

U5_E1_LO1_Psycho-cognitive skills – Listening and Speaking at the same time

Unit 5. Respeaking. Element 1. Psycho-cognitive skills.

Listening and Speaking at the same time. This video lecture has been created by SSML and Velotype.

The introduction to this Unit has already explained what respeaking is. The introduction to this element has already explained what are the psycho-cognitive skills a respeaker must possess. This video lecture is aimed at letting you know about the Effort Model which is at the basis of the skill of listening and speaking at the same time. And at letting you learn the skill of listening and speaking at the same time in two specific contexts. Where verbatim accuracy is required, you will learn how to listen and repeat at the same time. Where sensatim accuracy is required, you will learn how to listen and reformulate at the same time.

This is the agenda of this presentation. I will first recall the skills of the respeaker to then concentrate on the so-called Effort Model, which is at the basis of simultaneous interpreting, a mental activity, which is very close to real-time subtitling. I will finally focus on shadowing, a manifold exercise that you will be requested to do along the course to develop, reinforce, and finally maintain this skill in two different contexts: verbatim subtitling and sensatim subtitling.

Section 1 – The skills of the respeaker.

As you have seen, a respeaker has to do many things at the same time.

In this Element, we will deal with the psycho-cognitive skill of listening and speaking at the same time, which is the bulk of the respeaking skills. In particular, for a respeaker to be able and become a professional in the field, he or she has to first develop the capacity of doing two things simultaneously: listening and understanding the speaker while talking to the computer, so that real-time subtitles are produced. While you can only develop this competence by the time and thanks to ad hoc exercises, you may be interested in understanding the rationale behind it, the Effort Model, and then shadowing, as a way to develop it.

Section 2 – The Effort Model.

We have talked about the effort model. What is it? In 1985 Daniel Gile proposes the so-called *Modèle d'efforts*, or Effort Model, based on the observation of the mistakes done by trainees into simultaneous interpreting. Daniel Gile realizes that trainees do mistakes that are so banal, that the reason for these mistakes cannot be a poor command of the language. He understands that this is due to other reasons, mainly that our brain is to be trained if we want it do more than one non-automatic thing at the same time. Our brain has indeed the capacity to process only one non-automatic process at a time. To understand this, it is important to know that mental activities can be of three types: automatic, like that at the basis of breathing, for example; semi-automatic, like that at the basis of walking; and non-automatic, like that at the basis of active listening, or – guess! – repeating or reformulating what somebody has just said. And while you can breathe, walk and speak at the same time, you cannot listen and speak at the same time, unless you are trained to do so as in courses like this one.

As we have said in the introduction, the Effort Model is thought for simultaneous interpreting but it can be easily adapted to real-time subtitling. Adapting Gile's notions to real-time subtitling, while respeaking we mainly do 4 non-automatic actions at the same time: listening the speaker and understanding, which implies that we analyze the waves he or she produces and turn them into meanings. Then, memory, which is the capacity to temporarily store meaning before doing something else with it. Production, which is the fact of producing sentences that need to both adequately render the meanings uttered by the speaker and be understandable by the Automat Speech Recognition tool. And coordination, which is the fact of monitoring one's performance, so that a balance is found between these three efforts.

Now, these efforts require a lot of what is called processing capacity. As said, we need to train our brain to find a balance between the 4 efforts that we have just seen. As long as our processing capacity is enough to carry on these mental activities at the same time, we then do a good job. If it is not, because of fatigue or other reasons, we may experience breakdowns in one of the activities, with negative consequences on the quality of the subtitles.

In particular, a good performance is possible when the following conditions occur. First of all, the speaker should speak properly, not too fast, with a clear voice, and not too technically. Then it is important that the respeaker knows the topic or has studied it. Moreover, the respeaker must work in a well-equipped environment and with working turns which are not too stressful. And finally, the interaction with the machine should be at its utmost.

In case one or more of these conditions are not met, more processing capacity is required in one of the four efforts to bridge the gap. This may cause a breakdown in one of the other activities which, in the end, go to the detriment of the quality of the subtitles. In particular, if the speaker is challenging, it will be harder for the respeaker to listen and understand. If the topic is not well mastered or totally unknown, it will be harder to remember what the speaker says. If the respeaker is not in good mental and or physical conditions, it will be harder to produce coherent subtitles. Finally, if the interaction with the machine is not good, coordination breakdowns may occur. In the next video lectures we will see how to cope with each of these situations that may cause bad performance. In this video lecture we will try and make sure that, in good conditions, you are going to be able and perform well. Moreover, we will try to see how it is possible to semi-automate some of the simultaneous non-automatic actions required in respeaking to reduce the processing capacity needed for each of them. One way to go for that is shadowing, which we will see in the next section.

Section 3 – Shadowing.

In this second section, we will deal with the notion of shadowing as a tool to develop and semi-automate the psycho-cognitive skill of listening and speaking at the same time. Shadowing means you listen to a speech and you repeat it simultaneously. There is no need to involve the software for the moment. However, you should know what it means to repeat. What should you repeat? To our understanding, there are four types of shadowing: litteratim shadowing, verbatim shadowing, sensatim shadowing, and signatim shadowing. The difference lies in the degree to which you should repeat the source text, the speech you are listening to.

Litteratim shadowing means that you should repeat every single sound you hear of the speaker. Every speaker, even the most trained one, makes use of given and recurrent features of orality when speaking. This means that you should repeat not just words, but any of them, even words that you don't understand the meaning of, as well as recurrent examples of orality. These may be fillers like "well", "you know", "kind of", "you see", etc. Extra sounds like "uhm", "er", "mh", etc. Interjections like "Uh!", "Ah!", "Ow!", "Ack!" etc. Barbarisms, that is words that each of us pronounces his or her own way, like "heyyy", "naaa", "wassuup", etc.

Verbatim shadowing means you should repeat every distinct meaningful element of speech you hear as uttered by the speaker, mistakes included. This means that you should repeat every single lexical item, like "house", "government", "Spain", etc. but also grammar items like "the", "when", "for", etc. Acronyms like "GDP", "NCRA", "OWL", etc. And foreign words and expressions, like "ad nauseam", "bon voyage", "gnocchi".

Sensatim shadowing is a bit more complex and less precise as a notion. It means you should repeat every single meaning uttered by the speaker, a meaning being any concept expressed as a word, a clause, or a sentence. You can either repeat these words as in verbatim shadowing or re-express them using other

words, normally shorter words. For example, you can make use of synonyms, both horizontal synonyms like “aim” instead of “objective”, and vertical synonyms like “flower” instead of “anemone”. You can also reformulate the utterance. For example, you can say “yes” instead of “I tend to agree”, or “we” instead of “you and I”. Finally, you can strategically omit some elements in a sentence that not necessarily add something to the overall meaning. For example, instead of saying “Carlo talks a lot so as to try and explain this notion”, you can simply say “Carlo talks to explain this”.

Finally, signatim shadowing is the form of shadowing that is aimed at repeating every single sign, meaning any meaningful occurrence in a speech event that adds information to the ideal reader of the potential transcription of signatim shadowing. This means not just the single sentences that one hears like “good morning”, but also relevant elements such as punctuation marks like comma, period, question mark etc. as in “good morning period”. Signatim also means paraverbal events, like the tone of voice, intonation, volume etc. as in “good morning period [he shouts]”. Signatim finally means non-verbal events, like applause, cheering, a bell ringing, as in “good morning period [applauses]”.

Summary.

In this video lecture we have introduced the main competence of the respeaker, the psycho-cognitive skill of listening to the source text and simultaneously repeating it. In particular, we have dealt with two important aspects: a theoretical one that is the Effort Model, and a more practical one, shadowing. The Effort Model is at the basis of this cognitive process that involves doing more things at the same time. We have seen that balancing the efforts these simultaneous actions require, is always needed to avoid breakdowns. One way to go for this is trying to semi-automate these actions. To do so, shadowing is the exercise to start with. It consists in listening to a speech and repeating it, either letteratim, or sound for sound, verbatim, or word for word, sensatim, or meaning for meaning, and signatim or sign for sign. In the homework session, we will see how to do this in practice.

Exercises. Exercises. The exercises for this video lecture are in the Trainer’s Guide and the PowerPoint file.