

Collaborative scaffolding in online task-based voice interactions between advanced learners

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Abstract

This paper reports some of the findings of a distinctive innovative use of audio-conferencing involving a population (campus-based advanced learners) and a type of application (task-based language learning) that have received little attention to date: the use of Wimba Voice Tools to provide additional opportunities for spoken interactions between advanced learners of French. The experiment had a dual aim: (a) to examine the suitability of Wimba Voice Tools as an environment for sustained interactive talk, and (b) to study the nature of interactions between advanced learners, with particular reference to the processes supporting collaborative activity.

After a brief summary of the rationale and main characteristics of the experiment, the paper focuses on the strategies used by three non-native speaker (NNS) dyads to resolve language problems as they worked on a set of four tasks. Extending the classical model of negotiation for meaning to cover other instances of language-related episodes identified through discourse analysis of the empirical data, the study offers a detailed account of the incidence and nature of negotiated interaction and collaboration between partners. This leads to a discussion covering the impact of functionalities, scaffolding and task effects. The paper ends with some suggestions for future research.

Keywords: Voice chat, negotiation for meaning, learner collaboration, scaffolding, task effects, advanced learners

1 Introduction

How learners deal with the language issues that they encounter has long been a focus of interest in language teaching and SLA research. In the 1980s and 1990s attention centred on the interactional adjustments made by conversation partners in order to repair or avoid communication breakdowns, i.e. negotiation for meaning. Recent studies have tended to adopt a broader view and have investigated the treatment of linguistic difficulties irrespective of whether or not they involved comprehension problems. The section of dialogue in which the difficulties are discussed is referred to as a language-related episode (LRE), a construct first identified within the context of

think aloud protocols produced by learners engaged in individual writing tasks (Swain & Lapkin, 1995) before being applied to dialogic situations and defined as “any part of a dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others” (Swain & Lapkin, 1998: 326). With the new focus on dialogic or group situations has come a partial shift in approach from an interactionist to a socio-cultural theoretical perspective and a trend towards an association with the discursive mechanism of scaffolding, i.e. the provision through speech, by a knowledgeable interactant, of conditions that help a less knowledgeable participant to reach a higher level of competence (Donato, 1994). Whereas early studies tended to claim that interactions aid language development by allowing learners to negotiate meaning and obtain comprehensible input (Varonis & Gass, 1985) and to produce modified, comprehensible output (Swain & Lapkin, 1995), research within a socio-cultural tradition argues that joint action and scaffolding enable learners to produce language they could not produce on their own, and that this assists the consolidation of existing knowledge and the internalisation of new forms (Lantolf & Thorne, 2006: 282–287).

Most of the research in the area has been carried out within the context of face-to-face interactions (Ewald, 2005; Foster, 1998; Guerrero & Villamil, 2000; Leiser, 2004; Pica, Kanagy & Falodun, 1993; Swain & Lapkin, 1998, 2000; Williams, 1999). However, a number of studies (Blake, 2000; Lai & Zhao, 2006; Lee, 2004; Pellettieri, 2000; Smith, 2003, 2004) have examined synchronous computer mediated communication, using online tasks modelled after Pica *et al.*'s (1993) typology. What emerges from these studies is a broad consensus that carefully crafted tasks stimulate L2 learners to negotiate meaning so as to achieve mutual comprehension, with jigsaw tasks providing the greatest inducement for negotiations, and lexis being the most common source of problems. Stress has been laid on the peculiarities of online negotiation routines (Smith, 2003) and on the capacity of text-based chat to promote noticing (Lai & Zhao, 2006; Lee, 2004). The advent of voice environments has prompted a further extension to various forms of audio-conferencing (Jepson, 2005; Lamy, 2004; Sauro, 2004; Vetter & Chanier, 2006), but without necessarily focussing specifically on the area under discussion.

Importantly, in all environments, the bulk of the research has involved either peer interactions between learners at beginner or intermediate level or between beginners or intermediate students and a teacher. Whether, and how, campus-based advanced learners interact to try and resolve language difficulties when accomplishing a joint task remains under-researched. The present study is therefore distinctive, first in focussing on a population (campus-based advanced learners) that has received little attention to date; second in examining voice chat interactions rather than face-to-face. It addresses three research questions:

1. What types of LRE, if any, occur in the interactions of advanced learners working on joint tasks in an audio-conferencing environment?
2. Are there differences in the incidence and nature of language related collaboration across tasks?
3. Are there differences in the incidence and nature of language related collaboration across pairs?

2 The study

2.1 Participants

Participants in the experiment were six English students enrolled in the first year of a post A-level French Honours course at a British university, who had briefly been introduced to the software during the previous semester. All were volunteers and female.

The primary goal of the experiment was to promote sustained interaction. The previous semester had revealed reluctance on the part of some students to engage in online oral conversation and had shown that, when they did interact, activities were completed far more quickly than anticipated. The main priority was therefore to produce tasks that were challenging enough to elicit speech and promote communication. As speaking time depends on the number of participants and as mismatches in proficiency and age, and lack of personal rapport can stand in the way of interaction (Belz, 2002; Lee, 2004), participants were allowed to work with someone of the same age group in self-selected pairs. It was acknowledged that pairing students with people they had chosen to work with might have an adverse effect on negotiation for meaning, given Varonis and Gass's (1985: 83) prediction that those with the most in common will have the least to negotiate and the finding of Fernández-García and Martínez Arbeláiz (2003: 117) that a lower incidence of negotiation occurred among NNS-NNS dyads with the same linguistic background and level of L2 proficiency. However, even when participants do not know each other, there will be an intrinsic and unavoidable tension between getting on with the task and negotiating meaning. Furthermore, it could not be assumed that rapport would affect all types of LREs in the same way.

2.2 Technological environment

The software used in the experiment was Wimba Voice Direct, a bimodal tool embedded in Blackboard that can be combined with wikis and Word and offers voice and text chat documents. As text chat cannot be disabled, anyone can type comments at any time. In contrast, as Wimba Voice Direct features a half-duplex system, it is not possible for more than one person to speak at a time. The current speaker is indicated by a microphone symbol next to their name and other participants cannot be heard. Turn-taking is regulated through icons: clicking a 'hand up' icon to request the floor and a stop button to release the microphone. This effectively gives the current speaker total control over the floor. Importantly, microphone transfer is not instantaneous. Users must be careful to wait until the microphone icon appears next to their name or the beginning of their utterance will be lost.

2.3 Tasks

The rationale behind the use of online tools, and the extent to which face-to-face might be a possible alternative, are important issues for the ecological validity of tasks, which will be inevitably different in campus-based and distance learning. In developing the tasks of the experiment, care was taken not to duplicate the kinds of activity used in classroom language classes. The aim was to devise distinctive free-standing activities providing students with additional opportunities to engage in oral interactions.

The tasks chosen comprised two 2-way jigsaw tasks (Tasks 1 and 2), a type of task with a single outcome that has been used successfully at lower levels of proficiency, and two decision making tasks involving the production of collaboratively negotiated objects (Tasks 3 and 4). Task 1 asked participants to identify which two of the four photos on their screen also appeared on their partner's screen. In Task 2, participants had a set of four pictures different from their partner's and had to identify a theme that linked four of the eight pictures. Task 3 was a translation of a short English text into French, reflecting the higher level and academic nature of the course, but not something that students are routinely invited to discuss in pairs. In Task 4, students had to create their own version of Task 1 or Task 2, using pictures from Clip Art. This involved agreeing on a task, sharing ideas, and selecting appropriate images.

In calling the activities tasks, this study follows Littlewood (2004) and Van den Branden (2006) in adopting a broad definition of task. A task is defined as a goal directed activity that is designed to enhance language learning and requires language use for its performance. Tasks may be more or less meaning focussed or form focussed. Thus Task 4, in which language is used for discussion and which has an unpredictable outcome (with correspondingly unpredictable language forms) has a strong focus on meaning, which places it towards the meaning end of a continuum from focus on form to focus on meaning. By contrast, Task 3, a translation task, has a strong focus on form¹ which places it towards the other end of the same continuum, with the two jigsaw tasks (Tasks 1 and 2) occupying intermediate positions.

Regarding the distinction between cooperative and collaborative tasks (based on whether the task involves sections completed individually or is accomplished through a process of dialogue-based shared creation without division of labour – see Paulus, 2005: 112), Tasks 1 and 2, in so far as they allocate different kinds of information to the participants, may be regarded as cooperative rather than collaborative. By contrast, the creation of a negotiated object in Tasks 3 and 4 appears to make these tasks collaborative, albeit with a cooperative element in the case of Task 4, since students search for relevant images separately.

Whatever the nature of a task, it may not be approached as intended by designers or approached similarly by all learners. For instance, learners carrying out a cooperative task may take turns at conveying the information they hold, but they may also adopt a proactive stance and draw each other out. Conversely, learners may decide to take on individual responsibility for certain parts of what is supposed to be a collaborative task, thereby reducing opportunities for discussion and collaboration. For these reasons, the distinction between cooperation and collaboration is best approached empirically.

Importantly, although it is tempting to equate collaboration with interactivity, an interaction is only collaborative if it presents certain features indicating the development of a collective orientation to jointly constructed activity, and a willingness to

¹ The case for regarding the production of a joint translation as a task rather than an exercise rests on the same argument as that put forward by Ellis (2003: 17) with respect to working with a partner over the classification of time phrases in a passage: unlike traditional exercises, both require learners to talk about the data together and exchange information and ideas.

accept other participants' contributions (Donato, 2004: 287). What marks out collaboration is discussed by Storch (2002), who uses the concepts of equality (notably in the degree of control exercised by each of the partners over the task) and mutuality (the extent to which they engage with each other's contribution) as a basis for distinguishing four patterns of dyadic interaction:

- 1) collaborative: moderate to high equality and mutuality
- 2) dominant/dominant: moderate to high equality but moderate to low mutuality
- 3) dominant/passive: moderate to low equality and mutuality
- 4) expert/novice: moderate to low equality but moderate to high mutuality.

Collaborative and expert/novice pairs are described as manifesting more scaffolding behaviour than the other pairs, who differ in that unlike expert/novice dyads, learners working collaboratively alternate in the role of expert and pool resources when difficulties arise.

2.4 Data collection

The experiment took place one dyad at a time in the university's Learning and Resources centre, using computers located in different rooms. This meant that partners were not in visual contact and could not speak directly to each other, and had the additional advantage of making online communication more authentic than co-location (Lamy & Hampel, 2007: 69). The researcher was logged in, but refrained from intervening. Sessions were archived automatically. Audio recordings were then transcribed manually and interlaced with text chat logs.

2.5 Data analysis

Recordings were first analysed quantitatively to allow comparisons across individuals, dyads and tasks regarding actual talk time, number of turns taken and duration of longest turn. In the qualitative analysis the data was examined for LREs, with particular reference to the trigger for negotiation, the person initiating negotiation, how repair is performed, and by whom.

It must be pointed out that the discussion below is only concerned with LREs in which one of the participants signals a language problem to their interlocutor that is not resolved before handing over the floor, since unprompted self-corrections like

A2: ... *je pense qu'elle est heureux ... heureuse pardon*
 [... I think she is happy happy sorry]

where the student corrects the form of the adjective by herself do not involve collaboration.

3 Results

3.1 Overview of patterns of interaction

All three dyads (A, B, and C) communicated effectively, creating a coherent discourse that moved along smoothly towards the achievement of the task. Evidence of

active involvement can be found in global participation rates and in the content of the exchanges. As might be expected at this level, student output contains much longer utterances than those normally discussed in the literature, including a number of long turns consisting of more than one clause that can be categorised as sustained talk (Swain, 1996: 97), and at least one turn lasting over a minute per student. Between them the tasks produced over 90 minutes of oral data, albeit with some differences between tasks and dyads (Table 1), Task 3 eliciting most speech overall, and dyad B differing from the other two both in terms of the overall amount of talk generated and its distribution across tasks.

Surprisingly, only one dyad (B) had recourse to text chat. As in other studies of multimodal environments (e.g. Blake, 2005; Hampel *et al.*, 2005), text chat was used for channel checks and for off-topic and metalinguistic comments. However, one of the partners (B1) also used text chat to write down the translation.

Further analysis of participation rates (see Table 2) shows that, with the exception of dyad B in Task 3, individuals maintained a broadly equal footing in the conversation. They displayed moderate to high equality in sharing control over task management and in their willingness to take directions from each other. Except for B in Tasks 3 and 4, the pairs also displayed moderate to high mutuality. They built on each other's contributions, referring to and incorporating what their partner had said, asking for their opinion, sharing ideas and providing reciprocal feedback.

Interaction patterns can therefore be classified as consistently collaborative for A and C, who took care throughout to establish intersubjectivity and worked together to reach solutions that both found acceptable. Dyad B's behaviour was less stable. The engagement that the partners displayed with each other's contributions in the first two tasks gave way in Task 3 to an asymmetrical dominant/passive pattern

Table 1 *Oral data per dyad and task (minutes)*

	Task 1	Task 2	Task 3	Task 4	Total time
A	2.56	6.57	11.30	12.11	33.34
B	7.30	11.55	4.48	1.10	25.25
C	3.35	7.24	14.41	8.57	34.37
Total	14.01	26.16	30.59	22.20	93.36

Table 2 *Individual participation rates (minutes)*

	Task 1	Task 2	Task 3	Task 4	Total time
A1	1.29	3.56	6.27	6.03	17.55
A2	1.27	3.01	5.03	6.08	15.39
B1	3.50	7.11	0.38	0.31	12.10
B2	3.40	4.44	4.10	0.41	13.15
C1	2.21	4.15	9.37	5.58	22.11
C2	1.14	3.09	5.04	2.59	12.26

characterised by the relative lack of involvement of one of the participants. In the case of Task 4, neither partner seemed to engage with the activity, which they accomplished cooperatively with virtually no negotiation. Storch (2002) includes such behaviour under the dominant/dominant category, although the label seems inappropriate in this case given the perfunctory manner in which the task was performed.

3.2 Language-related episodes

3.2.1 General overview. In this study, an LRE deals with only one linguistic issue. Consequently, as in Swain and Lapkin (1995), LREs can overlap or be embedded into others and discussions of two separate aspects of the same string (e.g. lexical choice and tense) constitute two LREs. This does not mean that the total number of LREs equals the number of issues raised, as it is possible for participants to return to an issue they have already considered. Where there has been a clear break, as when students, in Task 3, move from translating the text to revising it, the further discussion is counted as a separate LRE.

Setting aside six repetition requests due to technical problems, data analysis (see Table 3) reveals a total of 38 LREs distributed, albeit unevenly, across all four tasks and all three dyads.

While the dyads produce a similar number of LREs overall, there are significant differences between the tasks, with Task 3 accounting for over two-thirds of the total number.

3.2.2 Negotiation for meaning. Content analysis reveals only 5 instances of negotiation for meaning, distributed as shown in Table 4.

As highlighted by Table 4, the majority of interactions do not comprise any instance of negotiation for meaning nor are instances confined to, or excluded from,

Table 3 LREs per dyad and task

	Task 1	Task 2	Task 3	Task 4	Total
A	1	1	10	3	15
B	1	5	7		13
C			10		10
Total	2	6	27	3	38

Table 4 Negotiation for meaning per dyad and task

	Task 1	Task 2	Task 3	Task 4	Total
A	1			1	2
B		2			2
C			1		1
Total	1	2	1	1	5

any task. It is worth noting that the one case of negotiation for meaning generated in the course of Task 3 occurs in a part of the dialogue tangential to the task (the use of fonts) rather than in talk about the translation itself.

In terms of the categories of move traditionally used in negotiation studies, i.e. comprehension checks (initiated by the current speaker to verify their interlocutor understands), confirmation checks (initiated by the interlocutor to verify that they have understood) and clarification requests (initiated by the interlocutor to elicit further information), the five instances consist of one comprehension check and four clarification requests. The comprehension check has a lexical trigger *phoque* (seal) and is produced by B2 in Task 2:²

B2: *... le photo est un photo d' un phoque ... qui est -erm- un animal -erm- tu peux comprend le mot 'phoque'?*
 [... the photo is the picture of a seal ... which is -erm- an animal ... do you understand the word 'seal'?]

B1: *Oui -erm- mais je n'ai pas un image -erm- d'un phoque*
 [Yes -erm- but I don't have a picture -erm- of a seal]

The four clarification requests are made up of two instances in which the trigger is global and the trouble source is reformulated, and two instances in which the relevance or referent of a particular lexical string is unclear to the interlocutor.

A1: *donc -erm- nous avons ... les mêmes photos qui sont -erm- numéro un et numéro trois ...*
 [so -erm- we have ... the same photos which are -erm- number one and number three...]

A2: *Pour moi la deuxième photo est B quatre donc je sais pas mais p peut-être pour toi c'est la troisième mais pour moi c'est la quatrième*
 [For me the second photo is B four so I don't know but p perhaps for you it's the third but for me it's the fourth]

A1: *-erm- est-ce que tu peux répéter ce que tu -erm- as dit ... s'il te plaît?*
 [-erm- can you repeat what -erm- you said ... please?]

A2: *Oui nous avons le même photo -erm- numéro un mais pour moi ce n'est pas -erm- numéro trois que tu as dit mais numéro quatre le photo avec le fille avec le robe noir et blanc ... c'est numéro quatre pas trois*
 [Yes we have the same photos -erm- number one but for me it isn't -erm- number three that you said but number four the photo with the girl with the black and white dress ... it's number four not three]

² The English version [in square brackets] is there as a guide to the expressed meaning and does not highlight the errors made by the learners.

In this episode, A2 points out a flaw in A1's statement arising from a difference in the numbering of their photos. A1 does not understand the objection and asks A2 to repeat. A2's response is to expand the original formulation and highlight what was wrong with A1's position. The episode ends with A1 stating that she understands.

In clarifying requests relating to specific strings, the issue is not the meaning of the words, but the need for further information.

- B2: *Pourquoi ... t'as dit -erm- American football?*
[Why ... did you say -erm- 'American football?']
- B1: *-erm- parce que dans -erm- le -erm- le deuxième image de famille de moi -erm- le homme -erm- a un un ball -erm- de football américain*
[-erm- because in -erm- the -erm- the second picture of my family -erm- the man -erm- has a a 'ball' -erm- of American football]
- B2: *Il est un ballon ... de football?*
[It is/There is a football?]
- B1: *-erm- si ballon est ball -erm- donc oui*
[-erm- if ball is 'ball' -erm- then yes]
- B2: *Ball en français c'est ballon quand le quand le ballon est grand et quand c'est petit c'est balle*
['Ball' in French is ball when the when the ball is large and when it is small it is ball]

Like her original description, B1's response contains a switched item which leads to a recast by B2 eliciting confirmation that she has understood correctly. The interaction then becomes form focussed, including the provision of an explanation.

3.2.3 Focus-on-form episodes. Focus-on-form episodes differ from negotiation for meaning in that there is no observable communication failure. It is the means of expression that are identified as problematic. The difficulty is often lexical, but may also involve some other aspect of language, notably morphology and syntax.

Like negotiation for meaning, focus-on-form episodes are initiated by signalling a language problem. The problem may reside in the current turn and be identified by the speaker of the trouble source (self-initiation); or it may relate to a previous turn, usually the interlocutor's (other-initiation), but occasionally one of the current speaker's previous turns. It may be identified explicitly, for example through an admission that the speaker does not know which form to use, or through pointing out an error in the previous discourse, but it may also be implied: for instance the speaker of the trouble source may provide a list of alternative forms, include epistemic modal adverbs, or use paralinguistic features that indicate lack of confidence, while the interlocutor may indicate a problem through a recast. Lastly, a speaker may make a direct appeal for assistance to her partner, or merely imply the need for assistance.

It may be objected that recognising a gap in one's knowledge or expressing uncertainty about language use simply conveys information; or that the utterance may be

directed to oneself, i.e. an instance of private speech. Although there is no clear evidence in the data of the linguistic and paralinguistic features (e.g. low volume, ellipsis) that mark out instances of private speech, it is worth stressing that, even if there were, private speech in a dialogic context is “necessarily public in some sense” (DiCamilla & Antón, 2004: 58). Consequently, as in Ewald’s (2005) study, the distinction between private and social speech is not a useful one here. Furthermore, whether self-addressed or not, in the context of a collaborative interaction, a speaker’s admission that there is a problem cannot but serve as a potential site for language collaboration because it offers the interlocutor a chance to help her partner towards the greater proficiency they both aspire to. The speaker’s admission that she does not know the right word or is not sure which form to use also paves the way for other-repair by lessening its face-threatening nature. This is true in all tasks, with the added incentive in the case of Task 3 that the requirement to produce a single jointly owned linguistic object effectively legitimises peer-intervention.

In the example below, taken from Task 2, the speaker, having failed in her lexical search, signals the problem explicitly before resorting to L1.

B1: ... *l'enfant est dans le vêtement ... bleu et ... oh ... je ne sais pas oh yellow*
I can't remember
 [... the child is in clothes ... blue and ... oh ... I don't know oh 'yellow' I can't remember]

B2: *-erm- oui j'ai un photo similaire -erm- aussi je pense que ... le yellow est ...*
jaune ... en français?
 [-erm- yes I have a similar photo -erm- also I think that ... the 'yellow' is yellow ... in French?]

In making use of L1, the speaker is employing a common strategy for avoiding communication failure. Interestingly, as happens elsewhere in the data, her partner carries on with the conversation before supplying the target form, thereby showing the higher priority assigned to conveying meaning and task accomplishment.

With regard to outcomes, LREs may lead to a correct resolution of the problem, to an incorrect solution, or they may be abandoned.

It follows from the tables above that the data contain a significantly higher incidence of focus-on-form episodes than of negotiation for meaning, with Task 3 accounting for the majority of cases (Table 5), all of them bar one related to a translation item.

Since Task 3 generates more talk overall, the occurrence of a greater number of focus-on-form episodes is unsurprising. However, Task 3 also contains a higher ratio of

Table 5 *Focus-on-form episodes per dyad and task*

	Task 1	Task 2	Task 3	Task 4	Total
A		1	10	2	13
B	1	3	7		11
C			9		9
Total	1	4	26	2	33

focus-on-form episodes to the amount of oral data (25 for 30 minutes 59 seconds, against 7 for 62 minutes 37 seconds). Significantly, as exemplified below, focus-on-form in Task 3 involves more complex episodes, frequently overlapping, or embedded into one another, and running over several turns:

A1: *... et je pense que pour la troisième phrase -erm- cela traduit comme ... et -erm- c'est le même cas pour tous les affaires d'amour -erm- de son enfance ou de sa jeunesse -erm- la la ville ou la le cité avait une influence -erm- à moi -erm- que j'ai pensé -erm- durait toujours*

[... and I think that for the third sentence -erm- that translates as ... and -erm- it is the same case as for all love affairs -erm- of one's childhood or of one's youth -erm- the the town or the the city had an influence -erm- on me that I thought -erm- lasted forever]

A2: *-erm- je suis d'accord avec votre deuxième phrase mais peut-être dans la troisième phrase on peut le traduire comme et -erm- quand tu dis love affairs of one's youth peut-être on peut dire -erm- les affaires d'amour pendant -erm- pendant la jeunesse peut-être c'est -erm- c'est nécessaire d'avoir le pendant parce que c'est un mot de temps peut-être et puis -erm- je pense qu'on peut dire la ville avait parce que ce n'est pas pas une cité -erm- c'est une ville -erm- qui -erm- la ville la ville avait ...?? la ville avait un influence ou peut-être -erm- on peut dire le mot pour impression peut-être -erm- sur moi et j'avais pensé -erm- -erm- que c'était -erm- durait pour tout le temps? je sais pas*

[-erm- I agree with your second sentence but maybe in the third sentence it can be translated as and -erm- when you say 'love affairs of one's youth' maybe we can say -erm- love affairs during -erm- during youth perhaps it's -erm- it's necessary to have the during because it is a time word perhaps and then -erm- I think we can say the town had because it isn't a city/housing estate -erm- it is a town -erm- that -erm- the town the town had (inaudible) the town had an influence or maybe we can say the word for impression maybe -erm- on me and I had thought -erm- -erm- that it was -erm- lasted for all time? I don't know]

A1: *Ouais je pense que -erm- dans la la troisième phrase -erm- oui tu tu es -erm- tu as raison les affaires de d'amour pendant la jeunesse et oui la ville avait une impression ou oui un un influence à moi -erm- mais quand tu as dis j'avais pensé je pense que ce serait -erm- ce devrait être -erm- je pensais -erm- dans le temps imparf imparfait parce que -erm- I thought c'est c'est une c'est une pensée qui dure qui durait -erm- pendant beaucoup de temps et donc -erm- cela continue dans le passé*

[Yes I think that -erm- in the the third sentence -erm- yes you you have you are right love affairs during youth and yes the town had an impression or yes an an influence to me -erm- but when you said I had thought I think that it would be -erm- it should be -erm- I thought -erm- in the imperf imperfect because -erm- 'I thought' is is a is a thought that lasts that lasted -erm- for a long time and therefore -erm- it continues in the past]

The extract begins with an implicit invitation to A2 to settle two issues: the translation of ‘youth’ and the translation of ‘city’. A2 attends to both. In the first case, the selected item is incorporated within a recast that alters the preposition used and explains the substitution. The translation of ‘city’ receives some elaboration, although only in the form of an assertion which does not make clear the difference between the two terms. At this point A2 suggests another modification (*impression* rather than *influence*)³, before making further changes to the rest.

A1’s response begins with an endorsement of A2’s suggestion to replace *de* with *pendant* and her resolution of the lexical uncertainties. This is followed by a repetition of the two candidate terms for *influence* without any decision being taken. In contrast, A1 rejects A2’s translation of ‘I thought’⁴, supporting her rejection with a metalinguistic explanation.

4 Discussion

These findings show that LREs do occur in the interactions of advanced learners working on joint tasks in an audio-conferencing environment, but are relatively infrequent, except in Task 3. Except in Task 3, where all episodes but one are form-focussed, the distribution between negotiation for meaning and focus-on-form is fairly even. As in other studies (e.g. Foster, 1998; Swain, 2001: 56), there are variations in student behaviour, both within and across dyads.

The low incidence of LREs in three of the tasks is not unexpected. Research on negotiation for meaning between intermediate learners has shown that peers transacting information exchange tasks tend not to negotiate meaning. Of the 39 learners in Foster and Ohta’s (2005) study, nearly a third did not negotiate for meaning at all, and many of the others only did so rarely. Furthermore, advanced learners decoding speech spontaneously produced by another advanced learner they want to work with are unlikely to encounter many comprehension problems requiring meaning to be negotiated. They may not understand every word, but will get the gist.

Turning to focus on form, there are several reasons for hypothesizing a low number of focus-on-form episodes in tasks which do not involve text production. To begin with, many errors are likely to go unnoticed. Second, initiating focus-on-form is inherently face-threatening: for the speaker in self-initiated episodes, for the interlocutor in other-initiation. There will be times, therefore, when interactants will refrain from pointing out a problem. Another reason for the low incidence of focus-on-form episodes is that they represent interruptions that slow down progress with the task at hand. The last two factors clearly do not apply with the same force in Task 3. Talking through difficulties is unavoidable if the ultimate product is to be jointly owned, and is part and parcel of the task rather than something that puts the discourse on hold.

³ A2 also uses *sur* instead of *à* but this appears to be an incidental change that neither participant notices rather than a conscious modification.

⁴ Although the transcript of this sentence indicates a possible ambiguity (that what is being referred to is A2’s own thoughts), the audio recording shows A1’s interpretation to be correct, as confirmed by A2’s recognition in a later turn that she used the wrong tense for *penser*.

This accounts for one of the most striking features of the LREs generated by Task 3: the amount of metatalk that students engage in. Whereas LREs in Tasks 1, 2 and 4 usually involve a simple short exchange, in Task 3 students take great pains to support their suggestions, especially when there is disagreement. They weigh alternatives up, articulate rules, make use of linguistic terminology, all of this in the target language. Together with the segmentation of the task into whole sentences, this makes for long and complex LREs. Another striking feature is the amount of modulation accompanying suggestions. While this may reflect genuine uncertainty, it can also be a tactful means of creating an atmosphere of mutual respect conducive to co-construction. In the same way, Schegloff, Jefferson and Sacks (1977: 378) note that L1 other-corrections are frequently modulated in form, typically through downgrading on a confidence/uncertainty scale. The following example illustrates the partners' desire not to position themselves as the expert, as well as their desire to reach consensus:

- C2: ... *je pense que c'est je suis tombée amoureuse de -erm- Buenos Aires -erm- quand j'étais une très jeune femme parce que l'expression est tomber amoureux de pas à oui ou non?*
 [... I think it is I fell in love with -erm- Buenos Aires -erm- when I was a very young woman because the expression is to fall in love with not to yes or no?]

Among the constraints on LREs are the characteristics of the technological environment, including the rather cumbersome mechanism through which turn taking is effected (need to click on icons, non-instantaneous switching of the microphone). Another influential factor is the inability of the interlocutor to seize the floor. The interlocutor may request the floor (by clicking on the appropriate icon), but she will not get hold of it until the speaker clicks the release button. As a result she cannot provide back-channelling, or the kind of short immediate feedback found in face-to-face and on the telephone. It is true that the interlocutor can intervene (as distinct from interrupt) using text chat, but not with the same degree of efficiency. Yet another influence of the environment is the availability of online tools, notably dictionaries, which enables participants to look things up by themselves rather than consult their partner. To what extent this impacts on the incidence and nature of LREs is not currently clear and requires further investigation. On one hand, it seems probable that some of the items looked up represent potential LRE material. On the other, students sometimes involve their partner in assessing the results of their searches.

Significantly, as with negotiation for meaning, signalling a language problem does not guarantee that it will be talked through, let alone resolved. This is particularly the case with implicit appeals for assistance, but even direct questions are sometimes ignored. Assistance may not be forthcoming because the interlocutor is not in a position to help, but the saliency of the problem, which often depends on timing and on respective agendas, appears to be relevant. If a speaker stops immediately, the problem will still be fresh in the interlocutor's memory. Moreover, the very fact that the speaker is handing over the floor may be seen as an invitation to contribute. If, on the other hand, the speaker continues to speak for a while, the problem may be forgotten or interpreted as unimportant. In the example below, from Task 4, the second speaker may well have omitted to give the translation for 'jump', had she not

needed the term herself. Here too supplying the item comes second, almost like an afterthought.

A2: ... *dans la quatrième photo il y a une homme qui ... qui est dans dans le ... air je*

sais pas umm le mot de jump star jump dans l'air donc je pense qu'il est il est heureuse aussi mais c'est une bonne photo donc je pense que je je suis finie

[... in the fourth photo there is a man who ... who is in in the ... air I don't know umm the word of 'jump star jump' in the air so I think he is he is happy too but it is a good photo so I think I am done]

A1: *-Erm- oui -erm- -erm- c'est amusant parce que -erm- j'ai choisi le même la même photo que toi j'ai un homme qui -erm- saute -erm- le -erm le verbe pour jump is sauter*

[-Erm- yes -erm- -erm- it's funny because -erm- I picked the same the same photo as you I have a man who -erm- jumps -erm- the -erm- the verb for 'jump' is jump]

Can the LREs in this study be regarded as instances of scaffolding? How scaffolding differs from other forms of assistance (Donato, 2004: 298–299) has yet to be fully explored. However, a number of pertinent observations can be made about some of its distinctive features. Looking at the origins of the metaphor, material scaffolds are typically temporary structures erected to meet a specific need, are constructed out of a number of simple components, and take some time to assemble. Similarly, scaffolding is used in the literature to refer to assistance that is offered when needed, i.e. contingently generated, that is provided in small graduated steps, and that unfolds over a number of turns.

Using these criteria, there appears to be a major difference between Tasks 1, 2 and 4 and Task 3. Generally speaking, requests and offers of assistance in Tasks 1, 2 and 4 are isolated phenomena dealing with a single point and confined to two or three turns. As such they do not provide scaffolded help. By contrast, assistance in Task 3 is often dynamic and offered in stages. There is continuous collaboration, at least in dyads A and C, with partners pooling resources and sharing expertise on a need-to-know basis in a way open to microgenetic analysis. While the difficulties and the strings involved are atypical, the step-by-step approach to assistance and the sharing of knowledge, with expertise moving from one partner to the other from moment to moment, are among the foremost distinctive features of peer scaffolding. The outcome is a product that partners could not have achieved individually. It can therefore be claimed that Task 3 contains scaffolding.

The presence of scaffolding in Task 3 and the significantly larger number of LREs generated seem due to the creation of a text. Research into task effects has shown that the requirement to produce a text has a significant impact on LREs. Pellettieri (2000: 71) notes that “the majority of the morphosyntactic routines were in response to language produced during the composition of the on-line note and narrative, which suggests that the composed piece of discourse served as a product of language upon which the learners could then consciously reflect”, while Swain and Lapkin

(2001: 104) report that LREs “usually occur in the context of writing out the story rather than in the initial telling of it”. In effect, and unsurprisingly, students focus on those aspects of the task necessary for its performance: negotiation for meaning when communication is seriously threatened (an unusual event at advanced level), focus-on-form episodes and scaffolding in a translation task.

5 Conclusion

This study has explored the extent and nature of collaboration between advanced learners working in pairs in an audio-conferencing environment. It has found differences between dyads and tasks that corroborate previous findings about the variability of student behaviour and about task effects. In addition, it has highlighted the impact of the technological environment on student behaviour and collaboration. It has also illustrated what are claimed here to be instances of scaffolding, albeit of a different kind from what has been previously discussed in the literature.

The study suffers from a number of limitations that call for undertaking further research in the area. Data needs to be obtained from a larger sample comprising both female and male participants. Stimulated recall interviews would help strengthen the analysis, while the incorporation of a follow up component would provide information on the effectiveness of collaboration for language development.

Other possible directions for future research include expanding the range of tasks. Obvious candidates are the kinds of task that have been used in other studies, e.g. dictogloss, a task in which students work together to reconstruct a text read at normal speed on the basis of the notes they took while listening (Leeser, 2004; Swain & Lapkin, 2000) or essay writing with reformulation by a native speaker (Watanabe & Swain, 2007). Variations in cognitive difficulty are another possibility. While there is little doubt that the occurrence of peer scaffolding in Task 3 was related to the nature of the task, it can be safely hypothesized that had the translation been less challenging, there would have been fewer LREs and less scaffolding. This could be tested through the use of translations of different levels of difficulty. With regard to the technological environment, repeating the study using a full-duplex (where interruptions are possible) rather than half-duplex system would help shed light on the effects of functionalities and help determine to what extent the findings of the present study are a function of the system used. Such studies are currently in short supply, yet have important pedagogical implications (Kenning, 2010). It would also be valuable to carry out comparisons between face-to-face and audio-conferencing environments.

This study is significant in establishing that audio-conferencing systems can not only successfully foster interactions between advanced students sharing the same native language, but also encourage collaboration and scaffolding. Although the long term benefits of the approach remain to be investigated, current findings suggest that this type of application is an avenue worth pursuing.

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