

A TASK-CYCLING PEDAGOGY USING STIMULATED REFLECTION AND AUDIO-CONFERENCING IN FOREIGN LANGUAGE LEARNING¹

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ABSTRACT

The aim of this paper is to describe a task-cycling pedagogy for language learning using a technique we have called *Stimulated Reflection*. This pedagogical approach has been developed in the light of the new technology options available, especially those that facilitate audiovisual forms of interaction among language learners and teachers. In this instance, the pedagogy is implemented in the context of introducing students to audio-conferencing (A-C) tools as a support for their ongoing independent learning. The approach is designed to develop a balance for learners between attention to fluency and meaning on one hand, and form and accuracy on the other. The particular focus here is on the learning of Italian as a foreign language, although the ideas and principles are presented with a view to the teaching and learning of any language.

The article is in three parts. The first considers appropriate theoretical frameworks for the use of technology-mediated tools in language learning, with a particular emphasis on the focus-on-form literature and task design (Doughty, 2003; Doughty & Williams, 1998; Skehan, 1998). The second part sets out the approach we have taken in the Italian project and discusses specifically the idea of task cycling (Willis, 1996) and Stimulated Reflection. The third part presents extracts of stimulated reflection episodes that serve to illustrate the new pedagogic approach.

INTRODUCTION

An important guiding principle throughout this project has been the recognition that for long term success language learners need to develop a balanced approach, one that engages them with multiple opportunities to attend to both the meanings and the forms of the language they are learning. In Skehan's (1998) terms, a balance is required between the pedagogical goals of fluency, accuracy, and complexity in the longer term learning of the grammatical system. By complexity, Skehan means the learner's willingness to use more challenging and difficult language. Following this line of thought, we aimed to devise a balanced approach that would address these pedagogical goals by combining the notions of stimulated reflection and task cycling (Willis, 1996) with the new options that technology-mediated communication could provide.

In considering the different pedagogical goals in the light of the many interactive technology options now available, the question arises as to whether particular technologies might suit particular pedagogical goals. Little research has been done on this so far. However, one study conducted by Sotillo (2000) suggests this line of thinking may be productive. She investigated discourse functions and syntactic complexity in ESL learner output obtained via two different modes of CMC: asynchronous and synchronous discussions. She concluded that "Asynchronous and synchronous CMC have different discourse features which may be exploited for different pedagogical purposes" (p. 82). Sotillo located quantitative and qualitative differences between the two kinds of discussions. While students communicating synchronously seemed to focus on meaning and disregard accuracy, those communicating asynchronously had more time to plan their answers and monitor spelling and punctuation. However, malformed sentences and inaccuracies in spelling and punctuation were evident in many of the asynchronous postings.

Such results need confirmation through further research. The literature on planning, for example, shows that pre-task planning has the potential to significantly influence the language produced in the task that follows (Skehan & Foster, 1997, 2001). Skehan and Foster (2001) divide pre-task activities into the categories of teaching, implicit learning, parallel, modelled or pre-task activities, and consciousness-raising activities. All these categories of preparatory activity have the potential to make an impact on the language generated in CMC-based CALL tasks. From the research findings, there is strong agreement now that complexity and fluency are enhanced by pre-task planning; the results for accuracy are not so clear. Learners may use planning time to plan how to avoid using structures they are not comfortable with; in such circumstances high levels of accuracy would still be recorded. Clearly, more work needs to be done, but the notion that different CMC technologies may be used for different pedagogical purposes remains significant and has influenced our approach in this project. In synchronous communication, especially, where there are very real time constraints surrounding all interactions, the likelihood that learners will rely on communication strategies, and complexity and accuracy will be diminished or otherwise influenced, is high (Skehan, 1998).

We have also been influenced by Cumming's work in the early 1990s on the need for action and reflection in learning. In the design of tutorial programs on the computer, Cumming argued that action and reflection should be entirely separated in the design, and that within the program structure a *task level* and a *discussion level* should be distinguished. In our project the same notion is pursued, but instead of developing a tutorial style interaction, here the focus is on *alternating* between action and reflection in a task cycle, with reflection activity facilitated, or "stimulated," by the use of recordings of the technology-mediated interactions. Recording the talk along with the corresponding visual material on the shared computer screen allows for the detailed documentation of interactions across two modes, the visual and the aural (Doughty, 2003). This is important, firstly as part of our pedagogical procedure, which is the focus of the discussion in this paper, and secondly, as a practice we are rehearsing and refining for the research studies that relate to this project.

With these ideas in mind, the paper continues with a detailed presentation of the theoretical background and principles. It then describes the Italian Project and the processes by which the principles were put into practice in introducing students to computer-mediated audio-conferencing tools as a way of supporting their ongoing, independent learning.

THEORETICAL FOUNDATIONS

Focus on Form

The question of how to achieve balanced attention to fluency and form is strongly represented in the literature on "focus on form" and this corpus of work provides a number of important principles and guidelines (Burgess & Etherington, 2002; Doughty, 2003; Doughty & Williams, 1998; Ellis, Basturkmen, & Loewen, 2002; Swain & Lapkin, 2001; Williams, 2001). In this literature, meaning or communication is always regarded as primary, and that is very much the stance taken here. In the words of Doughty and Williams, "focus on form entails a prerequisite engagement in meaning before attention to linguistic features" (p. 3). In other words, linguistic form is treated within the context of the learners performing a communicative task (Ellis, Basturkmen, & Loewen, p. 419). In addition, when a focus on form does occur, typically this arises in a way that is incidental or unplanned. Long and Robinson (1998) speak 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" (p. 23; see also Williams, p. 325). Thus, we are seeking tasks that are primarily communicative, meaning-focussed activities, with a provision for an occasional or incidental focus on linguistic form that is initiated by either teacher or student.

As far as the timing of an occasional focus on form is concerned, Lightbown (1998) elaborates on this point and says that there is not a single prescriptive approach or technique that can be recommended. While sometimes it is preferable to integrate a focus on form and meaning concurrently in the same activity, at other times there is a case for separate self-study of the formal linguistic features at a later time, although not too much later.

In discussions of focus on form in works such as Doughty and Williams (1998), there is no doubt that the linguistic form primarily in view is the grammar of the language. In fact Ellis, Basturkmen, and Loewen (2002) say that the term *form* is often used only to refer to "grammar" although, like Ellis et al. (2002), in this article the term is used more generally to include any aspect of linguistic form, including phonological, lexical, or grammatical forms. In this regard, DeKeyser (1998, p. 43) notes that a focus on form "may not be necessary" for vocabulary, and "may not be sufficient" for pronunciation, although really these domains of language learning have not been sufficiently researched to make any substantive claims either way, that is either for or against the effectiveness of a focus on form in relation to vocabulary or pronunciation.

Skehan's work on the need for balanced attention to a focus on form and meaning also stresses the significance of the brain's limited capacity to process language in real time. For the purposes of this discussion this constraint relates to the difficulty for learners in simultaneously attending to form and meaning when the primary focus in a task or activity is communication. Greater time pressure will reduce attention to form and accuracy in real time communication activities (Skehan, 1998). This is very relevant for CALL because synchronous communication activities, as in chat and audio-conferencing sessions, clearly allow less time for learners to formulate their utterances than in asynchronous communication activities, as in e-mail interactions, for example (see Levy, in press). The focus-on-form literature helps us to think about ways of guiding learners so that they may be encouraged to attend to both meaning and form in a principled way. From a broader, educational computing perspective, another related concept can assist as well.

The Task Level and Discussion Level

Cumming (1993) provides a complementary perspective on learning which emphasizes a distinction between action and reflection. For learning interactions at the computer, he proposes a distinction between a task level (TL) and a higher order discussion level (DL). The DL is intended to provide detailed information about the TL, it requires the learner to "engage in metalevel activities" (p. 230) and to reflect, evaluate, plan, and draw conclusions on actions performed at the TL.

Cumming (1993) goes on to suggest that the TL and DL should be separated or, "decoupled," that is kept separate in two associated but distinct modules. A simple example of this idea in practice is the typical word processor. When composing a new document, the user is operating at the TL with the focus very much on the task at hand, that is formulating the words and the sentences to convey meaning. However, at a certain point, the user will step back and consider what has been written; this may be signalled by a printout of a draft version of the document, or it may also be flagged by the use of one or more of the tools provided by the program that assist checking or reflection, such as the spell checker, thesaurus or grammar checker.

Cumming's basic idea was put into practice in the conversational English multimedia CD project described in Levy (1999). The decision to make a distinction between the TL and the DL was one of the most significant design decisions made in the program, and the separation between the two levels was maintained throughout. At the DL, learners have a learning journal available to them in the form of a notebook. Using the notebook, they can record observations about the tasks they have completed at the TL and then relate this work to out-of-class experience. Most importantly, as Schmidt (1990) points out, material in the notebook at the discussion level may be used as evidence of noticing, and therefore provides a valuable data source upon which to consider the effectiveness of the approach.

Language-Learning Tasks

Much has been written about the nature of language-learning tasks and there is now a very extensive literature (Candlin & Murphy, 1986; Ellis, 1994; Littlewood, 2003; Nunan, 1989; Ribé & Vidal, 1993; Salaberry, 2000; Skehan, 1998). There is not sufficient space here to provide an in-depth analysis, but it is important to note that the ways in which language-learning tasks are defined have changed significantly over the last 20 years. Ribé and Vidal's description, recently referenced by Littlewood, is still useful in this respect. They speak of first, second, and third generation tasks. First generation tasks aim solely at developing the students' communicative ability in a specific area of language. Second generation tasks aim to develop not only communication skills, but also general cognitive strategies, such as analysing what information is needed in order to complete the task, and include the idea of using language for a "real" piece of work that has value outside the classroom. Third generation tasks extend this idea even further. They not only aim to activate communication and cognitive strategies, but also to enrich the students' personal experience more broadly by enhancing awareness, motivation, creativity, and interpersonal skills. Third generation tasks have "a high degree of task authenticity, globality and integration of language and contents and involvement of all the aspects of the individual's personality" (Ribé & Vidal, p. 3). Goodfellow, Manning, and Lamy (1999) reinforce the nature of the change that has taken place when they say, "Communicativeness itself is now less of an all-inclusive goal for language pedagogy than it once was. In Little's (1997) view, the 'dominant form' of the communicative approach ... fails to develop any kind of language awareness and does not foster learner autonomy" (p. 269). We therefore have reached a point where we recognize that learners need reflective activities to develop language awareness, as well as productive activities, in order to become effective and autonomous learners.

These ideas provide a general background on the nature of the language-learning task, but a more specific framework is needed to facilitate a design and a process for implementation. Here it is helpful to return to Skehan's (1998) notion of balance. He argues that the learners' attention can be channelled toward meaning or form and that an appropriate balance is required between the two pedagogical goals. He goes on to suggest that we need "to implement sequences of tasks so that balanced development occurs as tasks which concentrate on different objectives follow one another in a planned manner" (p. 135). He emphasizes the value of cycles of task-based activity and opportunities for learners to "engage in cycles of analysis and synthesis" (p. 91). This is the sense in which we draw on Skehan's work. The overall balance required may then be achieved through effective task design and sequencing, and the careful selection of communication technologies that fit the pedagogical goals. We require tasks and technologies that alternately lead to focussing the learners' attention on communication and fluency or on accuracy and form. But it is also important to recognize that Skehan employs the label "cycle" in other ways, too, as in cycles of "accountability," cycles of "evaluation," and "monitoring" cycles where learners carefully reflect upon what they have learnt through the task they have completed and thus make plans for future emphasis and action. In sum, a cyclic approach permeates the kind of thinking about tasks and task sequencing that Skehan espouses. Although these ideas are not discussed in this paper, they are very much part of our planning for future iterations of the Italian Project.

Task Cycles and CALL

There is already considerable evidence that task cycles are being employed in CALL, using different technologies for different pedagogical purposes, although a general framework has not been formulated as yet. With one exception, the focus in the CMC-based CALL literature so far has been on developing post-task rather than pre-task activities. The one interesting exception is Hewer, Kötter, Rodine, and Shield (1999) who utilize email to allow practice before an A-C session, as a form of rehearsal. Otherwise, most examples that could be located in CALL refer to post-task activities designed especially to encourage a focus on form or accuracy.

One of the advantages of synchronous CALL interactions such as chat or MOO sessions is that language interactions can easily be recorded in the form of logs. Unlike the chat session itself, which is transient and dynamic, the log provides a stable reference for discussion later. Paralleling Skehan's (1998) and Willis's (1996) suggestions, these logs may be used post-chat for discussion and analysis, by the student alone, through pair work, or through teacher-student discussions. The CALL literature provides a number of examples of task cycles which use the log for post-task analysis to facilitate a focus on form or accuracy (e.g., von der Emde, Schneider, & Kötter, 2001; Toyoda & Harrison, 2002).

Post-chat logs can potentially be valuable for language learning, though they do have important limitations. For example, in logs of synchronous CMC, Negretti (1999) noted that multiple parallel sequences with overlaps and disjunctions were common and that the adjacency pairs typical in phone conversations and face-to-face conversations were infrequent. Post-chat log transcripts can appear haphazard and illogical to students as they try to follow the turns in overlapping conversations. Clearly, care has to be taken in any post-chat analysis to avoid confusion. Here the teacher's role is very important; for instance the teacher might highlight single sentences or limited sequences from the log for the student's attention, or work one-to-one with the student. Multiple parallel sequences can often be avoided if learners create their own private space or room for their conversation to take place.

THE ITALIAN PROJECT: INTRODUCING AUDIO-CONFERENCING THROUGH A TASK-CYCLING APPROACH

Overview

A task-cycling approach using computer-mediated audio-conferencing (A-C) tools was recently introduced to Italian and Spanish students at Griffith University. The overriding goal was to provide the means for students to practise speaking in the target language outside scheduled class time and, most importantly, to develop their confidence to continue independently, as part of their ongoing learning after completion of formal studies. This paper concerns the experience of the Italian group, who were the first cohort involved.

We felt it important that the students should perceive A-C conversations as a means to an end rather than purely as a vehicle for decontextualized speaking practice. So we chose to engage them in a project, to complete over a period of time, in which highly interactive conversations would be essential. The project eventually defined was the preparation of material for a series of Italian Web pages on an agreed topic. This was to involve the students in locating, discussing, and selecting authentic material and then preparing a draft of the text, editing it, and polishing it for publication on the Web.

We refer to the *project* that the students carried out, rather than the *task*, in order to convey the idea of a complex, multi-faceted activity carried out over a few months and comprising various phases leading to a coherent, finished product. Although a task can potentially be viewed in this way, too (for discussion see Bygate, Skehan, & Swain, 2001), we have applied a more restrictive interpretation of the term task and clearly distinguished it from project work (Fried-Booth, 1986; Ribé & Vidal, 1993). Here task is used to refer to shorter term activities carried out at a single sitting, such that the task is circumscribed by the audio-conferencing session itself. Within a task, the focus is on communication, as the student works with an interlocutor toward the goal of collecting and preparing information for the project. The attention is on meaning rather than form, or at the task level rather than the discussion level, using Cumming's terminology.

Within the students' projects, the concept of task cycle was implemented in the form of alternation between A-C conversations, in which the learners' focus is on fluency, negotiation, and getting the message across, and guided reflection activities on those conversations. Periodically, after an audio-conferencing session had been completed and recorded, a "Stimulated Reflection" (SR) session followed,

in which the teacher and student discussed the recording, examining various linguistic and non-linguistic elements of the interaction that either chose to raise. These reflection activities provided the learners with the opportunity to focus on accuracy and complexity of their language, and on their strategies for understanding and conveying meaning and maintaining appropriate social behaviour in a conversation.

The following sections outline the various preparatory steps that were taken: choosing *NetMeeting* as the A-C tool; preparing the technology platform to allow for recording of A-C sessions; selecting the students for a trial of the approach; and defining their projects and planning the phases of their work. This description is followed by a section presenting the way SR sessions were conducted.

The Choice of *NetMeeting*

NetMeeting features real-time audio and video, text-based chat, document sharing, and whiteboard graphics exchange. It is also widely available and free of charge to *Windows* users. We concur with Sotillo's rationale (2002) in choosing *NetMeeting* for language-learning purposes in that such conferencing software provides for shared practices that enhance understandings across the community of learners (Sotillo, 2002). Furthermore, *NetMeeting* has particular features that make it an attractive option. Its capacity for desktop sharing, so that partners at a distance may look at the same content on their computer screens while passing control to and fro between them, was seen as a distinct advantage because such features help create a shared context around which talk can occur (Mohan, 1992). This means, for instance, that in a *NetMeeting* session two people can browse through Web sites together and see the same on-screen material as they talk about it. Or they can jointly create or modify documents using a word-processor, with control of the application -- through both mouse and keyboard -- passing from one to the other as desired. In fact, without this capability, this project would simply not have been possible.

Preparation of Special-Purpose Workstations

To provide a prompt for later, stimulated reflection, we needed to be able to record selected A-C sessions. This meant recording not only the voices at either end of a connection but also the dynamic screen content, in order to track what the speakers were seeing on the screen and referring to as they spoke, and to capture the way the desktop-sharing and application-sharing features were used. We therefore decided to set up two workstations with recording facilities, which could be used by the participants when necessary. On all other occasions they were to be free to use any computer they chose.

A hardware-based approach was taken in the recording of the A-C sessions, involving video capture cards, sound mixer, and video-recorder. The setup is illustrated in the [Appendix](#). Recording to videotape was convenient as it allowed easy replay for students and staff at home or university. Operation was very simple: Users just had to remember to press the record button on the video recorder at the start of their session. The date and time code was enabled on the computer screen to ensure it appeared on all recordings, for ease of identifying and locating specific segments during later SR sessions.

Selection of Students

We invited four students to participate in a trial of our approach. These students were chosen from among those who had just completed all our language courses, in line with our interest in preparing students for managing their own learning after graduation. We made a deliberate choice to involve students at the higher end of the spectrum in terms of proficiency and motivation, as we anticipated the experience would be quite demanding in time and energy, and there might be delays while we resolved technical issues. The four students selected had all achieved grades of Distinction or High Distinction in their Italian subjects.² They hoped to visit Italy within the next couple of years and were keen to find appropriate ways to keep working on their Italian. All were women, aged between 19 and 23; one was a native speaker of Spanish and the other three of English. The reasons for choosing advanced and highly motivated students at this early stage were purely practical. We would not envisage a different

pedagogical procedure for students at lower proficiency levels, although the content would need to be suitable for less advanced students and the project carefully circumscribed so that it was manageable.

Definition of the Students' Project

The project was defined through negotiation between the students and the teachers. We initially proposed a number of projects in broad terms, which we saw as consistent with the "third generation" approach to task design referred to earlier. We then invited the participants to choose a project and tailor it to their own interests. In devising types of projects we drew up the following criteria, drawing on the ideas of Fried-Booth (1986) and Ribé and Vidal (1993) on project work in general, and the work of Debski (2000) in relation to project-oriented CALL in particular:

- the project should motivate and engage the participants in collaborative work;
- the project should be authentic and involve problem-solving of the kind required in the wider world outside the classroom;
- the project should entail practical outcomes that are useful and of interest to the participants themselves and other students;
- the outcomes should also be of interest to a wider audience and reach beyond the lifetime of the project;
- the definition of the project and its outcomes should be allowed to change and develop over time, in accordance with the participants' interests, needs, and abilities;
- the project should encourage the development of learner autonomy, and be managed and controlled primarily by the participants, with the teachers available to assist on request.

Two extra criteria related to the technology were also invoked. Firstly, the use of A-C was considered central to the carrying out of the project. We wanted the projects to be such that conversations with speakers in Italy would make a difference to the quality of the outcomes and the efficiency of the students' work. Secondly, the project would entail the creation of a polished written product -- in this case a series of Web pages -- as well as practice in listening and speaking. This would provide the opportunity for the students to use application sharing to jointly edit drafts of their text(s) with a native-speaker interlocutor. The engagement of writing skills implied the added benefit that the students would have the opportunity to "focus on form" in various stages of work on the project itself, and not only in the reflection activities.

The following project options were suggested: preparing a cine-club programme; planning a trip to Italy for study or research purposes; setting up an on-line pen-pals register; or producing material for our Italian Studies Web site. All four participants liked the last option and together they came up with a specific proposal for the whole group: to create pages that would be useful to young Australians -- students or otherwise -- visiting Italy and living in an Italian city for a certain period of time. They chose to focus on Bologna and Perugia, two cities they were particularly interested to visit and known to be attractive destinations for Griffith students going to Italy to study. The Web pages were to include material collected from Italian students at the universities in the two cities, people working in administration there and Australians who had lived and studied in Italy. In addition to written text and links to useful sites there were to be photographs and perhaps audio or video files contributed by the interlocutors in Italy. The group formed two pairs and agreed on a division of labour for the project.

Planning the Phases of Work on the Students' Project

The participants discussed with us their project aims, plans for carrying them out and the ways they would use A-C. We stressed that audio-conferencing should not be their only means of communication. They would also meet with each other and their teachers face to face and use the telephone and e-mail as necessary to contact each other. They were to call on their teachers freely, at any stage in their work, for information, help in organizing their work, or feedback on what they had done. With all this in mind the

students drew up a plan for their work on the project which would culminate by them giving a public presentation of their final product.

Onto the students' plan, which was concerned with achieving the aims of their project, we grafted a second plan, related to our concerns for technical training and establishing task cycles. First, we established a sequence for types of A-C sessions to allow the students to gain experience in a protected environment with more robust communication technology links before dealing with the outside world. Second, we set out a plan for task cycling in their work on the project, or for interleaving SR activities with the A-C sessions.

They were to converse initially just with a teacher; then with a fellow participant; then with a native-speaker stranger but locally, through the university network; and finally with a native-speaker stranger in Italy or anywhere outside the university. This gradual approach was adopted with a view to reducing stress and maintaining confidence as students familiarised themselves with the new technologies involved. The earliest sessions, in which the students talked just with teachers, were focused on gaining familiarity with the workstations and with *NetMeeting* operations, including making and accepting a call; speaking; using the text-chat window for written messages and the whiteboard for drawing; sharing the desktop and control of applications. However, this was not just a technical apprenticeship. The participants were also developing confidence in talking across this particular medium, by practising first on us and each other, before tackling conversations with strangers and dealing with time-zone differences, firewalls, slow connections, and so on. Discussion of these activities with examples will be the focus in the remainder of this paper.

Conducting Stimulated Reflection (SR) Sessions

The plan for an SR session was to allow a student to reflect on an A-C conversation, through interaction and collaboration with a teacher, and in reference to a video recording of the voices and the computer screen contents. It was usually held soon after the A-C session, so that the student's memory of the conversation was fairly fresh, but with enough time in between for the teacher to preview the video and prepare some notes and questions. During the SR session the student and teacher watched the video recording together, stopping it at any point when either wished to make observations or ask questions.

The discussion in an SR session concerned both the language of the conversation and the process that generated it, or, in other words, both "reflection on product" and "recall of process." In devising our approach to Stimulated Reflection we drew on the technique of Stimulated Recall as discussed by Gass & Mackey (2000), especially for the recall of process dimension of our sessions. On one hand, a session provided an opportunity for the student to listen to the conversation and notice her own problems or interesting language elements used by the interlocutor. The teacher's role was to help her both in this noticing work, by bringing points to her attention or asking questions, and then in working out how to improve her language, by providing clarifications, explanations, and/or confirmation. All components of language could be addressed, from pronunciation and intonation to lexical and grammatical accuracy and complexity to choice and rendition of register. On the other hand, the discussion served to revive the student's memories of the process of the conversation, her affective responses and the strategies she had used. These included ways of getting around language problems, getting her meaning across, clearing up misunderstandings and maintaining an appropriate level of social interaction. The teacher's role was to help raise the student's consciousness of her personal communication strategies and language learning strategies and of how to most effectively employ them in the future.

The choice of language -- English or Italian -- for conducting each SR session was made by the student (although this may be one of the situations in which students are likely to speak in Italian because they assume we prefer them to do so). One student used Italian almost exclusively, only breaking into English for odd words or questions when she felt it strictly necessary. Another spoke in English with the teacher

who was a native speaker of English but in Italian with the others. The other two appeared intent on using Italian as much as possible, resorting to English when they felt the need.

EXAMPLES OF FOCUS ON FORM IN THE STIMULATED REFLECTION SESSIONS

In this section we present some extracts from the students' SR sessions and, where useful for reference, the corresponding A-C excerpts. These examples illustrate the key principles underlying the approach:

- the primacy of communication during the task itself (the A-C session);
- the opportunity to focus on linguistic form embedded within a context of meaning-centred interaction;
- the provision for two different timings of focus of form: spontaneous or "on the fly" reflection, happening *during* an A-C session (at the task or action level), and scheduled reflection *afterwards* (at the discussion or reflection level); and
- the aim of enhancing the scheduled reflection activities through the "stimulation" provided by the videorecording.

We have chosen examples to illustrate two important characteristics of the types of focus-on-form activity that can result in this environment. The first is the range of language aspects that the students can choose to deal with, encompassing pronunciation, lexis, morphology, and syntax. The second characteristic is the "open door" nature of the activity, in the sense that the students choose the forms or aspects to reflect upon at any particular moment spontaneously; usually the points raised were not predicted by the teacher.

The four examples presented here are taken from the initial phase, when the A-C sessions were largely for the purposes of technical training and practice in speaking and listening via this medium. In this phase, each student was involved in at least three SR sessions, with three different teachers. At the time, the students' work on their project was concerned with general planning: seeking information from the Web, deciding what sort of people they would subsequently contact in Italy for information, and preparing the types of questions they would put to them.

In the extracts shown, the speakers are identified as follows: *T* for a teacher, *S* for a student and *P* for a partner (usually fellow student). The notation used is adapted from the transcription conventions set out by Jefferson (1984).³ Explanatory notes are coloured blue and placed between curly brackets.

Example 1. Pronunciation: "*dischetto*" (diskette)

The first example (see [Figure 1](#)) shows a student spontaneously recognising and responding to an error in pronunciation, when given the opportunity to notice it in an SR session. In the A-C session earlier, she and her partner in the project had been talking about a file containing the questionnaire they were preparing for their future Italian interlocutors. In lines 3 and 4 of the A-C extract, they had each used the word *dischetto* (diskette), which the student concerned mispronounced. The sound she doubled was the incorrect one, but her partner had subsequently pronounced it correctly. This situation is made clear in the extract itself, so the omission of the IPA notation will not cause a problem. During the SR session the student stopped the video tape on hearing those lines, without any prompting from the teacher, and pointed out the difference, after which they discussed what was wrong with the pronunciation. While she presented this as an example of a type of error she realized she was prone to -- having difficulties with double consonants in Italian, as many native speakers of English and Spanish do -- it was clear that she recognized this particular case only at the time of the SR session, not during the A-C conversation itself.

Audio-Conferencing Segment 1**S = student, P = partner**

- | | | | | |
|----|----|--|----|--|
| 1. | S: | C'è un piccolo problema | S: | There's a small problem |
| 2. | P: | Sì? | P: | Yes? |
| 3. | S: | Non riesco a vedere il documento con i + con l'email però ho + in un dischetto ho + quel + le domande, quel questionario che avevamo fatto prima | S: | I can't see the document with the + with the e-mail but I have + in a diskette I have + the questions, that questionnaire that we did before |
| 4. | P: | Sì, se non c'hai + OK ce l'hai sul dischetto? | P: | Yes, if you haven't got + OK Have you got it on the diskette? |
| 5. | S: | Sì adesso sto vedendo se | S: | Yes now I'm looking to see if |

Stimulated Reflection Segment 1**T = teacher, S = student, P = partner referred to**

- | | | | | |
|----|----|---|----|---|
| 1. | S: | Si vede che io "dischetto" l'ho pronunciato male, no? La prima volta che ho detto "dischetto" ho fatto doppia + <i>sound</i> | S: | You can see that I pronounced "dischetto" badly, didn't I? The first time I said "dischetto" I made a double + <i>sound</i> |
| 2. | T: | Hai fatto la C doppia? | T: | You doubled the C sound? |
| 3. | S: | Sì, invece della T. Oppure ho fatto più + ehm + C'è + Il suono della C l'ho fatto più forte da quello che doveva essere | S: | Yes, instead of the T. Or I made more + I made the C sound stronger than it should have been |
| 4. | T: | Come se avessi raddoppiato la C? [E la T? | T: | As if you were doubling the C? [What about the T? |
| 5. | S: | [Sì, invece della T | S: | [Yes, instead of the T |
| 6. | T: | Quindi hai fatto "disccheto"? | T: | So you pronounced it "disccheto"? |
| 7. | S: | "Disccheto" invece di "dischetto." Si vede, perché dopo quando lo, quando P lo dice + Che comunque P, è una delle strategie che usa P, per mm + Perché io, due cose che faccio sempre, degli errori, sono ehm quando pronuncio + male una parola che ha doppia, una consonante doppia, oppure quando scrivo che c'è qualche problema di + <i>spelling</i> ? Come si dice in italiano? | S: | "Disccheto" instead of "dischetto." You can tell, because later, when P says it + Anyway, it's one of the strategies that P uses to + Because two things I'm always doing, two mistakes, are when I mispronounce a word with a double consonant and when I write it and make <i>spelling</i> errors. How do you say <i>spelling</i> in Italian? |
| 8. | T: | "Di ortografia" | T: | "Di ortografia" |

Figure 1. Extracts from A-C and SR sessions for example 1

Example 2. Lexis: "cliccando" and "scrivendo" (clicking and typing)

The second example (see [Figure 2](#)) illustrates the value of an SR session to a student for clarifying and going over vocabulary that had constituted an obstacle in the earlier A-C session. In this case, the A-C segment was part of a discussion between the student and teacher about the student's prior experience in using computer-based tools. The student was talking about "chatting" and used the verb form *cliccando* (clicking) a couple of times when she meant to convey "typing" or "writing," as in "typing messages." It was clear that she was searching for the right words for what she was describing, until she eventually found and used an appropriate word, *scrivendo* (writing), in line 9.

In the SR session, the student reacted to the videotape immediately on hearing *cliccando* the first time, at line 2. The tape was stopped and she initiated the discussion by observing that *cliccando* means "clicking" rather than "typing," and then asking how to say "typing." It is not clear if she remembered that she had

eventually come up with *scrivendo* in the A-C session, but she evidently did remember having had difficulty and wanted to obtain a clear answer on the options available. The teacher suggested *scrivendo* initially and then offered a couple of other possibilities, after which both went back to the original *scrivendo messaggi*. The student spoke this phrase out loud, apparently confirming it to herself.

The SR extract also provides an example of a teacher taking an opportunity to extend the answer to a student's question and introduce further points, in this instance potentially new vocabulary. In the way we orchestrated the SR situation there is no pre-set agenda, so the learner is free to choose which language points to take up and which to leave aside from those offered by the teacher for lateral exploration. In this case the student did not show a desire to explore *digitare* or *battere a macchina* further, but she was certainly free to do so.

Audio-Conferencing Segment 2

T = teacher, S = student

- | | | | | |
|----|----|---|----|--|
| 1. | T: | Quando dici che lo usi per chatting vuoi dire così come stiamo facendo adesso? | T: | So when you say you use it {the computer} for chatting, do you mean like what we're doing now? |
| 2. | S: | No, come, sì. No, cliccando con i messaggi. Solamente con i messaggi. Non faccio [l'audio, non audio] | S: | No, like, yes. No, clicking with messages. Only with messages, no audio |
| 3. | T: | [Ah ho capito
{Some turns not shown}] | T: | I see |
| 4. | T: | Allora io sono confusa, scuso, scusa. Quindi "speaking with others" nel senso di parlare come stiamo facendo adesso? | T: | So I'm confused, sorry. Is it "speaking with others" {reading from a questionnaire on computer use they are referring to} in the sense of speaking like we're doing now? |
| 5. | S: | Ah, scusa, forse io mi sono confusa. No, non faccio così. No, non parlo + così come facciamo adesso. Solo + cliccando, faccio i messaggi. Parlo usando + sì + [Non parlo] | S: | Ah, sorry, maybe I'm confused. No, I don't mean like this. No, I don't speak like we're speaking now. Just clicking, I do messages. I talk using + yes + I don't speak |
| 6. | T: | [OK, quindi chatting] | T: | OK, so chatting |
| 7. | S: | Chatting | S: | Chatting |
| 8. | T: | nel senso | T: | in the sense of |
| 9. | S: | scrivendo messaggi | S: | writing messages |

Stimulated Reflection Segment 2 (conducted largely in English)

T = teacher, S = student

1. S: "Cliccando." "Cliccando" is clicking, not typing
2. T: Yeah
3. S: Ah! "Typing"?
4. T: Um "scrivendo"
5. S: "Scrivendo," OK
6. T: I'd say, yeah, "scrivendo messaggi"
7. S: "Scrivendo"
8. T: The act of typing, I suppose you use + "digitare"
9. S: Ah!
10. T: No?
11. S: [{"Digitare"}]
12. T: [{"Pressing the keys, or
13. S: Sì
14. T: More in general you can say "battere a macchina," [means "to type" something

15. S: ["Battere a macchina," sì, mm
 16. T: But I think in this case, yeah
 17. S: "Scrivendo messaggi" (x)
 18. T: Yeah, 'cause you were talking in general about writing rather than speaking weren't you?
 Yeah?
 19. S: (x) Yes, yep

Figure 2. Extracts from A-C and SR sessions for example 2

Example 3. Grammar: Gender of "programma" (program) and agreement with articles and adjectives

The SR segment shown in Figure 3 is interesting because it provides an example of a student noticing an error that she was surprised to find herself making, as she knew the correct form. On listening to the videotape of the A-C session, the student realized (without prompting from the teacher) that she had sometimes made mistakes in the agreement of articles and adjectives with the noun *programma* (program), as if it were feminine. While most Italian nouns ending in *-a* are feminine, there are various exceptions including several masculine nouns ending in *-ma* such as *programma*. The student made it clear she knew that *programma* was masculine and therefore should take *un* as indefinite article rather than *una*, and *questo* for "this" rather than *questa*, and actually gave a list of other masculine *ma*-ending nouns that she knew of, later in the SR session. But, as she put it in lines 3 and 13, it seemed the correct combinations *un programma* and *questo programma* did not always come to her on the spot. Clearly, the student believed she said *questa programma* automatically, suggesting perhaps that the general rule for nouns ending in *-a* had been automatized and placed in long term memory, but not the specific *-ma* rule, making the correct form more difficult to produce when time was short (see McLaughlin, Rossman, & McLeod, 1983; Skehan 1998).

An important aspect of this episode is that the student noticed her errors with *programma* only during the SR session, as she listened to the recording, despite the teacher's best efforts at giving a correct model during the A-C session. The teacher concerned had deliberately included *programma* -- matched with a masculine article -- into her own utterances on two occasions in the A-C conversation, but at the time the student had not shown signs of consciously registering the difference, such as echoing or subsequently producing the correct form. In fact, the student was clearly surprised on hearing herself later and so discovering that she was apt to make this mistake even though she knew better. It would be interesting to investigate what impact this discovery appears to have on her use of the word in future and whether it becomes an element of the language that she monitors closely.

This example illustrates the usefulness of both spontaneous focus on form and the SR type of focus on form which is scheduled and supported by a recording. The A-C session referred to includes at least one situation in which the student did appear to detect a difference between her use of words and the teacher's, at the time it happened, and to react to it by later recycling the teacher's word appropriately.

Stimulated Reflection Segment 3 (conducted in English)

T = teacher, S = student

1. S: {On hearing herself say "this program"} Oh. No, I just realized I made the wrong conjugation, just thinking like "questa programa," "questo programa," masculine
 2. T: Uhuh
 3. S: Just little things that you think of. It's hard like + When you have to think about + on the spot whether it's masculine, doesn't come to you straight away
 {Some turns not shown}
 4. T: But I think sometimes there it was + you used a masculine article with it and sometimes feminine

5. S: Yeah, I used feminine, yeah, that's what I noticed as well
6. T: I mean just then
{Some turns not shown}
7. T: Let's, let's listen again 'cause I think other times you said
{They listen to part of the videotape again}
8. T: Yeah, so, it did seem "questo programma" the first time, didn't it? And [then "questa"]
9. S: [And then
10. T: Mm
11. S: I don't know. Mm. Maybe it just comes out easier "questa programa"
12. T: Mm
13. S: 'Cause I think of "a" at the end. But I know + Just sometimes + yeah, on the spot I don't, you know, you kind of + yeah
14. T: So it is something that you reckon you know? That you know that "programma" is masculine?
15. S: Yeah, I know, yeah, particularly now that, that I've used it a lot in Cinema {the course on Italian cinema} like
16. T: Yes
17. S: we've talked and used these type of words, you know (x)
{Some turns not shown}
18. T: So are you saying you've learnt that during the course of + the course about cinema?
19. S: Yeah, well I knew
20. T: That before that you didn't know it was masculine?
21. S: I knew before that, I knew it was before that but particularly I talk, we use these words a lot now when we're talking about TV
22. T: Mm
23. S: and things like that, but + And it came more evident that when a word finishes with an "a" it's masculine usually, like "il clima" or "il tema" or
24. T: Those "ma" endings?
25. S: "ma" endings, sorry, yeah. But yeah, particularly + but I, yeah, it should come to me naturally now but I don't know why it came out + like that, yeah

Figure 3. Extract from SR session for example 3

Example 4. Lexis and Grammar: "relying on someone"

We have included Example 4 (see Figure 4) because it so clearly shows a learner taking advantage of an SR session as the opportunity to work on her language production by not only interacting with an expert but also drawing explicitly on the expert's knowledge. As well as encompassing issues across both lexis and grammar, the exchange includes three modes of correction: suggestions provided by the teacher in response to the learner's request (lines 5, 12, and 16); unsolicited correction by the teacher (line 7); and un-prompted self-correction by the learner (line 9). There is also an instance of the learner expounding out loud a rule she has noticed: "So, 'contare su' but 'appoggiare a'" (line 13).

The segment also illustrates particularly well both the unplanned nature of SR sessions, in terms of content, and the way they can facilitate alternation between focus on meaning and focus on form. Neither the student nor the teacher had the prior intention of discussing how to express "I rely on her" and the different prepositions required by the verbs they considered. Instead, these points arose in a focus-on-form interlude that was embedded into a context in which the communication of meaning was primary: the student was intent upon describing to the teacher an aspect of her relationship with a fellow student that she found interesting.

Example 4: Stimulated Reflection Segment 4**T = teacher, S = student, P = partner referred to**

- | | | | | |
|-----|----|--|----|--|
| 1. | T: | E tu te ne sei accorta | T: | And did you just notice this |
| 2. | S: | [[Si | S: | [[Yes |
| 3. | T: | [[oppure qualche volta è venuto fuori in maniera esplicita tra te e P questo? | T: | [[or did it come up explicitly at some time between you and P? |
| 4. | S: | Ehm, no, me ne sono accorta, anche perché + ehm + io, non so come dire questa espressione in italiano, <i>I rely on</i> + il suo, la sua conoscenza dell'italiano, mi | S: | No, I just noticed she does it + Partly because I + I don't know how to say this in Italian: <i>I rely on</i> her knowledge of Italian, I |
| 5. | T: | "Mi appoggio"? | T: | {Suggests verb} "Mi appoggio"? |
| 6. | S: | Mi appoggio, sì. Mi appoggio nella sua conoscenza | S: | {Uses wrong preposition after the verb} "Mi appoggio," yes. I rely on [her |
| 7. | T: | Alla | T: | {Gives correct preposition} [On |
| 8. | S: | Alla? Alla. Mi appoggio alla sua conoscenza dell'italiano anche nella pronuncia, perché lei ha fatto più anni di italiano rispetto a quello che ho fatto io | S: | {Repeats the preposition and then starts the sentence again, correctly} On? On. I rely on her knowledge of Italian in pronunciation too, because she's done more years of Italian than me |
| | | {Some turns not shown} | | |
| 9. | S: | Noi sappiamo qual è il nostro livello di italiano e lei sa che io mi appoggio su la sua conoscenza della lingua. Alla! Alla conoscenza della lingua. | S: | We know what each other's level of Italian is and she knows that {Uses wrong preposition} I rely on her knowledge of the language {Suddenly corrects herself} On! On her knowledge of the language |
| 10. | T: | Sai che cosa, non + "Mi appoggio" si capisce ma non è la parola che proprio + Ci penso, perché non mi torna completamente e ti farò sapere esattamente come puoi rendere + sì, in questo contesto. | T: | You know + "Mi appoggio" is comprehensible but it's not the right word + I'll think about it, I'm not really happy with "mi appoggio." I'll get back to you about how to say + in this context |
| 11. | S: | E lei comunque sì + sa che io conosco più come utilizzare il computer e queste cose, quindi se c'è qualche problema, diciamo tecnico, lei sa che + che so come risolverlo oppure | S: | And she knows that I know how to use the computer better than her and things like that, and so if there's a, say, technical problem, she knows I'll know how to solve it |
| 12. | T: | "Posso contare." Posso contare sulla sua conoscenza della lingua e lei può contare sulla mia competenza tecnologica. [Mi è venuto! | T: | {Makes another suggestion} "Posso contare." I can count on her knowledge of the language and she can count on my technological competence. [It came to me! |
| 13. | S: | [Quindi "contare su" e "appoggiare a" | S: | {Notes the different prepositions that the two verbs take} [So, "contare su" and "appoggiare a." |
| 14. | T: | "A," uhuh, uhuh | T: | "A." Uhuh, uhuh |
| 15. | S: | Quindi, sì, lei sa che può contare con me. Con me? Sì | S: | {Uses the new verb but with wrong preposition; then checks the preposition} So, yes, she knows that she can count on me. On me? Yes |

- | | | | | |
|-----|----|--|----|---|
| 16. | T: | Contare su di me | T: | {Corrects the preposition} Count on me |
| 17. | S: | Su di me + ehm + in + nell'uso del computer oppure cose tecniche | S: | {Repeats exactly} On me + in the use of the computer and technical things |
| 18. | T: | Mm, interessante! | T: | Mm, interesting! |

Figure 4. Extract from SR session for example 4

CONCLUSION

This paper discusses the way we have carried through a set of theoretically-driven principles, conceived at the more abstract level, to a practical and concrete set of pedagogical procedures at the level of implementation. These procedures are designed to facilitate a balance between focus on form and meaning within a communicative, project-based setting. Trials of our approach with a small group of students have shown that action through the task and reflection through the audiovisual recordings can be supported.⁴ The students are able to engage in focus-on-form work that is relevant to their individual needs, especially as the SR work stems directly from a sample of their own language production in meaning-focused interaction at their current proficiency level. They are very much working at the interface between the language forms they know and can fluently reproduce in an online conversation and those they cannot.

As this approach entails one-to-one sessions between teachers and students, it requires a considerable commitment of the teachers' time for each student. It is therefore essential that the few sessions each student participates in be useful beyond the specific reflection episodes they produce; that is, they equip the student to better exploit future opportunities for reflection in a self-managed way. For this reason we consider the approach will be most useful if it serves to cultivate in the students a task-cycling mentality, a habit of alternating action and reflection or, more specifically, of using conversations with proficient speakers -- regardless of the medium and context -- as material for reflection. Many learners already realize how much they can exploit an interaction with a native speaker or teacher for "on-the-fly" focus on form: asking for confirmation, clarification, explanation, or repetition in the course of a conversation, and perhaps recycling what they hear. But few seem to practise deliberate post-task reflection, especially of a stimulated kind, and this is what we are seeking to bring to their attention.

We are planning a series of longitudinal research studies examining our pedagogical approach in depth. We want to track individual students and trace patterns of response to the recorded A-C text over time. There are three main areas we will be investigating: the language focus of the reflection episodes; evidence of learning as a result; and how their ability to reflect develops with experience. Specific questions might be

- Are students focussing on particular areas of language more than others when they review the recorded material?
- What are their strategies for reflection and how could they be improved?
- How can the teacher interventions be characterised and how can they be made more effective?
- Is there evidence that language points discussed in earlier SR sessions are absorbed and learnt such that changes are evident in later A-C sessions?
- Is there evidence of increased student autonomy, and does the student become more able to reflect and to critically assess the recorded material?

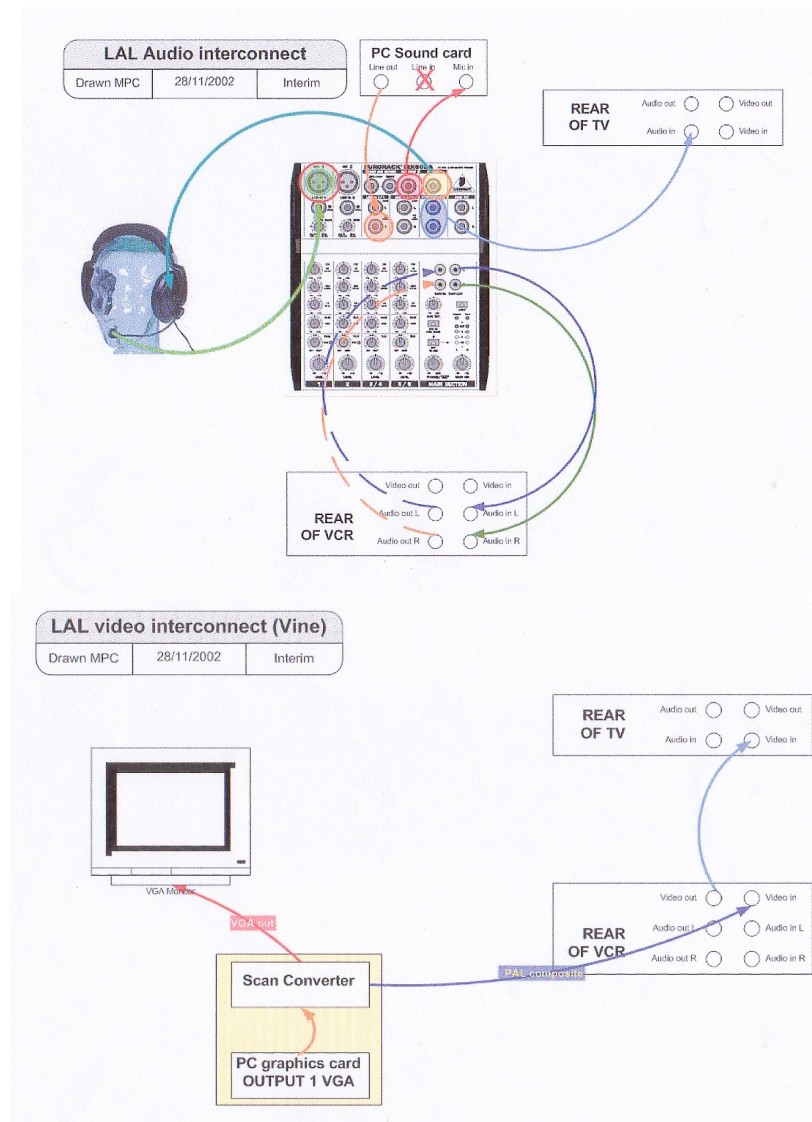
In sum, we want to be able to pinpoint the benefits, such as they are, in the longer term, and thereby strengthen our understanding of the approach so we can refine and improve it.

In closing, we turn to Samuda (2001) who argues that the systematic details of task design require more rigorous attention, "both as a research agenda and in pedagogic practice" (p. 136). She highlights the

importance of specific design features, "as a scaffolding device that may permit teachers to work at the developing edge of current interlanguage repertoires" (p. 136). We hope that the pedagogical approach described here involving Stimulated Reflection, task cycling, and audiovisual conferencing provides an appropriate response to Samuda, and a way forward.

APPENDIX

Audio and Video Setup



NOTES

1. The study discussed in this paper is part of a wider project involving students of Spanish as well as Italian. The project team is made up of the authors and Tiziana Miceli, Sara Visocnik Murray, Cristina Poyatos Matas, and Greer Johnson. Griffith University is supporting the project through a Teaching Grant and a Quality Enhancement Grant.
2. Possible grades in any subject at our university are High Distinction, Distinction, Credit, Pass, and Fail.

3. The symbol "+" indicates a pause of up to 1 second; (x) an undeciphered item; "[[" two utterances starting up simultaneously; "[" and "]" the start and end of overlap between two utterances when they do not start simultaneously.
4. From the technology perspective, we are continually reviewing audio-conferencing products so that the most effective program to support our project may be used. We are also investigating the possibility of digitally recording and distributing the A-C sessions with an audio/video capture program such as "Camtasia" (see www.techsmith.com). Potentially this is beneficial because of the speed with which the teacher or student may review a session by using a technique called *scrubbing* which, like a scroll bar in a word processor, enables the user to scan a digitized video text very quickly. The main drawbacks of this approach at the moment concern the cost of the software, the need for a dual or upgraded soundcard for recording the twin audio tracks and a CD burner on the computer to record the A-C session, and concerns that students may not have easy access to playback facilities either at home or elsewhere.

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