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Learner interaction using email: the effects of task modification

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Abstract

This paper outlines the findings of a research project studying the effects of task modification on learner interaction when using email. Taking as its starting point interactionalist theories of SLA, it argues that if those interactional features characteristic of negotiation of meaning which have been identified as promoting SLA are to be preserved when tasks are transferred from a face-to-face spoken environment to a computer-mediated written asynchronous environment, then modifications to the tasks need to be made.

1 Introduction

This paper is the result of a study into learner interaction when completing tasks in face-to-face and email environments. Its purpose was to discover how a task needs to be adapted for email completion in order to encourage the presence of those interactional features which have been identified as promoting language acquisition in face-to-face environments.

This paper will start by outlining the case for a task-based approach to language learning in general, and a task-based learning (TBL) approach to CALL in particular. The background to TBL in CALL will be discussed and its research background presented.

The current investigative project will then be outlined. This will include a description of the participants, the task and the rationale behind their design, and the method of analysis of the data. The results of the investigation will then be presented and conclusions drawn concerning their implications for the future of TBL in CALL environments.

2 TBL and CALL

Task-based learning of languages is currently receiving a lot of attention from researchers, language teachers and the publishers of teaching materials. The definition

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of what constitutes a task-based methodology is, unlike with some other methodological approaches, not fixed. Long and Crookes have identified three approaches to TBL, including their own. The others are Prabhu's, and Breen and Candlin's (Long & Crookes, 1992). TBL cannot be said to be limited to just these three models though; other models are being developed and specific questions of task definition and design are also being examined (Nunan, 1993; Skehan, 1994; 1996; 1998). However, much of this latter work can be said to be based on Breen and Candlin's (1980; Breen, 1984; 1987; Candlin & Murphy, 1987) and Long and Crookes' models. One useful generalisation about all these approaches to TBL is that they:

> ..share a common idea: giving learners tasks to transact, rather than items to learn, provides an environment which best promotes the natural language learning process (Foster, 1999: 69)

The approach to TBL that underpins this paper is that supported by Long and Crookes in their 1992 paper (*op cit.*).

Long and Crookes argue that their model is soundly based on SLA research, on classroom-centred research and on principles of syllabus and course design (*op cit:* 42). In particular they claim that their approach promotes a 'focus on form'. This is not a traditional structural syllabus approach but an acknowledgement that acquisition can be accelerated if learners' attention is drawn to specific linguistic features of the target language (Long, 1991). Long has laid out the theoretical basis for such an approach and has argued that particular types of task are best able to provide such a focus by promoting 'negotiation of meaning' (Long, 1989; 1996; 1991; Long & Crookes, 1992; 1993; Long & Robinson, 1998). Such an approach, often labelled 'interactionalist' as it is the interaction that takes place between learners that promotes learning, regards the negotiation of meaning necessary to complete the task as providing opportunities for learners to notice and focus on form.

This model is underpinned by a number of assumptions about language learning. The first of these is the 'Noticing Hypothesis', which is based on the idea that:

> conscious processing is a necessary condition for one step in the language learning process (Schmidt, 1990: 131)

and that models based on subconscious language learning, such as Krashen's 'Natural Approach' (Krashen, 1981; 1982; Krashen & Terrell, 1983), are insufficient to promote acquisition (Schmidt, 1990). The second is that 'focus on form', by causing learners to 'notice' and therefore consciously consider new language, promotes acquisition. Long and Robinson have argued that:

> …focus on form often consists of an occasional shift of attention to linguistic code features – by the teacher and/or one or more students – triggered by perceived problems with comprehension or production (Long & Robinson, 1998: 23)

Negotiation of meaning is considered the type of interaction that is most likely to result in a 'focus on form', in 'noticing' and therefore in acquisition, and it is the ability of

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tasks to encourage negotiation of meaning that is the focus of this paper.

The concept of 'negotiation of meaning' grew out of studies looking at interaction and comprehension, initially between native and non-native interlocutors (Pica, Young & Doughty, 1987). The modifications to interaction that characterise negotiation of meaning have been identified as:

> (1) confirmation checks, (2) comprehension checks, and (3) clarification requests, as well as (4) repetitions or paraphrases of a previous speaker's or one's own utterances (Doughty, 1991: 155)

It is Doughty's typology of these features that is used to identify incidences of negotiation of meaning in the study described in this paper. It should be noted that while the initial research into 'negotiation of meaning' was conducted by looking at NS-NNS (Native Speaker, Non-Native Speaker) interaction, this has not been regarded as a barrier to it being considered a suitable basis for pedagogical models where NNS-NNS interaction is the norm. The work detailed in section 3 of this paper, 'Research background', where negotiation of meaning was observed studied NNS-NNS interaction, for example.

Long distinguishes between 'target tasks' and 'pedagogic tasks' (Long, 1989; Long & Crookes, 1992; 1993): the former being what the learner will eventually do in the target language, while the latter are activities which can be undertaken in the classroom and which both approximate the target tasks and provide opportunities for SLA (Long, 1989: 6). Long recommends the following principles of task design in order to promote negotiation of meaning:

1. Two-way tasks produce more negotiation work and more useful negotiation work than one-way tasks.
2. Planned tasks 'stretch' interlanguages further and promote destabilization more than unplanned tasks.
3. Closed tasks produce more negotiation work and more useful negotiation work than open tasks (Long, 1989: 12–18).

A 'two-way task' is one where both participants are required to exchange information for successful task completion, for example 'planning a holiday'. This is in contrast to a 'one-way task' where only one participant provides information to the other in order to complete the task, for example one participant describes a picture while the other has to identify which picture is being described from a selection in front of them. Closed tasks are those for which an 'answer' or 'result' is expected, such as 'Planning a holiday', in contrast to 'open' tasks where agreement need not be reached, such as 'Discuss your views on globalisation'. Closed tasks can vary between those where only one result is possible, for example a 'Who killed Ms White' to those where a number of 'correct' answers are possible. Where a number of 'correct' answers are possible, but only one is eventually arrived at, such as 'Planning a holiday', the task is often described as being a 'convergent' task. Long's principles have informed the tasks designed for use in this study.

The case for the adoption of interactionlist SLA models by CALL developers has

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already been made by Chapelle (1997; 1998; 1999) and challenged by Salaberry (1999). Chapelle argued that the study of SLA is the only area which directly addresses questions of instructed language learning, and is therefore the best means of assessing any CALL activity (Chapelle, 1997: 22). Writing a year later in 1998, she focussed squarely on interactionalist SLA theories (Chapelle, 1998) and clearly outlined her support for Long's model of SLA. She argued that:

> …it is useful to view multimedia design from the perspective of the input it can provide to learners, the output it allows them to produce, the interactions they are able to engage in, and the L2 tasks it supports. (Chapelle, 1998: 26)

Chapelle's 1998 paper acted as a spur to the debate about CALL and SLA and encouraged a response from Salaberry (1999), where amongst other points he questioned whether only interactionist models should be considered. While it is true that there is no single agreed model of SLA, it has been well argued that the diversity of models within SLA should be seen as a strength of the discipline, not a weakness (Block, 1996). The decision to focus on one particular model of SLA in this paper is not to suggest that other models have nothing to offer CALL development, and developments within other models of SLA and the synthesis of existing models are eagerly awaited by the author. However this, as Chapelle has pointed out, should not prevent research based on the application of current theories taking place (Chapelle 1999:109).

The case for task in CALL has also been made by other researchers, such as Doughty (1988), and is already providing a theoretical basis for research. It is this research that this paper will now consider.

3 Research background

A number of researchers have investigated the nature of both synchronous and asynchronous Computer Mediated communications (CMC) and asked how learner interaction in electronic environments reflects interaction in face-to-face environments with respect to models of language learning which were originally developed from studies of face-to-face interaction (Kern, 1995; Lamy & Goodfellow, 1999; Blake, 2000; Pellettieri, 2000; Sotillo, 2000; Wilkinson, 2002). In their study of asynchronous chat Lamy and Goodfellow have argued that it provides 'reflective conversations' and that these:

> …fulfil the conditions for language learning which are postulated in the literature on interaction, viewed both cognitively as input modification and as social interaction. (Lamy & Goodfellow, 1999:59)

In particular they cite van Lier's 'Social Interaction' model (1996) and Ellis' work on noticing (1990).

This approach, based on analysing learner interaction in an electronic environment using existing language models, appears to be a sound basis for conducting research, and informed the study described in this paper. Lamy and Goodfellow clearly state the assumption upon which such an approach is built:

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> Although we cannot assume that conversational interaction carried out via CMC is functional for language learning in precisely the same way as the face-to-face equivalent…, we nevertheless believe that there are enough similarities between written CMC and speech interaction…to justify the use of models from the face-to-face environment. (Lamy & Goodfellow, 1999: 45)

The purpose of the research described in this paper is therefore to investigate whether the conditions can be created whereby the interactional characteristics of a particular type of CMC, namely email, can promote language learning in the same way as face-to-face interaction through encouraging negotiation of meaning.

In a research project into synchronous interaction, but not specifically into task-based learning, Kern found a number of benefits of CMC over face-to-face interaction (Kern, 1995), which it seems reasonable to assume would also apply to asynchronous task-based interaction. Kern noted that students enjoyed CMC, some experienced less anxiety than in face-to-face communication, some felt 'freer to communicate in what they considered a more formal atmosphere', and students who were shyer in face–to-face situations 'participated more actively' (Kern, 1995: 470). Such benefits suggest that being able to undertake TBL via CMC might offer advantages beyond the purely geographical/temporal advantages inherent in the technology.

Research into synchronous task-based interaction undertaken by Pellettieri (2000) has found evidence of both negotiation of meaning and 'noticing' form in the synchronous written interaction of students studying Spanish. Evidence was also detected of the students developing sociolinguistic skills and interactive competence. Pellettieri used tasks that required the participants to exchange information in order to complete a task, a task type labelled a 'jigsaw task' (Pica, Kanagy & Falodun, 1993). Pellettieri concluded:

> The data presented would suggest that those tasks which involve vocabulary beyond the repertoire of the learners, and which involve ideas, concepts or items outside of their real-world expectations can increase the quantity of negotiation produced. (Pellettieri, 2000)

Such research suggests that the use of a graphic medium should not in itself therefore prevent the interaction from containing negotiation of meaning.

Similarly, Blake has also found evidence of negotiation of meaning arising in synchronous CMC (Blake, 2000). Two findings of Blake's research support Pellettieri's findings and have implications for the project described here. Firstly, he found that:

> Jigsaw tasks prove superior to other types of tasks (e.g. information gap, decision-making, opinion tasks)… (*op cit*: 132)

This paper will explore this issue further when looking at the tasks developed for the project described here. Secondly, he found that:

> Lexical confusions make up the most common form of negotiation… (Blake, 2000: 132)

A finding which elements of this study confirm.

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Sotillo has undertaken research to compare synchronous and asynchronous interaction (Sotillo, 2000). Her finding that…those communicating asynchronously had more time to plan their answers and monitor spelling and punctuation. (*op cit*: 104) suggests that asynchronous interaction allows for the inclusion of planning time, a feature that it has been argued is necessary if output is to encourage learning (Ellis, 1987), and which therefore should be considered when designing tasks (Skehan, 1998). Although she also found that students working asynchronously…primarily responded to teacher and student questions. (Sotillo: 104) the tasks used in the project described here by virtue of being student-student with no role for a 'teacher' should not exhibit the same outcome.

In his recent study into the effect of email interaction on learners' speaking skills, Wilkinson (2002) notes that the quantitative data collected was inconclusive but that the use of questionnaires which are completed by the students adds greatly to the robustness of the findings. Although questionnaires were not used in the study described here, their potential value in further research was confirmed by the findings.

For the study being described here, the question is therefore how the use of an asynchronous medium, namely email, to conduct a task can be structured in order to provide opportunities for negotiation of meaning in the students' exchanges and therefore encourage acquisition.

4 The research project

The research described here took place in two stages. Initially a comparison was made between task completion face-to-face and using email in order to identify how the switch to using email influenced the way the task was completed. Stage II then compared the completion of a task using email when the task was modified to take account of its being carried out using email and when it was not, i.e. when it remained the same type of task as would be used face-to-face.

4.1 Stage 1

The primary aim of Stage I was to highlight similarities and differences in learner interaction when conducting the same task orally face-to-face and via email. These features were then assessed in regard to their relevance to interactionalist models of task-based learning. The results of this assessment were then used to inform Stage II.

4.1.1 Stage 1: Design

Stage I involved groups of adult English learners working on a task either via email or face-to-face. The interaction between the learners in each group was recorded, transcribed and analysed. The participants were adult learners of English who had volunteered after a request for participants was posted at (a) an adult education college in east London, and (b) a private language school in south-west London. Participants from 'a' were often originally refugees now living permanently in the UK of Asian, African and Eastern European origin. Participants from "b' were 'gap-year' students and au pairs, and were mainly Western European with one Chinese participant. All learners were at an 'intermediate/upper-intermediate' level (International English Language Testing System [IELTS] 4.5–5.5), see Appendix 1 for further details.

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A convergent task was developed where participants, while having some information in common, each had specific information to contribute to the resolution of the task. This was in line with the criteria suggested by Long (1989) for designing tasks which encourage negotiation of meaning. The task was designed to be completed by two interlocutors and allowed for the participants to contribute their own ideas and opinions. Such a task does not easily fit into the taxonomy of task types developed by Pica *et al*. (1993). While requiring both participants to exchange information in order to complete the task in the manner of a 'jigsaw task' (op cit: 19), it did not have only one possible outcome. It was, however, convergent in that the participants had to agree on one solution to the problem they were given. Such a task type would be familiar to most language teachers working within the 'Communicative' tradition (Nunan, 1989).

The task required the participants to plan a day out in London, with the added complication that they would each be accompanied by a friend with particular preferences concerning food and how the day should be spent. The participants' task was to arrange a programme agreeable to both the participants and their imaginary friends. Each participant (known as A and B) was provided with an outline of the task, a description of his/her friend and a London listings magazine which the participants were likely to have encountered before (the free ES Magazine) (see Appendix 2).

4.1.2 Stage I: Execution and results

The six participants carrying out the face-to-face task were recorded, and the recordings transcribed. The six participants carrying out the task via email were put into pairs and briefed on the task, but experienced difficulties of access and co-ordination which led to the breakdown of one dyad before the task was completed.

The interaction within the dyads was examined in order to identify incidences of negotiation of meaning. The examination used the descriptions provided by Doughty (1991) of those features which characterise negotiation of meaning. It should, however, be noted that identifying such features is not always a simple task and there is often scope for debate concerning exactly which function a given example of language is performing. For that reason, although the interpretation of the data in Stage 1 was undertaken solely by the researcher and author of this paper, the decision was made to present the data to others in order to solicit a second opinion in Stage 2.

The data was also examined to see if there were differences in the incidence of turn-taking. The use of turns to analyse email interaction could be seen as problematic, as although its use with spoken interaction is straightforward, and its use with synchronous written chat has been suggested (Ioannou-Georgiou, 2001), the practice of embedding quotes from messages received and responding to them one-by-one within one reply might suggest that more 'turns' are actually taking place than a single message would imply. In practice, this did not appear to constitute a problem as the analysis of the results for Stages 1 and 2 will reveal.

The transcript of the three face-to-face dyads reveals evidence of negotiation of meaning in every case. The following exchange contains a clarification request (via repetition and intonation), a reformulation (giving an example) and then use of the item by the participant who originally made the clarification request, possibly to 'test' that she is using the term appropriately:

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First dyad.
S1 Theatre, oh yes. I was thinking about going for a musical in West End.
S2 Musical?
S1 Yes, …and I find the 'Cats' they will be all right.
S2 Oh yes, but I think that's, I think that's kind of old musical, and I think every one already seen that.

Similarly in the second dyad a clarification request followed by a reformulation occurs at the start of the interaction:

Second dyad.
S1 Yes, my tongue is Tamil, what is yours?
S2 Pardon?
S1 What is your mother tongue?
S2 Bangladeshi

The third conversation also provides an example of a clarification check followed by an explanation:

Third dyad.
S1 …maybe just go to see the 'Big Ben' you know, it's always…
S2 No
S1 You know the 'Big Ben'
S2 I don't know
S1 You don't know? But for a long time you've been in London.
S2 Ah, 'Big Ben', yes I know it!

The vast majority of negotiations related to lexical items concerning social activities and places. On several occasions the lexical item in question was a real name whose explaining involved reference to cultural context ('Dogstar' as an example of a 'pub', third dyad).

The pattern of interaction between the three face-to-face dyads reflected the predicted norms for such interaction, with frequent turn-taking, short utterances and frequent interruptions.

The email interaction was characterised by far fewer turns and long texts dealing with the task. After initial introductory messages, one participant would take the lead and offer a whole plan for the day, rather than the negotiated step-by-step interaction of the face-to-face group, and his/her partner would simply agree or offer alternative suggestions. The element of 'tension' which should precipitate negotiation, i.e. the information gap, was effectively removed as more information was initially shared, for example:

It doesn't really matter what kind of food we will be eating except Indian food which I dislike and my friend dislikes Chinese food. (Maria J.)

The use of a 'permanent' graphic medium also allowed the participants to consider their partners' output more slowly and to see it in the fuller context of a longer text. This is

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likely to have led to fewer misunderstandings and therefore less need for negotiation of meaning.

It appears therefore that the medium, email, influenced the pattern of the interaction contrary to the direction desired of the task.

4.1.3 Stage I: Conclusions

Stage I supported the hypothesis that the transfer of an interactionalist model of task-based learning based on face-to-face interaction must consider the influence of the medium into which it is transferred and modify the tasks accordingly. The interactionalist model developed by Long (1985; 1989; 1991; 1996; Long & Porter, 1985; Long & Crookes, 1992; 1993; Long & Robinson, 1998) outlines those features of interaction which characterise negotiation of meaning, which is regarded as a spur to acquisition. As tasks for non-face-to-face environments must seek to encourage negotiation of meaning, they should therefore be modified with this in mind. Future tasks for completion via email therefore need to consider how being conducted in a permanent graphic medium, which encourages longer turns than face-to-face interaction, influences task completion and learner interaction.

4.2 Stage II

Stage II of the project was an attempt to build on the findings of Stage I, namely that tasks for email use need to be adapted to take account of the medium if they are to promote learning in the ways outlined by Long. It seemed clear from Stage I that greater turn-taking should be encouraged and steps to facilitate this were taken in the task design.

In order to prevent the practice of one participant simply presenting a solution which the second participant accepts or slightly modifies, it was felt that a task which required a more genuine exchange of opinions rather than just solving a problem would also be useful, although this had to be in keeping with Long's third principle that closed tasks are preferable to open tasks (Long, 1989). Stage II therefore tested a 'standard' task against one modified for completion via email in order to investigate if the modifications made would lead to greater negotiation of meaning.

4.2.1 Stage II: Design

The task was carried out by two groups of volunteer participants. The participants came from a wide range of backgrounds as the request for volunteers was widely distributed using email discussion lists. Participants included refugees living in the UK, foreign nationals studying and working in the UK, and foreign nationals studying English in their own countries (Appendix 3). The participants, who were all adults, had an intermediate/upper-intermediate level of English (IELTS 4.5–5.5). When recruited, participants were asked about their email competence and whether they already possessed their own email accounts. All were current email users, and were competent enough to require no specific training before attempting the task. The participants were organised into two groups as follows:

Group 1	4 dyads	Undertook a modified task via email.

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Group 2	2 dyads	Undertook a 'standard unmodified' task via email.

Task – Unmodified

The participants in the second group were given a convergent task where they were required to agree on the answers to a number of questions. In order to answer the questions the participants were expected to draw on their own experience and knowledge of the world. They were also given relevant information which they were each expected to assimilate into their responses and share with their partner. This task was designed to be compatible with the criteria suggested by Long for designing tasks which encourage negotiation of meaning (Long, 1989). The task was specifically designed to be completed by two interlocutors.

The task required the participants (referred to as Participant A and Participant B) to act as a 'focus group' for a company planning the launch of an online magazine (Appendix 4). They were required to agree on a set of answers to questions asked them by the company in a 'market research' exercise. The participants were encouraged to consider the likely market for the magazine in both their own countries of origin and globally. This was designed to allow a high degree of personalisation rather than simply requiring the participants to work from a prescribed 'script'. To complicate the activity and increase participant interaction, each participant was given additional background information relating to the questions asked by the company. As each of the participants comprising a dyad received different information, it was necessary for each of them to share this information and consider its implications for the task with their partner. As noted earlier, such a task type is not included in the commonly quoted taxonomy produced by Pica, Kanagy and Falodun (1993), but is one which preserves the benefits of a jigsaw task while allowing greater personal input by the participants.

The participants comprising the second group were given the complete task, including their own additional information, to read before contacting their partners and discussing the questions asked by the market research company. They were also given instructions concerning copying all messages to the researcher and informing both their partner and the researcher if they were going to be uncontactable for a few days, and their partner's contact details. The 'unmodified' email task participants were also provided with all their additional information at the start.

Task – Modified

Those participants given the 'modified' task to complete via email were given the same task, instructions and procedural information as those completing the unmodified task. However, changes were made to the way in which they received the market research company's questions and their additional information. The order in which questions and information was provided is given in the table in Appendix 5.

As can be seen from the table, the additional information was staggered in such a way that it would often refer back to questions which the participants would already have discussed. This was to encourage them to go back and include the information in a further discussion of the topic.

Features to be examined

It was anticipated that those dyads completing the unmodified task using email would

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engage in little turn-taking and produce few incidences of negotiation of meaning, as characterised by Doughty (1991). The modified task email dyads were expected to engage in more turn-taking and produce more examples of negotiation of meaning than those working on the unmodified task. This was the aim of supplying the information in stages with each requiring a response, and this engineered increase in turn-taking was expected to encourage more negotiation of meaning.

4.2.2 Results

The results are analysed here first in terms of the turns taken to complete the task and secondly in terms of the language generated. Of the four dyads completing the modified task, two of them didn't fully complete all of the stages due to communication breaking down as they returned to their home countries. Of these two, one, (the forth dyad), used attachments containing summaries of their ideas. This had been neither suggested nor prohibited in the brief the participants had been given. It did, however, tend to move the task completion closer to that of the unmodified task.

Table 1 shows the number of turns between the participants working on the task. It was found that some participants sent a short introduction of themselves followed by their first opinions of the task, while others combined these two steps into one message. As the introductions were not strictly part of the task, it has been decided to present the data here both including and excluding any messages which were purely introductory in nature.

Table 1 clearly shows that the participants working on the modified task took more turns to complete the task, as would be expected as they were fed the task in stages, a deliberate feature of the task design.

In order to create a context whereby these results could be considered, it was felt necessary to calculate the minimum number of turns that the task could be completed in. For the unmodified task this was calculated as three, namely: 1st participant sends opinion, 2nd responds with modified suggestion, 1st participant accepts modifications. For the unmodified task this figure was calculated to be nine steps, expanding on the unmodified task by adding a pair of turns for each extra step. This figure assumes that any reference back to previous steps in the process would be included with opinions on any new data.

Table 2 shows that whether working on the modified or unmodified task, the dyads took more turns than was absolutely necessary to complete the task. If only those dyads

Table 1 *Number of turns per dyad*

Dyad	Task	Turns Inc intros.	Turns Ex intros.	Notes
1 & 2	Modified	20	18	
3 & 4	Modified	12	10	
5 & 6	Modified	6	5	Incomplete
7 & 8	Modified	8	6	Incomplete Used attachments
9 & 10	Unmodified	6	4	
11 & 12	Unmodified	3	3	

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Table 2 *Average number of turns for modified and unmodified task*

	Modified	Unmodified
Hypothetical minimum number of turns	9	3
Actual average number of turns – all dyads	9.75	3.5
Average actual number excluding incomplete	14	3.5

Table 3. *Ratio of turns unmodified: modified (hypothetically 1:3)*

	Ratio Turns Unmodified: Modified
All dyads – including introductions	1:2.6
All dyads – excluding introductions	1:2.8
Excluding incomplete dyads – including intros	1:3.6
Excluding incomplete dyads – excluding intros	1:4

which fully completed the task are considered, the modified task is seen to have generated an average five higher than the minimum.

It was also felt useful to calculate the ratio of the number of turns comparing the modified with unmodified task dyads. Hypothetically this should be 1:3 if the dyads complete the task in the minimum number of steps – three for the unmodified task and nine for the modified.

Table 3 shows that if only those dyads which fully completed the task are measured, then the ratio of turns reached 1:4. This would suggest that the modification of the task didn't simply increase the number of turns in a direct ratio to the additional number of steps but functioned to generate further interactions.

Turning now to the content of the exchanges, clear differences can be seen between those dyads working on the modified and unmodified tasks, with the frequency of such differences greater among those dyads which completed the modified task and those which completed the unmodified task.

The data presented here was analysed by the author and two independent academics according to the description of the features of negotiation of meaning provided by Doughty (1991). All the examples presented below as clear examples of negotiation of meaning were identified as such by each of the three people examining the data. Although not asked to do so, the independent academics also highlighted other areas of 'interesting' language and this often coincided with the items identified by the author as possibly comprising negotiation or being interesting in its own right.

Those dyads which worked on the modified task included a great deal of 'procedural' language designed to check progress and agreement and to solicit opinion. For example:

Dyad 1
I think we can say that we have already agreed on an answer to this question.
What do you think could be other topics in this online magazine?

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Dyad 2
What do we have to do now?
What do you think?

Dyad 3
Is this the end of our task?

Dyad 4
I just wanted to write you a short letter in order to ask if you found out something referring to the questions we were given?

Within the dyads working on the unmodified task only one example of such procedural language was found:

Dyad 5
...have you read my answers?

It seems reasonable to assume that the presence of such language was a result of the increased turn-taking that resulted from the task modifications. Although such interactions are not among those identified as characterising negotiation of meaning, they can certainly be classed as 'real' communication and as such are desirable in any approach which sees its roots in the Communicative Language Teaching (CLT) tradition (Richards & Rodgers, 1986), the tradition upon which task-based learning is based (Bygate, Skehan & Swain, 2001).

In terms of features that have been identified as being examples of negotiation of meaning, the modified task dyads again produced many more examples. These included comprehension checks, such as:

Dyad 1 ~ Following an explanation of boring webpages
Do you know what I mean?

Complex exchanges which included clarification requests, explanations and then confirmation of understanding also occurred:

Dyad 1
1: …and I don't know what you mean with 'a whole section of tourism', do you mean another issue of tourism, both of them together? I think it would be quite interesting.
2: …what I was trying to say about the tourist section is, that I feel it should be enough to have it as a part of our culture section each month...what do you think?
1: All right, now I understand what you meant, so I agree with you…

and

Dyad 1
1: …I don't understand what it exactly means, can you help me?

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2: …I think what they mean is that we will need one office anyway…and local offices will be needed…to do regional research about the country they're located in…
1: …I understand it better now.

Where an attempt at asking for clarification did occur with the unmodified task, it received no acknowledgement as the exchange was essentially one of presenting ideas to be accepted or rejected:

Dyad 6
1: Sorry, could you repeat this point, I can't understand what you want to explain me, sorry.

A number of other exchanges could be classified as including clarification checks, expansions or clarification requests, but might not necessarily be regarded as evidence of negotiation of meaning as it is impossible to tell from the written record whether the focus is on the ideas being expressed or on the language used to express them:

Dyad 2 ~ Discussing advertising
..do you honestly think people look at these advertising more than the news?

and

Dyad 1 ~ Explaining subscription problems
I once made a really bad experience. I signed a subscription for a magazine...and soon found out that it was not very good for me...so I tried to get out of the contract and couldn't.

and

Dyad 3 ~ Explaining advertising problems
…and as a result you cannot work properly, I hope you know what I mean.

However, no such examples occurred in those dyads working on the unmodified task though, again probably as a result of the 'present ideas-accept/reject' format that seemed to occur as a result of the unmodified task design.

Before moving on to see what conclusions can be drawn from these results, it is interesting to consider the output of the fourth dyad, which although working on the modified task produced results similar to those dyads working on the unmodified task. Although one member of this dyad initiated the exchange by giving his opinion as text within the email, his partner responded by giving her opinion in an attachment, which reproduced the questions asked. This then became the pattern for exchanging information. By moving into the use of attachments the exchange then became characterised by the 'present opinion – accept/reject' style of the dyads working on the unmodified task.

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5 Conclusion

Although the study described here has been small, its findings appear to offer tentative support to the conclusion that if task-based learning is to be adopted by CALL practitioners then the tasks cannot simply be developed according to the same criteria as face-to-face tasks; adjustments to reflect the influence of the medium they will be used in need to be made. In particular, adjustments which help to preserve the 'spoken' character of tasks need to be made if tasks are to function in ways consistent with interactionalist models of SLA.

The modification of tasks in order to encourage increased turn-taking appears a simple and effective way of ensuring that tasks are completed with the desired interaction. Increasing turn-taking by breaking the task down into a number of steps appears to have an effect that is greater than might at first be expected, as it appears to stimulate interaction beyond the theoretical minimum needed for task completion.

Task instructions seem an important area, and the evidence of the dyad which worked on the modified task but used attachments suggests that the use of attachments should be discouraged if speech-like interaction is desired. As this dyad spontaneously decided to use attachments with no prompting, earlier experiences of email use appear to have influenced their chosen approach, so an overt prohibition on the use of attachments would probably be necessary in most cases.

The language generated by the dyads working on the modified task contained far more examples of negotiation of meaning than that produced by the dyads working on the unmodified task. This was particularly the case with extended exchanges of the 'clarification request – explanation/expansion – comprehension confirmation' type. It does not seem unreasonable to conclude that this is the result of the increased turn-taking moving the interaction closer to that of speech. Generally much more interaction seems to have been fostered by the modified task, both in terms of negotiation of meaning and in terms of general interaction, which has not been further analysed here but which can be seen as beneficial to learning according to a broadly CLT approach.

Inevitably such a small scale project raises more questions than it answers and its findings need to be replicated on a much larger scale. One of the areas requiring further research highlighted by this study is the language generated when modified tasks are used which is not clearly identifiable as negotiation of meaning. A close study which required the participants to comment on and explain the language they produced in order to see 'behind' the texts they produced would be one way of approaching this. Questionnaires could be used to support such research. Other research to further consider the application of tasks to CALL needs to consider what other modifications might be required to make the tasks generate the desired interactional patterns. Coupled with this is the need to consider how tasks could be used in environments, other than the email one, such as when asynchronous conferencing is used, synchronous written 'chat' or computer-mediated oral-aural communication.

In conclusion, the study here can be said to support the hypothesis that if task-based learning is to be adopted in environments other than those characterised by face-to-face oral/aural interaction, then tasks need to be adapted to those environments; in this way, if those features of interaction identified as negotiation of meaning and considered beneficial for SLA could be preserved. The study also suggests that one way to do this when

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working with tasks using email is to modify the task to increase turn-taking by manipulating the staging of the task. Further research is likely to provide other possible modifications to standard face-to-face tasks to make them usable in email environments, as well as suggest modifications appropriate to other electronic forms of interaction.

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Appendices

Appendix 1: Stage I participant profiles

	Age	M/F	Occupation	L1
1	28	F	Teacher	Chinese
2	22	F	Teacher	Czech
3	20	F	Au pair	Slovak
4	22	M	Student	Czech
5	26	F	Au pair	Czech
6	19	F	Au pair	Slovak
7	23	M	Student	Czech
8	25	F	Housewife	Bengali
9	48	F	Housewife	Sindhi
10	25	F	Au Pair	French
11	26	F	Au Pair	French
12	36	F	Postmistress	Tamil

Appendix 2: Stage I task

Profile of the two 'friends'		
	Participant A's	Participant B's
Food		
Chinese	Y	N
Italian	Y	Y
Greek	OK	OK
Indian	N	Y
Film		
Comedies	Y	Y
Romance	Y	N
Sci Fi	N	Y
Action	N	Y
Music		
Classical	Y	N
Jazz	Y	Y
Rock/Pop	N	Y
Other		
Art galleries	Y	OK
Museums	OK	Y
Shopping	Y	N
Theatre		
Comedies	Y	Y
Serious plays	N	Y
Musicals	Y	N

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Appendix 3: Stage II participant profiles and task allocation

	Age	M/F	Occupation	L1
1	21	F	Student	Spanish
2	23	F	Student	German
3	23	F	Student	German
4	32	M		Tagalog
5		M	Ski instructor	German
6	25	M	Pharmacist	Chinese
7		F	Accountant	Chinese
8	22	M	Student	German
9	25	F	Student	Portuguese
10	30	F	Teacher	Yemeni
11		M	Student	Spanish
12		M	Student	French

	Participants	Task
Dyad 1	1 & 2	Modified
Dyad 2	3 & 4	Modified
Dyad 3	5 & 6	Modified
Dyad 4	7 & 8	Modified
Dyad 5	9 & 10	Unmodified
Dyad 6	11 & 12	Unmodified

Appendix 4: Stage II unmodified task

The following background information and questions were given to each participant. Participants then received different additional information depending on whether they were 'Participant A' or 'Participant B' in each dyad.

The launch of a new online magazine

A large international publishing company is planning to launch an online magazine, which will be available to readers via a special website. As part of its market research the company is asking groups of people to discuss a number of questions and provide it with feedback. You and your partner have been asked to discuss the questions below and to agree on a set of answers for the company. It is important that you reach agreement as the company only requires one set of answers from you and your partner.

You should answer the questions by first imagining what would be most popular in your own country. You should also use any knowledge that you have of internet use or magazine publishing. Remember, there are no right or wrong answers; it is your ideas and opinions that the publishing company are interested in.

Questions

- Do you think the magazine should be free to all via the website and paid for by advertising, or only available by subscription?

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- If it is not free, how long should subscriptions be for, e.g. one month, three months, etc?
- If it is not free, what do you think is a reasonable price?
- How often should the magazine come out, eg weekly, fortnightly, monthly?
- Who should be the target age group?

How much of the magazine should be devoted to:

- News
- Sport
- Fashion
- Culture (music, art, books, etc.)
- Business
- Other (please give examples)

- What should be the balance between text and images?
- Should the magazine be fully international, or should there be local versions for different markets?
- If there are local versions, what should be the balance between world and local news?

Additional information Participant A

- BMW will advertise only if it is a subscription magazine.
- Channel, the perfume company, will only advertise if there is a fashion section.
- Local variation would require local offices, which would be more expensive.
- Some countries might try to block it if it is too political and critical of undemocratic regimes.

Additional information Participant B

- Coca Cola will advertise only if aimed at teenagers.
- Nike will only advertise if there is a sports section.
- More pictures mean it will be slower to load on people's computers.
- Some countries might try to block it if it is too 'Western' and seems against local religious customs.

Appendix 5: Stage II modified task questions & additional information

Initial Message – Participant A & Participant B

- Do you think the magazine should be free to all via the website and paid for by advertising, or only available by subscription?
- If it is not free, how long should subscriptions be for, e.g. one month, three months, etc?
- If it is not free, what do you think is a reasonable price?
- How often should the magazine come out, eg weekly, fortnightly, monthly?
- Who should be the target age group?

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Extra Info 1 – Participant A & Participant B

- How much of the magazine should be devoted to:
- News
- Sport
- Fashion
- Culture (music, art, books, etc)
- Business
- Other (please give examples)
- What should be the balance between text and images?

Extra Info 1 – Participant A Additional Information

- BMW will advertise only if it is a subscription magazine.
- Channel, the perfume company, will only advertise if there is a fashion section.

Extra Info 1 – Participant B Additional Information

- Coca Cola will advertise only if aimed at teenagers.
- Nike will only advertise if there is a sports section.

Extra Info 2 – Participant A & Participant B

- Should the magazine be fully international, or should there be local versions for different markets?
- If there are local versions, what should be the balance between world and local news?

Extra Info 2 – Participant A Additional Information

- Local variation would require local offices, which would be more expensive.

Extra Info 2 – Participant B Additional Information

- More pictures mean it will be slower to load on people's computers.

Extra Info 3 – Participant A Additional Information

- Some countries might try to block it if it is too political and critical of undemocratic regimes.

Extra Info 3 – Participant B Additional Information

- Some countries might try to block it if it is too 'Western' and seems against local religious customs.

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