw.
<I> O: what is chainsaw?
<R> C: chainsaw is cutting the tree.
<TAR><RR+> O: i hope to protect tree
C: ok . . .

Testing deductions strategies may also be characterized as negative if they implicitly show a continued lack of full understanding on the part of the initiator. Of course they are only negative in the sense that they elicit a negative confirmation <C–>. By employing a testing deductions strategy, the initiator grapples with a certain degree of uncertainty but puts forth his or her best guess. In the case of a faulty testing deduction <TD–>, the respondent will normally respond with an explicit nonconfirmation (such as using the word no) followed by a return to the response phase. Occasionally, however, the respondent abandons the routine at this juncture. An example of the former follows in Excerpt 6 below.3

Excerpt 6

A: what is comb?
<R> B: after shower, I get my hair straight by this
<RR–><TD–> A: it’s like hair drier?
<C–> B: no
A: oh, I see
<R> B: like fish bone
<RR+> A: ok
A: ^ ^

The confirmation phase (optional) of the negotiation routine is where the respondent either confirms <C+> or disconfirms the degree of understanding by the initiator based on the latter’s reaction to the response. As mentioned above, in the case of a negative confirmation, the respondent reinitiates the response phase with further input, or in very rare cases, may simply abandon the negotiation routine. In contrast, positive confirmation affords three possibilities for the respondent, simple confirmation, reaffirmation, and comprehension check. Simple confirmation consists of a “minimal” response of some sort such as “OK,” “Good,” or “Right.” It can also take the form of praise such as “Good job!” or “Great!” Alternatively, respondents can opt for reaffirmation whereby, in addition to a minimal confirmation, they provide a bit more information to their interlocutor. In these cases, it often seems that there is some level of doubt by the respondent as to whether the initiator has fully grasped the negotiated element or not. Finally, a simple comprehension check may occur largely, it seems, for the same reasons as the reaffirmation. Examples of each are listed in Excerpts 7 through 11.

Excerpt 7
Simple Confirmation

<R> C: . . . when you open wine bottle or something like that, you use it
<RR+> A: A . . . Ok!
<C+> C: ok

Excerpt 8
Simple Confirmation

<R> J: . . . and have a red ribbon on the bottom of the green circle
<RR+> B: I got it
<C+> J: Good job, B.
<RC> B: Thanks . . .

Excerpt 9
Reaffirmation

<R> C: corkboard is similar blackboard
C: do u understand?
<RR+> E: I see
<C+> C: but corkboard have a pin

Excerpt 10
Reaffirmation

<I> O: what is bongos?
<R> C: bongos is similar to drum
<RR–><TD+> O: it is play music
O: oh,,,,
<C+> C: but it is traditional drum

Excerpt 11
Comprehension Check

<i> B: what is razor? can you explain?
A: razor is . . .
<R> A: when you want to cut your chin hair, you use it.
A: it’s kind of knife.
<RR+> B: I see
<C+> A: got it?
<RC> B: ok

The final phase in this model is the optional reconfirmation phase. The reconfirmation by the initiator follows the respondent’s confirmation and is essentially the same as the positive explicit (minimal) reaction to the response. It normally consists of single words like “OK,” “Good,” “Right,” and “Yes,” or, if the reconfirmation fol-
lows, an instance of praise in the simple confirmation, “Thanks.” Like the confirmation phase, the reconfirmation is very common in task-based CMC because of the apparent demand for explicit acknowledgments of the understanding/nonunderstanding that CMC interaction elicits. Thus, rather than simply acknowledging understanding of the negotiated element like the explicit (minimal), positive reaction to the response, the reconfirmation serves as a definitive signal that the negotiation detour is now over and that the conversation (task completion in this case) may resume. Examples of reconfirmations are found in Excerpts 8 and 11 above.

CONCLUSION

Results from this research show that learners do negotiate meaning when problems in communication arise during task-based CMC. Indeed, one-third of the total turns were spent negotiating. Given that the tasks employed in this study were seeded with new lexical items, it is no surprise that most of the negotiated interaction was around these items. In addition, those negotiation routines around nontarget items were most often triggered by lexical difficulty as well, which confirms previous interactionist research (Blake, 2000; Brock et al., 1986; Fernández-García & Martínez-Arbelaitz, 2002; Pellettiere, 1999; Pica, 1994; Sato, 1986). The data also suggest that task type does indeed influence the amount of negotiation that learners engage in during task-based CMC. This influence was evident in the significantly higher number of negotiated turns found in the decision-making tasks as well as the higher number of target lexical items negotiated in these same tasks. There was some evidence that jigsaw tasks may elicit more incidental negotiation, as predicted by Pica et al. (1993), but when target lexical items are infused into the task, decision-making tasks yield more negotiation sequences than jigsaw tasks. The notion of task-induced saliency was offered as a possible explanation for this finding. However, more research specifically addressing this possibility is needed before any firm conclusions may be drawn.

The results of this study are also consistent with existing face-to-face and CMC research in that the learners were found to use local indicators of nonunderstanding most often. Responses to these indicators were comprised mostly of rephrasals or elaboration, thus confirming some previous research (Pellettiere, 1999) while contradicting other studies (Pica, 1988a, 1988b, 1992; Pica, et al., 1989; Pica et al., 1991). These responses were normally followed by a minimal reaction to the response or a testing deductions strategy. Presence of the latter strategy indicates a heightened degree of active involvement, which I argue here is facilitative for SLA, though it need not necessarily be limited to explicit instances of testing deductions or manifest itself in any observable way, a point supported by Pica (1992), Reiss (1985), and Slimani (1989). Finally, though the most widely espoused model for charting negotiation routines (Varonis & Gass, 1985) was found to be largely applicable to CMC, the present data require an expansion of this model in order to incorporate better the observed features of negotiation episodes during task-based CMC. This new model of computer-mediated negotiated interaction is presented as a more accurate instrument for charting negotiation routines in a CMC environment.

ACKNOWLEDGMENTS

I wish to thank Robert Ariew, Sue Gass, Jun Liu, and Mary Wildner-Bassett for comments on various aspects of this work. I would also like to thank the four anonymous Modern Language Journal reviewers whose insightful comments certainly helped strengthen this article. Finally, many thanks are also due the participants in this study.

NOTES

1 These categorizations are taken directly from participant-completed background questionnaires.
2 Excerpts are reproduced exactly as they appeared in the chat. No spelling or other errors have been corrected.
3 ^ ^ is an emoticon reported by various Asian students to signify smiling.

REFERENCES


Pica, T. (1988a). Interlanguage adjustments as an out-


APPENDIX A
Jigsaw Task

Student A Messy Garage

Part 1: Look at the series of pictures about a messy garage. You have three scenes (pictures) and your partner has three different scenes. Together with your partner put the scenes in the correct order. To do this, you will need to describe each of your scenes to your partner since he/she cannot see your pictures. You may use the words below to help you describe your pictures. Your partner will do the same for you.

The scenes are marked A, B, C, D, E, F. When you finish, please type the correct order. For example – “The correct order is C, B, F, A, D, E”

MAKE SURE YOU HAVE THE CORRECT ORDER!!!!!

Part 2: When you are SURE that you have found the correct order discuss the following question with your partner: What chores (jobs) around the house do/did you have? Do parents expect their children to do jobs around the house to help out? Is there a difference in the KINDS of chores boys and girls are expected to do while living at home? Do/did you and your partner have similar experiences? If not, what are the differences?

When you are finished raise your hand!

![Tricycle](Tricycle.png)  ![Snow shovel](Snow_scoop.png)  ![Broom](Broom.png)  ![Thermos](Thermos.png)

Student A – Picture Sequence

![Picture 1](Picture_1.png)  ![Picture 2](Picture_2.png)  ![Picture 3](Picture_3.png)
Jigsaw Task
Student B Messy Garage

Part 1: Look at the series of pictures about a messy garage. You have three scenes (pictures) and your partner has three different scenes. Together with your partner put the scenes in the correct order. To do this, you will need to describe each of your scenes to your partner since he/she cannot see your pictures. You may use the words below to help you describe your pictures. Your partner will do the same for you.

The scenes are marked A, B, C, D, E, F. When you finish, please type the correct order. For example – “The correct order is C, B, F, A, D, E”

MAKE SURE YOU HAVE THE CORRECT ORDER!!!!!!

Part 2: When you are SURE that you have found the correct order discuss the following question with your partner:

What chores (jobs) around the house do/did you have? Do parents expect their children to do jobs around the house to help out? Is there a difference in the KINDS of chores boys and girls are expected to do while living at home? Do/did you and your partner have similar experiences? If not, what are the differences?

When you are finished raise your hand!
APPENDIX B
Decision-Making Task

Student A  Shopping for a Gift

Part 1: You and your roommate/friend are trying to decide on some gifts for your home stay family here in the United States. Your host family has four (4) members; Mr. Jones (father), Mrs. Jones (mother), Billy Jones (son 15 years old), and Mary Jones (daughter 14 years old).

Below are some items you have noticed while shopping at the Mall, which may make good presents. Your roommate/friend has been shopping at the Mall and has also seen some (different) things that he/she thinks might make good presents. Since the presents will be from both of you, you must decide together on one present for each family member (four total).

Razor Corkboard Wreath Corkscrew

Part 2: After you have decided on the four gifts you will buy, discuss gift-giving customs in your countries! Is there any difference in gift giving practices between your country and your chat partner’s country? If not, or if you come from the same country, discuss similarities or differences you have noticed in gift-giving practices between your country and the United States. When you are finished, raise your hand!

Student B  Shopping for a Gift

Part 1: You and your roommate/friend are trying to decide on some gifts for your home stay family here in the United States. Your host family has four (4) members; Mr. Jones (father), Mrs. Jones (mother), Billy Jones (son 15 years old), and Mary Jones (daughter 14 years old).

Below are some items you have noticed while shopping at the Meridian Mall, which may make good presents. Your roommate/friend has been shopping at the Lansing Mall and has also seen some (different) things that he/she thinks might make good presents. Since the presents will be from both of you, you must decide together on one present for each family member (four total).

Bouquet Extension cord Magnifying glass Comb

Part 2: After you have decided on the four gifts you will buy, discuss gift-giving customs in your countries! Is there any difference in gift giving practices between your country and your chat partner’s country? If not, or if you come from the same country, discuss similarities or differences you have noticed in gift-giving practices between your country and the United States. When you are finished, raise your hand!