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"Stimulated Reflection": A Technique for Language Learners

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In this paper we present a technique we call "stimulated reflection", which we have used in seeking to encourage tertiary-level learners of Italian to reflect on their oral production, or 'think after they speak'. This is part of our efforts to prepare them as autonomous learners who can fully exploit opportunities for conversation outside class and after they graduate, especially those provided by computer-mediated audio-conferencing tools. In a stimulated reflection session a student and teacher together review and discuss a recording of a conversation involving the student. We present examples of the types of reflection events our students engaged in during stimulated reflection sessions, distinguishing between those concerned with the linguistic aspects of the conversation and those addressing the interactional dynamics and the students' personal communication strategies. In analysing them we look for evidence of the students going beyond describing an experience to stepping back and viewing it from an external and critical perspective, and observe the teacher's role in this. We conclude by outlining further investigation to be done, including experimentation with a variation on the technique, which we hope will further encourage the students to engage in such "stepping back".

Background
Since the 1980s reflective practice has been seen as playing an important role in adult education and there has been considerable attention to exploring ways of helping adults enhance their learning by integrating experience and reflection. In this paper we present a technique we call "stimulated reflection", which we have used in seeking to encourage tertiary-level learners of Italian to reflect on their oral production. This is part of our efforts to prepare them as autonomous learners who can fully exploit opportunities for conversation outside class and after they graduate. We examine the types of reflection our students engage in using this technique, and outline further investigation to be done.

One area in which there has been extensive work on methods of fostering reflection is teacher education. Teacher preparation programmes have been placing increasing emphasis on the need for student teachers to subject their beliefs on teaching and learning, and their practice, to critical analysis. The aim is to move from a level where actions may be guided largely by intuition or routine to one where they are guided by critical thinking (Richards, in Farrell, 1995, p. 94). Hatton and Smith (1995) reviewed studies of various approaches to reflection in the teacher-education context and proposed a typology of reflection events that can result. Some approaches involve reflection-on-action; that is, reflection that takes place after an activity, when the learner can give full attention to analysis and possibly with the support of a teacher. Others are
concerned with reflection-in-action, which occurs during an activity and requires simultaneous attention to behaviour and analysis and immediate action in response (Imel, 1992). Recently, there has been increasing attention to reflective practice in second and foreign language learning. Pennington (1992), among others, stressed the benefits to language students of conscious attempts to improve their effectiveness through consideration of learning beliefs, strategies and outcomes. Little (2002) defined engaging in reflection as essential to language learners' assumption of responsibility for their own learning, and therefore as a step towards their development of autonomy. Murphy (2001) noted the abundance of literature on not only the significance of reflection in effective and self-directed language learning but also the difficulties students can have with respect to reflection and autonomy.

Most of the literature on approaches used by language teachers to promote reflection concerns reflection-on-action rather than reflection-in-action. In some cases the framework provided by the teacher is intended to support reflection on the learning process in general and over a period of time; in others it relates to a specific task or activity, usually conducted in class, which it closely follows in time. One example of the first type is reported on by Murphy (2001). Her students were invited to periodically fill in three types of forms (skills audit, self-assessment and reflection sheets) intended to help them in reflection on their learning process in general, through the range of learning strategies of "reflecting on performance, prioritizing, planning, monitoring progress and self-evaluation" (pp. 2, 4). This was an ongoing process throughout the duration of their course and was not limited to any particular language skills, materials used or activities conducted. An example of the second type is Ting's (2002) work with Italian university students of English; she included a written, in-class reflection activity at the end of each lesson, on difficult second-language grammar domains encountered in the lesson, and found this helped students perform better.

Our aim in the project discussed in this paper was to promote reflection-on-action and in relation to a specific type of activity – conversation in the target language. In other words, we set out to turn a familiar maxim on its head and encourage our students to 'think after they speak'. Both the conversations and the reflection activities took place outside class. The reflection activity was conducted in face-to-face meetings between a student and teacher, in a literal application of Little's advice that reflection is best developed interactively, "as teacher and learner collaborate in seeking to make explicit the learning process the student is engaged in" (2002, p. 22).

While experimenting with reflection in this context, we were interested in analysing the types of reflection our learners engaged in. While we were not able to find any existing framework for classifying reflection events that strictly applied to our situation, we drew on the discussion by Hatton and Smith (1995) of different levels in student teachers' reflections on their practice. What we found particularly valuable was their fundamental distinction between a reflection event that involves "stepping back" from an action and "mulling over" one's role in it, and one that does not. Hatton and Smith claimed that it is when stepping back and mulling over take place that self inquiry happens and reflection becomes analytical (p. 49).
What makes the details of the four-level schema defined by Hatton and Smith not applicable to our situation is the fact that student teachers are not likely to be concerned with the accuracy and fluency of the language they use in their practice in class in the same way that a language learner is in a conversation in the target language. But this is not to say that language learners will be interested in reflecting only on what they say, and student teachers only on what they do. In fact, given that conversing requires competence not only in the linguistic sense – in using and understanding lexis, grammar, pronunciation and intonation – but also in interacting with another person, we can say that language learners should be able to profit from reflecting both on what they say and what they do in a conversation.

In light of this observation we decided to distinguish between two realms of reflection that our language learners might explore after a conversation: the linguistic and the "interactional". The latter includes, for example, dealing with turn-taking, giving and receiving cues, and using phatic expressions to keep the connection alive. Another aspect of conversation, which assumes particular importance for language learners, is that of applying strategies for understanding and for getting one's message across. This means, for example, using techniques such as asking for clarification or correction; it also entails dealing with being corrected. We included these too in the interactional category.

**Stimulated reflection (SR) sessions**

Our study of students' reflection is part of a project being conducted at Griffith University to investigate the use of computer-mediated audio-conferencing as a means for language students to practise speaking in their target language outside class. We worked with a small group of advanced students of Italian who were producing copy for a Web site providing information for students planning to work or study in Italy. This was a pilot exercise which was not part of their regular course work nor linked to assessment. In the course of working as a team to collect and prepare material, our subjects were invited to use Netmeeting (an audio-conferencing tool) for conversations over the Net. In this way they engaged in several peer-to-peer conversations which were recorded and examined in later reflection sessions.

We called these stimulated reflection (SR) sessions, with reference to the research technique of stimulated recall discussed by Gass and Mackey (2000), wherein a recording is used as a means to prompt (or 'stimulate') a subject's memory of an activity. At each SR session a student and teacher together viewed a video-recording of a Netmeeting session and discussed various aspects of it. The video-recording included the audio of the two voices and the screen contents captured from the computer, since Netmeeting allows the two parties to share a desktop and applications and work jointly on the same documents. It therefore allows a more comprehensive record – and stimulus – to be used than an audio-only recording. The SR session was usually held soon after the Netmeeting session, so that the student's memory of the conversation was fairly fresh but the teacher had time to preview the recording, familiarize herself with the content of the conversation and take notes on possible points to raise with the student. While the two then viewed the video together, each could stop it at any point to initiate a discussion. Usually when the teacher did this she began with an open question, such as "Can you tell
me what's happening here?", "What were you trying to say here?" or "Is there anything here that it might be useful to talk about?". At times the discussion was such that the video was rewound and a segment replayed several times.

**Analysis of the SR sessions**

In analysing the SR sessions (from transcripts of recordings) we were interested in two main questions. First, were distinct levels of reflection identifiable, and was there an equivalent to the "stepping back" discussed by Hatton and Smith? Second, how did our collaboration as teachers help the students in reflection? We examined reflection events on linguistic and interactional aspects separately.

As far as interactional aspects are concerned, our observations of the students' reflection events suggested that it was indeed possible to make a distinction between a level of reflection that involved stepping back and one that did not, somewhat analogous to that made by Hatton and Smith with respect to student teachers' reflections on their practice. This is because it is a matter of our learners observing their *behaviour* in conversation. In some reflection events, our students did seem to step back and observe their own behaviour from an external point of view, and gave the impression that they were becoming aware of something that might influence their behaviour or way of seeing interactional dynamics in future. But there were others in which, even when prodded by the teacher, they did not step back but simply described, and sometimes justified, their behaviour, thus apparently reinforcing their existing point of view. The following examples, concerning error correction and turn taking, illustrate both levels of reflection.

In the first example (Figure 1), stepping back allowed a student to evaluate her peer's approach to correcting her and her response to being corrected. While discussing a pronunciation error she had made, the student pointed out her interlocutor's habit of repeating an utterance back to her with the error corrected. Invited by the teacher to comment on this, she concluded that, although she often appreciates this approach, sometimes she would prefer a direct and explicit correction. Interestingly, some time after this SR session, the student informed us that she and her partner had subsequently discussed error correction openly, as they both felt their strategies needed to be clarified if they were to continue working together efficiently and successfully. We consider this a positive outcome of this type of reflection.

In the second example of stepping back (Figure 2), the student explored the impact of her leading role in a *Netmeeting* conversation with a less assertive partner. She initially justified the way she dominated the conversation on the basis of her partner's encouragement to do so through her frequent interjections of "Sì" or "certo" or "Sì, certo" (Yes, OK). Prompted by the teacher, the student then looked more closely at these interjections and realized that her partner had in fact been trying to take a turn in the conversation. Her reaction was to reflect on her tendency to interrupt and take the lead without regard for her interlocutor.
S = student; T = teacher; P = partner

T: So you pronounced it 'discheto'?

S: 'Disccheto' instead of 'dischetto'. You can tell, because later, when P says it ++ That + Anyway, it's one of the strategies that P uses to ++ Because two things I'm always doing, two mistakes, are when I pronounce a word with a double consonant wrongly or when I write it and make spelling errors. What's spelling in Italian?

T: 'Ortografia'

S: 'Ortografia'. And P, one of the strategies she uses is repeating a word after I say it, repeating it with the correct pronunciation, or she tries to let me know, but in an indirect way, not directly.

T: And did you realize this yourself, or has it come up explicitly at some stage between you and P?

S: No, I realized it, maybe because ++ I, I don't know how to say this in Italian, I rely on her, her knowledge of Italian

[...]

T: Ah, interesting. Can I ask you something? Are you happy with P's way of 'correcting' you, or would you prefer something more explicit or more direct? Is this indirect way in which she, let's say, repeats your word but with the correct pronunciation, OK with you?

S: Mmm, yes, it's fine. But when we're working on a document, later on, I made a mistake in ++ spelling a word and she, so as not to tell me directly + tried to + to ask me something else and to see if I had realized or not. Ehm + and so maybe in that moment it would have been easier to tell me "you made a mistake" or "that word's not written right" or something like that

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**Figure 1.**

*Example 1. Reflection on interactional aspects: Peer error correction.*

T: OK but was she suggesting something to you there?

S: I'm not sure

[...]

T: That's what I was wondering, if there was a suggestion or not. Or if you had seen it as a suggestion

S: No, I, no, but perhaps she wanted to suggest something, I don't know, oh dear!

T: No, no, I'm not saying ++ It's just that not being present at the time ++

S: And what did I say after that?

(They listen to the Netmeeting segment again)

[...]

S: [...]. Oh dear! Maybe + later on I'll ask her. I feel bad, poor P, I left her + [...] No, because I know I usually do that, I keep on talking talking talking with what I (emphasized) want to say. But I think that later, when she had control (of the mouse), I did let her speak.

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**Figure 2.**

*Example 2. Reflection on interactional aspects: Turn-taking from assertive partner's perspective.*
T: Can you stop it here? In this discussion here P shows you various things and you keep saying "sì" or "certo" or "sì, certo". What was going on in this discussion?
S: Mmm. When I was answering "sì" or "certo", I think it was, she was explaining things to me, showing me the page, and I was saying, "ah yes, I see", that I understood what she was showing me and saying.
T: So how do you use these 'sì's and 'certo's? What function do they have for you, when you say
S: Like saying "OK, I agree", another way of saying. I don't know, I always say "sì", um, I don't know, maybe it came out like that, but I meant to say "yes, I agree, I understand"
T: To keep the conversation going, to continue
S: Yes
T: But here there's ++ Can you tell me here if the word you say, maybe a 'sì' or a 'certo', is something you used to keep the conversation going or if you wanted to take over? It's not clear to me.
S: Ah, OK.
(They listen to the following Netmeeting segment)
P: after 'for those who' we've put some information for students
S: [ah yes, here
P: [and here
(They then resume discussion)
S: Maybe I wanted to say something but she interrupted me and said + Yes I wanted + because I saw here there are the words 'University of Bologna'. Maybe I wanted to say something about that, I don't know, but + Yes
T: So you used it to break in to say something?
S: That I +
T: Do you want to listen to it again?
S: Yes because +
T: And we can listen to what happens afterwards again too, so it's easier to
(They listen again to the same segment)
S: Yes maybe I wanted to say "ah yes, here, I want to show you something". But I really can't remember what I wanted to say. Maybe it was about + that link there for Bologna.
T: OK, so you wanted to interrupt +
S: Yes, maybe I wanted to say ++ Yes
T: But then P continues and you don't interrupt her
S: I let her
T: You didn't try other ways?
S: No, because maybe she later on said the thing I wanted to say, maybe that's why I didn't interrupt any more +

Figure 3.
Example 3. Reflection on interactional aspects: Turn-taking from less assertive partner's perspective.

The next example (Figure 3) is of a reflection event that did not entail stepping back. Here the less assertive partner referred to in Example 2 discussed the same Netmeeting
conversation with the same teacher. She resisted the teacher's fairly persistent invitations to look at her role critically and took a defensive stance, justifying her role and her partner's. She described her frequent interjections of "Yes, OK" as a way of keeping the conversation going and letting her partner know she was following. Even when the teacher drew her attention to an instance where, in the teacher's view, it was evident the student was trying to get a turn in the conversation but was interrupted by her partner, she continued to justify their uneven roles as being determined by the situation. We think she therefore missed an opportunity to discuss tools she could use in future to make it clear when she is trying to take a turn, such as expressions more appropriate than "yes, OK" and paralinguistic techniques using intonation and tone of voice.

It seems to us that for this student a stepping back type of reflection was difficult and uncomfortable on this occasion. It is possible she felt that commenting on her peer's behaviour meant being critical of her and therefore going against her principles of fairness or politeness. Clearly, we as teachers need to bear in mind that some students may be reluctant to step back in some situations. This may be due to their personality, or their perceptions of what stepping back might entail – such as being critical of a peer or oneself! – or the very presence of the teacher and therefore some expectation of being 'tested'.

When we turned our attention to the students' reflections on linguistic aspects we realized it was not going to be appropriate to distinguish between reflection that involved stepping back and reflection that did not. We felt that any noticing of language elements had to be seen as requiring some degree of distance from oneself, of becoming an external observer. By 'noticing' we refer to a learner's conscious act of focusing on the form of language (Ellis, 1995), whether it be that of the input received from an interlocutor or that of his/her own output (Swain, 1998). It can serve either to consolidate one's knowledge or extend it (Swain, 1998, p. 67). We saw noticing as implying, by definition, a stepping back from one's own interlanguage – that is, one's individual linguistic system as a non-native speaker – as it entails examining differences between that interlanguage and the target language.

We found that our students' reflection events on linguistic elements in SR sessions could be classified into three categories. In the first case, a student notices something in the input that suggests a difference between the language of her interlocutor and her own (such as an element that exists in the interlocutor's language but not her own). In the second, while observing her own output, she notices that an element she needs is missing in her interlanguage, or detects a "hole" in the terms used by Doughty and Williams (1998, p. 228). In the third case her focus is again on her own output but on an error rather than a hole. In each situation the noticing may be spontaneous or prompted by the teacher. We will illustrate these three categories by presenting examples, and argue that some stepping back is occurring in each.

Example 4 illustrates the first situation: here the student encountered unfamiliar usage of a particular lexical item in the input, which suggested a difference between the language of her interlocutor and her own. In this instance, the teacher had actually invited the student to comment on her partner's pronunciation in a particular segment but, in the course of responding, the student went off on a tangent, taking the
opportunity to query the partner's use of the word 'fascicolo' and therefore to step back and question or verify her own knowledge of its use. With the teacher's help she arrived at extending that knowledge.

S: [...] There are some words [...]. For example, to say 'folder' she says 'fascicolo'. I've noticed it, but ++ I haven't asked her why. [...] But I noticed that often I say 'folder' and then she says 'fascicolo'.

[...]

S: I've never heard it used for folder on a computer. 'Fascicolo', isn't it ++ 'Fascicolo' it's a magazine, 'the issue', isn't it? Don't you use it to say 'issue'?

T: Yes it can be that, 'fascicolo' as an issue of a magazine, but a fascicolo can also be ++

S: The folder of a computer too

T: Yes, but also papers. For example, in an office, in a filing system, there might be a fascicolo for Ms A. Smith and it's all the ++ a folder full of documents. At the consulate they've got a fascicolo with my name and documents

S: Ah maybe that's where she got the word from (they laugh)

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The next example (Figure 5) illustrates the second situation, in which a student reflects on a hole in her output: in this case a missing lexical item. The teacher remarked on a hesitation and so elicited the student's observation that she had paraphrased 'piece' (of music), awkwardly, as 'piccolo pezzetto' (little bit), because she could not come up with an appropriate word. The teacher had a dual role: encouraging the student in the stepping back, by inviting her to notice the hole, and then providing expert assistance, by offering the word 'brano', which appeared to extend the student's knowledge.

T: There's a hesitation here, I heard "a +++ a +++" and then you say "little bit". Why this hesitation?

S: (laughs) I meant a ++ yes + a little ++ bit of music, I could hear music. [...] And I couldn't say 'little bit', I wanted to say 'little bit' but it didn't come out

T: Then were you happy when "little bit" came out? Was it the word that you wanted?

S: No, it wasn't the + I really didn't know how to say it. It gives the idea but then if there's another way

T: Maybe you could have said 'brano' [...]?

S: No, it didn't come to mind

T: So "little bit" was to stand in for the word you had in mind in English?

S: Yes, I didn't know you could use 'brano' in this context

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The final example (Figure 6) belongs in the third category, of reflecting on an error in one's own output. We think it is a particularly interesting example because the stepping
back that occurred, guided by the teacher, not only assisted the student to gain new knowledge – about the context of use of a particular expression – but prompted or reminded her to take such considerations as context of use and, as she said, 'intrusiveness' into account in her reflections in general. A reflection event in which the student realizes that an utterance has aspects that she had originally not taken into consideration may be useful in developing learning strategies for the future.

The example relates to a Netmeeting session during which two students were discussing a questionnaire they were preparing for Italian university students. In the SR, the teacher invited the student to reflect on the inclusion of the question 'Cosa fai nella vita' (What do you do in life?), which is very informal and typical of spoken language. The combined efforts of the teacher and the student, in a discussion that took considerable time, resulted in the student looking at the expression from a new angle: not just in terms of grammar and lexis but degree of formality and intrusiveness.

T: OK it was this question – which you're both fairly happy with – 'Cosa fai nella vita?' (What do you do in life?) Have you ever heard this question before? Did you already know it?
S: Yes I'd heard it. It's common in Spanish too, to say 'What do you do in life?' I wasn't sure at the time, but maybe you can't tell from the video. I thought it was very informal, but [...] I thought it might be OK because this (questionnaire) is for young people. I thought maybe it's too informal but at the same time I said to myself "let's leave it anyway".
T: And so… I don't know if it's the same in Spanish but… This 'Cosa fai nella vita?', had you seen it written in a questionnaire or is it more something you use in speaking?
S: Yes it's very colloquiale [...] In Spanish does it belong to spoken language too?
T: 'Colloquiale' [...] In Spanish does it belong to spoken language too?
S: Yes. So maybe that's why I wasn't very sure [...] the fact that it was written [...] Oh, another thing [...] Even though it's more common among young people [...] Is it a bit intrusive? [...] To say "What do you do in life?" rather than "Do you study? Do you work?" something like that?

Figure 6.
Example 6. Reflecting on an error in the output.

Another point needs to be made in relation to the third category. In many instances, reflection on an error in output involved very little discussion, as the student was able to fairly promptly correct and explain an error upon spotting it herself or having her attention drawn to it by the teacher. We consider such events useful, nonetheless, as registering the occurrence of the error did involve seeing the output from an external perspective. While this kind of noticing may not necessarily be a step in extending knowledge, it may well make a contribution to consolidating existing knowledge.

Conclusion
Our initial analysis suggests that SR sessions do offer students the opportunity to engage in a stepping back type of reflection, whether on linguistic or interactional issues. They
can profit from both the expert assistance of a teacher and the investment of their own
time and capacity for critical thought. As discussed in relation to Example 6, the time
and effort invested in one SR may provide the student with a new way of looking at
language in any future reflection events, which may be in other settings. And Example 1
is an instance of an SR event that prompts a student to take a specific step to enhance
her learning strategies outside the sessions.

The data also show that the teacher plays a major role in facilitating or even prodding
students' reflection as well as giving expert feedback. However, there is the risk that
students may react defensively to a teacher's probing and feel themselves put to the test.
We think a teacher faces two major challenges in ensuring that students perceive SR as a
real learning opportunity for their own benefit. One is to make sure that the student sees
the teacher, at all times, as a resource to exploit. The other is to adapt the prompting
technique to a student's personality and find ways of offering feedback when it is not
explicitly sought.

We therefore need to further investigate the role of the teacher and of the student's
personality in effective SR and in facilitating stepping back. We need to find the
necessary strategies to support students as they struggle with the uncomfortable aspects
of reflection. This is particularly important because we would like students to see the
benefits of continuing to use computer-mediated audio-conferencing for conversation,
especially with native speakers, after finishing their studies. And we would like them to
continue to reflect on such conversation even when they no longer have a teacher
available for SR afterwards. This means developing the habit of reflecting on their own
initiative: noticing what the interlocutor says and what they can learn from that as well as
critically analysing their own production and their use of strategies for managing their
role in the interaction. We are trying to encourage them to do self-directed reflection and
look out for contact with other speakers – whether native speakers or other learners – as
providing opportunities to ask some of the sorts of questions they would raise with a
teacher in SR.

We are currently experimenting with a new approach to SR intended to allow the
students greater responsibility and control. This is in the context of a second-year course
in which students not only attend classes but are paired with native speakers in the
community for face-to-face practice outside class. We will be inviting the students to
review the recordings of these conversations on their own first, so as to come to an SR
with a list of interactional and linguistic points to raise for discussion. In this way we
hope that the agenda is less likely to be set by the teacher and that this may help lessen
some students' defensiveness or feeling that they are facing a test.

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1 This is part of a project being conducted by Mike Levy, Greer Johnson, Cristina Poyatos Matas and the
authors. See Levy and Kennedy (2004) for further information on the project.

2 One example of a study of reflection-in-action by language students is Anderson's (2002) analysis of
conversations in a 'Tandem' situation, where students of different mother tongues are paired so that each can
practise with a native speaker of the language she/he is learning. Anderson argued that this type of
conversation exchange can promote reflection-in-action, as students tend to engage in metalinguistic and
metacognitive discussion in such an environment.
In the excerpts shown the discussion was conducted almost entirely in Italian. Due to space limitations we include only our translations in English.

The symbol ‘+’ indicates a pause of up to 1 second, ‘[…]’ some text not shown, and ‘[’ alone the start of an overlap between two utterances. Round brackets enclose transcriber’s and translator’s notes. Italics indicate English words used in the original.

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