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Project Ref: 2018-1-DE01-KA203-004218: LTA Quality Training in real time subtitling across EU and EU languages

## IO2 REPORT: LTA CURRICULUM DESIGN

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PU	Public	X
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## 1 Introduction

This report follows the IO1 report available at [https://ltaproject.eu/?page\\_id=101](https://ltaproject.eu/?page_id=101). It reports on the activities of Intellectual Output 2. Its main aim is to design an effective curriculum for real-time intralingual respeakers and velotypists. It contains expected results as per the submission:

- a **graphic representation** of the proposed course design, visually representing its modular structure and flexibility of its modular components;
- a **full report** elucidating this overall structure and the motivation behind the choices made, the functionality and learning outcomes of the different modules and the different ways in which they can be implemented.

To facilitate reading the report starts with preliminary remarks (this introduction), important for understanding terminology and concepts contained in the main body and an illustration of the “ingredients” used to come to it. This introduction refers to extended versions of illustrated concepts. Such extended versions are available as annexes. Annexed is also a glossary (annexe 1) of the technical terms given for granted in the report. Follow three main chapters:

- Chapter 2: **rationale** elucidating the overall structure described in Chapter 1 and the motivation behind the choices made, their functionality and and the learning outcomes;
- Chapter 3: **graphic representation** of the LTA Curriculum for academic and vocational training of the Real-Time Intralingual Subtitler through Respeaking and Velotyping;
- Chapter 4: suggested **implementation pathways** of the LTA curriculum.

For readability questions and in order to focus as much attention as possible on IO2 outputs, only a brief introduction to what has been done as a preliminary basis for the curriculum design is given. Each paragraph refers to specific annexes to this report. Such annexes deal with the details of the content briefly illustrated in each paragraph: paragraph 1.1 deals with terminological remarks related to the profession of the real-time intralingual subtitler. Paragraph 1.2 is a review of the literature on teaching which shows parallelisms with the terminological remarks as well as the current gap between training and the world of job. Paragraph 1.3 describes the main structure of the model considered to design LTA curriculum as proposed by recent research in this field. Paragraph 1.4 will introduce the specific terminology used in this report concerning the field of Curriculum design. This introduction will allow to understand the genesis of the curriculum which is the main body of this report (chapters 2, 3, and 4).



## 1.1 Terminological remarks

In our project we deal with the profession of a figure we call “Real-time intralingual subtitler”. His/her job is that of producing a more or less faithful transcription of what is said by one or more speakers. The transcription is produced as the speakers speak and in the same language. The transcription is accessible to the audience on a screen, with a slight delay compared to pre-recorded subtitles. He/she works in different in different contexts (Cultural events, Parliamentary assemblies, Broadcasts, Workplace, Education) in different work settings (Face-to-Face, Online, By relay). We are aware of shorter and more straightforward expressions (e.g. live subtitling, respeaking, CART, speech-to-text interpreting), but, unfortunately, there is no terminological univocity in this field around the globe. Moreover, such expressions only provide one facet of the profession as we envisage it (see Annexe 2 - “terminological remarks”).

## 1.2 Literature on teaching

The previous paragraph has shown that terminology in the field of real-time intralingual subtitling is multifaceted and can be categorized based on several criteria, each affecting training. If some of these criteria are ignored in training, future professionals will lack necessary skills. As shown in Annexe 3 (“literature review of training practices”), today’s available courses (both academic and professional) about the profession train students mainly to contexts such as TV or conferences, thus limiting the scope to some applications. Moreover, they mainly concentrate on respeaking, thus limiting training to a technique and to the languages for which an ASR technology is available. Additionally, the training material that they use is culture-specific (which is not a disadvantage per se but it limits the scope to one single culture), and it is not open source. Finally, the training is mainly limited to students who can afford a training course in terms of costs and time, since they might have to move to another city or country. Conversely to what happens in in-house training, these students are trained to the profession in very general terms and don’t experience the real world until they are employed by a service provider or find clients as freelancers. So, training today is either too exclusive in terms of time, money, or place; too focused on a technique, a language, an application, or a context; or too generic; and the quality of this training is neither well-established – it depends on trainers and not on the faculty or on literature in the field – nor certified. The aim of LTA is to bridge such gaps by providing a comprehensive basic training and a specific training as industry-driven as possible, based on the professional and academic state-of-the-art of training.



### **1.3 The pedagogical and methodological curriculum**

Teaching as envisaged up to now moves its focus from students needs and expectations to competencies to be mastered and acquired. This is in line with the Bologna process and the attempt to bridge the gap between what the world of job requires and training at academic level. However, learning single skills one after the other does not automatically allow trainees or students to be able and start working as a professional. Moreover, the didactic approaches described above focus on very specific techniques only and do not consider the whole picture. Being able to subtitle in real time, in our case, is not synonym to being able to use an ASR software. It means much more. It means knowing where, when, how and for whom to subtitle. It means knowing the sociolinguistic environment of live intralingual subtitling, as we call it here.

To try and move a step further in the direction of a full-encompassing curriculum, we have analysed Safar (1992) and Hamaoui's proposals (2010) for the training of university students into audiovisual translation. They base their work on the proposal made in 1975 by Belgian pedagogist Louis D'Hainaut and propose to structure a curriculum on 3 levels:

- Aims and objectives
- Teaching methods and tools
- Evaluation methods and tools

These levels are further subdivided into 14 subcategories (see Annexe 4 "the Pedagogical and Methodological Curriculum"). The same structure has been used to design the LTA curriculum.

### **1.4 Curriculum Terminology**

In the LTA project, both the Higher Education system and the Vocational Educational system are used to describe the skills a Real-time intralingual subtitler needs to possess to do his or her job. That is why joint reference is made to CEDEFOP terminology (Table 1) published online (2014) and the ECQA terminology compiled in a Master thesis by Blanca Nájera Villar (2011).

**Table 1. ECQA structure of a Skill Card (see Glossary in Annex)**

ECQA structure	
A <b>DOMAIN</b> contains	
	<b>JOB ROLES</b> , which contain
	<b>SKILL UNITS</b> , which contain
	<b>LEARNING ELEMENTS</b> , which contain
	<b>LEARNING OUTCOMES</b> , which must be proven by
	<b>EVIDENCES</b>

In the current report as well as throughout the LTA project, we use the terminology of Higher Education (Table 2) with reference to the CEDEFOP terminology and contents when describing skills and competences. To comply with the European standards for skills descriptions set by ECQA, the LTA partner for future certification, it is necessary to compare the ECQA structure and the LTA structure of skills which basically only vary in terminology.

**Table 2. LTA structure of the skills of a Real-time intralingual subtitler**

LTA structure	
<b>Subtitling</b> (Domain)	
	<b>Real-time intralingual subtitler</b> (Job role)
	<b>Modules = Competence Areas</b> (Skill units)
	<b>Units</b> (Learning elements)
	<b>Learning outcomes</b>
	<b>Assessment</b>

## 2 Rationale of the LTA curriculum design

On the basis of the Pedagogical and Methodological Curriculum (PMC) described above, this section will illustrate the rationale that has brought us to come to the LTA Curriculum for the Real-Time Intralingual Subtitler through respeaking and velotyping which will be visually represented in Chapter 4 and whose implementations into academic and professional training pathways detailed in Chapter 5. To do so, the same structure of the PMC will be followed.

The LTA training of the real-time intralingual subtitler is going to be based on the following:

- Aims and objectives;
- Tools and teaching;
- Assessment.

Each part of the curriculum will be further subdivided into different axes. Each axe will be discussed in the light of previous input and in order to design the LTA curriculum.

### 2.1 Aims and objectives

Aims and objectives is divided into 5 axes:

#### 2.1.1 Axe 1: “Defining and analysing educational policy”

This axe calls curriculum designers to make sure that the teaching fits in the societal framework, so as to avoid and create teaching pathways that are useless or inadequate in the professional world. This is one of the main reasons of the LTA project: bridging the gap between the world of job and that of training. Concerning its implementation, in the case of in-house professional training, this gap in training will be bridged by the “educational policy” of the company. In case of professional training outside the company, it is important that trainers capitalise as much as possible on the skills, competencies and knowledge they already have before the course to focus on those they have not. In this case there is no educational policy. We suggest to go as deep as possible into all materials provided, to acquire the largest possible service portfolio.

Academically, the best collocation of an academic course in real-time intralingual subtitling is in a faculty training language mediators, interpreters, translators, audiovisual translators, communication experts, media communicators, and the like. This is because, besides the technique (respeaking or velotype), all aspects of Applied Linguistics play an important role in



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the training of real-time intralingual subtitlers who will need to acquire them if they want to facilitate communication between people in a live context.

As Eugeni suggests (2008), interpreters are the best candidates for the training into respeaking, because the process of Real-time Intralingual Subtitling (RIS) is very similar to that of Simultaneous Interpreting (SI). In a faculty for interpreters, the training into live subtitling through respeaking would be easily included after the first year of training into SI, that is after students have acquired the psycho-cognitive skills of listening and speaking at the same time. Training into respeaking would also be a good first step into simultaneous interpreting, because of the same reason. The main factor influencing such a decision is the status of RIS in a society. If it is considered as less prestigious than SI, it will be positioned before the course on SI. Otherwise after that. Given that LTA also concentrates on velotype, considering the process of respeaking alone is quite a limitation. However, survey results and their implementation into skills cards show that both technique-specific modules (Modules 5 and 6) consider the psycho-cognitive skill of listening and speaking/typing at the same time as among the most important skills. This confirmed by ongoing studies (Cosci, forth.), which seem to confirm that the process of SI and that of RIS involve the same areas of the brain, regardless of the technique used.

In all above-mentioned cases, RIS is taught within a smaller context (that of a specific companies with specific needs) or a wider one (that of Applied Linguistics, where other disciplines are taught like Simultaneous Interpreting, pre-recorded Subtitling, or Parliamentary or Court Reporting) compared to the scope of RIS. As mentioned above, RIS encompasses a wide range of activities, stretching from TV subtitling to minute-taking during a meeting. And each of these activities share something in common: the translation from a spoken text into a written text in the same language, cfr. Gottlieb 2005. This suggests that RIS can also be considered as a per se discipline (Gottlieb calls it Diamesic Translation), with enough applications to justify a BA, similarly to what happened when the European Master in Translation came into being. A similar standard would guarantee a full understanding of what RIS is and what is expected by a Real-time Intralingual Subtitler around the globe.

***In short: real-time intralingual subtitling can be considered as a discipline per se, whose best collocation is a BA only devoted to Diamesic Translation and its applications. Other implementations are possible (academic or vocational) but need to be contextualised.***



### **2.1.2 Axe 2: “Implementing aims and objectives”**

Strictly related to the previous axe is the need to provide trainees with Learning Outcomes. This allows trainees to know in advance what they will learn during the course and know what their role in the professional world will be. To do so, during IO1 we have identified six competence areas and have described 74 indicators grouped into 24 elements. To the purposes of the LTA curriculum design, we have adapted them into 6 self-contained modules: 4 general modules valid for both respeakers and velotypists (Understanding Accessibility, Linguistic competence, IT competence, Entrepreneurial and Service Competence); and 2 technique-specific modules (one specific to respeaking and one specific to velotyping). The 24 elements have been translated into 22 units: 12 Units for the four general modules (3 each) and 10 Units for the two specific modules (5 each). Each unit has been equipped with 3 Learning Outcomes (66 in total).

The 4 general modules can be taught one after the other but should not be considered as functional to the following module. The technique-specific module - training is thought into respeaking only or velotyping only - is the only module which has to run parallel to the general modules, because, from surveys, it emerges the need to not consider the technique as one of the many competences to possess, but as a transversal one, supporting all others.

Deciding which technique to go for will depend on personal aptitude, competencies, and skills. This means that specific importance should be given to the moment trainees decide the technique they want to learn. This should happen as soon as possible to allow the training into the technique to start parallelly to the beginning of the rest of the course. This means that of utmost importance is also specifying when assessments are planned. To our understanding, an introductory illustration of the two techniques could be useful to let trainees better decide what they are meant to be and how they should work as future professionals. Once they understand what the 2 techniques look like, they go for an aptitude test (called pre-assessment) and start being trained into one or the other technique. This should happen at the beginning of the course. In case of wrong assessment, moving to the other specific module should be flexible.

Other assessments have been designed at the end of each general module to prove trainees have acquired competences in line with the LOs. Then, technical assessments at the end of each technique-specific Unit will assess if the different steps to be taken in the learning of the technique have been acquired. Finally, a professional assessment, in line with international certifications, will demonstrate the trainee is ready for the world of job.

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***In short: a course into RIS should be structured into types of competence (general or specific), assessed to guarantee progressive learning, until completion of the course.***

### **2.1.3 Axe 3: “Understanding trainees background”**

This is the first step towards a real definition of the curriculum, because to meet a goal it is important to know where to start from. As mentioned in previous works (Remael-van der Veer 2006, Eugeni 2008, Romero Fresco-Arumi Ribas 2008) it is important to understand what the background of future trainees is. In case of different backgrounds, different teaching options may be available. Now, given that the aim of the LTA project is to create material to be used in training or self training, this step can only rely on the people who directly care about the training. Despite its use, it is important that trainees do not undergo training that they don't need. That is why a self assessment test has been foreseen for each general module. On the basis of results, trainers will adapt the curriculum to the trainees needs, thus keeping motivation high all along the whole curriculum. Such self evaluation tests will be structured around the material that the LTA curriculum is going to provide. Plain English descriptions will allow trainers and trainees to easily assess if a skill/knowledge/competence is already possessed. They may skip some parts of the curriculum if they already possess some. However, this is not enough. Given that training into respeaking may be long and that skills/knowledge/competences should work not as per se, rather as a unique set of skills/knowledge/competences within a multi-task framework, it is important to make sure that self evaluation mirrors real professional life. That is why an assessment at the end of each general module and at the end of each specific unit will let them understand what is meant by a given Learning Outcome. This double-check system perfectly works in every single context (vocational, academic, MOOC) except a full BA, where students are more likely to be young and without academic or professional backgrounds. Moreover, exams (where required) normally follow a term, and cannot be skipped.

***In short: a self evaluation assessment will tell which skills and competencies a trainee already possesses. An end-course one will tell if he/she is ready for the profession.***

### **2.1.4 Axe 4: “Determining and analysing contents”**

This step is strictly related to the previous one. We have determined contents thanks to literature in the field and specific surveys and interviews aimed at academic and professional training. We have come up with the definition of Learning Outcomes. The materials to acquire them will be created ad hoc. Some others, already available, will be used to train trainees in

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language-specific situations. This is all the more important because in many countries trainees could be very good candidate professionals without knowing English though English is the language most of users will be able to understand. This is an important aspect that has not been solved in similar projects where training is in English only (see ADLABpro, EASIT), even where the content of the training is focused on a specific language-pair (see ILSA). To do so, we have identified homogeneous material for each of the 3 following working contexts:

- Conferences and classes;
- Assemblies and working scenarios;
- TV and live events.

For each of the above contexts, we have tried to identify as many material sources as possible. The main principle adopted is ‘cross-fertilization’, meaning that reinventing the wheel is to be avoided and free materials already available on the Web should be re-used, if they fit the course purposes and if GDPR, privacy policies, copyrights and similar legislation allow for that. Given that some contexts make it hard to find appropriate training material for various reasons (mainly security, Non-Disclosure Agreements, and privacy), we have identified the following sources, exemplifying each context, and available in all the 5 languages of LTA (those of partners - Spanish, German, Dutch and Italian - plus English which is the LTA working language). Per each working context, 3 levels of “difficulty”, allowing progressive training, have been identified:

- Beginner: the trainee can accurately use the technique with a slow speech;
- Intermediate: the trainee can accurately use the technique by repeating a rapid speech;
- Advanced: the trainee can accurately use the technique by also adopting exit strategies.

For the first part of the training (basic), we have identified the DG SCIC speech repository, a free resource (<https://webgate.ec.europa.eu/sr/https://webgate.ec.europa.eu/sr/>), exclusively for non-commercial purposes with two versions: a reduced version for every user; and a full version for SI students or teachers at a DG SCIC partner university, a member of a partner organisation or a professional conference interpreter working for the European Institutions. It contains training speeches divided into 5 different speech rates (basic, beginner, intermediate, advanced, very advanced), which can be easily chosen by trainers or trainees for exercise purposes. Speeches are available in all EU official languages. Levels basic to intermediate can be functional to acquiring the technique, given their slow speech rate and semantic density (i.e. concepts are linearly expressed). For training purposes another important source is the Intersteno speech repository. Intersteno is the International Federation for Information and

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Communication Processing ([www.intersteno.org](http://www.intersteno.org)). They organise world championships of fast writing and have two sources that allow for good training:

- Taki (<https://www.intersteno.it/site/esercitazioni/esercitazioni-con-software-taki/>) is a free online software that shows a written text to be copied as quickly and accurately as possible. The software is equipped with a counter and offers the possibility of doing a 1-minute or 10-minute test in 20 languages (all LTA languages). It shows the text to be copied and the copied text in a scrolling mode. At the end of the session, the number of characters and of errors made produced is shown. It is an important source to improve once writing capacities before learning other skills (listening and speaking/typing at the same time, mastering the technique, improving one's MARS).
- Competition texts. There are two interesting competitions that can be used for training:
  - Audio Transcription: a 15-minute speech at a steady-pace that can be used for assessment throughout the course;
  - Speech Capturing: a 15-minute speech read at an increasing speed (up to 497 syllables per minute).

This material can be used for an advanced step in mastering the technique and for specific LOs.

For the second part of training (advanced) we have thought of focusing on verbatim subtitling. The reason for that is not that it is easier than sensatim subtitling (reformulation of what is said). The reason is operational: verbatim subtitling does not imply Plain Language or exit strategies, hence some skills can be skipped. As to contents, the EU parliament TV channel fits our needs (<https://multimedia.europarl.europa.eu/fr/home?referer=%22www.europartv.europa.eu%22>) because it contains two types of materials: commissions and plenary sessions. Commissions usually allow for longer turns, while plenaries usually contain very quick speeches normally read at a very high speed. The first can be used for training, the last for assessment or for improving one's master of the technique. Terminology used is sectoral and can be useful in real-life.

For the third part of the course (advanced) we suggest focusing on sensatim subtitling. Once again we don't suggest this because it is more difficult than verbatim. We say so because of several reasons we consider functional to the modularity of the course:

- Since reformulation is needed, understanding of the Source Text (ST) and monitoring the Target Text (TT) syntax are crucial. This requires attention to always be at its utmost;
- More skills and workload are involved;

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- More subjective quality check makes reformulations more questionable and stressful.

Here again, to allow for a homogeneous training in the 5 languages of LTA, we suggest using TED talks and TV programs as material. The TED format and protocol that speakers follow guarantee that quality (hence linguistic difficulty) is more or less the same across languages. For progressive reasons, different areas of content can be used: tourism, science, politics, engineering, according to the perceived difficulty of single areas. Then, trainees start working on those TV programs that are more likely to be subtitled in real time (first documentaries and then the news), the news being considered as the most difficult text type to work on, because:

- they cover any area;
- more proper names which can be unknown;
- speech rate is usually higher;
- they are usually short and contextual knowledge is not useful to compensate for difficulties;
- multimodality is at its highest.

We have selected such products because they are easier to find online and whose complexity can be considered as more or less homogeneous in many languages.

***In short: contents are to be selected according to a progressive principle which is determined by the number of LOs to be acquired. Plus, they have to be homogeneous in all languages. Hence, first-level contents are general (SCIC speech repository and Intersteno championships). Second-level contents are specific (EurParl TV). Third-level contents are all the more varied and specific (TED talks, TV documentaries and news).***

### **2.1.5 Axe 5: “Processing learning outcomes”**

This phase allows to understand the right way to concretely go towards the direction of the aims and objectives. It will allow for determining (or self determining) if a goal has been met or not and how much. An important step in this direction has already been done in the first IO, where skills cards have been drafted, thanks to the contribution of professionals. To determine their relevance for training, interviews to professionals have been done and analysed. LTA course has been designed to have the following (self-)assessment structure:

- Pre-assessment: a test based on all Learning Outcomes will define which parts of the course the trainee should undergo. This will be done via an ECQA (LTA partner) self assessment tool, which will be further developed together with Intersteno (LTA supporting partner).



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Answers will provide a personalised training, adapted to the knowledge, skills, competences the trainee already possesses. This step will also include a technique-specific assessment to understand which technique better suits the aptitude of a trainee to RIS.

- Peri-assessment: the actual acquisition of a LOs to be tested at the end of every general module and at the end of every unit of the specific module, and be based on their content.
- Post-assessment: as in semantics, where the meaning of a sentence is not given by the sum of the meaning of every single word, in didactics, professionalism is not given by the sum of every single skill and competence acquired. A real-life test will allow trainees to show they have the actual background to work in the fields (LTA contexts and settings) of RIS.

***In short: outcomes will be assessed following a modular competence-based structure allowing for customising the course and assessing achievement of learning outcomes (acquired knowledge, competence and skills) and professionalism.***

## **2.2 Tools and teaching**

Tools and teaching is made of 6 axes:

### **2.2.1 Axe 1: “Determining resources and limits”**

This is a very concrete step, which will make it clear how the course will be held and by whom. This is also a very subjective phase. Here we will mention what is fundamental and what can be, instead, replaced with other solutions. First of all it is important to say that by resources it is meant not only financial resources, but also administrative (number of hours to dedicate to training but also organising learning environment and providing credits and certificates), logistic (where to train students), and human (teaching staff) ones. Technical resources (software and hardware needed for training) will be dealt with in “Tools and methods” below. Pretending there are no administrative and financial issues, let’s concentrate on human and logistic resources.

Despite the training materials we will provide comply with ECQA standards and are ready for certification, to train somebody into a profession, a trainer who is also somebody who knows the world of real-time intralingual subtitling is for sure an added value. Otherwise trainees will inevitably miss an important part of the training which is determined by the transfer of that intangible knowledge which stems from a professional experience in the field. However, we have thought of implementing a Trainer’s Guide (to be created during IO3) which will help trainers through the process of training/teaching future real-time intralingual subtitlers. It goes



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without saying, that this is just a help and cannot completely replace the didactic and professional experience of a professional. This means that self training, though it is possible, it is not recommended, at least in the case of trainees who have no experience in the field of RIS.

Logistically, students should be exposed to real-life conditions. The minimum required in specific modules is a setting where each student has direct access to the source text, in the best working condition possible. Conference Interpreting faculties usually have booths or similar sound-proof equipment (sometimes companies do have some extra booths for training purposes) that allow for optimum training into respeaking and velotyping. Training into Velotyping does not really need that a room is acoustically isolated, because while typing they do not make too much noise and background noise does not really influence the velotyping process. However, high-quality access to the source text is to be guaranteed in both cases to avoid concentrating on aspects that are immediately solved in a professional context.

As for teaching general knowledge, it can be taught both in presence or from remote. Knowledge about deafness can be acquired by getting to know deaf people and living real-life situations. Here an internship is recommended. The same is true for IT tools, whose knowledge is fundamental for the operational part of the training. Teaching technical aspects and technique-specific aspects is preferable in presence so trainees can immediately understand how IT tools work. A general approach to it would not enable for that.

***In short, trainers should be professional, to add professional value to training. Logistically, financially and administratively, training should guarantee real-life conditions. It is recommended that trainers are LTA certified, possibly by ECQA.***

### **2.2.2 Axe 2: “Tools and methods”**

This part concentrates on which tools trainees should work with in order to meet the goals set, with the resources available and the identified limits. What is important to recall is that training materials have been designed as being grouped per module (4 general modules: 1. Understanding accessibility, 2. Linguistic competence, 3. Entrepreneurship and service competence, 4. IT competence; and 2 specific modules: 5. Respeaking and 6. Velotype), per type (interviews, tutorials, demos, real-life recordings, websites, legal documents, guidelines, contacts, academic publications, technical publications...), and per aim (class-work training, self-study training, peri-assessment, post-assessment). This means that the training materials we will provide have a vertical (specific to curriculum) and a horizontal (progressive) hierarchy.



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Vertically, materials are to be more or less used depending on the kind of curriculum (e.g. a MOOC will consist in more short videos and less academic reading; a BA will consist in more academic reading; in-house training will also make use of specific materials the company deals with); horizontally, elements cannot be picked up haphazardly but need to be selected (if trainees only need to acquire some skills) and used by respecting the criteria provided for each case-type (MOOCs, 30credit courses, BA), because some LOs and materials are functional to other LOs and materials.

Concerning tools, some of them are fundamental for training, some others are recommended:

- Essential Hardware. There are three basic tools every trainer should be equipped with:
  - A laptop or PC allowing for installation of the writing software, reception of source text (audio, video, slides...), processing of input from microphone (voice) or velotype (strokes) software, and production of mid text or target text.
  - Audio input tool: to listen to the source text. This aspect is not a secondary one. Some trainees may be tempted to use earphones, which are uncomfortable in the long run and do not allow for good audio isolation. Plus, they may fall while working. That is why we recommend the use of headphones, though in a silent training situation (at home, during one-to-one teaching situations, in booths...).
  - Audio output tool (for respeakers only): ASR software programs need a good audio input. It goes without saying that a standard mic-in microphone is the minimum required. Condensers or dynamic microphones are a better choice, but more in a TV studio than in a setting where flexibility is required. Very good is also a stenomask, a microphone built in a mouth-shaped rubber which avoids the voice of the respeaker to be heard from outside. This is a shortcut to avoid the need for sound-proof environments.
  - Text input tools (for velotypists only): a velotype keyboard is essential to make sure that both class- and home-works are correctly done.
- Essential software. To produce subtitles the following tools are required:
  - RESPEAKING: Several commercial software programs exist. Free software are also available on the market, provided by the most various types of company. These tools not always allow for a use in RIS. Our video materials will be made with the technology owned by single partners (DNS, FAB, PSW).
  - VELOTYPE: a Velotype software is needed to learn not only the basics of the technique, but also the basics of the profession. Here, no alternatives are

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possible, Velotype being a private software house. Other keyboards can be used, but all LTA material will be created with a Velotype keyboard, whose combinations are unique to this type of keyboard.

- Recommended programs. To train students into RIS, they should not only make use of a fast-writing tool, but also of all those other tools required in a professional scenario, especially when the professional is a freelancer:
  - Text-on-Top: or similar software allowing for projecting subtitles onto a screen without the need for a second screen and VGA or HDMI cables. This tool can be used both in presence and in remote working settings.
  - Eclipse: or other similar interface allowing for formatting Middle Texts, and providing assistance while editing.
  - Coworking cable, PSW, or similar software allowing for a second professional to edit what is written by the subtitler in real time and without interfering with the subtitling process. This can only be used in face-to-face situations.
  - Foot-pedal: to replace some activities like cueing subtitles, erasing a word, or even rewinding, this tool can be used by means of one's foot.
  - Streamtext: or similar web-based software allowing for producing a text file from remote and accessing it in another place or in the same place without cables.

***In short, some tools are essential to training (hardware and software for RIS), some are recommended for training, but in the profession all are essential.***

### **2.2.3 Axes 3 and 4: “Teaching and learning conditions”**

The LTA curriculum decided to put these two aspects together because they are strictly interrelated to each other as well as to previous aspects. Here trainers need to implement the tools available by personalising teaching methods depending on students and conditions but they have also to determine the learning conditions to better target training. Teaching and learning conditions both depend on the tools and resources available. LTA training material comes from the best sources available in the field of RIS. LTA training materials come from specific situations and future professionals may encounter others. For instance, 5-people meetings in a company or telephone calls have restrictions that parliamentary assemblies do not have. However, texts coming from these situations cannot be made available in the training for privacy reasons. So, the solution adopted is to propose available material or copyright-free material which presents gradual difficulties that can be encountered in real life. For didactic



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reasons such materials have been classified according to difficulty levels (beginner, intermediate, and advanced) and topic areas (tourism, daily events, sciences, medicine, politics), so that it is easier for teachers to follow a progressive order in the skills acquisition process of students who will not be demotivated by an immediately difficult text to process (as in many short courses).

Methodologically, in-presence guided training guarantees a better and immediate acquisition of skills and competences. However, e-learning has proved to be very effective in many areas. MOOCs are becoming recognised platforms in e-learning and have proved to effectively teach the basics of a profession and also more advanced skills. According to the report "Validation of Non-formal MOOC-based Learning" (2017), some MOOC platforms in Europe have been specifically set up to provide courses that increase learners' employability. That is why LTA materials have been thought to guarantee both vocational and academic training in e-learning and in-presence modes. However, distinguishing general and specific modules is crucial.

General modules (1-4) encompass Learning Outcomes based on the skills and knowledge required for both respeaking and velotyping. Didactically they allow for merging groups together without the need for extra classes and extra teachers. Some modules are aimed at general knowledge, easy to acquire from remote. For example, most of the knowledge to be acquired in Module 1 (about accessibility, multimodality, universal design, target groups and their needs) is easily read and acquired through the material that will be provided (short videos explaining in a nutshell what is meant by each item and reference material to be used for more information).

Sticking to Module 1, the third Unit (How accessibility is embedded in the environment) is less easily teachable, because it needs a check by the trainer. This is the role of the Trainer's Guide and of the peri-assessment that will be delivered in IO3. Completely opposite to this is Module 2, which aims at providing students with the linguistic skills and knowledge a professional real-time intralingual respeaker or velotypist is asked to possess. Such skills are complex to teach from remote because trainees may need continuous feedback from trainers, who must - more than in all other cases - know what the world of job requires. In particular, trainers cannot simply rely on what they have read, they also have to understand what is acceptable in the real life of their country. For example, in the case of teaching subtitling, it tends to be standardised but standards are not accepted everywhere, and this results in a big gap to bridge between academia and the professional world. And this is also one of the main contributions of the PMC to professional training in an academic setting. Given all such difficulties, particular attention is paid to such aspects. Trainers will be provided with: real-life source texts and the official target



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texts - where available - in order to let trainers and trainees understand what the process of RIS should be; details and contacts of associations of professionals to contact in case of doubts; and guidelines per country and per domain where available.

The content of Modules 3 and 4, IT Competence and Entrepreneurship and Services competence, is different from the previous ones, but shares didactical similarities with Module 2 as it is aimed at teaching trainees those skills that are not trained in academic training: LOs depend on the professional workplace, every-day job experience, and human relations hard to find in academic publications. Because of the privacy-related issues mentioned above, for Module 4 role plays are envisaged to show how to concretely cope with the problems professionals may encounter in their career. Also, interviews with professionals telling their professional life will be recorded to offer the widest spectrum of professionals telling how life is out there. And case studies, videos, live streamings of live events, etc. This is one of the major gaps that academia finds hard to bridge: telling how to turn what is learnt into practice. This is why the industry certificates of ECQA are very helpful models for an LTA/ECQA certificate in the future, with Intersteno (supporting partner) providing professional experience. This is, again, one of the main contributions of the PMC to professional training in an academic setting. Similarly, Module 3 implies knowing all IT tools needed and used in the profession and how to use them to better suit a professional's needs. Interviews and demos are envisaged here

Teaching Specific Modules (5 and 6) encounter similar difficulties to the ones encountered in Module 2. Here progress needs to be monitored step by step and a special attention and competence need to be possessed by the trainer. Teaching and learning activities should be ideally those of tutorials (face-to-face one-to-one training). To be able to teach such skills from remote and in a one-to-many situation, particular attention is to be paid to what the professional world requires. Books and handbooks only work in specific settings and only for some customers. Given the great variety of text types LTA training materials are aimed to fit in (parliamentary subtitling, conference/lecture subtitling, class/meeting note taking, TV subtitling), trainers are suggested to first decide what is the professional scope of the course and then to select the materials which better suit their didactic needs. Otherwise trainees are exposed to activities and acquire useless LOs, which may demotivate them and cause the course failure. After having determined this, trainees should be followed step by step as in Module 2. Similarly, real-life material will be provided, with real-life source texts and target texts, and interviews to professionals and demos by professionals, whenever possible. This will allow trainers to bridge some gaps in case they shouldn't be professional of this or that field.



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A training path has been envisaged which makes respeaking or velotype modules transversal. This means that while all general modules will be learnt one after the other (though the order is not rigid), the specific module should be learnt parallelly to them. Hence, trainees ideally start their course with both Module 1 and Module 5 (respeaking) or 6 (velotype), continue with both Module 2 and Module 5 or 6, then Module 3 and Module 5 or 6, to end with Module 4 and Module 5 or 6. This is because training into a technique is a long process relying on command of the technique and all LOs provided in general modules (see Annexe 5 - "IO2 modules").

Internally, specific modules are organised in a way that some skills can only be acquired after others (dictation/typing skills are to be learnt first and improved all along the training, while activating exit strategies and editing skills are only necessary while moving from verbatim to sensatim subtitling), while the others need to be developed gradually, from the beginning to the end of the learning path. The reasons are multiple: first of all because such techniques do not have an end result. In the surveys professionals say that they are always faced with new challenges. For example, people speak at different speeds and there will always be someone who is so quick to be hard to subtitle. Here several suggestions have been made to fix a words-per-minute goal (180 English words per minute in some cases but also 500 English syllables per minute or 250 English words per minute in some specific settings) a subtitler has to produce without making mistakes. Of course there is a need for a parameter assessing the quality of a subtitler, because quality in some cases is synonym to quantity. One cannot only be accurate. But this parameter depends on situations (in lectures turns are generally very long and delay is meaningless; in parliamentary subtitling, subtitles are functional to the reporting service and most of access to it is delayed) and on personal capacities (subtitlers in those countries where sensatim subtitling is required are asked to deliver readable text at 120 words per minute, which is a production speed that is not particularly hard to reach for professionals. In this case producing text at 200 wpm is useless). That is why one aspect of the didactics is dedicated to what we call MARS (acronym for Most Accurate and Rapid Speech-production rate).

MARS is the amount of text a subtitler is able to produce while keeping accuracy at acceptable levels. The acceptable amount of mistakes is set at different levels: in some cases it is 2% (NER model, Romero-Fresco 2011), in some other cases at 5% (IRA model, Eugeni 2017) while in some other it is 0.25 (Intersteno model, Intersteno). At the beginning of the training it is difficult not to make mistakes. Once one is confident with the technique, he/she has to try and set the bar higher and higher until he or she reaches his or her MARS, i.e. the amount of text, over the minimum required in every single field, a subtitler is able to produce while keeping



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accuracy at acceptable levels. The same is true for compression or other exit strategies, which are most used not only when sensatim subtitling is required, but also when a verbatim subtitler is faced with a challenging Source Text.

***In short: LTA teaching and learning have been thought in a way that they adapt to both vocational and academic training. Moreover it is modular and personalisable, meaning that trainers can choose the kind of materials they want depending on teaching limits and students' needs. Finally, general modules are organised in a progressive way, and specific modules are transversal, because they start simultaneously to the course.***

#### **2.2.4 Axe 5: “Determining feasibility of tasks”**

This is an aspect that cannot be covered here. In particular, the LTA curriculum will be tested during IO4, led by UAB, when partners will test the materials that will be produced during IO3, led by Velotype, with a group of trainees who will undergo a MOOC. At the same time, materials are going to be certified by ECQA (IO5). This will guarantee their compliance with EU standards. Having designed the materials with best practices, interviews, and surveys in mind and having received feedback from an advisory board which suggested to introduce an assessment-system all along the training to make sure that the weaknesses of e-learning are balanced by motivational monitoring, materials will be solidly built, thus allowing for a complete training into real-time intralingual subtitling, whatever the context.

***In short: tasks comply with the content of training materials; will be tested; and certified.***

#### **2.2.5 Axe 6: “Creation and implementation of missing tools”**

Similarly to the above point “creation and implementation of missing tools” will depend on the resources the training institution possesses. For every context, the necessary tools for the teaching/training are suggested as well as solutions to cope with possible lacks of materials, tools or any other kind of resources. In particular extra literature for more academic training will be suggested and extra practical exercises for vocational training.

***In short, how to cope with lack of resources will be suggested in IO3.***

## 2.3 Assessment

Assessment is made of 3 axes.

### 2.3.1 Axe 1: “Designing assessment plan”

This is a fundamental step in the course, because without assessing the progress of trainees, it is impossible for both trainees and trainers to understand how much has been learnt and how. For this reason, in line with Safar’s recommendation and Hamaoui’s recommendation of including assessment criteria and variables, an assessment system has been designed making sure that each LO acquired at each step fit the overall structure of the course and give birth to a professional profile, which is the ultimate goal of the LTA curriculum.

As mentioned in “Processing learning outcomes”, an evaluation system has been designed characterised of 3 phases: pre-assessment (before training starts), peri-assessment (during the training), and post-assessment (final exam). Such assessments will be made as follows:

- **Pre-assessment:** on the basis of the skills cards developed in IO1, which have led to the definition of the content and structure of the curriculum (IO2), Learning Outcomes of general (1 to 4) and specific (5 and 6) Units will be used for two assessments:
  - **General assessment** will say which skills/knowledge/competencies a trainee already possesses before starting the course. Such background is subdivided according to its nature: theoretical (knowledge about the profession), linguistic (how to cope with text writing), technical (how to use IT materials), and/or managerial (how to professionally work). Given that this mirrors the structure of the course, the general assessment is a general overview of one’s background and it is aimed at suggesting the trainer which elements of the course to choose for an as personalised course as possible. This is particularly useful in vocational training. In academic training, being more rigid, this can be either skipped or used for self monitoring and to activate previous knowledge.
  - **Specific assessment** will assess the aptitude of the future trainee for dictating (respeaking module) or typing (velotyping module). Besides a first impression of one or the other technique, an aptitude test can be useful to avoid starting a course which may end after some weeks because of a superficial choice. Such tests have proved effective at CIUTI (Conférence Internationale des Facultés de Traduction et d’Interprétation) and guarantee a reduced drop-out rate.



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- **Peri-assessment:** these are essential. Professionals asked to add them because during their training, especially as University students, they were not able to understand if they were learning well or not because of a lack of professional feedback from their teachers. That is why an assessment of trainees' progress has been envisaged at the end of each general module and specific unit, to see if the trainees' learning is in line with the LTA LOs. Peri-assessments have three levels: beginner, intermediate and advanced, mirroring the 3 steps trainees could achieve during the course:
  - **Beginner:** trainees have to be able to know general aspects related to process, product and function of the many job roles they may be asked to play in their profession. They need to know what is linguistically required by them, how to behave in different settings and which IT tools to use. Concerning the specific module, they have to be able and produce text at a given speed and without mistakes without the need for achieving professional results.
  - **Intermediate:** trainees have to apply all above-mentioned skills in the specific contexts of verbatim subtitling, while complying with provided standards.
  - **Advanced:** trainees have to be able and apply all required skills in the specific contexts of subtitling for the TV, conferences and other live events, while complying with provided standards.
- **Post-assessment:** trainees have acquired competences but this does not mean they are able to do the job of the real-time intralingual subtitler in the different LTA working settings (face-to-face, online, and by relay) and contexts (Cultural events, Parliamentary assemblies, Broadcasts, Workplace, Education). To do so real-life texts will be suggested to allow trainees to find out if they are ready to apply to the ECQA certification after the end of the course, together with Intersteno. Post assessment is a mock test, simulating a potential certification. It can be used as a final exam by trainers or rather as a self monitoring tool by trainees. At this step, trainees will be exposed to a series of tutorials explaining them what to expect from the world of job in their country. Thanks to the partnership with the international federation for information and communication processing INTERSTENO, contacts with many national associations of real-time intralingual subtitlers will be made available as a contact point for future developments of the professional life of the trainee.

***In short: material will allow trainees to self-monitor not just their LOs but also their overall expertise before, during and after the course.***

### **2.3.2 Axe 2: “Selection and creation of assessment tools”**

As mentioned above, there is a need to create assessment tools capable of measuring as objectively as possible the progress of trainees. To do so, all open source tests available will be evaluated, together with guidelines and codes of conduct capable of working as an inspiration for trainers to create such material. Given that material will be created during IO3, no further information can be provided at this point. What is recommended is to create them following the material provided by Intersteno, which is one of LTA’s most active advisory members.

***In short: ideas for assessment will be provided in line with the market of job.***

### **2.3.3 Axe 3: “Implementation of assessment methods and tools”**

This is exactly the focus of IO4. In particular, the essential of our training material will be tested with a group of students who will undergo online training using a MOOC format, IO leader being UAB. Guidelines to create accessible material for blind students will be used thanks to cross-fertilization coming from other international projects (in particular ADLAB).

***In short tools will be tested during IO4.***

## **2.4 Executive summary of the LTA curriculum design**

The LTA curriculum for the training of the real-time intralingual subtitler through respeaking and/or velotyping, based on an adaptation of the Pedagogical and Methodological Curriculum has been designed according to the following criteria:

- **Feasability:** the LTA curriculum is to be progressive so as not to discourage trainees. To do so, we have capitalized on existing literature, best practices and interviews to trainers and we have adapted to our purposes Safar’s Pedagogical and Methodological Curriculum (PMC) as adapted by Hamaoui for the training of Audiovisual Translation disciplines.
- **Adaptability:** thanks to advisory board members and the surveys and interviews carried out during IO1, we have come to a curriculum which is adaptable to changing teaching and learning needs by means of an assessment system monitoring progress all along the course.
- **Modularity:** the LTA course will be characterized by self-contained Modules, 4 general modules composed of 3 Units and 2 technique-specific modules composed of 5 units. Each general and specific Unit is aimed at the acquisition of 3 well-defined Learning Outcomes.



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- **Effectiveness:** the LTA curriculum has been designed to fit the needs of the world of job, thus bridging an existing gap in the training world. To do so we have envisaged real-life materials, ECQA certified, in English for general modules and language specific for specific modules.

More specifically, the rationale of the course runs parallel to the PMC structure, which is divided into 3 main areas:

- 1 **Aims and Objectives:** real-time intralingual subtiting (RIS) can be considered as a discipline per se, whose best collocation is a BA only devoted to Diamesic Translation (Translation from Spoken into Written Language) and its applications. Other implementations (academic or vocational) are possible but need to be contextualised. Regardless of its implementation, a course into RIS should be structured into types of competence (general or specific), assessed to guarantee progressive learning, until completion of the course. To do so a first self-evaluation assessment will tell which skills and competencies a trainee already possesses and if he or she has an aptitude for respeaking or velotyping. Intermediate tests will guarantee progression is in line with the aims of the course. An end-course will tell if the trainee is ready for the profession. As to contents, they are to be selected according to a progressive principle which is determined by the number of Learning Outcomes to be acquired. Plus, they have to be homogeneous in all languages. Hence, first-level contents (beginner) are general (SCIC speech repository and Intersteno championships). Second-level contents (intermediate) are specific (EurParl TV). Third-level contents (advanced) are all the more varied and specific (TED talks, TV documentaries and news). The modular competence-based structure of the LTA curriculum allows for customising the course and assessing achievement of learning outcomes (acquired knowledge, competence and skills) and professionalism.
- 2 **Tools and Teaching:** LTA curriculum envisages ad hoc tools and teaching. As to teaching, trainers should be professional, so as to add professional value to training. Logistically, financially and administratively, training should guarantee real-life conditions. To do so, it is recommended that trainers are LTA and ECQA certified, while tools can be either essential to training (hardware and software for RIS), or only recommended for training, while in the profession they are essential. LTA teaching and learning have been thought in a way that they adapt to both vocational and academic training. Moreover the curriculum is modular



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and personalisable, meaning that trainers can choose the kind of materials they want depending on teaching limits and students' needs. Finally, general modules are organised in a progressive way, and specific modules are transversal, because they start simultaneously to the course. As far as tasks are concerned, they comply with the content of training materials, will be tested, and certified during IO4. How to cope with lack of resources will be suggested in IO3.

- 3 Assessment: the course is going to be divided into 3 levels of competence: beginners, intermediate, advanced. LTA material will allow trainees to self-monitor not just the achievement of LTA LOs but also their overall expertise before, during and after the course. To do so, an assessment system has been designed divided into (pre-assessment, peri-assessment, and post-assessment). These assessments will be provided in line with the market of job after having been tested during IO4.

On top of all this we will provide a trainers guide to allow teachers and trainers to adapt the curriculum to any teaching and learning situation in the fields of Real-Time Intralingual Subtitling through Reaspeakign and/or Velotyping, regardless of the working context (Cultural events like conferences, festivals, shows; Assemblies like parliamentary, council, and other kinds of gatherings; Broadcasts like live TV/web programs, news and sports events; Workplace like job meetings and interviews; and Education like school classes, university lectures, laboratories), and working scenario a subtitler will encounter in his/her profession (Face-to-face with the subtitler being physically in the same room as the event; online with the subtitler connected through Internet connection but still capable of being there, though virtually; and finally by relay, with the subtitler only listening to the audio component of the speech via Internet or telephone).



### **3 Visual representation – the LTA curriculum design**

Before coming to the visual representation of the curriculum(3.1) and its detailed explanation (3.2), it is to be reminded that LTA training materials:

- have been organised to be adapted to training and learning needs, be they vocational or academic (merely academic or vocational materials will be signaled);
- have been thought to be as self-contained as possible, in order to allow trainers to use them at their ease, depending on their level (beginners, intermediate, advanced);
- comply with ECQA guidelines to prepare international certification during IO5;
- will be accessible to blind people;
- will be tested (MOOC version) during IO4 before being made available.

The model we have defined, described, analysed and explained above can be implemented in several ways (see chapter 4) because of its flexibility. Its training materials may vary in nature and in number according to their role in the implementation pathways described below:

- Class-work material: core material (their nature and number may vary depending on the course) to be used “in the class” (be it physical or virtual) by trainers to achieve an LO;
- Self-study material: material (their nature and number may vary depending on the course) to be used outside classes by the trainees to further develop an LO;
- Accompanying material: subtitles in .srt format, presentations in .ppt format, transcripts in .pdf format and other materials created during the LTA project;
- Suggested reading: websites, academic papers, laws, etc. providing information which can be useful in diverse settings and contexts, though not essential to acquire an LO;
- Tasks: material especially created by LTA partners or made available by third parties to be able and accomplish a technique-specific or general LO.
- Tests: material used to both assess one’s background and achieved results after a Unit/Module and after the full course.

#### **3.1 The basic temple structure**

On the basis of the Pedagogical and Methodological Curriculum (PMC) above we have designed a curriculum that allows for meeting the goal of the LTA project, meaning bridging the gap between labour market and societal needs through open education and social inclusion in

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the field of real-time intralingual subtitling, where by “real-time intralingual subtitling” it is meant the production of both verbatim and sensatim subtitles. As agreed in the project proposal, the proposed course design has a modular structure and can be implemented in several pathways according to the learning and training needs. Below a basic representation of the LTA curriculum (figure 1), with colors representing the colors of each partner.

**Figure 1. Basic visual representation of LTA curriculum**

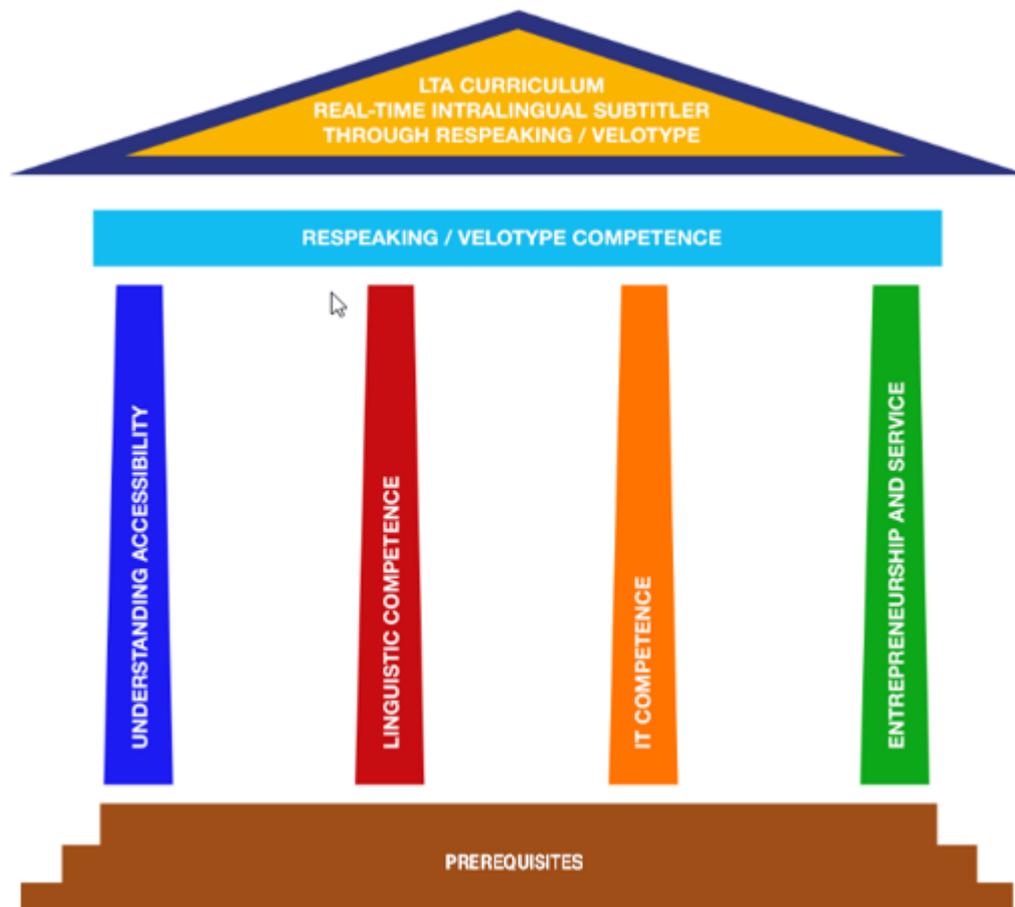


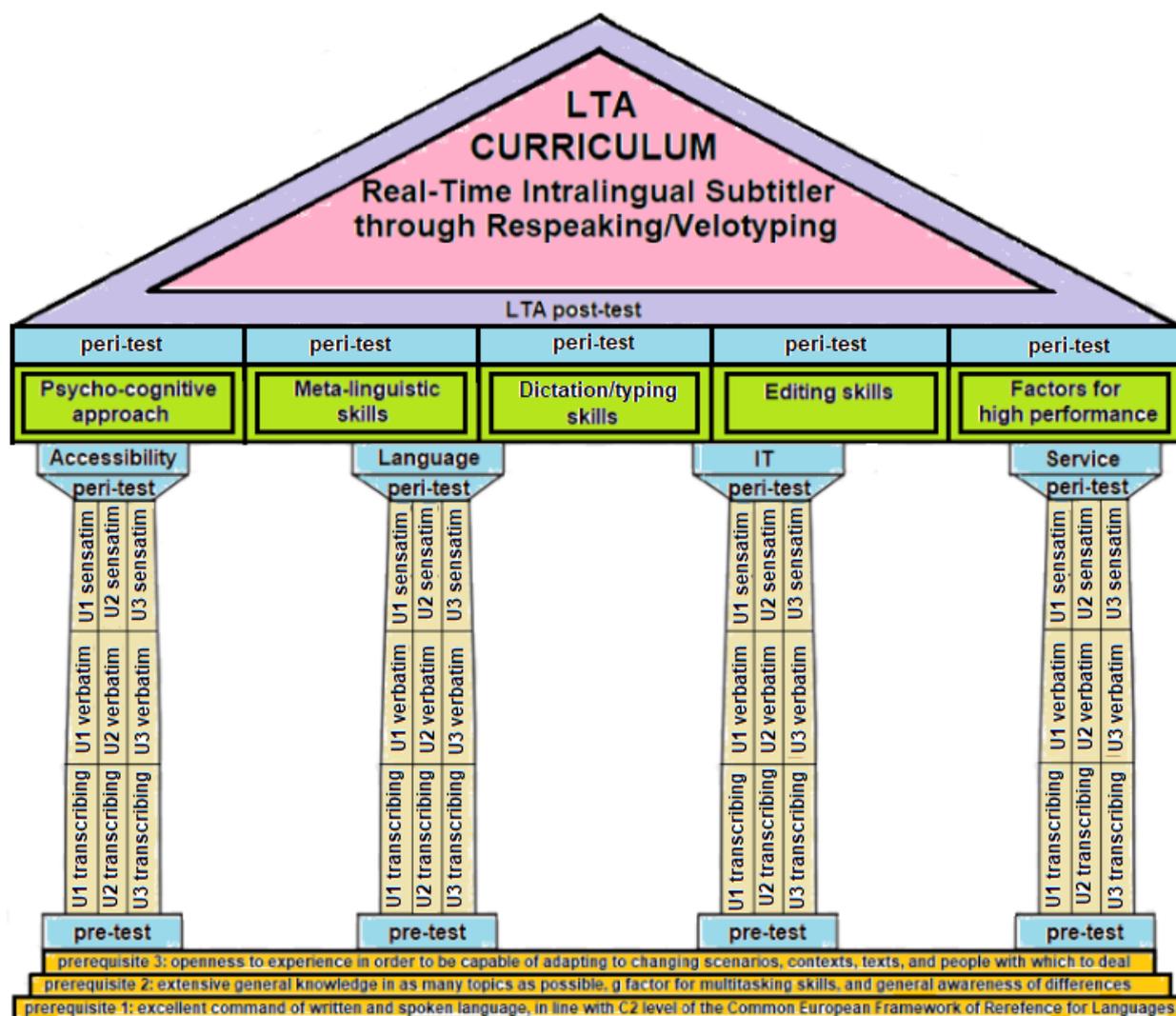
Figure 1 visually represents the LTA course. It simplifies the structure of a Doric Temple entrance, thus paying tribute to the Greek civilisation which first introduced the notion of culture in Europe in many fields, including that of education. Understanding it is quite simple: the stairs represent the prerequisites to start the LTA course. They are the basis on which the training stands. Each of the four pillars is a general module while the architrave is the specific one, running parallel to them. They are the core structure of the training. The tympanum with its post-assessment and certification make all materials a curriculum and not a simple sum of elements.

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### 3.2 The detailed temple structure

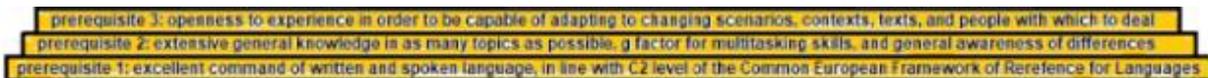
By adding details to this basic visual representation, we come to a more structured representation of the LTA curriculum, showing all details of each component (figure 2).

Figure 2. Detailed visual representation of the LTA course design



The stairs are, in fact, a *three-stepped crepidoma* representing the prerequisites a trainee should possess in order to be able and successfully undergo the LTA training course. Though they cannot be considered as limiting access to the curriculum, which is open to everybody, we suggest them in order to reduce frustration and drop out. We have limited them to (Figure 3):

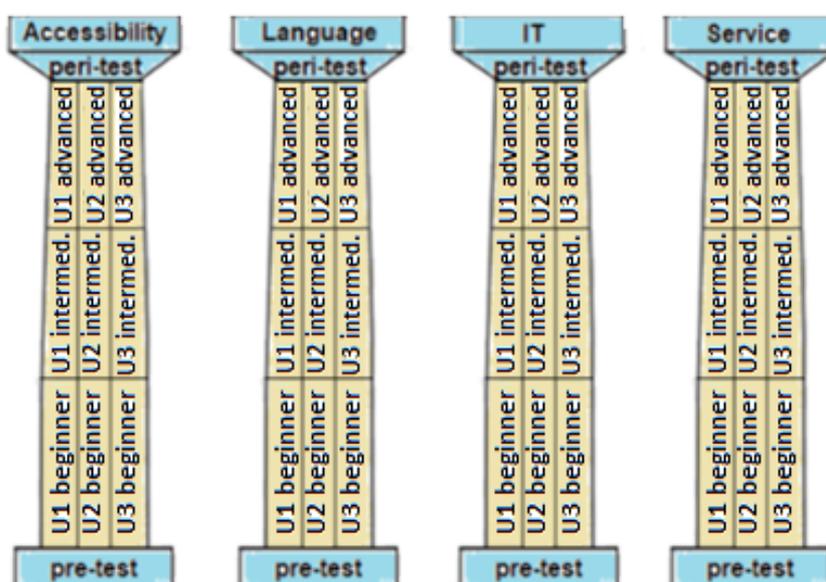
**Figure 3. Prerequisites in the LTA curriculum**



- 1 Excellent command of written and spoken language, in line with C2 level of the Common European Framework of Reference for Languages. This implies the trainee knows the working language enough to avoid being taught grammar (morphology and syntax), spelling (orthography), meaning (semantics), and / or text types and genres (pragmatics);
- 2 Extensive general knowledge in as many topics as possible, g factor to comply with the multitasking skills a subtitler needs to possess, and awareness of the many applications of a similar job. In QI tests such elements are interrelated because in many contexts a professional is required to have an aptitude for the job on top of training, that of the real-time intralingual subtitler included;
- 3 Openness to experience in order to be capable of adapting to changing scenarios, contexts, text types and people with which to deal. This prerequisite is related to the previous one but is more focused on the real life of a real-time intralingual subtitler, who has to be able to adapt to many varying contexts and scenarios, especially when working as a freelancer.

Pillars are made of a basis (plinths), the main structure (columns) and a top (capitals) (figure 4).

**Figure 4. General modules in the LTA curriculum**





*Plinths* are the first elements of LTA training materials, the basis of the course. They contain the training materials called pre-assessments (assessments of the preliminary theoretical, linguistic, managerial, IT, and technical skills/knowledge/competencies of a trainee before he/she starts the course). This flexibility is highly important for the LTA course and makes it almost unique, because these assessments mirror the structure and content of the course. Depending on the results, the course can be customised on the single trainee, who will only need to be trained into some modules/units or LOs. Given that this course is to be as flexible as possible, pre-assessments have been thought for all categories of people: beginners who possess none or just a small amount of required LOs; intermediate who know at least the content of one or more general modules; advanced who already know the technique and want to acquire the professional aspects of verbatim and/or sensatim subtitling or who know the profession and want to acquire a new technique to deal with that. Of course the number of possible trainees is much larger; the ones that have been targeted during the design phase.

*Columns* stand for the four general modules. Visually they look the same but each of them represent a module whose “shortened” name is graved in the capitals (Accessibility, Language, IT, Service). Before entering into details it is important here to recall that every single module is thought as a 3-layer module: beginners, intermediate, and advanced. This is mirrored by the three building blocks of each column. In the curriculum design they have been thought as propaedeutic and as complementing each other. The training materials composing every single module are visually represented by the column’s *fluting* (each vertical groove which stands for the three units each module is composed of (U1, U2, U3). Training materials have already been described above and need no further visual representation. What is important to specify here is that they structure the module as Lego-bricks: a trainee approaches this course with a quantity of Lego-like bricks (his/her previously possessed skills/competences/knowledge) and a capacity to use them (prerequisites) as verified by pre-assessments. When he/she starts the course some bricks may be useful to shorten the construction of the temple (to achieve a Unit or finish the course); some others may be redundant and used to reinforce or retrieve an LO; some others are useless and will not be used in the temple construction.

*Capitals* represent the general module’s peri-assessment. These allow trainees to understand if they are learning well or not because of a lack of professional feedback from teachers who may not be professional subtitlers. They can be used at the end of the module or they can be split into 3. The Trainer’s Guide will provide details to help trainers decide which to use and when.

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On top of pillars there is a horizontal *epistyle*(figure 5), which stands for the specific module (respeaking or velotype). It is the architrave of our design, running simultaneously to every single module. Tasks will guarantee that the technique is mastered enough to meet the single LOs per each level (basic, intermediate, advanced). Again, in the Trainer’s Guide suggestions will be provided about how to adapt such material in case of specific courses.

**Figure 5. Specific module (respeaking or velotyping) in the LTA curriculum**

peri-test	peri-test	peri-test	peri-test	peri-test
Psycho-cognitive approach	Meta-linguistic skills	Dictation/typing skills	Editing skills	Factors for high performance

Units and peri-assessments of the specific module are not designed as the others. The 5 units divide the specific module into 5 *freizes* aimed at training one’s command of a technique, beating one’s records, and/or passing real-life tests, particularly useful for certification purposes. Peri-assessments are envisaged at the end of every single unit.

On top of the temple is the triangular *pediment*(figure 6) composed of:

- the outer *cornice* represents post-assessments, which can be used by trainers to also let future trainees understand what the course is about and what the final result is expected to be, so as to motivate them since the beginning of the training process;
- the inner *tympanum* is the completion of the course (a diploma, certification…) telling people what trainees have become: “real-time intralingual subtitler through respeaking and/or velotyping”.

**Figure 6. Post-assessment and certification of the LTA curriculum**



### **3.3 Executive summary of the visual representation of the LTA curriculum**

Visually, the LTA curriculum for the training of the real-time intralingual subtitler looks like a solid building. This represents the consistency of its construction, in the light of the most recent contributions in the field of curriculum design, with input from the world of professional training, which has fed the curriculum structure with specific learning content (Learning Outcomes). Despite this, the LTA curriculum is not meant as a unique block of materials to take or leave. On the contrary, its main features are feasibility, adaptability, modularity, and effectiveness.

Building blocks of the curriculum are 6 modules (4 general modules and 2 technique-specific modules), aimed at training future real-time intralingual subtitlers through respeaking (the 4 general modules + the module specific to respeaking) or velotyping (the 4 general modules + the module specific to velotyping). General modules are composed of 3 Units, while specific modules of 5 units, each being composed of 3 LOs focused on professional contents. Each module is further subdivided into 3 levels of expertise: beginner, intermediate, and advanced.

This allows for many implementations of the LTA curriculum, from vocational training to Higher Education teaching. Such flexibility is extended at both the level of general modules or specific units (macro-level) and that of training materials (micro-level), thanks to a three-fold assessment system which allows for bridging the gap between trainees needs and the market of job.

The next step will be the creation of training materials (IO3) and their assessment (IO4). Assessment will be iterative and would allow to improve the material before the project is finished and releasing the. Testers will match the LTA target groups: prospective trainees, prospective trainers (academic and vocational), professionals and end-users from partners (like EFHOH or the HEI ones) or associates (like Intersteno). While the first two (prospective trainers



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and trainees) will provide feedback about the usability of materials; the last two (professionals and end-users) will provide feedback about their quality and correlation to real life.

## 4 Implementation pathways

In this section we will deal with possible implementations of the curriculum as designed above.

### 4.1 Online course

In IO4 we are going to test LTA materials by means of a 4 or 6-week MOOC for trainees with little or no knowledge about RIS (see type-1 learners below) aimed at reaching the first level of expertise (beginner) out of three (beginner, intermediate, advanced). Originally, a MOOC (Massive Open Online Course) is a training course available on the web aimed at unlimited participation and open access (Kaplan & Haenlein, 2016). By the time MOOCs have evolved differentiating from the original standard. In this section, we will not describe the MOOC which will be tested during IO4. However, the LTA MOOC will be available for free access after completion of the assessment process (IO4) and can be used as a reference. For the purpose of this report, we will describe three possible implementations of the LTA curriculum as online courses that use the materials we will create, which are meant to be:

- available for free without time limits;
- accessible to blind users;
- LTA-certified following ECQA standards.

Even if no certification is provided at the end of such a course, its assessment system allows for a close-to-professional third-party assessment or even for self-assessment. Follow the descriptions of 3 possible implementations of the LTA as online courses for three different types of learners: with little or no knowledge in the field of RIS (type 1); some knowledge in the field of RIS (type 2); a lot of but not complete knowledge in the field of RIS (type 3).

#### 4.1.1 Type-1 learners

Type-1 learners are learners with little or no knowledge in the field of Real-time Intralingual Subtitling, or RIS. This means they will undergo all LTA modules. The related online course is going to be structured in a way that presents 4 general modules and 2 specific modules. The general modules provide knowledge about accessibility as well as linguistic, entrepreneurial and

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IT skills. The specific modules provide the training materials to learn one of the two techniques we provide material for and which trainees into real-time intralingual subtitling want to learn, simultaneously to the general modules. An introductory video will make all this clear to trainees and trainers, by providing an overview of the course, explaining what respeaking and velotyping are, and showing what the possible implementations of the two techniques combined with the general modules are. Though the materials provided (class-work material, home-work material, accompanying material, suggested material, and tasks) have a hierarchy, going through them all allows for a complete training process.

In case of time constraints, it is suggested to focus on class-work material and tasks, to have the widest overview possible of the matter and to make sure that LOs have been actually met. In case of extra time, it is possible to fill it in by re-using self-study material as much as possible: first using self-study material coming from one of the two specific modules (respeaking and velotyping); then following the preferred order (or level of expertise), which may depend on teaching and learning needs and own expectations.

Table 3 below offers a graphic overview of the way all materials available for an online course are organised. In particular it shows the evolution of materials starting from general modules (first column), moving to and general units (second column), running parallel to the specific one (third column), internally subdivided per levels of expertise (beginner, intermediate, advanced). At the end of every general module and of a specific unit peri-assessment is envisaged.

**Table 3. Representation of the LTA learning materials for beginners**

General units		Specific unit: respeaking or velotyping
Understanding Accessibility	Concepts of accessibility, disability, multimodality and Universal Design	Psycho-cognitive skills: How to listen and speak simultaneously (beginner)
	Knowledge of target groups and their needs and expectations	Psycho-cognitive skills: How to listen and speak simultaneously (intermediate)
	Knowledge of how accessibility is embedded in the environment	Psycho-cognitive skills: How to listen and speak simultaneously (advanced)
<b>Peri-assessment: Understanding Accessibility</b>		<b>Peri-assessment: psycho-cognitive skills</b>
Linguistic Competence	Functionality: Accuracy, readability, and legibility	Metalinguistic skills: How to turn non-verbal elements into verbal input (beginner)

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General units		Specific unit: respeaking or velotyping
	How to cope with speech-related challenges	Metalinguistic skills: How to turn non-verbal elements into verbal input (intermediate)
	Strategies to acquire and develop specific thematic knowledge	Metalinguistic skills: How to turn non-verbal elements into verbal input (advanced)
<b>Peri-assessment: Linguistic Competence units</b>		<b>Peri-assessment: Metalinguistic skills</b>
IT Competence	How to set up the working environment	Dictation/typing skills: how to write fluently, quickly and accurately (beginner)
	Input tools	Dictation/typing skills: how to write fluently, quickly and accurately (intermediate)
	Output tools	Dictation/typing skills: how to write fluently, quickly and accurately (advanced)
<b>Peri-assessment: IT competence units</b>		<b>Peri-assessment: dictation/typing skills</b>
Entrepreneurial and service Competence	Management + Interpersonal skills	Editing skills: When and how to correct oneself and another respeaker/velotypist (beginner)
	Personal + Stress management skills	Editing skills: When and how to correct oneself and another respeaker/velotypist (intermediate)
	Business strategies	Editing skills: When and how to correct oneself and another respeaker/velotypist (advanced)
<b>Peri-assessment: Entrepreneurial and service competence units</b>		<b>Peri-assessment: editing skills</b>
		How to develop factors for high performance such as flexibility, and self-motivation (beginner)
		How to develop factors for high performance such as flexibility, and self-motivation (intermediate)
		How to develop factors for high performance such as flexibility, and self-motivation (advanced)
		<i>Peri-assessment on factors for High performance</i>
<b>Post-assessment on real-time intralingual subtitling (verbatim and sensatim)</b>		

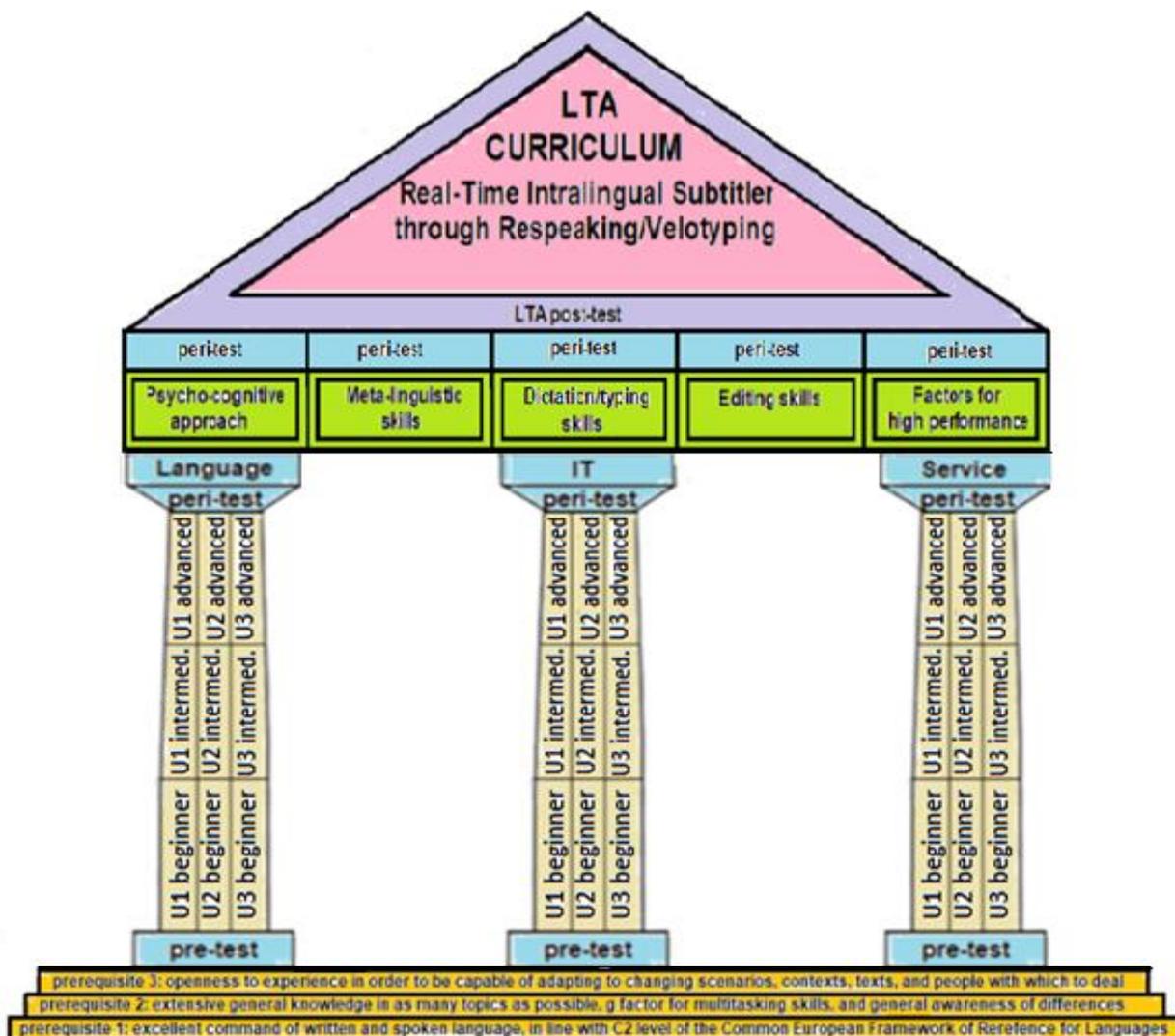


#### 4.1.2 Type-2 learners

Type-2 learners are learners with some general or specific knowledge in the field of RIS. It may happen that trainees, especially in the field of vocational training, already possess some knowledge. This knowledge may be the sum of all LOs of a whole general module (Understanding accessibility, Language competence, Entrepreneurship and service competence, IT competence) or the sum of all LOs of a technique-specific unit. In this case, if pre-assessments will have determined that trainees have already the knowledge/skills/competences envisaged by the LOs of a general module or of a technique-specific unit, they may skip that module or unit and the course can be re-designed accordingly. For example, people coming from the field of deafness, such as sign-language interpreters, already know most of the content of module 1. Similarly, people coming from the world of conference interpreting will find it quite useless to go through the specific unit of the respeaking module called “psycho-cognitive skills”. Depending on the content known by trainees, the modular structure of the course allows trainers to reshape the curriculum accordingly. In this case the temple (figure 7) will be thinner because of less *columns*. Peri- and post-assessments will verify consistency.

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Figure 7. Visual representation of the LTA learning materials for Type 2 learners



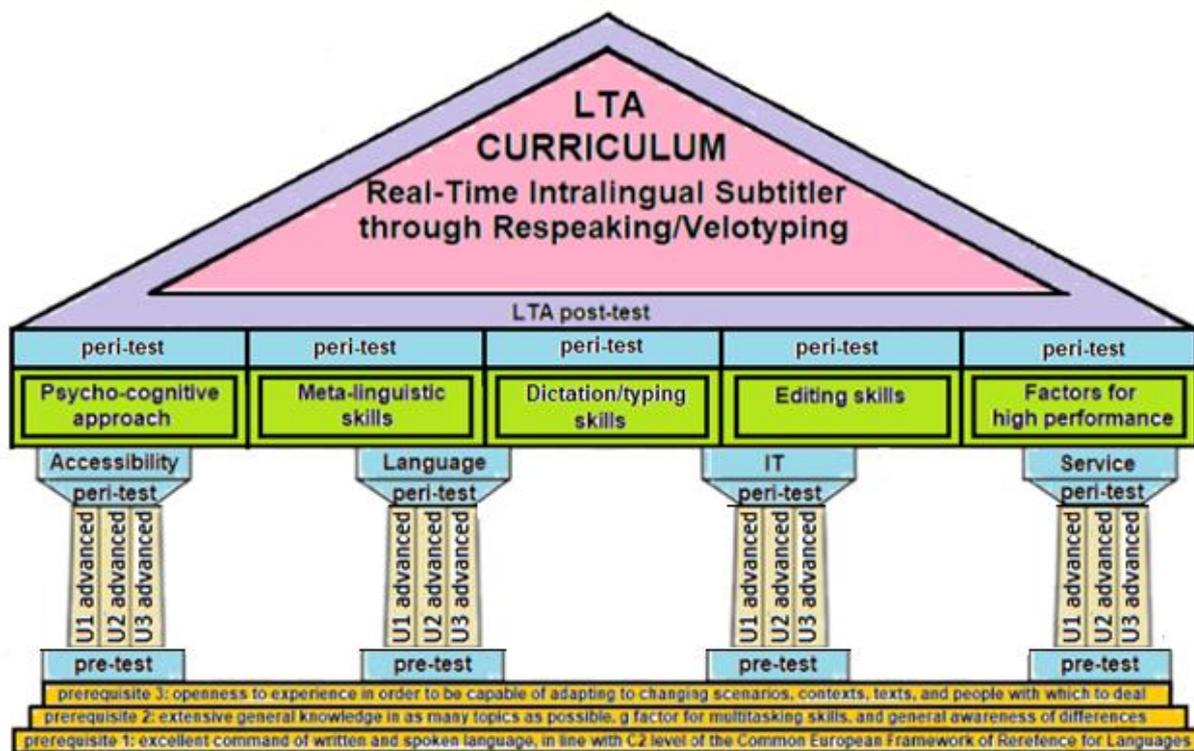
### 4.1.3 Type-3 learners

Type-3 learners are learners with a lot of, but not complete, knowledge in the field of RIS. The online course can also be used by those people who already work in the field of real-time intralingual subtitling, or RIS, but want to add skills specific to a profession (sensatim subtitling) or a technique (respeaking or velotyping). Some of the respondents to our survey have complained that stenography can be physically tiring and they would be happy to learn respeaking to give a rest to their hands. Conversely, some respondents have complained that respeaking is not as flexible as the world of job requires and that knowing how to type on a chord keyboard (in our case Velotype) would be of help in some cases. Similarly, verbatim

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parliamentary subtitlers would like to learn TV subtitling and may find it useful to adapt the online course to their needs. In this case the temple will be shorter because of less building blocks composing columns (levels of expertise) as shown in figure 8.

**Figure 8. Visual representation of the LTA learning materials for Type 3 learners**



Here too peri-assessments and post-assessments will allow to verify if this course will have been consistent with the curriculum design provided by the LTA MOOC on real-time intralingual subtitler. This is due to the fact that it happens that a technique is associated to a profession and the related linguistic practice. For example in some countries, stenotypists are parliamentary reporters and have a verbatim approach to the profession. Should they be asked to do TV subtitling, they would adopt the same verbatim approach to the profession, even when a sensitim approach is required.

#### 4.2 30-ECTS/ECVET course

ECQA recommends that a course, to be certified, should normally deliver 30 credits, be they academic (ECTS) or vocational (ECVET). 30 credits correspond to 750 training hours (one training hour corresponds to 45 minutes), meaning 25 training hours per credit. These 750 training hours are to be distributed into 270 class hours (contact hours during which the student

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undergoes a class) and 480 independent self-study hours (independent study hours during which students either accomplish tasks, do homework or read literature or other materials which allow them to consolidate their skills and acquire knowledge).

To translate these hours into materials, we have first distributed the total amount of 30 credits into the different modules. This has not been an easy task. The easiest solution would have been to divide the total number of hours by five, but modules cannot be attributed the same amount of training hours because they are different. And some skills are easier or quicker to acquire than others, though they have the same importance, didactically speaking. For example technique-specific skills are very long to acquire compared to most of those in general modules. This is the reason why we have designed the technique-specific training in a way that specific LOs are taught simultaneously to general ones. Moreover, the specific module is further subdivided into three levels so as to guarantee a gradual training and not demotivate trainees. These three levels, as shown in figure 8 above, are: **Beginner**, **Intermediate** and **Advanced**. These 3 levels of expertise correspond to 3 different parts of the course. Beginner corresponds to the first part and is to be taught at the beginning of the course; Intermediate corresponds to the second part and should be taught in the middle; and Advanced subtitling corresponds to the third part and is to be taught at the end. The same colours have been attributed to the general LOs the specific LOs should run parallel to. The reason for that is purely practical. At the beginning trainees learn the basic general concepts of the profession and the basics of the technique. On this basis they first built the capacity to subtitle verbatim (starting from intermediate level), then the capacity of subtitling sensatim (during advanced level). Here again the reason is not hierarchical but functional: what is required in verbatim subtitling is also required in sensatim subtitling and the skills specific to sensatim subtitling are not required in verbatim subtitling. It is logical to dedicate the last term of the training to sensatim subtitling LOs and LOs needing life-long training, such as reaching one's MARS, generating glossaries, developing raising awareness and using sign language to communicate. LOs needing life-long training start with the beginning of the course but have been designed to have the same 3 different levels (beginner, intermediate and advanced), ending with the end of the course.

Following this criterion we have come to the following distribution of hours per module:

- Understanding accessibility: 3 credits = 27 class hours
- Linguistic competence: 9 credits = 81 class hours
- Entrepreneurship and service competence: 3 credits = 27 class hours



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- IT competence: 3 credits = 27 class hours
- Respeaking/Velotype competence: 12 credits = hours 108 class hours

#### 4.2.1 Understanding accessibility (LTA.M1)

Following the above-mentioned criterion we have come to the following distribution of hours per LO within the first module Understanding accessibility (3 credits). The level of expertise targeted has been marked according to the following convention: beginner (yellow and letter "b"), intermediate (green and letter "i"), and advanced (blue and letter "a").

**Table 4. Distribution of hours/credits per LO - Module 1**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M1.U.1 Accessibility, multimodality and universal design	<b>LTA.M1.U.1.LO1-b:</b> distinguish between the medical and social model of disability.	1/3 = 3 hours
	<b>LTA.M1.U.1.LO2-b:</b> explain the concepts of accessibility, disability, multimodality and Universal Design from the perspective of the social model of disability.	1/3 = 3 hours
	<b>LTA.M1.U.1.LO3-b:</b> design accessible working settings for the provision of real-time intralingual subtitles by applying the principles of Universal Design and a For all approach.	1/3 = 3 hours
LTA.M1.U.2 Target groups and their needs	<b>LTA.M1.U.2.LO1-b:</b> Explain the needs and cultural preferences of the hard-of-hearing, deaf, deaf-blind community, and other end users of real-time translations.	1/3 = 3 hours
	<b>LTA.M1.U.2.LO2-b:</b> Explain the concepts of hearing, hearing loss, and assistive technology and how they relate to the needs of end-users of real-time subtitles.	1/3 = 3 hours
	<b>LTA.M1.U.2.LO3-i:</b> Use sign language to communicate in basic job-related situations such as greeting.	1/3 = 3 hours

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Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M1.U.3 How accessibility is embedded in the environment	<b>LTA.M1.U.3.LO1-b:</b> Classify real-time working settings according to the LTA trained working contexts.	1/3 = 3 hours
	<b>LTA.M1.U.3.LO2-b:</b> Explain the role and competences of the real-time intralingual subtitler as communication mediator for each LTA trained working context.	1/3 = 3 hours
	<b>LTA.M1.U.3.LO3-b:</b> Advise customers about how to set up an accessible real-time working environment for end users in the trained working contexts and settings.	1/3 = 3 hours

This first module is an introductory module to the whole course. It is important that it is taught at the beginning of the course, because it provides the necessary conceptual framework and affective objectives to better understand the core target of real-time intralingual subtitling, and the main reason for such a profession. It is important for motivation and for raising one's awareness about the need to foster inclusion and to develop critical thinking skills. During this period, trainees will also start the technique-specific module, so that they can alternate theory and practice both at vocational and academic level. Moreover, materials used to reach the 9 LOs can be used for training purposes during the specific module: written extra material as a source text to dictate/type during the first steps of the specific module; and core videos as a source text once trainees have learnt how to listen and dictate/type at the same time. This means that the same materials used here can be re-used for both **beginner** and **intermediate** and **advanced** subtitling, hence during the three main levels of the course.

## MODULE MATERIALS

- Class-work material: core material will be subtitled video lectures explaining the main concepts accompanied by .ppt presentation summing up main elements to recall.
- Self-study hours material: tasks to do and academic papers and association websites to study, understand and implement notions that will be used during the training.

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- Accompanying material: all slides, subtitles and transcripts of video lectures will be provided as separate files for uses different from the ones specific to the module. Plus, this will allow trainers to adapt them to training and learning needs.
- Suggested readings: mainly academic papers, association websites, laws and other material to develop a wider knowledge about single concepts in related fields.
- Tasks: a pre-assessment based on the theoretical knowledge of the module, to assess students' conceptual understanding (if they already know a concept or not); a peri-assessment on the operational LOs of the module (for professionals in the field), checking if they are able to implement those concepts in real-time intralingual subtitling.

#### 4.2.2 Linguistic competence(LTA.M2)

Following the same criterion here follow a distribution of hours per LO in module 2 “Linguistic competence”. Being particularly important as identified in IO1 and online survey, and a module thought for self-studytraining during the whole course, 9 credits are dedicated to it:

**Table 5. distribution of hours/credits per LO - Module 2**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M2.U1: Functionality: Accuracy, readability, and legibility	LTA.M2.U1.LO1-b: Produce accurate transcriptions in terms of spelling, grammar, and meaning.	1,5 credit = 13,5 hours
	LTA.M2.U1.LO2-b: Produce legible and readable transcriptions by applying readability indicators while creating the transcripts and after the real-time situation.	1 credit = 9 hours
	LTA.M2.U1.LO3-b: Identify non-verbal elements to be described in each context and situation.	0,5 credit = 4,5 hours
LTA.M2.U2: Strategies to acquire and develop specific thematic knowledge	LTA.M2.U2.LO1-i: Search for terminology, identifies reliable sources, and generate glossaries specific to a topic.	0,5 credit = 4,5 hours
	LTA.M2.U2.LO 2-i: Manage terminology and implements it in real-time.	0,5 credit = 4,5 hours

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Unit	LO - trainee is able to...	ECTS/HOURS
	LTA.M2.U2.LO 3-i: Learn how to cope with terminology by using shortcuts.	0,5 credit = 4,5 hours
LTA.M2.U3: How to cope with speech-related challenges	LTA.M2.U3.LO 1-a: Identify speech-related challenges and which exit strategy to apply.	2 credits = 18 hours
	LTA.M2.U3.LO2-a: Simplify the structure of a text according to the notion of Plain Language.	2 credits = 18 hours
	LTA.M2.U3.LO3-a: Adjust delay by means of exit strategies when required.	0,5 credit = 4,5 hours

This module should not be considered as a single block. Rather it should be considered as a column composed of three building blocks. The first unit (“Functionality: Accuracy, readability, and legibility”) to accompany the first basic level of the training (**beginner**); the second unit (“Strategies to acquire and develop specific thematic knowledge”) to accompany the second level of the technique-specific training (**intermediate**); the third unit (“How to cope with speech-related challenges”) to accompany the last level of the technique-specific training (**advanced**).

## MODULE MATERIALS

- Class-work material: core materials will be videos explaining concepts of applied linguistics and specifically of diamesic translation (difference between spoken and written language, verbal and non verbal components of language, semiotics, plain language...) and the related academic papers. Tasks and demos will be also made available to show how concretely deal with the translation of speech into written text.
- Self-studyhours material: tasks allowing trainees to understand what diamesic translation concretely is and its different applications. Further training material will made of videos and texts (in all LTA languages) taken from the sources identified at the beginning of the IO: SCIC repository, EurParl TV, TED Talks, Intersteno tests, TV news. A selection of the videos used as class-work materials in the general modules will also be used with specific objectives, depending on the LO.

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- Accompanying material: all slides, subtitles and transcripts of lectures will be made available. Transcripts of the videos will only be provided if already provided by repository owners.
- Suggested readings: mainly academic but also vocational material will be made available for those who want to investigate further the relationship between written and spoken language in their language or in other countries using the same language.
- Tasks: a pre-assessment will assess the prerequisite “Excellent command of written and spoken language”, without which such course is professionally useless. Peri-assessment will make sure that LOs for the various levels (beginner, intermediate, advanced) are reached.

#### 4.2.3 IT competence (LTA.M3)

Following the same criterion above, we have come to the following distribution of hours per LO within the third module “IT competence”. This is also a particularly important module, where a competence essential to the profession is taught. Here again some skills and knowledge are to be considered as essential to a basic level (beginner), while other can be taught later during the course for more professional objectives (intermediate and advanced). Given that the LOs acquired here derive from illustrative more than practical work - trainees may not be interested in buying all material shown - and despite their professional usefulness, they provide 3 credits:

**Table 6. Distribution of hours/credits per LO - Module 3**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M3.U1: Input tools	LTA.M3.U1.LO1-b: Know how to use the different input tools available on the market for both respeaking and typing techniques.	1/3 = 3 hours
	LTA.M3.U1.LO2-b: Implement strategies to rapidly produce text during a real-time job by using a respeaking/velotyping software.	1/3 = 3 hours
	LTA.M3.U1.LO3-i: use editing software for both verbatim and simultaneous subtitling.	1/3 = 3 hours
LTA.M3.U2: Output tools	LTA.M3.U2.LO1-b: Know how to use the different output tools available on the market for real-time intralingual subtitling.	1/3 = 3 hours

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Unit	LO - trainee is able to...	ECTS/HOURS
	LTA.M3.U2.LO2-i: Explain the advantages of output tools in the different LTA working contexts.	1/3 = 3 hours
	LTA.M3.U2.LO3-a: explain the differences of the different language, machine translation and crowdsourcing tools for real-time subtitling.	1/3 = 3 hours
LTA.M3.U3: How to set up the work environment	LTA.M3.U3.LO1-i: Set up the hardware and software for each type of trained setting and solve problems.	1/3 = 3 hours
	LTA.M3.U3.LO2-a: work directly with the HoH or deaf person requiring the service if the service will be personal support.	1/3 = 3 hours
	LTA.M3.U3.LO3-a: test each setting with a client before work starts.	1/3 = 3 hours

Similarly to the first module, here materials created to teach this module have been thought to be used for a specific technique (respeaking or velotyping), both at the beginner, intermediate, and advanced level. As to when teaching this module's LOs, most of them are to be taught during the first level (in yellow), while the one in green can be taught during the second level, and the cyan ones at the third level. The latter are specific to sensatim subtitling such as "is capable of using editing software (...)"; "explain the differences of the different language, machine translation and crowdsourcing tools (...)"; and "work directly with the HoH or deaf person requiring the service (...)". Here most of LOs can be reached during self-studyhours, by reading user's guides, by exploring the single functions of a program, and by testing them during tasks. This module is a step towards the profession and the aim of bridging the gap between training and profession, with input and output tools illustrated in real-life situations.

## MODULE MATERIALS

- Class-work material: core videos will show how professionals in various parts of the world in different working settings use hardware and software. Demos will show how to use the main functions of a software/hardware. User's guides will also be used to let trainees understand all minor functions of a tool.

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- Self-studyhours material: here material will consist of tasks asking trainees to show if they know the various functions in order to be able and assist them in producing text.
- Accompanying material: all slides, subtitles and transcripts will be made available.
- Suggested reading: suggested readings will consist of blogs and other non academic material concretely telling trainees how to use their tools in various settings.
- Tasks: pre-assessment will guarantee that trainees comply with the second prerequisite “Extensive general knowledge in as many topics as possible, g factor for multitasking skills, and general awareness of differences”. Peri-assessment will check their capacity to use the basic input and output software and hardware programs; and the awareness of the input and output software and hardware used in the various working settings.

#### 4.2.4 Entrepreneurship and Service Competence (LTA.M4)

Concerning the last general module (“Entrepreneurship and Service Competence”), the same criterion used above has been applied. This module is the accomplishment of the LTA course and the aim of bridging the gap between training and job. Similar to the previous one, this module calls trainees for action by raising their awareness about what professionalism is.

**Table 7. Distribution of hours/credits per LO - Module 4**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M4.U1: Management and Interpersonal skills	LTA.M4.U1.LO1-a: plan job-related tasks by considering other dependencies such as schedule, costs, human and physical resources and related risks.	1/6 credit = 1,5 hours
	LTA.M4.U1.LO2-a: Identify possible clients and sponsors in his/her country of real-time intralingual subtitling service.	1/6 credit = 1,5 hours
	LTA.M4.U1.LO3-a: Timely and effectively listen, answer, and respond to customer’s requests to ensure accessibility.	1/6 credit = 1,5 hours
LTA.M4.U2: Personal and Stress management skills	LTA.M4.U2.LO1-b: explain the main causes of stress derived from the job and different working contexts, and list coping techniques before, during, and after live situations, and develop personal resilience.	0,5 credits = 4,5 hours

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Unit	LO - trainee is able to...	ECTS/HOURS
	LTA.M4.U2.LO2-i: Deal with feedback as well as provide feedback and solutions in conflictive situations.	0,5 credits = 4,5 hours
	LTA.M4.U2.LO3-b: Remain objective, neutral and follows a code of conduct in the interaction with end-users and costumers at work.	0,5 credits = 4,5 hours
LTA.M4.U3: Business strategies	LTA.M4.U3.LO1-i: Prepare for professional interviews with customers and potential customers.	1/3 credit = 3 hours
	LTA.M4.U3.LO2-i: Develop a service portfolio adapted to the market.	1/3 credit = 3 hours
	LTA.M4.U3.LO3-i: Evaluate a critical situation, identify the problem, and find solutions.	1/3 credit = 3 hours

This module is the last general one and is thought at the end of the course as a bridge between training and the world of job. Most of attention has been given to the unit “Personal and Stress management skills” which is also operational because managing one’s stress is probably the most important LO to possess for a real-time job. And it requires time to acquire.

## MODULE MATERIAL

- Class-work material: core materials will be ad-hoc produced videos allowing trainees to understand what the basic concepts in this module are. Of special importance will be videos bearing witness of how to manage stress in different settings. Then, video interviews to professionals will explain how to concretely put them into practice.
- Self-studyhours material: readings focused on how to deal with interpersonal relations and stress. Role plays will make sure trainees know how to behave in diverse settings.
- Accompanying material: all files used to create above materials will be provided, except for material, such as those codes of conduct, whose reading is only suggested.
- Suggested readings: Codes of conduct of other countries, advanced handbooks on stress management and public speaking and similar.

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- Tasks: pre-assessment will make sure that trainees respect the third prerequisite “Openness to experience in order to be capable of adapting to changing scenarios, contexts, texts and people with which to deal”. Peri-assessment will check all LOs have been achieved.

#### 4.2.5 Respeaking competence (LTA.M5)

This module is one of the two specific modules. It starts with the beginning of the course and ends with the end of the course, and it is to be considered as the practical counterbalance of general modules, which are more theoretical and illustrative. As it will be possible to see below, training materials will be exercises mainly, aimed at improving the trainee’s performance in both verbatim and sensatim subtitling in terms of accuracy and rapidity. This module is divided into 3 levels (beginner, intermediate and advanced) and profits from all kinds of input (general modules) and constitutes the key for the success of the course. That is why this module is 12 credits, almost half of all credits attributed to the course.

**Table 8. Distribution of hours/credits per LO - Module 5**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M5.U1: Psycho- cognitive skills: How to listen and speak/type simultaneously	LTA.M5.U1.LO1-b: Speak, reformulate and edit the source text while listening	1 credit = 9 hours
	LTA.M5.U1.LO2-a: Remember full sentences while lagging behind because of editing/quick speech/other difficulties	0,5 credit = 4,5 hrs
	LTA.M5.U1.LO3-a: Activate exit strategies while respeaking if she/he realises the speaker is challenging.	0,5 credit = 4,5 hrs
LTA.M5.U2: Metalinguistic skills: How to turn non-verbal elements into verbal input.	LTA.M5.U2.LO1-i: produce coherent text while respeaking by extracting and combining the information conveyed with the speakers’ material.	1 credit = 9 hours
	LTA.M5.U2.LO2-i: identify which non-verbal elements need to be turned into verbal for each LTA trained working context by applying techniques like changing colours or font-size or inserting labels.	0,5 credit = 4,5 hrs
	LTA.M5.U2.LO3-b: type/dictate punctuation while keeping the pace of the speaker.	0,5 credit = 4,5 hours

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Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M5.U3: Dictation skills: how to speak fluently, quickly, and accurately to the ASR software.	LTA.M5.U3.LO1-b: use breathing to support dictation and endurance.	1 credit = 9 hours
	LTA.M5.U3.LO2-b: Command voice projection, pacing, articulation and modulation to support dictation.	1,5 credits = 13,5 hours
	LTA.M5.U3.LO3-a: have a MARS (Most Accurate and Rapid Speech-to-Text rate) above 500 cpm	2,5 credits = 22,5 hours
LTA.M5.U4: Editing skills: When and how to correct oneself and another respeaker.	LTA.M5.U4.LO1-i: IO1: pre-edit before the source text is displayed by applying strategies such as uploading glossaries on the topic, adding new words to vocabulary, inserting the names of speakers, etc.	0,5 credit = 4,5 hours
	LTA.M5.U4.LO2-a: peri-edit before middle text by typing, editing or rephrasing the text in difficult situations or by avoiding a word when spelling is unsure, such as in proper names or acronyms.	0,5 credit = 4,5 hours
	LTA.M5.U4.LO3-a: post-edit before target text by correcting own typing mistakes either spotting and correcting the mistakes after the text goes live, or before the text goes live in the case of live editing.	1 credit = 9 hours
LTA.M5.U5: Professionalism: How to develop factors for high performance such as flexibility, and self-motivation.	LTA.M5.U5.LO1-i: implement strategies or self-motivation techniques, trying to reach the best quality of work at all time and in all job circumstances.	1/3 credit = 3 hours
	LTA.M5.U5.LO2-i: Discipline themselves to practice and improve their skills daily; reach higher speed and accuracy during the real-time situation.	1/3 credit = 3 hours
	LTA.M5.U5.LO3-i: implement strategies or techniques for training and enhancing concentration on the long run.	1/3 credit = 3 hours

Being technique-specific, this module has been designed to run parallel the general modules. This means that all LOs have been distributed along the course so as to first enable trainees to acquire a practical competence, which allows them to immediately be able to produce text. This motivates trainees, particularly in vocational training where it is important to immediately see the



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results without having the feeling of losing time. That is why most of credits have been attributed to reaching a MARS above 120 English words per minute (500 characters per minute), which is the standard required in pre-recorded intralingual subtitling. Here, it is the minimum amount of words per minute a real-time subtitler has to reach, because speakers speak at a higher speed, especially if they read a written text. The 2.5 credits attributed to this LO are necessary because trainees will need to do homework aimed at this, since the beginning of the course. Other LOs have been equally distributed along the course so that trainees first acquire the basic ones to be able to produce text (in yellow); then they acquire professional LOs to be able and work (in green); finally they learn those LOs strictly related to sensatim subtitling (in cyan).

## MODULE MATERIALS

- Class-work material: core videos in English explaining what respeaking is and how to do it, and training demos in English (with equivalents in all LTA languages) for acquiring technique-specific skills, showing professionals doing the exercise required to trainees.
- Self-studymaterial: training videos and texts (in all LTA languages) taken from the repositories identified at the beginning of IO2. A selection of the videos used as class-work materials in the general modules will also be used with specific objectives.
- Accompanying material: transcripts of videos will only be provided if already available.
- Suggested reading: material will only be informative and based on literature in the field. Given that this module puts an end to the course together with general module 4, provided are also contacts with professionals, associations and schools in the field.
- Tasks: specific pre-assessment in every LTA language will check if trainees have an aptitude for respeaking or velotyping. Peri-assessments will be organised at the end of each Unit. Some units being transversal, specific peri-assessments will be organised at the end of the second (intermediate) or third (advanced) part of the course.

### 4.2.6 Velotyping competence (LTA.M6)

This module is alternative to the previous one, though one can go for training into both techniques if he or she wishes. What changes here is not the distribution of LOs or credits, but the type of LOs to acquire related to the technique used (“typing skills”). The rest remains unchanged: it starts with the beginning of the course and ends with the end of the course, and is to be considered as the practical counterbalance of general modules; training materials will be



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exercises mainly, aimed at improving the trainee's performance in both verbatim and sensatim subtitling; it is also divided into 3 levels; profits from all kinds of input; and is worth 12 credits.

**Table 9. Distribution of hours/credits per LO - Module 6**

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M6.U1: Psycho-cognitive skills: How to listen and type simultaneously	LTA.M6.U1.LO1-b: Type, reformulate and edit the source text while listening	1 credit = 9 hours
	LTA.M6.U1.LO2-a: Remember full sentences while lagging behind because of editing/quick speech/other difficulties	0,5 credit = 4,5 hrs
	LTA.M6.U1.LO3-a: Activates exit strategies while typing if she/he realises the speaker is challenging.	0,5 credit = 4,5 hrs
LTA.M6.U2: Metalinguistic skills: How to turn non-verbal elements into verbal input.	LTA.M6.U2.LO1-i: Produce coherent text while typing by extracting and combining the information conveyed with the speakers' material.	1 credit = 9 hours
	LTA.M6.U2.LO2-i: Identify which non-verbal elements need to be turned into verbal for each LTA trained working contexts by applying different techniques as changing colours or font-size or inserting labels.	0,5 credit = 4,5 hrs
	LTA.M6.U2.LO3-b: Type punctuation while keeping the pace of the speaker.	0,5 credit = 4,5 hours
LTA.M6.U3: Typing skills: how to speak fluently, quickly, and accurately.	LTA.M6.U3.LO1-b: Use all key combinations to support dictation and endurance up to 30 minutes.	1 credit = 9 hours
	LTA.M6.U3.LO2-b: Balance finger position and key combinations to support typing at the necessary speed rate.	1,5 credits = 13,5 hours
	LTA.M6.U3.LO3-a: Have a MARS (Most Accurate and Rapid Speech-to-Text rate) above 500 cpm.	2,5 credits = 22,5 hours

Unit	LO - trainee is able to...	ECTS/HOURS
LTA.M6.U4: Editing skills: When and how to correct oneself and another velotypist.	LTA.M6.U4.LO1-i: Pre-edit before the source text is displayed by applying strategies such as uploading glossaries on the topic, adding new words to vocabulary, inserting the names of the speakers, etc.	0,5 credit = 4,5 hours
	LTA.M6.U4.LO2-a: Peri-edit before middle text by typing, editing or rephrasing the text in difficult situations or by avoiding a word when spelling is unsure, such as in proper names or acronyms.	0,5 credit = 4,5 hours
	LTA.M6.U4.LO3-a: Post-edit before target text by correcting own typing mistakes either spotting and correcting the mistakes after the text goes live, or before the text goes live in the case of live editing.	1 credit = 9 hours
LTA.M6.U5: Professionalism: How to develop factors for high performance such as flexibility, and self-motivation.	LTA.M6.U5.LO1-i: Implement strategies or self-motivation techniques, trying to reach the best quality of work at all time and in all job circumstances.	1/3 credit = 3 hours
	LTA.M6.U5.LO2-i: discipline themselves to practice and improve their skills daily, to reach higher speed and accuracy during the real-time situation.	1/3 credit = 3 hours
	LTA.M6.U5.LO3-i: Implement strategies or techniques for training and enhancing concentration on the long run.	1/3 credit = 3 hours

Being technique-specific, this module has been designed to run parallel the general modules. This means that all LOs have been distributed along the course so as to first enable trainees to acquire a practical competence, which allows them to immediately be able to produce text. This motivates trainees, particularly in vocational training where it is important to immediately see the results without having the feeling of losing time. That is why most of credits have been attributed to reaching a MARS above 120 English words per minute (500 characters per minute), which is



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the standard required in pre-recorded intralingual subtitling. Here, it is the minimum amount of words per minute a real-time subtitler has to reach, because speakers speak at a higher speed, especially if they read a written text. The 2.5 credits attributed to this LO are necessary because trainees will need to do homework aimed at this, since the beginning of the course. Other LOs have been equally distributed along the course so that trainees first acquire the basic ones to be able to produce text (in yellow); then they acquire professional LOs to be able and work (in green); finally they learn those LOs strictly related to sensatim subtitling (in cyan).

## MODULE MATERIALS

Class-work material: core videos in English explaining what velotyping is and how to do it, and training demos in English (with equivalents in all LTA languages) for acquiring technique-specific skills, showing professionals doing the exercise required to trainees.

- Self-studymaterial: training videos and texts (in all LTA languages) taken from the repositories identified at the beginning of IO2. A selection of the videos used as class-work materials in the general modules will also be used with specific objectives.
- Accompanying material: transcripts of videos will only be provided if already available.
- Suggested reading: material will only be informative and based on literature in the field. Given that this module puts an end to the course together with general module 4, provided are also contacts with professionals, associations and schools in the field.
- Tasks: specific pre-assessment in every LTA language will check if trainees have an aptitude for respeaking or velotyping. Peri-assessments will be organised at the end of each Unit. Some units being transversal, specific peri-assessments will be organised at the end of the second (intermediate) or third (advanced) part of the course.
- A last type of material used in this module is a selection of the material coming from the Velotype Academy, meant to train owners of a Velotype keyboard into fast writing.

### 4.3 BA course (180 ECTS)

A BA in Real-Time Intralingual Subtitling (RIS) is possible within the fields of Translation Studies and Applied Linguistics, given that RIS is a form of Diamesic Translation (from spoken into written - Gottlieb, 2007) within the same language, and involving the knowledge of many text types and the related differences between spoken and written language. Also Interpreting faculties are good candidates to host a course in RIS, given that they organised the first courses on respeaking (one of the techniques used to produce RIS). Other faculties with good



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possibilities of organising successful RIS courses are the faculties of Language and Communication, Media studies, Deaf studies, Journalism, Education, and the like.

Follows a list of the disciplines divided per academic year with an illustration of the contents and the corresponding credits thought reasonable for a training into RIS at BA level. The sum of credits may not always be in line with the credits deemed necessary for a given discipline (credits could be more than necessary or less than necessary). The LTA aim here is to provide suggestions of how to implement the LTA training material in a BA course. Credits are there to show the importance of all materials only. Hence, in case of less credits, materials used in a discipline can be re-used in another discipline (for example material used in the discipline Intralingual Subtitling can be used in the discipline General Culture or the other way round); in case of more credits, the number of credits can be reduced to the suggested ones and the related materials reduced accordingly; or the suggested materials can be used in other disciplines (for example material thought for intralingual subtitling can be used in Applied linguistics or Language and Translation 1 or 2).

For some disciplines there is no material suggested, because these disciplines are common and well known. The same materials used in other courses can be used here.

Summary of credits:

BA = 180 credits

Every year = 60 credits

Last-year traineeship + thesis = 18 credits

Module 1 = 15 ECTS

Module 2 = 45 ECTS

Module 3 = 15 ECTS

Module 4 = 15 ECTS

Modules 5 and 6 = 72 ECTS



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#### 4.3.1 FIRST YEAR = 60 credits

**Table 10. Distribution of ECTS per discipline - BA first year**

<b>Discipline</b>	<b>Content</b>	<b>Credits</b>
Linguistics and terminology 1	M2.U2.LO1 – 2.5 ECTS	6
Applied Linguistics 1	M2.U1.LO1 – 7.5 ECTS	6
Language 1 and translation 1		6
Language 2 and translation 1		3
Sign Language 1	M1.U2.LO1 – 1 ECTS M1.U.2.LO3 – 1.5 ECTS	3
Theory of Translation		3
Intralingual Subtitling	M5/6.U1.LO1 - 6 ECTS M5/6.U2.LO3 - 3 ECTS M5/6.U3.LO1 - 6 ECTS M5/6.U3.LO2 – 9 ECTS	12
MARS laboratory 1	M5/6.U3.LO3 – 4 ECTS	3
ITC 1	M3.U1.LO1 – 1.5 ECTS M3.U1.LO2 – 1.5 ECTS M3.U2.LO1 – 1.5 ECTS	6
General Culture 1	M1.U1 – 5 ECTS M1.U2.LO1 – 1 ECTS	6
Traineeship	M1.U3 – 5 ECTS M4.U2.LO3 – 2.5 ECTS	6
<b>TOTAL</b>		<b>60 ECTS</b>



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#### 4.3.2 SECOND YEAR = 60 credits

**Table 11. Distribution of ECTS per discipline - BA second year**

<b>Discipline</b>	<b>Content</b>	<b>Credits</b>
Linguistics and terminology 2	M2.U2.LO2 – 2.5 ECTS	6
Applied Linguistics 2	M2.U1.LO3 – 2.5 ECTS	6
Language 1 and translation 2		6
Language 2 and translation 2		6
MARS laboratory 2	M5/6.U3.LO3 – 6 ECTS	6
Intralingual Subtitling	M5/6.U2.LO1 – 6 ECTS M5/6.U2.LO1 – 3 ECTS M5/6.U4.LO1 – 3 ECTS M5/6.U5 – 6 ECTS	12
ITC 2	M3.U1.LO3 – 1.5 ECTS M3.U2.LO2 – 1.5 ECTS M3.U3.LO1 – 1.5 ECTS	6
General Culture 2	M4.U2.LO1 – 2.5 ECTS	6
Traineeship	M4.U3 – 5 ECTS M4.U2.LO2 – 1 ECTS	6
<b>TOTAL</b>		<b>60 ECTS</b>



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### 4.3.3 THIRD YEAR = 60 credits

**Table 12. Distribution of ECTS per discipline - BA third year**

Discipline	Content	Credits
Linguistics and terminology 3	M2.U2.LO3 – 2.5 ECTS	6
Applied Linguistics 3	M2.U1.LO2 – 5 ECTS M2.U3 – 13.5 ECTS	6
Language 1 and translation 3		6
Language 2 and translation 3		6
MARS laboratory 3	M5/6.U3.LO3 – 6 ECTS	6
Intralingual Translation 3	M5/6.U1.LO2 – 3 ECTS M5/6.U1.LO3 – 3 ECTS M5/6.U4.LO2 – 3 ECTS M5/6.U4.LO3 – 6 ECTS	12
ITC 3	M3.U2.LO2 – 1.5 ECTS M3.U3.LO2 – 1.5 ECTS M3.U3.LO3 – 1.5 ECTS	6
General Culture 3		6
Thesis	M4.U1 – 2.5 ECTS	6
<b>TOTAL</b>		<b>30 ECTS</b>



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## **6 Annexes**

### **6.1 Annexe 1 - Glossary**

**COMPETENCE:** ‘the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.’ (source: EQF 2008)

**COMPETENCE AREA:** see Module.

**CORE MATERIAL:** The main material around which revolve all other materials. It is usually a video introducing what the trainee will learn during that specific part of a unit.

**DEAF AND HARD-OF-HEARING:** persons with hearing loss. The term ‘Deaf’ is used when it also means deaf culture as opposed to ‘deaf’ when it only refers to having a hearing loss.

**KNOWLEDGE:** the outcome of assimilating information through learning. It is the body of facts, principles, theories and practices that is related to a field of work or study.’ (source: EQF 2008)

**LEARNING ELEMENT:** see Unit.

**LEARNING OUTCOMES:** ‘statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence.’ (source: EQF 2008). ECQA calls them Performance Criteria.

**LITTERATIM:** sound for sound rendition of what is said. This a strategy which is used in those cases where it is important that a word is spelt the same way it is said.

**LIVE EDITING:** correction of the mistakes done by the real-time intralingual subtitler done by a second person or the subtitler him/herself in order to provide a more accurate text to audience.

**MID TEXT (MT):** first draft transcription of an ST before it is edited and accessed by audience.

**MODULE:** biggest component of a curriculum (also called Unit) in vocational training (European Commission, 2011) and Skill Unit by ECQA. In LTA it structures the learning content into units.

**PROCESS:** activity of the real-time intralingual subtitler, as opposed to the **PRODUCT**.

**PRODUCT:** final result of the **PROCESS**. It is accessed simultaneously to it.



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**REAL-TIME INTRALINGUAL SUBTTLER:** person capable of producing a transcription of a speech simultaneously to its listening. The transcription can be corrected or not in real-time (live editing) and access to it is possible simultaneously to the event itself, with a delay of seconds.

**SENSATIM:** meaning for meaning rendition of what is said. This is the approach which is normally used in those countries where readability is considered as more important than accuracy. It can also be used as an exit strategy when the subtitler supposed to produce verbatim renditions is in trouble because of various reasons.

**SKILL:** 'the ability to apply knowledge and use know-how to complete tasks and solve problems.' (source: European Qualifications Framework - EQF 2008)

**SKILL CARD:** In vocational context, knowledge map of the skill units, learning elements and learning outcomes that define and standardize the required state-of-art qualifications of a specific profession. Skill cards are structured in units (modules in the LTA curriculum) learning elements (units in the LTA curriculum) and learning outcomes.

**SKILL UNIT:** see Module.

**SOURCE TEXT (ST):** the original text, the one which is spoken and is to be transcribed.

**TARGET TEXT (TT):** the final version of the transcription, as accessed by audience.

**UNIT:** A self-contained, formally structured learning experience. It has a coherent and explicit set of learning outcomes, consistent with the time allocated and assessment criteria. Units are also called course units and aim at forming competences. They are grouped into modules.

**VERBATIM:** word for word rendition of what is said. This is the approach which is normally used in those countries where accuracy is considered as more important than readability. It can also be used as a technique or even exit strategy in other types of approach.

**WORKING CONTEXT:** each of the macro-types of event a subtitler will work for in his/her profession. Cultural events (conferences, festivals, shows), Assemblies (parliamentary, council, gatherings), Broadcasts (TV/web programs, usually live), Workplace (meetings, interviews), and Education (school classes, university lectures, laboratories).

**WORKING SETTING:** each of the three macro-situations a subtitler will encounter in his/her profession. Face-to-face (subtitler physically in the same room as the event), online (subtitler connected through Internet connection but still capable of being there, though virtually) by relay (subtitler only listens to audio component of the speech via Internet or telephone).

## 6.2 Annexe 2 - terminological remarks

In Translation Studies, the importance of names is stressed in particular when it comes to translating them because a close natural equivalent is often a hard venture (Nida, 1964). This means that names are much more than just a reference or a meaning. Terminological confusion in specialised discourse may arise, especially if a field is not consolidated and the related speech community is scattered. When this occurs, the same term may refer to different concepts or different terms may refer to the same concept. In the field of Audiovisual Translation (AVT), terminological confusion has always been evident. As Gambier shows, the names referring to it – “language transfer”, “multimedia translation”, “screen translation”, “multimodal translation”, “film translation”, “versioning”, “transadaptation”, etc. – reflect different perspectives and do not mean the same because they do not refer to the same (2006).

Similarly, in real-time intralingual subtitling, various terms seem to refer to the same profession. Limited to the field of respeaking, Romero-Fresco enumerates several similar “terminological hesitations” (Gambier, 2006). By expanding on what Romero-Fresco enumerates (2011), several expressions denoting real-time intralingual subtitling have been identified: some are synonyms such as “live captioning”, especially used in the USA, or “live closed-captioning” used by the International Television Union; some others have a hierarchical relation and refer to a more specific or general area of the profession (the process, the product, or the profession), such as “respeaking” or “verbatim court reporting”. Terminology also varies from country to country, and even within the same country. If we exclude “live closed-captioning” – further subdivided into “direct speech recognition”, “direct typing method” and “re-speak speech recognition” – these variations depend on several variables which partially or completely influence the perspective on the subject and consequently on the training. Five main variables have been identified: context, target text, production system, technique, other. These five variables are explained below.

### 2.1. Context

Depending on the context where real-time intralingual subtitles are produced, terminology varies with direct consequences on training itself. The most notable examples are the contexts of TV, conferences, courts, and parliaments.

TV live subtitling, or TV live captioning, is a common example of context influencing terminology in the field of real-time intralingual subtitling. The word “TV” used in the expression reflects the reason why, most of training in real-time intralingual subtitling is done either by TV service



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providers or universities where TV subtitling is taught, namely translation faculties or film-making faculties.

Conferences are another example of context influencing terminology in this field, which explains why interpreting faculties often train real-time intralingual subtitlers. The terminology reflects such perspective with expressions like “conference live access” or “speech-to-text interpreting”, where “interpreting” recalls the setting in which real-time intralingual subtitles – again, in the broadest sense of text translating speech, and not of text appearing at the bottom of a screen – are mostly used: conferences.

Similarly, “live court/parliamentary reporting”, implying the transcription of a source text produced in a parliament or a courtroom or a similar setting, mirrors training, which is done either in-house by service providers or in trade schools, specialised in this type of real-time intralingual subtitling.

## 2.2. Target text

The target text also influences terminology and training. For instance, parliamentary or court reporting is traditionally not accessed simultaneously to the event. However, its production is simultaneous to the listening of the source text and terminology reflects this change in expressions like “live reporting”, “real-time reporting” or STTR (Speech-To-Text Reporting, which is interestingly used as an alternative to STTI, or Speech-To-Text-Interpreting). This is mirrored in training, reporting and subtitling usually being taught separately because they are considered as two different professions. In particular, reporting is still a discipline with little or no theoretical framework, hence hardly taught at college or university level. However, freelance live subtitlers and live subtitling agencies tend to accept services as live reporters or live producers of minutes (LTA, 2019), because the process is the same.

## 2.3. Production system

As De Serriis (2006) indicates, there are three systems to produce TV programmes: pre-recorded, live, and semi-live. The first encompasses traditional programmes (films, series, cartoons, and documentaries); the second focuses on breaking news, sports events, political debates; the third refers to programs whose text is pre-prepared and read or recited live (e.g. the Academy Awards). As for subtitles, they may be either automatically or manually cued or produced in real time. For this reason, it is common to read about “live subtitles” instead of “real-time subtitles of live programs” or “semi-live subtitles” instead of “real-time/manually-cued subtitles of semi-live programs”. Such shortcuts match the production system of the product to

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be subtitled with the production system of the subtitles, thus generating confusion in the case of pre-recorded videos to be subtitled in real time, for example. Related to this is the production mode of the subtitles themselves, which can be produced physically in the same room where the event takes place, by telephone, or in streaming mode. This explains why expressions like “face-to-face live captioning”, “relay captioning” and “online subtitling” – also used as an antonym to “offline subtitling”, meaning pre-recorded subtitling – are also common. To our understanding, this factor has not a direct link to training but keeps multiplying the number of expressions used in the field of real-time intralingual subtitling, thus contributing to confusion and restricted views on the matter.

#### 2.4. Technique

Another important aspect influencing the description of real-time intralingual subtitles is the technique. As Romero-Fresco already signalled

“(o)ne of the consequences of the very little research carried out so far in respeaking is the lack of established terminology to refer not only to the professionals engaged in this discipline but also to the discipline itself.” (2011: 2).

Capitalising on Romero-Fresco’s list and updating it, a long list of labels focusing on the technique can be found, which also limit teaching to that specific technique:

- Speech-related terminology: e.g. “respeaking”, “speech-based live subtitling”, “speech recognition-based subtitling”, “real-time subtitling via speech recognition”, “shadow speaking”, “speech captioning”, and even “speech capturing” or “re-speak speech recognition”;
- Voice-related terminology: e.g. voice recognition (used as a synecdoche), (real-time) voice writing, revoicing, which is quite well established as an umbrella term to include audiovisual practices where a new voice replaces that of the original product (e.g. dubbing) or is added to the product (e.g. voice- over);
- Technology-related terminology: e.g. ASR (Automatic Speech-Recognition used as a synecdoche), CART (Computer-Assisted-Real time-Transcription/Translation), stenotyping, palantyping, velotyping, and “direct speech recognition” or “direct typing method”.

In the cases mentioned above, the relation with teaching is all the more evident, as many vocational training institutes usually focus on the command of the technique, which is so influential that they call themselves “stenotyping school”, “academy of voice-writing” or “Velotype academy”, to name just a few examples.

## 2.5 Other

Other aspects influence the terminology in the field. One of these is the editing, when a form of reduction or adaptation to linguistic guidelines is expected, as in the case of “sensatim live subtitling”, “verbatim live subtitling”, or the extreme “live editing”.

Similarly, the way subtitles appear on screen has led to expressions like “live closed-captioning” or “CC” (for both pre-recorded and real-time subtitles), in those countries where subtitles appear on teletext.

Language combination is another very interesting factor influencing terminology in the field. If in American English “subtitling” applies only to the production of interlingual subtitles, with “captioning” referring to the production of intralingual subtitles, in British English, “subtitling” is used for both, given their similar form. In Europe, it is not uncommon to read about “real-time intralingual subtitling”, as in this paper, or “real-time interlingual subtitling” to mean subtitles in a language different from that of the speaker.

Finally, worth a mention is the focus on end users. When intralingual subtitles started to be the focus of academic studies, authors talked of SDH (Subtitling for the Deaf and the Hard-of-Hearing). In what are conventionally called “dubbing countries”, this expression also means that subtitles are intralingual. Hence live or real-time SDH is used to mean intralingual real-time subtitles. Another expression which is based on end users is “special-needs subtitling”, where “special needs” also covers products such as audio description.

All these definitions mirror ways to consider the products which are reflected on teaching. Common is, indeed, the teaching of real-time intralingual subtitles in audiovisual translation summer schools, publicly-funded courses specifically designed for operators in the field of disability, and faculties of humanities, where the focus is more on linguistic manipulation than on the technique, as happens in trade schools.

It goes without saying that it would be very helpful to have a common terminological database to structure and clarify the many different ways to create and use such heterogenous terminology in our field. In the LTA training, there will be an overview of the terminology used in the field, to make learners aware of such a tricky situation around the globe.



### 6.3 Annexe 3 - literature review of training practices

Terminology in the field of real-time intralingual subtitling is multifaceted and can be categorized based on several criteria, each affecting training. This brings to partial views of what can be easily considered as a wider profession, with direct consequences on training. With the labour market requiring more and more flexibility, ignoring the bigger picture in training could be a limit as has always happened. Real-time intralingual subtitles were first produced on TV using standard QWERTY keyboards (Lambourne, 2006), but then were replaced by more speed-efficient stenographers (den Boer, 2001). Due to a lack of professionals, many broadcasters more recently opted to train their own professionals internally to respeaking as is still the case today (Romero-Fresco, 2018).

Formal training of real-time intralingual subtitling only came in 2005, at the then SSLMIT (Scuola Superiore di Lingue Moderne per Interpreti e Traduttori) of the University of Bologna (Eugeni, 2008). After that, some universities have tried to organize courses on live subtitling especially through respeaking, but only for a limited period of time. Currently, only a few European universities regularly offer training on respeaking, such as (though not limited to) the University of Antwerp, having been the first to offer regular formal training into respeaking; the University of Leeds, providing introductory sessions on respeaking as part of their courses on AVT; the Universitat Autònoma de Barcelona, providing a three-month online module and a one-month face-to-face module in Spanish as part of an MA in Audiovisual Translation; the University of Roehampton, providing a three-month face-to-face module in English, Spanish, French, Italian, and German; and the Universidade de Vigo, offering a three-month online module on intralingual respeaking in English, Spanish, and Galician, and a three-month online module on interlingual respeaking in the same languages (Romero-Fresco, 2018). Worth a mention are also the School of Applied Linguistics of the Zurich University of Applied Sciences (Dutka & Szarkowska, 2017), the three-week online module on respeaking within the online Master of Audiovisual Translation (MTAV) of the University of Parma; the course on audiovisual translation in general, including respeaking, at the University of Mons; and the one-week face-to-face module on respeaking within the summer school in AVT of the University of Salento, in Lecce. In Germany, the SDI München offers a nine-month course, which trains in both respeaking and QWERTY typing. The course is practice-oriented and combines formal learning with short internships with partners in the industry.

All these courses train students mainly to some of the criteria mentioned above, thus limiting the scope of training. In particular most of the above-mentioned Higher Education institutes focus



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on specific contexts such as TV or conferences, thus limiting the scope to some applications. Moreover, they mainly concentrate on respeaking, thus limiting training to a technique and to the languages for which an ASR technology is available. Additionally, the training material that they use is language- and culture-specific, and it is not open source. Finally, the training is mainly limited to students who can afford a training course in terms of cost and time, since they might have to move to another city or country. Worth a mention is also the fact that students of these faculties are trained to the profession with little contact with the real world, which they come to know only once they decide to opt for a traineeship into real-time intralingual subtitling, are employed by a service provider or find clients as freelancers.

To conclude, training today is either too exclusive in terms of time, money, or place; too focused on a technique, a language, an application, or a context; or too generic. Furthermore, training materials and the way they are structured, even when they are part of well-established courses, normally depend on the single trainer and not on an international reference framework, which could more easily bridge the many gaps that have been identified. Among these is certification. Though university students get a diploma, this is not a certification of their real-time intralingual subtitling competences. And this affects the status of such a profession which is more and more widespread but not yet internationally recognised.

## 6.4 Annexe 4 - pedagogical and methodological curriculum

Teaching as envisaged up to now moves its focus from students needs and expectations to competencies to be mastered and acquired. This is in line with the Bologna process and the attempt to bridge the gap between what the world of job requires and training at academic level. However, learning single skills one after the other does not automatically allow trainees or students to be able and start working as a professional. Moreover, didactic approaches focus on very specific techniques only and do not consider the whole picture. Being able to subtitle live is not synonym to using an ASR software, but much more: knowing where, when, how and for whom to subtitle; knowing the sociolinguistic environment of real-time intralingual subtitling.

To move a step further in the direction of a full-encompassing curriculum, we have analysed Safar (1992) and Hamaoui's proposals (2010) for the training of university students into audiovisual translation. They base their work on the proposal made in 1975 by Belgian pedagogist Louis D'Hainaut and propose to structure a curriculum on 3 levels:

- Aims and objectives
- Teaching methods and tools
- Evaluation methods and tools

These levels are further subdivided into 14 subcategories. "Aims and objectives" into 5:

- 1 Defining and analysing educational policy to make sure that the teaching fits in the societal framework, so as to avoid and create teaching pathways that are useless or inadequate in the professional world;
- 2 Implementing aims and objectives so that every trainee knows what he or she will learn during the course and know already what his or her role will be in the professional world. This is not only important for didactic reasons, but also for self motivation;
- 3 Understanding trainees background so that psychological, pedagogical, cultural and linguistic aspects of his or her background are considered as basis for the training of such students (what is to be added to this core);
- 4 Determining and analysing the contents that will be "transferred" to trainees so as to train students to the real world and avoid training them to something useless or inadequate in the professional world;



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- 5 Processing learning outcomes to understand the right way to concretely go towards the direction of the aims and objectives. This step will allow for determining (or self determining) the goal has been met or not and how much.

“Teaching methods and tools” is further subdivided into 6 steps:

- 1 Determining resources and limits is a very concrete step, which will make it clear how the course will be held. This includes understanding who the trainer(s) will be, how will they train, where, and how administratively this will be managed;
- 2 Tools and methods that will be adopted to allow trainees to meet the goals that have been set, with the resources and limits that have been spotted;
- 3 Teaching conditions and trainer roles implementing the tools available by personalising teaching methods depending on students and conditions;
- 4 Determining learning conditions to better target learning outcomes. The learning environment is fundamental to acquire skills and competencies with the tools and resources available;
- 5 Determining the feasibility of tasks, which depend on background, previous learning outcomes and material resources available;
- 6 Creation and implementation of missing tools, which is the last step before the go. Testing all materials and resources allows for understanding possible weaknesses in the teaching and learning processes.

“Evaluation methods and tools” is further subdivided into 3 steps:

- 1 Designing assessment plan, which include assessment criteria and variables Meeting learning outcomes is of course one step, but an overall view of how the single learning outcome fits in the overall structure is also fundamental;
- 2 Selection and creation of assessment tools capable of measuring as objectively as possible the progress of trainees;
- 3 Implementation of assessment methods and tools before starting the course on a focus group so as to be able and avoid epic fails.

Though this is a pedagogical tool which has its roots in the 1970s, the Pedagogical and Methodological Curriculum (PMC) has been duly adapted to an educational environment that has changed a lot. Hence, it allows for creating a course capable of matching the needs of trainees, society, and the world of job in both an academic and a vocational setting.



## 6.5 Annexe 5 - Ita modules

**LTA.M.1 Understanding Accessibility:** This Module serves as an introduction to accessibility. In this module, learners will learn about the basic concepts of inclusion and accessibility, the target users, and how accessibility is embedded in the environment. The first Unit (LTA.M1.U1 *Accessibility, multimodality and universal design*) to be considered in this Module lays its foundations on the basic and most important concepts of accessibility, multimodality and universal design. In recent years, many research activities have focused on design that aims to produce universally-accessible systems, taking into account the special needs of various groups of users. These special needs are associated with various disabilities (namely physical, cognitive, and intellectual) as well as other environmental factors such as emotional factors and learning difficulties, aging, and so forth. Fields that address this problem, such as usability, universal accessibility, universal design, or inclusive design share many approaches and ideas.

In this perspective, on successful completion of the first Unit, which focuses on the basic concepts about accessibility, multimodality and universal design, trainees will be able to:

- **LO 1.**Distinguish between the medical and social model of disability.
- **LO 2.**Explain the concepts of accessibility, disability, multimodality and Universal Design from the perspective of the social model of disability.
- **LO 3.**Design accessible working settings for the provision of real-time intralingual subtitles by applying the principles of Universal Design and a For all approach.

The second Unit (LTA.M1.U2 *Target groups and their needs*) is based on the needs of the target groups, in order to:

- **LO 1.**Explain the needs and cultural preferences of the hard-of-hearing, deaf, deaf-blind community, and other end users of real-time translations.

This is important in order to adjust the output to the working context by considering the needs and cultural particularities of the hard-of-hearing, deaf, and deaf-blind community, and other end users of real-time translations, being aware of the definitions of the concepts of hearing, hearing loss, and assistive technology and how they relate to the needs of end-users of real time subtitles.

- **LO 2.**Explain the concepts of hearing, hearing loss, and assistive technology and how they relate to the needs of end-users of real-time subtitles
- **LO 3.** Use sign language to communicate in basic job-related situations such as greeting.



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The third and last Unit (LTA.M1.U3 *How accessibility is embedded in the environment*) of the Module on Accessibility takes into account the embedding process of the concept of accessibility into the real-time translation context. The trainee will be able to:

- **LO 1.** Classify real-time working settings according to the LTA trained working contexts.
- **LO 2.** Explain the role and competences of the real-time intralingual subtitler as communication mediator for each LTA trained working context.
- **LO 3.** Advise customers about how to set up an accessible real-time working environment for end users in the trained working contexts and settings.

**LTA.M2. Linguistic competences:** This Module puts an emphasis on linguistic competences a real-time intralingual subtitler has to possess in order to manage both his/her knowledge of the language and the performance itself. The first Unit (LTA.M2.U1 *Functionality: accuracy, readability, and legibility*) is based on the principles of accuracy, readability and legibility. On successful completion of this Unit, trainee will be able to:

- **LO 1.** Produce accurate transcriptions in terms of spelling, grammar, and meaning.
- **LO 2.** Produce legible and readable transcriptions by applying readability indicators while creating the transcripts and after the real-time situation.
- **LO 3.** Identify non-verbal elements to be described in each context and situation.

The second Unit (LTA.M2.U2 *Strategies to acquire and develop specific thematic knowledge*) is intended for the subtitler to be able to cope with speech-related challenges. The trainee will be able to:

- **LO 1.** Search for terminology, identifies reliable sources, and generate glossaries specific to a topic.
- **LO 2.** Manage terminology and implements it in real-time.
- **LO 3.** Learn how to cope with terminology by using shortcuts.

Last but not least, the third Unit (LTA.M2.U3 *How to cope with speech-related challenges*) is focused on the strategies to acquire in order to develop specific thematic knowledge. The trainee will be able to:

- **LO 1.** Identify speech-related challenges and which exit strategy to apply.
- **LO 2.** Simplify the structure of a text according to the notion of Plain Language.
- **LO 3.** Adjust delay by means of exit strategies when required.

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**LTA.M.3 IT Competence:** 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 Arumì 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”. In this view, developing the right and the most suitable skills in terms of IT is of paramount importance in the training of a real-time subtitler. The same is true for the Velotypist, who needs to know the technology they are going to use. For this reason the first Unit (LTA.M3.U1 *Input tools*) of the present module is based on the Input Tools to be taken into account during the subtitling. After the completion of this Unit, the trainee will be able to:

- **LO 1.** Know how to use the different input tools available on the market for both respeaking and typing techniques.
- **LO 2.** Implement strategies to rapidly produce text during a real-time job by using a respeaking/velotyping software.
- **LO 3.** Use editing software for both verbatim and sensatim subtitling.

The second Unit (LTA.M3.U2 *Output tools*) focuses on the Output Tools to be taken into account during the subtitling process. On successful completion of this Unit, trainees will be able to:

- **LO 1.** Know how to use the different output tools available on the market for real-time intralingual subtitling. This is an overview of all the current systems that exist in the market and their advantages/disadvantages:
  - the Qwerty/Qwertz/Azerty keyboard is the standard keyboard that is used with computers and available for all languages. One pressed key produces one character. This is a convenient keyboard.
  - The Velotype keyboard is an orthographic chord keyboard, typing chords of keys producing syllables or word parts. It is available in about 30 languages. IT works at a higher speed than Qwerty, but it is lower than Stenotype. Mid range price.
  - The Stenotype keyboard is a phonetic chord keyboard. The speed is very high, but the training is long. High range price.



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- The Palantype keyboard is a phonetic chord keyboard, it is used for English and in the UK.
- Michela keyboard is a phonetic chord keyboard. It is used in Italy for Italian language.
- **LO 2.** Explain the advantages of output tools in the different LTA working contexts.
- **LO 3.** Explain the differences of the different language, machine translation and crowdsourcing tools for real-time subtitling.

The third Unit (LTA.M3.U3 *How to set up the work environment*) is focused on the setting up of the work environment, in order to:

- **LO 1.** Set up the hardware and software for each type of trained setting and solve problems.
- **LO 2.** Work directly with the HoH or deaf person requiring the service if the service will be personal support..
- **LO 3.** Test each setting with a client before work starts.

**LTA.M.4 Entrepreneurship and Service competences:** The goal of the present Module is on the definition of Entrepreneurship and Competences as an act upon opportunities and ideas and transform them into value for others. This is a definition which focuses on value creation. The Units envisaged for this Modules are crucial to develop and acquire to best intertwine entrepreneurial opportunities, resources and actions. The first Unit (LTA.M4.U1 *Management and Interpersonal skills*) deals with Management skills, after accomplishing which the trainee will be able to:

- **LO 1.** Plan job-related tasks by considering other dependencies such as schedule, costs, human and physical resources and related risks. Plan tasks and evaluate possible related risks depending on type (schedule, costs, human, physical resources) and solutions.
- **LO 2.** Identify possible clients and sponsors in his/her country of real-time intralingual subtitling service.
- **LO 3.** Timely and effectively listen, answer, and respond to customer's requests to ensure accessibility.

The Personal and Stress Management skills' Unit (LTA.M4.U2 *Personal and stress management skills*) will give the trainees the most useful competences in order to:

- **LO 1.** Explain the main causes of stress derived from the job and different working contexts, and list coping techniques before, during, and after live situations, and develop personal



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resilience. Explain main causes of stress, list coping techniques before, during, and after the live event, and develop professional resilience.

- **LO 2.** Deal with feedback as well as provide feedback and solutions in conflictive situations.
- **LO 3.** Remain objective, neutral and follows a code of conduct in the interaction with end-users and costumers at work.

The Unit on Business strategies (LTA.M4.U3 *Business strategies*) will make the trainee able to:

- **LO 1.** Prepare for professional interviews with customers and potential customers.
- **LO 2.** Develop a service portfolio adapted to the market.
- **LO 3.** Evaluate a critical situation, identify the problem, and find solutions.

**LTA.M.5 Respeaking Competences:** The present module is a specific module, specifically designed for Respeaking, mainly intralingual respeaking. Intralingual respeaking is a technique for live subtitling whereby respeakers listen to live input and simultaneously repeat it the same language to a speech recognition software that turns it into written subtitles. This technique is now widely used to provide subtitling for the deaf and hearing-impaired in many settings, especially on television. In order to better understand the skills and competences needed by intralingual respeakers, this Module includes five Units and its associated Learning Outcomes.

The first Unit (LTA.M5.U1 *Psycho-cognitive skills: How to listen and speak simultaneously*) envisages the Psycho-cognitive approach. On its successful completion, trainees will be able to:

- **LO 1.** Speak, reformulate and edit the source text while listening. Good grammar and spelling skills are needed for both disciplines, with particular focus on punctuation, which will have to be delivered orally in the case of the respeaker. Besides, the source text (ST) often poses the same type of difficulties for respeakers and subtitlers, namely multiple turn-taking, overlapping dialogue, use of realia (famous names, geographical references, names and institutions) etc. Also, respeakers need to be aware of their viewers' needs and requirements, so as to, for instance, produce appropriate extralinguistic information.
- **LO 2.** Remember full sentences while lagging behind because of editing/quick speech/other difficulties. Respeaking presents a number of cognitive challenges for an individual – they have to hold previous sentences in memory while listening to the next one, analyse what's been said and insert punctuation as required, paraphrase if necessary and then actually speak it all out to produce captions. At the same time, they need to be monitoring the software output to identify and correct any errors – and, in the case of live broadcast

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television, move the captions around the screen so they don't obscure any speakers, graphics or any other on-screen information. Memory is paramount, then, while respeaking. For this purpose, and in order to strengthen both the short-term and the long-term memory an activity could consist in having students listen to a speech, without taking notes, and then answer a number of questions related to the content presented. Another exercise could be based on orally summarizing a speech they have just heard. Yet another drill could be built on the introduction of deliberate difficulties in speeches so that students are able to employ coping tactics. These difficulties may range from fast speech rates to unplanned structures, redundancies, speaker hesitation and/or missing links. Finally, anticipation skills could be strengthened by reading speeches and leaving out the end, and then having students follow their logic to anticipate the content with which the discourse could continue.

- **LO 3.** Activate exit strategies while respeaking if she/he realises the speaker is challenging.

The second Unit (LTA.M5.U2 *Metalinguistic skills: How to turn non-verbal elements into verbal input*) describes Metalinguistic skills: turning non-verbal elements into verbal, which means to:

- **LO 1.** Produce coherent text while respeaking by extracting and combining the information conveyed with the speakers' material.
- **LO 2.** Identify which non-verbal elements need to be turned into verbal for each LTA trained working context by applying techniques like changing colours or font-size or inserting labels. This is a technical skill which is 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. 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 lists of terms). More, spotting and synchronization skills, the capacity to change rapidly the position and the colour of the subtitles, 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 Arumì 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*".

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- **LO 3.**Type/Dictate punctuation while keeping the pace of the speaker. This learning outcome involves the ability of the respeaker to perform a good analysis, synthesis and reformulation of the speaker's discourse. Important to such a good performance are the ability to understand the communicative intention of the source message, to understand the red thread of the discourse, the capacity to select and focalize the relevant information and to divide between main and secondary ideas and to deliver an accurate oral punctuation, the capacity to identify the discourse connectors, while deduce meaning through context and extralinguistic elements. Last but not least, the ability to condense information and to segment information in sense units.

The third Unit (LTA.M5.U3 *Dictation skills: how to speak fluently, quickly, and accurately to the ASR software*) focuses on Dictation skills. After successfully completing it, the trainee will:

- **LO 1.** Use breathing to support dictation and endurance. 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.
- **LO 2.** Command voice projection, pacing, articulation and modulation to support dictation. This is an essential part of the training of respeakers given that the final result of their performance will be influenced by the percentage of the dictated words correctly recognized by speech recognition software. Eugeni (2009) proposes a series of voice coaching exercises grouped in four categories: voice warm-up, respiration exercises, voice inflection and articulation of words. These skills should be gradually internalized and become automatic, resulting in more successful recognition.
- **LO 3.** Have a MARS (Most Accurate and Rapid Speech-to-Text rate) above 500 cpm (see Intersteno comparison table for other languages): Eugeni (*ibidem*) suggests that the automaticity can only be reached through a constant exercise and therefore he recommends trainers to spend the first part of each class to the afore-mentioned 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.

The fourth Unit (LTA.M5.U4 *Editing skills: When and how to correct oneself and another respeaker*) takes into account the Editing skills, in order to be able to:



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- **LO 1.** Pre-edit before the source text is displayed by applying strategies such as uploading glossaries on the topic, adding new words to vocabulary, inserting speakers names, etc.
- **LO 2.** Peri-edit before middle text by typing, editing or rephrasing the text in difficult situations or by avoiding a word when spelling is unsure, such as in proper names or acronyms.
- **LO 3.** Post-edit before target text by correcting own typing mistakes either spotting and correcting the mistakes after the text goes live, or before the text goes live if it is edited live.

Finally, the fifth Unit (LTA.M5.U5 *Professionalism: How to develop factors for high performance such as flexibility, and self-motivation*) focuses on Professionalism, which will allow trainees:

- **LO 1.** Implement strategies or self-motivation techniques, trying to reach the best quality of work at all time and in all job circumstances. This is a very important skill to acquire for a respeaker, since a respeaker needs to improve self-motivation supported by expertise and skill acquisition at all time and in all circumstances; also s/he has to maintain concentration even under pressure, and cope with the frustration of mistakes appearing on the screen and making corrections always keeping in mind the target audience. This all link to stress management due to multitasking. Indeed, multitasking has often been discussed in the literature as a key feature of simultaneous interpreting (e.g. Gerver 1974, 1976; Gile 1985, 1995; Lambert 1988). Considering that the skills developed in respeaking run parallel to simultaneous interpreting, and that respeaking is a sort of simultaneous interpretation in the same language, the multitasking skill fully applies to respeaking as well. In this perspective, Gile (1995: 169) developed the idea of the Effort Models. He identified the main cognitive components of simultaneous interpreting, which also applies to respeaking: i.e. the Listening and Analysis Effort (L), the Short-term memory Effort (M), the Speech production Effort (P) and the Coordination Effort (C). The main idea behind Gile's models was that interpreting/respeaking requires some sort of 'mental energy' that is only available in limited supply (Gile 1995: 161). Hence, each interpreter/respeaker has a limited amount of cognitive resources at hand. It might happen that interpreting/respeaking takes up almost all of this mental energy, and sometimes requires more than is available, at which times performance deteriorates" (Gile 1995:161).
- **LO 2.** Discipline themselves to practice and improve their skills daily; reach higher speed and accuracy during the real-time situation.
- **LO 3.** Implement strategies or techniques for training and enhancing concentration on the long run. Respeakers need good short-term memory to retain what they have just heard and a good long-term memory to put the information into context. Ability to concentrate is a factor

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as is the ability to analyze and process what is heard. Memorising several and different pieces of news in daily TV or radio news broadcasts retelling the story behind them will help strengthen concentration and, by extension, improving memory skills and keeping focus.

**LTA.M.6Velotyping Competences:** Like Module 5, the Module on Velotyping is a specific module, meaning that it should also run parallel to the other Modules, and shares with LTA.M5 many Units and LOs. However, some are specific to Velotyping. That is why we have decided that, to better understand the skills and competences needed by intralingual velotypers, we will list and explain all 5 Units and related 15 LOs as in the previous Module, without mentioning if some are the same as the LOs mentioned before.

The first Unit (LTA.M6.U1 *Psycho-cognitive skills: How to listen and type simultaneously*) deals with the Psycho-cognitive approach. On its successful completion, the trainee will be able to:

- **LO 1.** Type, reformulate and edit the source text while listening.
- **LO 2.** Remember full sentences while lagging behind because of editing/quick speech/other difficulties.
- **LO 3.** Activates exit strategies while typing if she/he realises the speaker is challenging.

The second Unit (LTA.M6.U2 *Metalinguistic skills: How to turn non-verbal elements into verbal input*) describes the Metalinguistic skills, which means the trainee will be able to:

- **LO 1.** Produce coherent text while typing by extracting and combining the information conveyed with the speakers' material.
- **LO 2.** Identify which non-verbal elements need to be turned into verbal for each LTA trained working contexts by applying different techniques as changing colours or font-size or inserting labels.
- **LO 3.** Type punctuation while keeping the pace of the speaker.

The third Unit (LTA.M6.U3 *Typing skills: how to speak fluently, quickly, and accurately*) elaborates on the Typing skills. After completing successfully this Unit, the trainee will:

- **LO 1.** Use all key combinations to support dictation and endurance up to 30 minutes. Learning how to use the keyboard combinations on Velotype is achieved by going through the Velotype Academy software. The Academy contains 15 lessons, starting with the starting position of the fingers on the keyboard. Every lesson a new key is introduced and the combinations involved with those keys. In a very visual and interactive way the student



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learns how to use the key combinations step by step. In a second part of each lesson composed words are practiced. That way the student also learns how to split up words according to the syllable rules used in Velotype. In a third part, a mix of the words which can be typed are rehearsed. And finally complete sentences are practiced. It is essential to learn how to use all the key combinations in the correct way, using the correct fingers. At the same time training to type without mistakes, with the aim to eventually type in the quickest and most efficient way with the highest accuracy.

- **LO 2.** Balance finger position and key combinations to support typing at the necessary speed rate. Already during the learning of the key combinations the aim is to type correct combinations without mistakes if possible. The speed should be increased efficiently with the focus on typing everything the first time right. This can be done by pressing the key combinations in a steady rhythm (for example using a metronome) and that way the student can directly see which combinations or which words are still a problem.
- **LO 3.** Have a MARS (Most Accurate and Rapid Speech-to-Text rate) above 500 cpm (see Intersteno comparison table for other languages). With a speed of 500 characters per minute in most cases enough of what is being said can be transferred from speech into text. The core meaning of the message should be written down. If the speed of the speaker is too high, the message can be edited, as long as the meaning of the message is not lost. In many cases (for example for deaf/hard of hearing users), a few spelling or grammatical mistakes are not disastrous, but of course should be limited if possible. Keeping in mind the average reading speed is about 600 characters per minute. At the same time, reaching the speed of 500 characters per minute is realistic and possible within a reasonable timeframe.

The fourth Unit (LTA.M6.U4 *Editing skills: When and how to correct oneself and another velotypist*) takes into account the Editing skills, in order to:

- **LO 1.** Pre-edit before the source text is displayed by applying strategies such as uploading glossaries on the topic, adding new words to vocabulary, inserting the names of the speakers, etc.
- **LO 2.** Peri-edit before middle text by typing, editing or rephrasing the text in difficult situations or by avoiding a word when spelling is unsure, such as in proper names or acronyms.
- **LO 3.** Post-edit before target text by correcting own typing mistakes either spotting and correcting the mistakes after the text goes live, or before the text goes live if it is edited live.

Finally, the fifth Unit (LTA.M6.U5 *Professionalism: How to develop factors for high performance such as flexibility, and self-motivation*) focuses on Professionalism which will make trainees:



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- **LO 1.** Implement strategies or self-motivation techniques, trying to reach the best quality of work at all time and in all job circumstances.
- **LO 2.** Discipline themselves to practice and improve their skills daily, to reach higher speed and accuracy during the real-time situation.
- **LO 3.** Implement strategies or techniques for training and enhancing concentration on the long run.