

Teaching Respeaking to Conference Interpreters by Claudio Russello

This contribution is sent by Dott. Carlo Eugeni, Member of the Education Committee of intersteno

15th April 2010

Dear Colleagues in response to Prof. Trivulzio invitation, please find attached the latest draft of an article a student of mine is writing about teaching respeaking (speech-to-text writing applied to live subtitling which shares many characteristics with live-reporting).

The paper collects some experiences in this field by some colleagues of mine (in Spain and in the UK) and by myself. Moreover it draws on the contributions by researchers in the field of Simultaneous Interpreting thus paving the way to multidisciplinary.

The paper will appear in the next issue of the very well-known scientific journal of translation SLTI published by St. Jerome.

Also, may I ask you to focus your attention on the forthcoming international conference "Languages and the Media 2010" which will be held in Berlin on October 6th-8th. The call for papers is still open (deadline May 3rd). This may be a good opportunity for all of us both to meet in a different setting and to start opening the studies of reporting to other similar disciplines.

For more detailed information please click the following link: <http://www.languages-media.com/>

With my best regards,

Carlo Eugeni

Abstract

The subject of the present article is respeaking: a new technique which has proven to be very useful to produce real-time, intra-lingual subtitles and any kind of live transcription of aural speech. Though some research in this field has already led to important results, much further research is needed to investigate some aspects of respeaking and especially of the training of professional respeakers. This article offers a comprehensive overview of all the skills required for respeaking and proposes a wide variety of practical exercises to provide students with such skills. More specifically, an in-depth analysis is dedicated to the skills activated during the process of respeaking in order to confirm that it involves a number of mental, non-automatic activities linked to interpretation. Bearing in mind the similarities between the two disciplines, we propose a training module for respeakers that can be introduced in university degree programmes in conference interpreting. The rationale of this proposal is that trained interpreters can have a head start in carrying out the activity of live subtitling through respeaking, and thus find new job opportunities in a sector which is steadily increasing. Respeaking. Real-time subtitling. Simultaneous interpreting. Training. Multi-tasking skills. Speech-to-text recognition software. Live subtitles. Accessibility.

1. Introduction

The technique to produce real time subtitles through speech recognition software known as respeaking is a discipline which is still in its infancy. However, in those countries where a commitment has been made to extending live subtitling services, an increasing number of broadcasters are adopting it to meet the growing demand for fully accessible live television programmes. This trend results on the one hand in a need for training future respeakers and on the other in a need to provide trainers with adequate tools for teaching. The present article aims at shedding light on the above-mentioned issues by offering a comparative analysis between respeaking and simultaneous interpretation with a special emphasis on the aspects related to the training of respeaking students. After exploring the cognitive processing skills activated during the respeaking process, which are very similar to the competencies needed for simultaneous interpreting, a number of practical exercises to train respeaking students will be proposed and a list of all the skills required to professional respeakers will be presented.

2 . Similarities between respeaking and simultaneous interpretation

Respeaking is a new technique which has proved to be very useful to produce real-time, intralingual subtitles and any kind of live transcription of aural speeches. This speech-to-text activity is possible thanks to the work of a professional (the respeaker) who analyzes, memorizes, reformulates and dictates in real time what he or she hears to speech recognition software which processes the input received and transcribes it, thus producing a written text. As it may seem evident from this first definition, this technique has a number of striking similarities with simultaneous interpretation in which a professional (the interpreter), while listening to a source message, analyzes, memorizes, mentally reformulates it and produces the target text speaking through a microphone.

A simultaneous interpreter listens to speech in one language (the source language) and speaks in another at the same time (the target language), translating the speaker's message for the listeners who can hear what he says through headsets. The characteristic that more resembles the two professionals is the skill to carry out several cognitive activities simultaneously in order to create an aural output that is as faithful as possible to the source text. More specifically, what the two professionals share is the ability to listen, analyze and speak at the same time. Both professionals must be able to perform well under extreme time pressure, and to cope with the associated stress of doing so. Both interpreters and respeakers facilitate communication between two parties that otherwise would not be able to understand each other. Their primary concern is conveying the speaker's message accurately to an audience that only by listening (the translation in their language) or reading (the subtitle or

transcription) can have access to the meaning. They are the means by which linguistic or sensorial barriers are overtaken.

Analyzing respeaking and simultaneous interpretation in terms of product, process and function, it is worth noting that the process and the function of the two techniques are very similar, if not identical. The process is the result of a linguistic reformulation, from a language to another in the case of the interpreter, and from a linguistic structure to a different one (simpler, shorter and respecting the characteristics of written language) in the case of the respeaker. As for the function, they make polysemiotic texts accessible to a part of the audience that without a respeaker or a simultaneous interpreter would not be able to understand what is conveyed by the audio channel.

Conversely, the main difference between the two activities is represented by the product or - more precisely - by the way in which the product is presented. While interpreters address their speech to the audience (voice to voice transposition), respeakers speak to speech recognition software, which only after an additional, although immediate, step makes the message visible to the audience in a written form.

The skills required to transpose accurately an aural message to a written text come from the field of audiovisual translation (AVT) and subtitling for the Deaf and Hard of Hearing (SDH). Respeaking is therefore strictly related not only to simultaneous interpretation but also to these disciplines. To summarize, it is probably useful to refer to Corinne den Boer (*op. cit.* in Remael & Van der Veer, 2006) who claimed, some years ago, that the ideal person for the job is a qualified interpreter and a professional subtitler. However, as pointed out by Remael & Van der Veer (2006), “VRT1 is now experimenting with interpreters and they are finding that they do a much better job”. The aim of the present article is thus to show that since the skills required to respeakers and to VRT is the public Dutch-speaking channel in Belgium that provides subtitles for the Deaf and Hard of Hearing through respeaking simultaneous interpreters are very similar, it seems possible to deduce that the training for the two professionals will be very similar as well: a training course for interpreters and one for respeakers will have in common a number of exercises designed to develop the basic skills needed by students of the two disciplines. The multitasking skills and the strategies to cope with the cognitive load, which are the most characterizing skills of a simultaneous interpreter, can be useful skills also to carry out a new job, namely respeaking. The growing demand for professionals of this new technique can offer new job opportunities to students of conference interpreting. The words of Muzii (2006) seem to confirm this idea: Respeaking is a sort of simultaneous interpretation in the same language, which requires strong linguistic skills as well as the ability to understand and analyze complex issues and ideas and to translate them clearly, using an informative and faithful wording to create coherent, clear captioning with the appropriate level of accuracy. The language market is evolving and conference interpreting is shrinking; conversely, the audiovisual market is characterized by an upward trend, and respeaking can offer new job opportunities for interpreters with inter-linguistic subtitling abilities.

3. Cognitive processing skills for interpreting and respeaking

As mentioned above respeaking can be compared to subtitling if the focus is on the product and to simultaneous interpreting if analyzed in terms of process.

However a number of specific features of respeaking make it totally independent and different from subtitling on the one hand and from interpretation on the other. Yet respeaking is still thought of as a branch of subtitling, just as simultaneous interpreting, in its infancy, was considered a branch of translation, rather than a profession in its own right (Marsh 2004). The progress made by simultaneous interpretation (SI) during the last 50-60 years show that the process through which interpretation obtained a total emancipation from translation was largely due to the peculiar features of this discipline and to the need to differentiate it from all other forms of translating activities. It seems

possible, if not likely, that given the growing interest for live subtitling and the spread of new studies and research on this topic, respeaking can one day lead to the creation of a field of study totally focussed on this discipline.

Moreover, the process which led to the professionalization of interpreters has been fostered by the creation of specific academic curricula and didactic tools for the training of interpreters. As for live subtitling through respeaking, on the other hand, only a few and isolated modules are at now being integrated in university courses of audiovisual translation and subtitling.

We can thus affirm that this recent technique is far from being academically and professionally acknowledged. In an attempt to offer a contribution to the present situation, we want to present a training course for professional respeakers, based on the most widely accepted teaching paradigm of simultaneous interpretation. In this respect, it's important to point out that there are many different opinions on what is the best training practice or approach to be adopted to train conference interpreters. Nevertheless it is possible to affirm that at present a training paradigm for simultaneous interpreters is widely accepted and adopted by major schools and universities.

As Mackintosh (1995: 129) points out: Although there are differences in the approach to interpreter training, these seem small enough to justify the claim that there does in fact exist a training paradigm, derived from a widely recognised and practised interpreting paradigm. And: Further evidence that there is a well-established and widely accepted CI [conference interpreting] paradigm is provided by the similarity between the content of training courses provided by many universities and other institutions such as the Commission of the European Union which runs occasional in-house training courses to meet particular needs. (Mackintosh, 1995:122) The statements of Mackintosh have been further confirmed by the birth in 2001 of the EMCI (European Masters in Conference Interpreting). It is a Consortium which establishes the training criteria to be respected by partner universities to provide students with a Degree in conference interpreting with a full recognition at European level and which is designed according to the quality criteria established by the CIUTI.⁴ All the 18 participating institutions throughout Europe share a number of modules and exercises which have been designed to equip young graduates with the professional skills and knowledge required for conference interpreting and they pursue a common policy on student recruitment and assessment, based on the aims of the programme and on the quality criteria which underpin the core curriculum (EMCI).

For instance, the courses activated at the Universities of Antwerp, Roehampton, Barcelona and Bologna (Forlì). ⁴Conférence Internationale Permanente d'instituts Universitaires de Traducteurs et Interprètes it is interesting to point out at this stage that many introductory exercises proposed by the EMCI and adopted by many university-level courses for conference interpreters are perfectly suitable also for respeaking training courses. We refer to those exercises which are intended to train students not in their second or third languages knowledge but to develop the cognitive skills which, as stated above, are fundamental for carrying out simultaneous interpreting, and respeaking alike. Among the cognitive skills respeakers and simultaneous interpreters should master, the most essential are probably the techniques of listening and recall, shadowing, dual-tasking, paraphrasing, abstracting, closing, lagging, and processing of names, figures and acronyms. In order to present a more in-depth analysis of these techniques, we relate to the didactic proposal of Sylvie Lambert for an introductory course on simultaneous interpretation made up of 12 learning objectives. It must be anticipated that this model does not include all the skills required to respeakers since it has not been designed originally to this end, neither it represents a complete training course for interpreters since it provides teachers with useful exercises aimed at developing just part of the skills required to do the job. However we think that Lambert's model can offer a number of didactical ideas which can be applied to design an academic module for respeakers, though more specific and technical exercises must be included in it. This model can be particularly of use to our scope because it is not designed to develop the linguistic skills of students but to improve cognitive abilities of interpreter-trainees. As stated by Lambert

(1992:15), “This course attempts to put into application some of the theories on cognitive and neurological psychology relevant to formation of conference interpreters”.

3.1 Learning Objectives for Respeaking Students

Lambert’s introductory course is structured around twelve pedagogical techniques which are to be presented to students step by step so that they can be familiar with a technique before moving to the next stage. These learning objectives are listed as follows:

1) Listening and recall. Listening represents the basic skill in any form of interpretation. Students are asked to simply listen to a spoken text without taking notes and they are told that they will be later asked to recall a number of given elements of the text.

This exercise trains students to develop a selective listening of a ST and to focus their attention more on its semantic elements than on its lexical and syntactic structures. This attitude is fundamental to conceptualize and understand the message of the speaker and to reformulate it.

2) Shadowing. Shadowing is the technique that more than any other resembles proper respeaking since it is “a paced, auditory tracking task which involves the immediate vocalization of auditorily presented stimuli, i.e. word-for-word repetition, *in the same language*, parrot-style, of a message presented through headphones” (Lambert 1992:17).

For respeakers training both *phrase* and *phonemic shadowing* (Norman 1976) exercises are of paramount importance. When phonemic shadowing, students are asked to repeat each sound of the ST as they hear it. It’s a word-for-word repetition of a message, thus it is quite identical to *verbatim* respeaking (Eugeni, 2009a). Through phrase shadowing students get familiar with the skill of memorize utterances and reproduce them after a short delay (of some words or a full sentence) making it possible to slightly modify and reformulate the structure of the ST.

This second type of shadowing is more similar to *non-verbatim* respeaking (*ibidem*) and trains students to develop their short-term memory and comprehension of the semantic contents of the ST.

3) Dual-task training. Before moving to other techniques, students must be able to split their attention between the two main tasks of any form of interpreting (both interlingual and intralingual): speaking and listening. Speaking and listening at the same time is not natural and can detract from other cognitive activities, it is therefore worthy of practice. Dual or multi-tasking exercises are therefore fundamental to learn how to carry out and coordinate two, or more, different and simultaneous cognitive activities. In designing such exercises for their respeaking trainees, trainers should take into account the specific activities which are to be carried out during live subtitling.

Apart from listening and speaking at the same time, students must become familiar to use the settings and functionalities of the speech recognition software, to activate shortcuts, to insert macros, to use touch-screen controls, etc.

4) Paraphrasing. The strategy of paraphrasing some words of the ST is very useful when an expression is too culturally bound to the Source Language (for interpreters) or it is possible to foresee and prevent that a word is not going to be correctly recognized, and thus transcribed, by the speech recognition software (for respeakers). The ability to find an equivalent term or expression in the same language in a very short time can be acquired through practice and exercises tailored to meet this specific need.

5) Abstracting. In providing students with abstracting exercises, trainers will ask them to listen to a speech and repeat only the main elements of it, removing adjectives, adverbs, subordinate and relative clauses, etc. For professional respeakers, and more in general for subtitlers, one of the most important

skill is the ability to produce a message synthetically but maintaining all of its main semantic elements. In subtitling, the ST must often be simplified to respect readability criteria, provided that omitting an idea-unit does not produce a total loss of meaning. In addition, respeakers can resort to abstracting strategies to reduce their *décalage* in all those circumstances in which their delay to the speaker is too long.

6) Clozing. This exercise consists of asking students to respeak a text which has previously been 'mutilated' of certain words and other textual elements. It is an exercise that can help to improve trainee's ability to find immediate responses to fill in empty spaces respecting the general meaning and context of the ST. It can improve students' vocabulary, creativity, memory, reformulation tactics and many other strategies which will improve their performance in difficult situation.

7) Sight translating. 8) Sight interpreting. 9) Processing digits, names, numbers, acronyms, lists. As any professional and scholar of the discipline knows, processing digits, names, acronyms, lists of data, quotes, and so on is a very demanding and truly problematic task for interpreters. To this concern Meyer (2008:108) points out that: Gile highlights names as potential problems for interpreters, especially if the interpreter is not familiar with a particular name or its pronunciation in the target language. [...] In terms of Gile's "Efforts Model" and its focus on listening/analysis, production and memory, names and other smaller linguistic forms such as numbers or acronyms may increase the efforts of the interpreter and thus require certain "coping tactics".

Although respeakers do not have to find equivalent solutions for such elements in the target language, it is however very common to find in a text to be respoken unknown proper names or figures and lists of data which can overload the listening effort and require more processing capacity for this mental activity at the expenses of the memory and production efforts. At a certain juncture of the course, the texts used for shadowing and clozing exercises could be enriched by a certain number of such specific elements.

10) *Décalage* or ear-voice span. Respeaking trainees should be accustomed to repeat what the speaker says with a minimum delay. With a very short *décalage*, respeakers can respect the need of synchronization of subtitles with images which helps deaf and hearing impaired people to understand who is saying what, and in some cases allow them to integrate the reading of the subtitles with lip-reading. Moreover, in the case of live subtitling for the TV, many programs are characterized by fast changes of set and characters. This makes the work of a respeaker even more complicated since a *décalage* of just a few seconds can make a conversation between two or more characters incomprehensible and thus jeopardize the final performance, even if the transcription is perfectly correct.

Also, respeakers face an additional difficulty. If they want to reduce the *décalage*, they cannot simply dictate their sentences at a faster pace because subtitles will be displayed on the screen according to the speed of dictation. All these aspects of the importance of a proper *décalage* must be known by respeakers and they must be trained to produce short stretches of text at an even pace, with a very short delay from the words of the speakers.

11) Anticipating. Anticipation exercises should develop students' skill of finding an immediate solution to complete a sentence without distorting the original meaning of the ST in accordance with the context. As already said for abstracting, clozing and paraphrasing techniques, anticipating is a valid method to reduce the *décalage* from the ST, without increasing the delivery rate of the TT. Bearing in mind the abovementioned need to dictate utterances to the speech recognition software at an even pace, this exercise can be extremely of use in training respeakers.

12) Ear preference and hemispheric processing. Neuropsychology showed that in the vast majority of human beings linguistic production and comprehension are carried out by the left hemisphere which

controls the right part of the body. 5 “It has been clearly shown that speech functions are lateralized in the left hemisphere in most adults” (Witelson & Wazir 1973). Right hemisphere is responsible for semantic relationships between words and reality held in long-term memory. It is important for interpreting and respeaking students to find their optimal condition while listening to the ST bearing in mind these aspects of cerebral lateralization. If it is true, as it seems to be, that the left ear is preferred to process verbal information, students will probably prefer to listen to the incoming ST through the left headphone, while the right ear is instead more focused on controlling the semantic meanings of the output. Whether we refer to respeakers and to interpreters, it is worth noting that such theories are still controversial among scholars and that each individual can prefer one ear or the other for a number of 5 This is what happens in right-handed people, while for left-handed the contrary applies. for different personal reasons.

However the knowledge of such cerebral lateralization can be useful to understand the cognitive load which professionals have to handle during both simultaneous interpreting and live subtitling through respeaking. The above-listed exercises are very important for training simultaneous interpreters and they cover an important part of several conference interpreting university-level courses.

The skills acquired by students through these exercises represent the basic knowledge which allows them to cope with most of the difficulties related to a simultaneous interpretation. However, as previously stated, the cognitive activities carried out by interpreters and respeakers are quite identical and therefore such exercises, and the resulting skills developed, represent the most consistent part of the training of respeakers.

The only two exceptions can probably be ‘sight interpretation’ and ‘sight translation’ because these techniques, unlike the other ten learning objectives, are aimed at fostering linguistic competencies of the trainees. The rationale of including a module for respeakers within a complete course for interpreters is dictated by the assumption that students of a school for interpreters have already acquired this set of skills through these exercises. Our proposal seems to be in line with the position of Remael and Van der Veer, scholars of the field and trainers of one of the pioneering courses for respeaking. They motivate their decision to include a course in live subtitling through speech recognition within the Master in Interpreting at University College Antwerp as follows: [W]e have been looking into what we have at our department for translation and interpreting, and what we need in addition. We already have an interpreting section, where students acquire a number of skills: listening and comprehension skills, memory training, oral skills, acquisition of specialised vocabulary, organisation of your documentation and databases, specific reproductive interpreting skills. We believe that all these interpreting skills will be useful for future *respeakers* as well. (Remael & Van der Veer, 2006)

4. Respeaking specific skills and related exercises

The above-mentioned list of exercises is aimed at developing the cognitive skills required by an interpreter. We have already said that many of these competencies should be mastered by respeakers 0 too. However respeaking is a complex activity which requires more specific skills not coming from the field of SI. To identify and analyze these additional skills required for respeaking we refer here to the taxonomy presented by Arumi Ribas and Romero Fresco (2008).

They put forward a proposal for the training of respeakers listing all the practical exercises aimed at providing students with the required competencies to work as a respeaker. After contrasting and comparing respeaking, simultaneous interpreting and subtitling, the authors draw up a list of all the professional skills organized according to the discipline they come from: whether from SI or subtitling. Moreover, they make another distinction between the skills to be activated before the process and those to be applied as the process is taking place.

We will offer an overview of the taxonomy put forward by Arumi Ribas and Romero Fresco in the following chapter, starting from the preliminary skills respeakers should master. *4.1 Prior to the process of respeaking*. Among the skills for the preparatory phase, respeakers share with simultaneous interpreters the ability to create glossaries, to research specific subjects' terminology, as well as the knowledge of the code of ethics that they have to respect during the job. These are aspects that university courses for interpreters already provide and are integrated in the European Masters in Conference Interpreting programme.

As for respeaking-related specific skills for the preparatory phase, Arumi Ribas and Romero Fresco refer to specific knowledge of the speech recognition software, both for technical aspects - technology, functions, limitations, characteristics of one's own voice model, etc. - and for the possibility to train the software to improve the words-recognition level and minimize misrecognitions. This last phase of the training is of paramount importance for a good performance of the respeaker, given that the capacity of the software to correctly recognize every utterance can be fostered by proper and constant training. It is at this stage that the respeaker has to create *ad hoc* dictionaries or specific macros and house-styles.⁶ Arumi Ribas and Romero Fresco (2008:117) describe the importance of the training activity of the software as follows: [T]he amount of work carried out by this *software* in the *respeaking* process is directly proportional to the amount of work that must be carried out by the *respeaker* to constantly train it and improve it beforehand.⁶ "A house style file consists of a list of words or names in one column, and what you would like them to be replaced by in another" (Marsh 2004).

The main aim of this preparation stage is to obtain a transcription where the words transcribed by the software depart as little as possible from the words the respeaker dictates during the job. The authors propose some exercises in order to provide students with the skills needed to properly train the software. At a first stage trainers will provide students with the full script of different specialized texts. They will be asked to identify technical and uncommon terms present in the texts and create a list of all those words that could not be included in their own voice model. Students will then be asked to dictate to the software the lists of specialized terms deciding whether to add them in their general voice model or in special dictionaries or even creating a set of necessary macros.

While dictating, students will be made aware that they have to dictate the words carefully, paying special attention to pronunciation of proper nouns and specific terms, since the software will be able to recognise them during the respeaking process only if pronounced exactly in the same way as they were dictated during the training stage. In a second phase students could be given just a general hint of the subject they are going to respeak, e.g. 'a headline of a news item', and on the basis of that they will have to carry out a proper research of all the terms they could eventually find in the text and develop subject matter glossaries⁷. Once again, they will then be asked to train the software with the list of terms and with the creation of special vocabularies, macros, etc.

Once the training of the software will be completed students respeak the spoken texts provided by the trainer and analyze the results in order to identify errors in transcription and assess whether those misrecognitions could have been avoided by further or better training. It seems interesting to stress at this juncture the importance of this didactic proposal for respeaking. Such specific exercises will have to find a place within an *ad hoc* curriculum for respeaker training, since they are not provided by any academic course in interpreting or translation.

The training module for professional respeakers proposed by Eugeni (2009b) places this kind of exercises in a first stage of the course. Designing six learning objectives to be taught step by step, the skills related to the training of the software have to be acquired by students in the second step,⁷

Although this kind of exercise is typical of respeaking given the interaction between the student and the software, it is worth noting that it could seem similar to the so-called brain-storming for interpreters. This is a technique that is often used by interpreters' trainers and consists in providing students with a hint of the subject that will be dealt with in the classroom and asking them to create a list of the terms they think can

be related to that subject and thus be present in the text to be interpreted preceded only by the theoretic knowledge of the profession of respeakers (development of the discipline, role of the professional, function of respeaking: accessibility for the Deaf and Hard of Hearing...).

A perfect knowledge of the Automatic Speech Recognition (ASR) software is of paramount importance for would-be respeakers because they have to learn since the very beginning of the module all the potentialities and limitations of the software that will be their constant coworker. According to Arumí Ribas and Romero Fresco (2008:108-109) the speech recognition software is “not only [...] a tool, but a partner which, if no corrections are made, is going to have the final say about the subtitle that will be displayed on the screen”. 4.2. *During the process of respeaking* Regarding the skills to be activated during the process of respeaking, Arumí Ribas and Romero Fresco list all the abilities required for respeaking during the three simultaneous cognitive activities, that is to say reception of the ST, crossover (or the transition between ST and TT) and production of the TT. According to the authors, these are the skills coming from the field of simultaneous interpreting: •

Listening comprehension skills. Among these skills there is the ability to develop a concentrated listening, to reckon geographic and social variants in the speaker pronunciation, to make use of the short-term memory, to adopt emergency strategies when part of the source text is not understood or there is the need to reformulate it.

- *Analysis, synthesis and reformulation skills.* Respeakers will master the ability to understand the communicative intention of the speaker, to identify and focus on the relevant information, to make a distinction between main and secondary ideas, to identify discourse connectors, to infer the general meaning of the source message through the context and extra-linguistic factors, to segment the message in idea-units, to condense information...
- *Multitasking skills.* Probably the most demanding set of skills for a respeaker (as well as for a simultaneous interpreter) is the ability to split his or her attention among different cognitive activities, mainly listening and speaking at the same time. They must be able to receive analytically the incoming message and control the outgoing message while respecting a proper *décalage* even when the speech is delivered at a high pace...
- *Live skills.* These comprise the ability to maintain one's calm and concentration even under pressure, to handle stress, to cope with the frustration of errors appearing on the screen and to make corrections when possible, to keep always in mind the target audience, etc.
- *Delivery skills.* Respeakers will express concepts in a clear and concise way, with a rich terminology and monitoring their voice. They will communicate fluently and with accuracy respecting the tone and register of the speaker, with a good voice projection and avoiding hesitations and repetitions in order to transmit conviction and self confidence.

The skills listed by the authors are the same as those identified through the examination of the interpreters' skills included in the training module designed by Lambert through her 12 learning objectives. Being this stage of training of respeakers the most consistent part of the teaching of this discipline (Eugeni 2009b) and having noted that many interpreters' courses already provide these very exercises, it is possible to suppose that trained simultaneous interpreters will have a head start in approaching the technique of respeaking.

If a course for respeaking is to be taught to interpreting students that have already developed cognitive skills, trainers will focus in developing only the skills coming from other fields than simultaneous interpretation. According to Eugeni (2009b): When students to be trained have already acquired the basic skills for simultaneous interpreting, the trainer can avoid all those exercises intended to develop the capacity of listening and understanding the ST and simultaneously produce the MT.⁸ In this case

students would have already acquired the skills to manage the cognitive overload, to control stress and monitor their voice; they would be able to work under time constraints and to adopt compensation strategies through editing or summarizing the source message. However, as has already been said, among the list of the skills to be acquired by professional 8 Concerning the aural production of the respeaker, Eugeni uses the word 'mid-text' (MT), to refer to "the text pronounced by the respeaker. It cannot be considered as the target text, because it is not the final product end users will read. It is the oral input to be automatically translated by the speech-to-text recognition software in written subtitles" (Eugeni 2009a). there are a number of additional competencies that do not come from the field of simultaneous interpretation. Some of them are specific to respawning and can be listed as follows: •

Multitasking skills. Respeakers should possess the ability to carry on four different and simultaneous intersemiotic tasks: listening, speaking, reading and writing (the latter two are needed to detect possible misrecognition and to correct them manually).

Live skills. Professional respawningers must be able to rapidly change the colour and position of subtitles, to add labels, to pre-edit sentences and manually insert words in a subtitle (e.g. if they foresee that a word or expression pronounced by the speaker would not be recognized by the software), to handle the stress and sense of discomfort that could arise by reading an error in the written subtitle on the screen, to cope with the lack of feedback from the audience, to cope with technological unexpected problems or vagaries.

• *Delivery skills.* Among these skills there is the ability to add correct punctuation, to speak in short stretches of text, to produce every subtitle of almost the same length, to have a clear and flat pronunciation, to set boundaries between words, to avoid non-verbal sounds, to avoid too long pauses within words (they could be recognized by the software as the end of an utterance), to dictate at a higher than average speed.

Respeakers should master this second series of skills, while a simultaneous interpreter should not. They will thus have to be taught with specifically designed exercises. Once the exercises for the preparatory phase are concluded and the software has been properly trained, would-be respawningers will move on to the exercises that aim at fostering cognitive skills coming from the field of simultaneous interpretation. A special attention should be devoted to shadowing exercises (both phonemic shadowing and phrase shadowing) cloze tests, paraphrase (both lexical and syntactic paraphrase), etc.

Only when students master these techniques and are able to simultaneously listen and produce a message, students will focus on exercises of proper respawning to acquire the specific skills of this discipline. Also for this phase Arumí Ribas and Romero Fresco propose shadowing exercises but with the additional difficulty of dictating the punctuation. Furthermore the teacher could ask students to constantly monitor the result of their 9 Although the scholars do not contemplate the reading and writing skills among the interpreters' skills, it should be noted that simultaneous interpreters very often do write (e.g. for note taking of numbers and names) and read (e.g. slideshows, written material provided by the speakers...) dictation on the screen. In doing so, students will get used to split their attention between listening, speaking and reading and to cope with the presence of errors in the written text which appears on the screen.

With the aim of fostering students' ability to modify the TT in function of the possible misrecognition of the speech recognition software, the teacher can modify or add new terms of a text that students had previously prepared training the software. Students will thus have to find alternative solutions to avoid errors of recognition of the software.

As an additional exercise, the trainer could forbid students to dictate specific words or expressions present in the source text in order to train them to maintain the general meaning of the message without sticking to the words used by the speaker.

In addition, so as to ensure that students acquire the skill of producing short ‘respoken’ subtitles (which in some cases is a necessary strategy according to the audience subtitles are intended for), they may also be asked to stick to, for example, one liner, which means that they will also have to split their attention and simultaneously watch the screen while they listen and respoken the ST. To design the exercises to develop the phonetic skills comprised within the delivery skills (flat and clear pronunciation, avoiding non verbal sounds, setting word boundaries clearly...), it is probably convenient to refer to Eugeni (2009b) who proposes a series of voice coaching exercises grouped in four categories: “voice warm-up, respiration exercises, voice inflection and articulation of words”. This is an essential part of the training of respoken given that the final result of their performance will be influenced by the percentage of the dictated words correctly recognized by speech recognition software. These skills should be gradually internalized and become automatic, resulting in more successful recognition. Eugeni (*ibidem*) suggests that this automaticity can only be reached through a constant exercise and therefore he recommends trainers to spend the first part of each class to such exercises to improve students’ phonetic skills and enrich their voice models. Moreover, he proposes an exercise to establish the highest dictation rate of a student, that is to say the speed at which a subject can dictate a text to the software without increasing the number of misrecognitions.

Bearing their limit in mind, students are aware that in order to obtain an accurate transcription of a speech delivered faster than their limit, they will have to adopt editing strategies to avoid software mistakes. Finally, those skills coming from the field of subtitling for the Deaf and Hard of Hearing are very important too. During the phase of the reception of the ST, respoken should be able to identify the specific features of a given communicative event to be subtitled, such as different TV genres, they should master the ability to cope with fast turn-taking or overlapping dialogues. As for the subtitling skills included within the 'crossover' and production categories, students should have developed the ability to synchronize oral dialogue with subtitles. It is essential that respoken are well aware of the different techniques to produce and display both live and pre-recorded subtitles (scrolling or block subtitles), to know the guidelines on readability, the style sheets and the norms to convey para- and extra-linguistic elements of the ST and all the theoretical principles concerning accessibility and deafness. Only thanks to these background knowledge respoken will be able to understand and adapt their output to the target audience and to their specific needs (reading speed, linguistic comprehension, etc.).

5. List of the skills for a training module

Having identified all the skills that should be mastered by professional respoken and listed the related exercises, we can sum up the competencies to be developed through a training module for professional respoken to be included in the curriculum of an academic course for translators and interpreters. In doing so, we are in line with the actual trend which sees a gradual spread of respoken modules within Master and Degree courses for translators and interpreters of a number of European Universities (i.e. Bologna at Forli, Roehampton, Barcelona and Antwerp). A respoken module could be included both in a first or a second year of a training course for conference interpreters. If included in a first year, all those exercises aimed at developing students’ cognitive processing skills would be taught according to the normal didactic schedule of the course for interpreters. In the second case, cognitive skills would already be mastered by students and all the additional competencies coming from subtitling and specific to respoken can be combined with interpreting skills. At this stage we can summarize all the skills required by respoken which should find a special place in a training module for live subtitling through speech recognition software:

1. Linguistic and phonetic skills
2. Technical and practical skills
3. Theoretical (and genre-related) skills
4. Cognitive skills

1) Phonetic skills can be acquired by students through the exercises proposed by Eugeni and described above. It is worth stressing the importance of dedicating a part of each lecture during the whole module to such an activity aimed at improving students' ability to control their voice and delivery speed and at enriching students' voice models with as many new terms as possible.

As far as linguistic skills are concerned, it is important to present an additional consideration. Professional respeakers need an excellent command of their mother tongue in terms of structure, vocabulary and – more importantly – spelling and grammar.

Subtitles are not only the tool to make information, culture, news, etc. accessible to disabled people, but they are also a tool to improve linguistic competencies of children, foreigners and of people with a limited knowledge of one language. Therefore, the text produced by respeakers should never have grammar or spelling mistakes.

Moreover, respeakers should hold a strong linguistic creativity and sensitivity in order to grasp the stylistic and prosodic nuances of a text and be able to reproduce them properly, respecting the intention, the register and specific characteristics of the speakers' output.

2) Technical and practical skills are related to the familiarity with the ASR software used during the job, such as the knowledge of all its potentials and limits and the expertise to manage all its features. Moreover, a general knowledge of all the technical tools which can be useful prior and during the respeaking process is strongly recommended (i.e. PCs and other electronic tools to retrieve information in real time on a given subject or to create useful glossaries or lists of terms).

Spotting and synchronization skills, the capacity to change rapidly the position and the colour of the subtitles, etc. are all aspects of the training that fall within this category of skills. A general aptitude for new technologies and the capacity to keep up-to-date with the latest technological progress would be a plus. The relentless technology advances will surely help respeakers doing their job as long as they will be able to handle it. Speaking of that, it seems interesting to quote a passage by Arumi Ribas and Romero Fresco (2008:109) in which the authors refer to the paramount importance of the ASR software: “in the same way that speech recognition *software* is often described as speaker dependent [...] the *respeaker* can be said to be *software*-dependent”.

3) A theoretical knowledge of the characteristics of deaf and hearing-impaired people should be acquired by students through specific teaching. Professional respeakers should be well aware of the different degrees of hearing loss (mild, moderate, severe and profound) and the related linguistic skills of hearing-impaired subjects (reading speed, vocabulary, whether their mother tongue is the sign language or not and so on). Only through this knowledge, respeakers can be able to make real-time decisions and adapt their strategies to produce a target-oriented text (verbatim or edited, simplified or fully transcribed TT). As for genre-related skills, we refer to the ability of respeakers to identify the main features of any audiovisual content they are subtitling and the semiotic elements it consists of.

4) Finally, as far as cognitive skills are concerned, a deep analysis has been provided above and a series of exercises have been suggested. In part they come from the introductory course on simultaneous interpretation designed by Lambert and in part from the most widely adopted training paradigm of many University-level institutions adhering to the EMCI. A last consideration can regard the need to encourage a deeper familiarization of respeakers with the technique of shadowing, since, more than interpreters, their performances will be positively affected by a constant practice of this technique.

6. Conclusions

Through an analysis of the process of *respeaking* it has been possible to confirm that it involves a number of cognitive, non-automatic activities linked to interpretation. In fact, *respeaking* is a sort of simultaneous interpretation in the same language, which requires strong linguistic skills as well as the ability to understand and analyze complex issues and ideas and to reformulate them in real time. Bearing these similarities in mind we propose a training module for *respeakers* that can be introduced in an academic course for conference interpreters.

The rationale of this proposal is that a specialised interpreter, if provided with some additional skills, can carry out the activity of live subtitling through *respeaking*, and thus find new job opportunities in a sector which is steadily increasing. 22 *ntersteno 15th April 2010* With a view to training students to become professional *respeakers*, we have outlined four categories of skills which *respeakers* should master at the end of the training module.

A number of specific exercises concerned to the teaching of these skills have been proposed. We have shown that most of the exercises proposed for a course for *respeakers* are already part of the *interpreter training paradigm* adopted by the major University-level courses for conference interpreters.

However, other knowledge and skills to be acquired come from the field of subtitling for the Deaf and Hard-of-Hearing (SDH) or are specific to *respeaking*. Through the present contribution we have tried to shed light on a field which is still in its infancy and that still faces a long future. More research is needed in this field and more empirical experimentation and training experience can give more precise hints on how to develop a training programme which can provide students with the tools to meet the growing demand for this profession of the future.

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