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

## IO1 REPORT

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### Dissemination level

Abbreviation	Level	X
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium	

### History Chart

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## Table of contents

<b>1</b>	<b>The LTA skills and competences survey</b>	<b>7</b>
1.1	The questionnaire	9
<b>2</b>	<b>Demographic data</b>	<b>11</b>
2.1	General demographic questions	12
2.2	Specific questions according to the respondent's profile	15
2.2.1	Professional	15
2.2.2	Prospective trainee	19
2.2.3	Trainer	21
2.2.4	Provider	22
2.2.5	User	22
2.3	Conclusions	23
<b>3</b>	<b>Competence areas</b>	<b>25</b>
3.1	Competence area: Knowledge on accessibility	26
3.1.1	Scale responses	26
3.1.2	Free-text responses	28
3.1.3	Conclusions	31
3.2	Competence area: Linguistic competence	32
3.2.1	Scale questions	33
3.2.2	Free-text responses	35
3.2.3	Conclusions	38
3.3	Competence area: Entrepreneurship and Service	40
3.3.1	Scaled responses	40
3.3.2	Free-text responses	42
3.3.3	Conclusions	46
3.4	Competence area: IT competence	47
3.4.1	Scale answers	47
3.4.2	Free-text responses	49
3.4.3	Conclusions	51
3.5	Competence area: Respeaking competence	53
3.5.1	Scale responses	53
3.5.2	Free-text responses	56
3.5.3	Conclusions	63
3.6	Competence area: Velotyping competence	64



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

3.6.1	Scale responses	64
3.6.2	Free-text responses	67
3.6.3	Conclusions	71
3.7	Other results of the survey	73
<b>4</b>	<b>Updated skills cards</b>	<b>73</b>
<b>5</b>	<b>Dissemination of the results</b>	<b>73</b>
	<b>Annex I. Online questionnaire</b>	<b>72</b>



## List of tables

Table 1.1. Feedback rate according to the survey language.	10
Table 1.2. Point scale	11
Table 2.1. Working languages and number of references	17
Table 2.2. Suggested names and number of mentions.	18
Table 2.3. Comments about the name of the profession	19
Table 3.1. Importance of the suggested competence areas by language	25
Table 3.2. Importance of skills within each competence area	26
Table 3.1. Knowledge about accessibility: mean points by skill	27
Table 3.2. Knowledge about accessibility: total number of responses by item	27
Table 3.3. Linguistic competence: mean points by item:	33
Table 3.4. Linguistic competence: total number of responses by item	34
Table 3.1. Entrepreneurship and service competence: mean number of points by item	41
Table 3.2. Entrepreneurship and service competence: total number of responses by item	41
Table 3.3. IT competence: mean number of points by item	48
Table 3.4. IT competence: total number of responses by item	48
Table 3.5. Respeaking skills: mean value by item, all respondents	53
Table 3.6. Respeaking skills: total number of responses by item.	54
Table 3.7. Velotyping skills: mean points by item	65
Table 3.8. Velotyping skills: total number of responses by item	66

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

## List of figures

Figure 2.1. How do you relate to real-time intralingual subtitling services? .....	12
Figure 2.2. Which category below includes your age? .....	13
Figure 2.3. What is the highest level of school you have completed or the highest degree you have received? .....	14
Figure 2.4. Which of these categories best describes your employment status? .....	15
Figure 2.5. How long have you been working as a real-time intralingual subtitler? .....	16
Figure 2.6. Working language .....	16
Figure 2.7. Type of employment .....	17
Figure 2.8. Does the name real-time intralingual subtitler describe correctly your profession? ..	18
Figure 2.9. In which professional profile are you interested? .....	20
Figure 2.10. How long have you been training real-time intralingual subtitlers? .....	21
Figure 2.11. During the project, we will carry out interviews with trainers and a specific online survey. Would you like to participate in these activities? .....	21
Figure 2.12. How long have you been working as a provider of real-time intralingual subtitling services? .....	22
Figure 2.13. When do you use real-time intralingual subtitles? .....	23
Figure 3.1. Overall importance of the competence area. ....	31
Figure 3.2. Overall importance of the area Linguistic competence. ....	38
Figure 3.3. Overall importance of the area Entrepreneurship and service competence. ....	46
Figure 3.4. Overall importance of the area Entrepreneurship and service competence. ....	52
Figure 3.5. Respeaking competence: overall importance of the skills .....	63
Figure 3.6. Velotyping competence: overall importance of the skills .....	71



## 1 The LTA skills and competences survey

This survey was part of the activities of Intellectual Output1 (IO1) of the European co-funded project Live Text Access (LTA).

The evolving legal framework surrounding inclusion has enabled greater participation of all audiences in the communication process. In this scenario, communication mediators such real-time intralingual subtitlers face the challenge to satisfy the needs and expectations of authors, audiences and providers while generating qualitative outputs. Despite EU legislation, the provision across Europe is still uneven (European Federation of Hard of Hearing People, 2015) or insufficient (Romero, 2015), and not necessarily provided by trained experts. Moreover, training is not based on a common skills framework or shares quality standards (Eugeni & Bernabé, forthcoming). The need for harmonised training to equip professionals and prospective trainees with the skills required in the labour market should be tackled. The European co-funded project Live Text Access (LTA) has taken on this task.

To do so, the first step towards the development of the LTA training was to a) define the competence areas and the skills needed in the profession and b) to gather best practices in training across Europe. These tasks were undertaken during Intellectual Output 1 (IO1).

The objective of IO1 was twofold: first, to define the skills and competences that a real-time intralingual subtitler should possess (professional profile), and, second, to explore real-time intralingual subtitling in terms of both vocational training (provided by universities or companies) and roles (respeakers or velotypists) so as to fuel IO2, IO3, IO4 and to guarantee the certification in IO5.

This report summarises the results of an online survey launched to identify the skills and competences of the professional in this field. The starting point of the survey was a drafted skills cards elaborated by the LTA partners according to the ECQA guidelines. This action took place during the kick-off meeting of the project in Milan. To do so, a working group was set up and facilitated by the ECQA partner.

Two steps were undertaken. First, ECQA explained the purpose and structure of skills cards, which are short descriptions that describe the knowledge, skills, and understanding needed for a specific profession. Second, partners, as stakeholders with insight into the views and

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

understanding of the profession, drafted the first version of the skills cards. The skills cards comprised six competence areas:

- Knowledge about accessibility,
- Linguistic competence,
- IT competence,
- Entrepreneurship and service competence,
- Respeaking competence, and
- Velotyping competence.

The online survey ran from November 12th, 2018 until December 14th 2018. A total number of 121 questionnaires were collected. The data were analysed in compliance with the standardised ECQA Guidelines: skills were grouped in Units (Modules), which are composed of Elements (learning objectives), broken down in the specific tasks a professional or a learner is capable of performing (performance criteria or learning outcomes).

The outputs of the survey have been two: this report on the results of the survey on the skills and a document illustrating the skills and competences for both profile roles (respeakers and velotypists), so-called skills cards. The skills framework and selected excerpts of this report will be disseminated through the project accessible website and proposed as academic publications, posters, and presentations at upcoming relevant conferences as well as project events.

## **2 IO development: online survey on skills and competences**

The development of this IO drew on the assumption that stakeholders in the field such as professionals, trainers, end-users, and providers of real-time intralingual can provide with deeper insight in the skills and competences that are needed. Aware of the fact, that stakeholders across Europe can only be reached through virtual communication, LTA partners agreed on using an online survey as collection technique. The steps undertaken were:

- Defining a methodological tool.
- Identifying the respondent profiles.
- Designing the questionnaire.
- Dealing with ethical procedures.



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

- Piloting the questionnaire.
- Distributing the questionnaire.
- Gathering and collating responses (data).
- Processing data.
- Discussing results.
- Creating a report
- Gathering best practices in teaching to be included in the curriculum design.

## **2.1 Methodological tool**

In view of the aims of IO1 and in order to reach as many stakeholders as possible, the methodological tool chosen was the online survey. The online questionnaire was designed to collect both quantitative and qualitative data. The first were gathered through closed questions and, the second, through free-text questions. Though online surveys also entail risks such as sample bias and lower response rates (Hunter, 2012), computer-mediated data collection is an effective method to overcome physical barriers and involve distant-located respondent (Wright, 2005).

## **2.2 The questionnaire**

The online questionnaire was created with Zensus<sup>1</sup> and published at the evaluation platform of the SDI München, leader of this IO. The questionnaire was implemented:

- in eight languages: Catalan, Danish, Dutch, English, French, German, Italian and Spanish.
- comprised 68 questions per language, meaning a total of 544 questions.
- with a total of 74 indicators for reporting.

The target group included professionals in the field of real-time intralingual subtitling as well as prospective trainees, trainers, and end users.

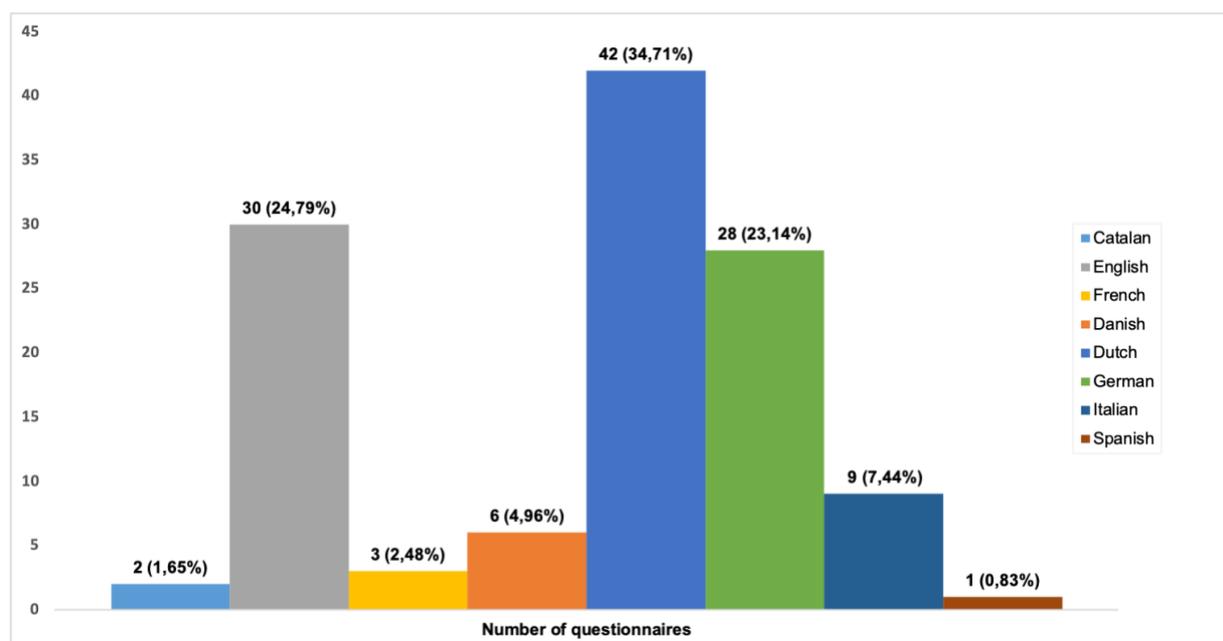
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<sup>1</sup> <https://www.blubbsoft.de/>

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

Table 1.1 shows the number of participants per the survey language out of a total of 121 participants. The language with the highest number of completed questionnaires was Dutch (42, 34.71%) followed by English (30, 24.79%), German (28, 23.14%), Italian (9, 7.44%), Danish (6, 4.96%), French (3, 2.48%), Catalan (2, 1.65%) and Spanish (1 (0.83%).

**Table 2.1. Feedback rate according to the survey language.**



The questionnaire comprised three sections. The first section provided participants with an overview of the questionnaire and the purpose, and informed them about ethical issues. In order to comply with ethical research needs and consent issues (Orero *et al.*, 2017). Participants were given the possibility to express their consent, leave the survey at any stage and to ask questions. Furthermore, participants were also informed about the use of the collected data for project dissemination purposes.

Participants were volunteers. The recruitment took place through the Stakeholders and Associated Partners lists of the LTA project. List members had already expressed their consent to be approached. Also, each LTA partner used their network lists to distribute the link to the survey. These lists are confidential and cannot be published in this report.

The second section gathered demographic data and the third collected data about the competences needed by the professional. The following sections reports on the results. Annex I includes a copy of the English questionnaire.

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

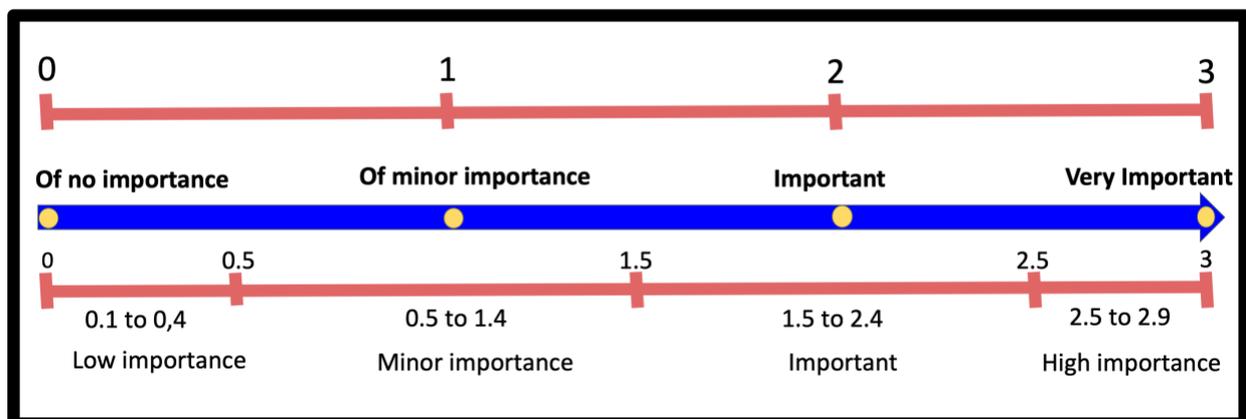
The questionnaire included three types of questions. Multiple choice questions were used to gather demographic and general data. Scale questions were used to collect information concerning the proposed skills. Free-text questions were included to allow respondents to give general information, such as their name or email address, but also to ask for people's opinions about the proposed skills, and to provide them with the opportunity to explain a previous answer.

Scale questions comprised a four-item scale: Of no importance – Of minor importance – Important – Very important. A total score of 3 points was related to the items to calculate the overall mean of points given to each skill: Of no importance (0 points), Of minor importance (1), Important (2 points) and Very important (3 points).

The following scale was created to translate the mean amount of points into a level of importance. A score of 0 points was defined as Of no importance; those ranging from 0.1 to 0.4 were considered of Low importance; from 0.5 to 1.4 were defined as of Minor importance; from 1.5 to 2.4 as Important; from 2.5 to 2.9 were described as of High importance; and scores of 3 point as Very important.

**Table 2.2. Point scale**

### Scale questions: items and points



## 3 Demographic data

LiveTextAccess is a project that targets professionals, end users, prospective trainees, and trainers, with both vocational and higher educational backgrounds. The demographic data collected should reveal if the project is reaching these audiences. Their views and involvement are necessary to support the user-centric approach pursued in the project.

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

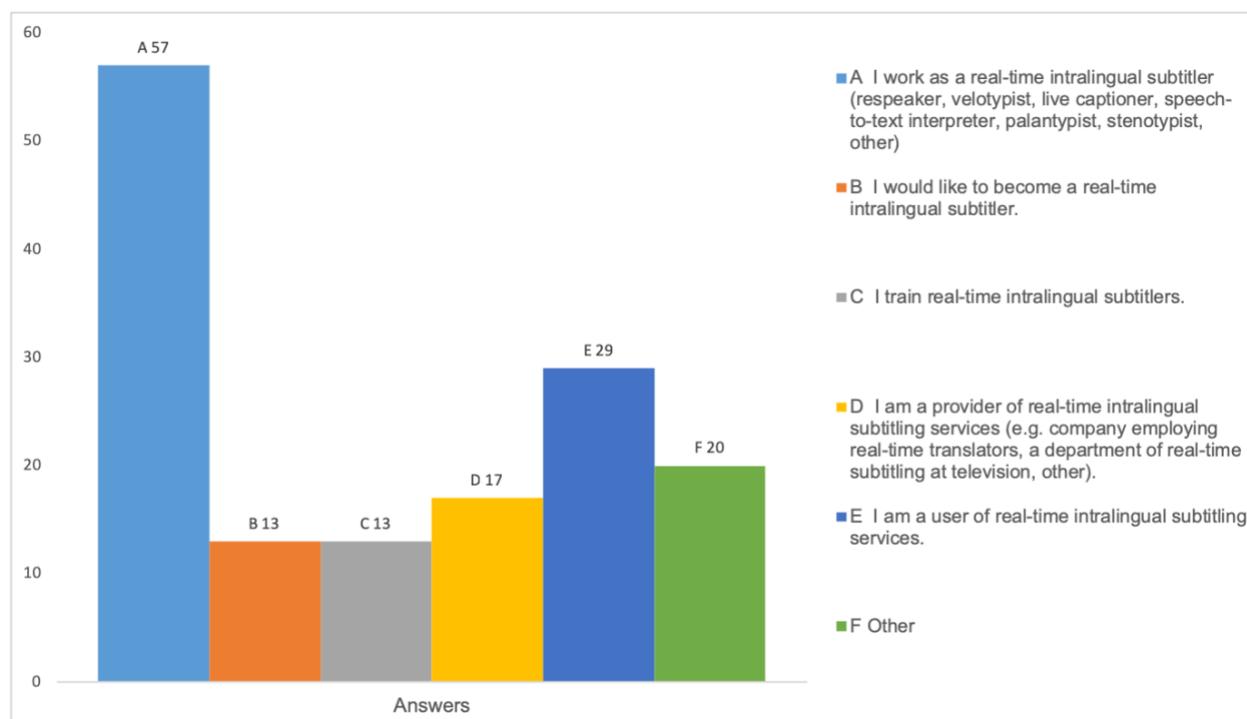
This section comprised three general questions that were mandatory as well as specific questions according to the participant's background.

### 3.1 General demographic questions

Figures 2.1 to 2.4 show the responses to the general questions. All questions were mandatory.

The results of the first question (**How do you relate to real-time intralingual subtitling services?**) disclosed the respondent's profiles, which matched the intended audience. A total of 57 (47%) participants work as real-time intralingual subtitlers (option A), 29 (24%) are end users (option B), 17 (14%) providers (option C), and an equal number of 13 (11%) trainers (C) and people interested in becoming a professional in this field (E) answered the survey. 20 (16%) participants chose Other (F).

Figure 3.1. How do you relate to real-time intralingual subtitling services?

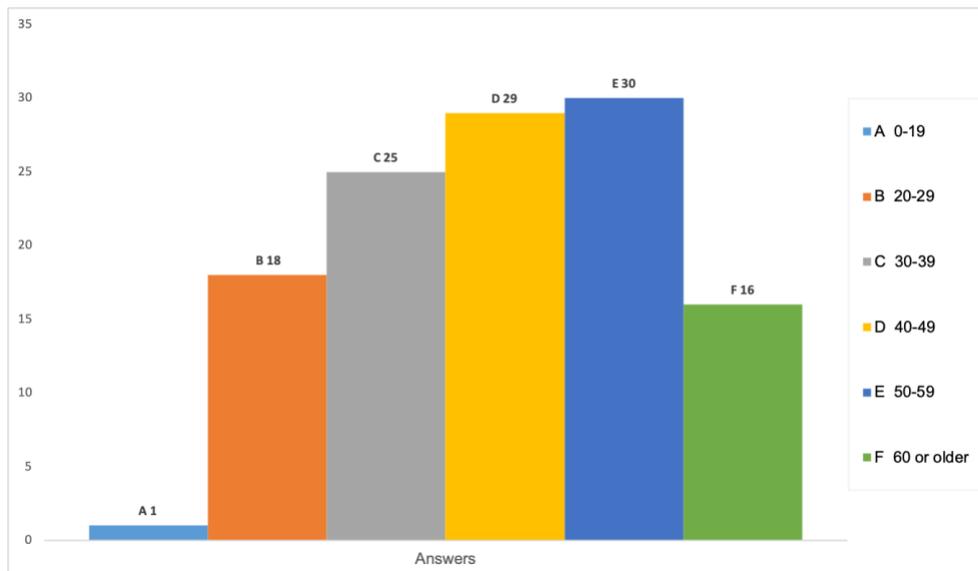


Free-text responses related to F, Other, included other types of services, for instance, the provision of real-time subtitles at museums, galleries or literary festivals, provision of technical assistance, and of remote services.

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

The following figure shows that all age groups were represented. The age group with the fewer participants was A (0-19). The largest was E with ages ranging from 50 to 59. Groups B (20-29), C (30-39) and D (50-59) were represented by a relatively equal number of participants, namely 25, 29 and 30, respectively. 16 participants were 60 or older (group F).

**Figure 3.2. Which category below includes your age?**

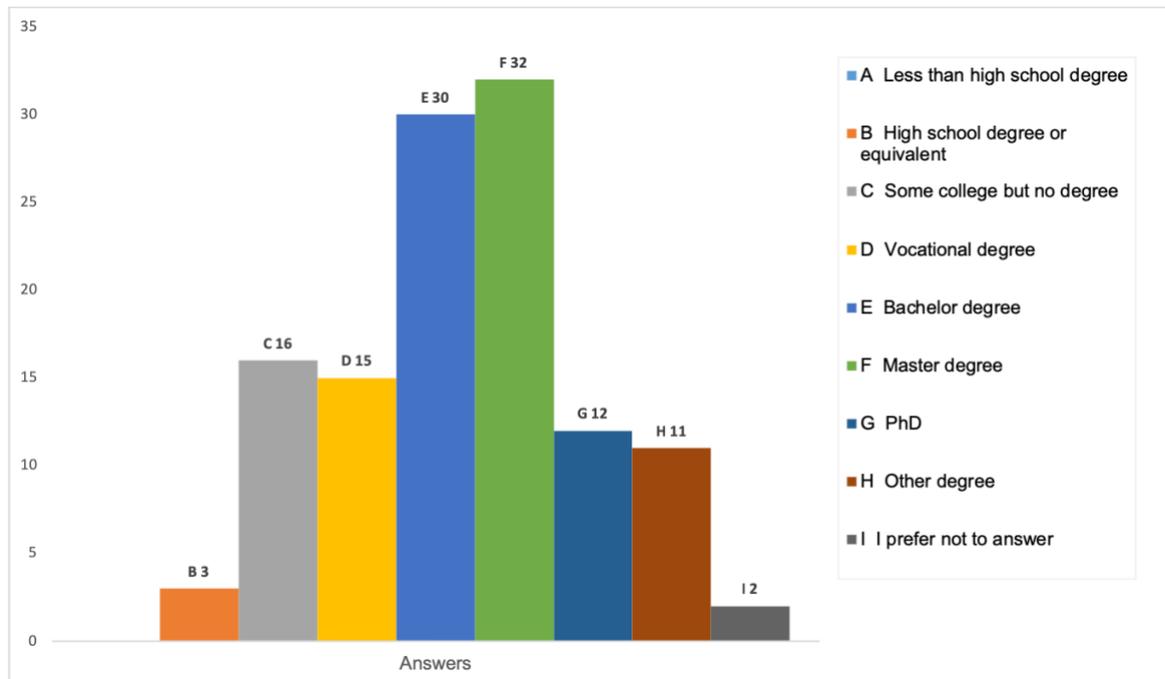


As for the level of education of the participants, Figure 2.3 shows that all groups were represented except for group A (Less than high school degree). Group B (High school or equivalent) received the least number of responses, namely 3. The largest groups were those of participants with a graduate degree, bachelor (30) or master (32). The number of participants in these groups approximately doubled the others. Respondents were asked to specify their degree. The responses referred to higher education degrees (master's degree, higher education and college) and undergraduate degrees (associate's of Arts Degree. In USA, it's a two-year college degree, halfway to the bachelor's, diploma, associate degree text interpreter).



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

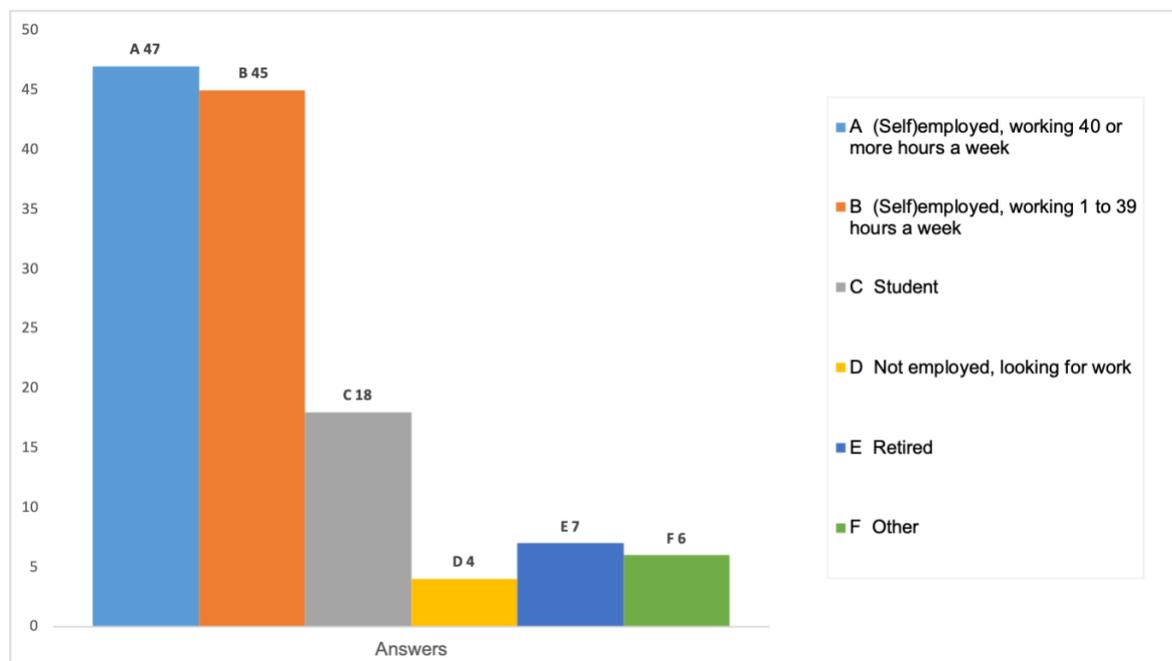
**Figure 3.3. What is the highest level of school you have completed or the highest degree you have received?**



Concerning the employment status of the participants, out of 121 answers, 92 participants were (self)employed, working 1 to 40 or more hours, which accounts for 72.5% of the respondents. The other 27.5% was represented in the other categories: students (18), Not employed, looking for work (4), Retired (7), and Other (6). The respondents of this last group was asked to please specify their employment status. The answers given included:

- End user
- Employee
- Volunteer work
- Own company with employees
- I own a captioning business and perform administrative work. I also caption.
- Retired, but involved in volunteer work 20-25 hours per week.

**Figure 3.4. Which of these categories best describes your employment status?**



### 3.2 Specific questions according to the respondent's profile

The first question of the demographic data section (How do you relate to real-time intralingual subtitling, Figure 2.1) was mandatory and allowed for a classification of the type of participant by profile (A) professional, B) prospective trainee, C) trainer, D) provider or E) end user F)). The results by type of participant were: 57 professionals, 14 Trainers, 19 prospective students, 17 providers, and 38 end users). The fact that the question admitted multiple answers explains the total of 145 responses given by the 121 respondents. All groups were posed further questions to learn more about each of them. The section presents the results.

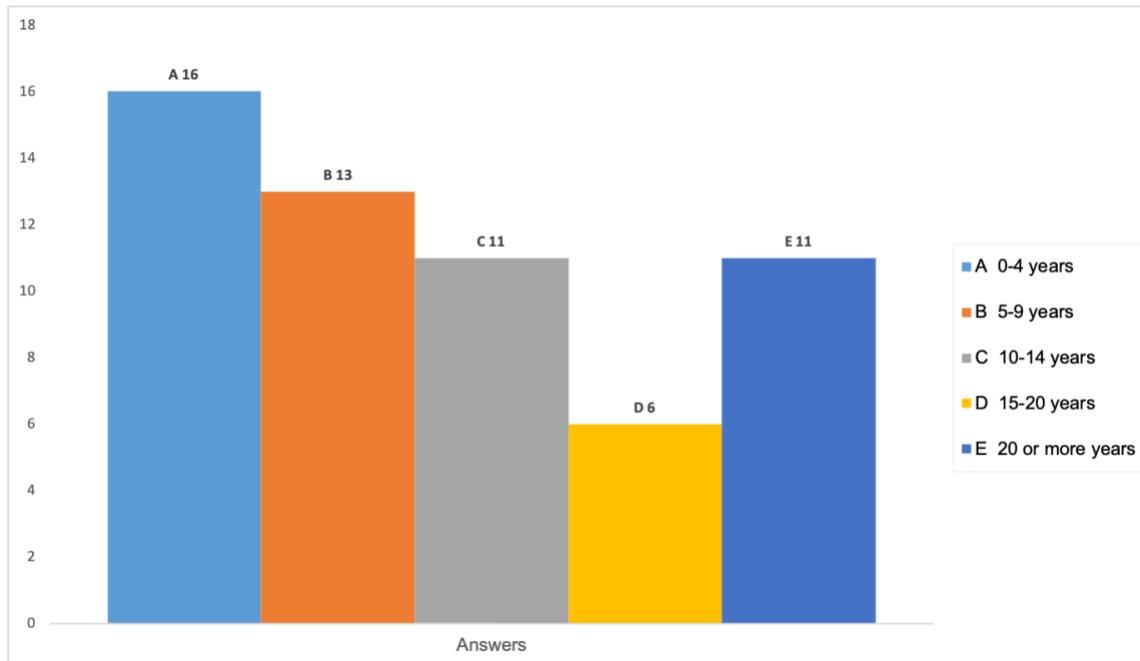
#### 3.2.1 Professional

Answer A I work as a real-time intralingual subtitler (Respeaker, velotypist, live captioner, speech-to-text interpreter, palantypist, stenotypist, other) triggered a set of questions about the number of working years and languages, and the type of employment. Respondents were also asked about the name of the profession. Figures 2.5 to 2.8 show the results.

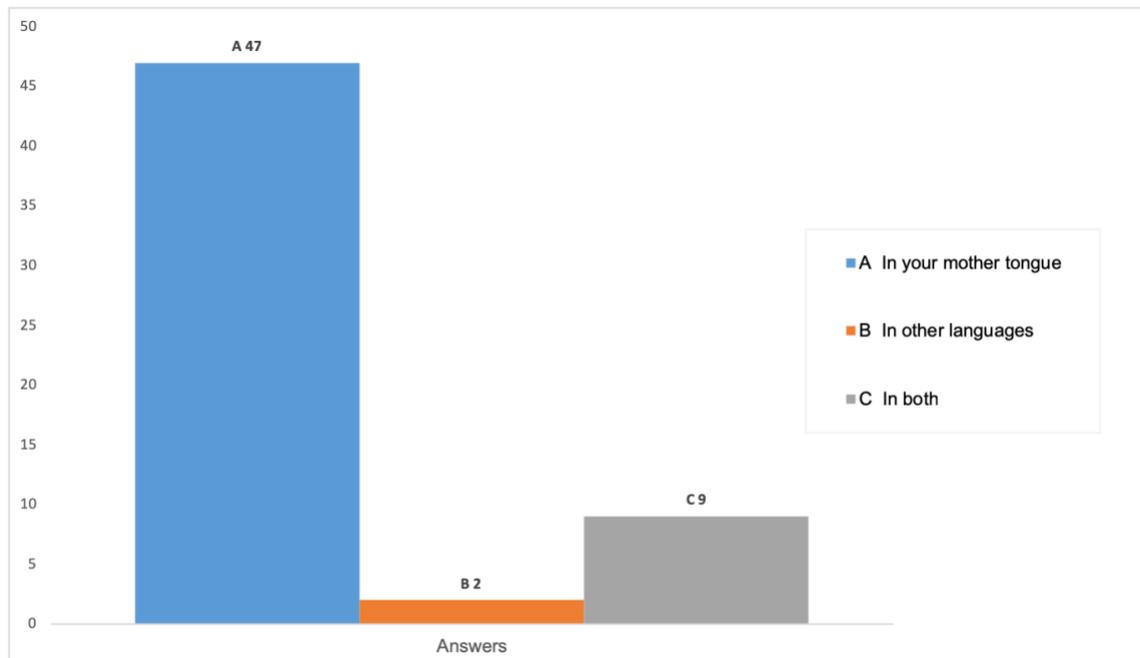


Project Ref: 2018-1-DE01-KA203-004218: LTA Quality Training in real time subtitling across EU and EU languages

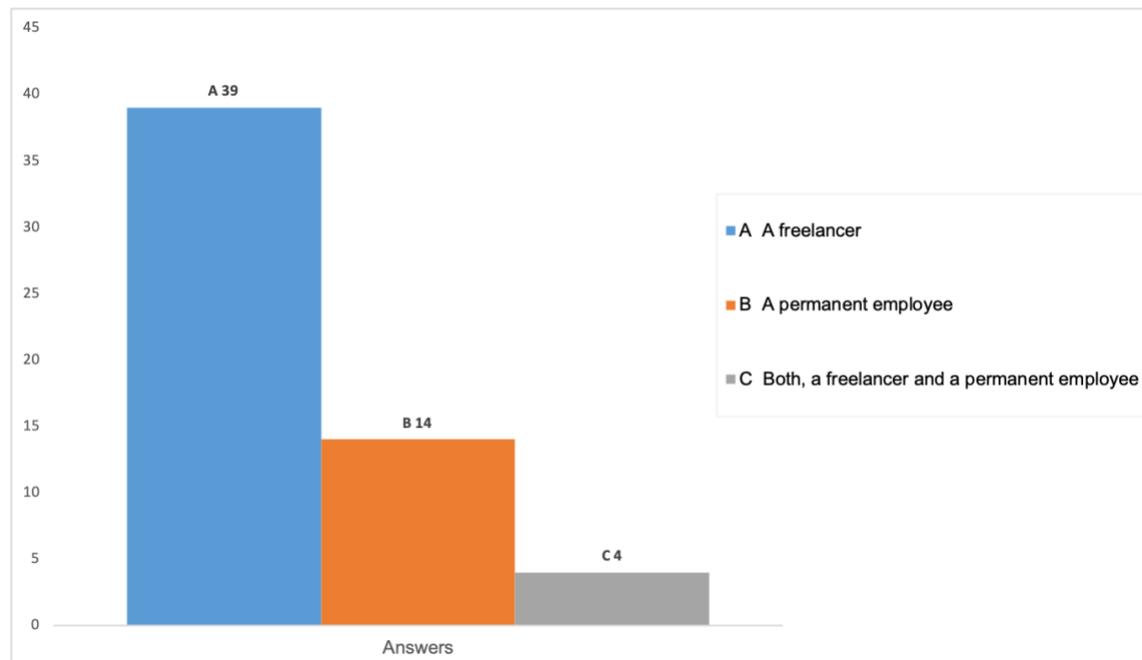
**Figure 3.5. How long have you been working as a real-time intralingual subtitler?**



**Figure 3.6. Working language**



**Figure 3.7. Type of employment**



According to the responses, participants were represented in all working-years categories, from beginners (0-4 years) to seniors (20 or more years). The ranges A (0-4 years) and B (5-9 years) obtained the larger number of responses, 16 and 13, which might be interpreted as concurrent to the higher demand of the service in the past years. The range C (10 to 14 years) and E (20 or more years) obtained 11 responses while D (15-20 years) had 6 responses.

As for the working languages and type of employment. 47 out of the 57 respondents work in their mother tongues, 9 work in other languages, and 2 participants in both (English and Spanish). The table shows an overview of the named mother tongues and other working languages. Concerning the type of employment, 39 out of the 57 respondents work as freelancers, 14 as a permanent employee, and 4 as both.

**Table 3.1. Working languages and number of references**

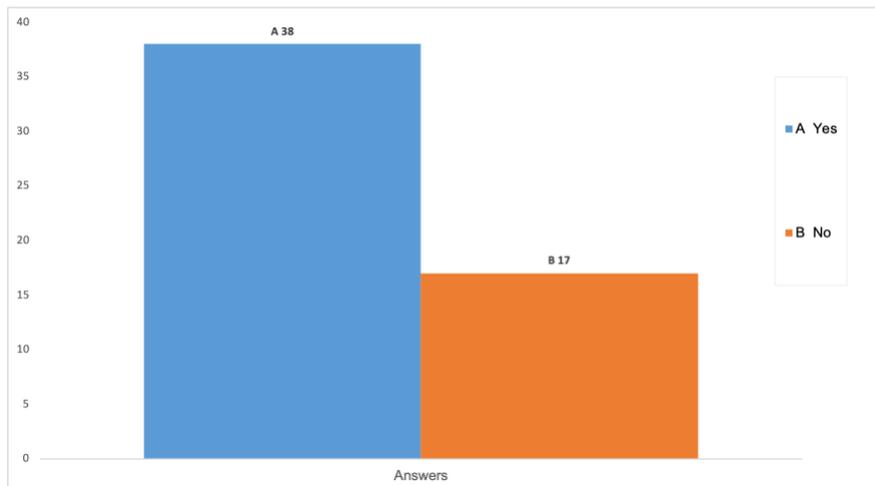
Mother tongue	Other working languages
Catalan (1)	English (9)
Dutch (16)	Sign language (1)
English (9)	Spanish (1)
German (19)	
Italian (6)	
Portuguese (1)	
Swedish (3)	



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

Regarding the question about the name of the profession, 38 participants agreed that the name real-time intralingual subtitles describes correctly the profession while 17 disagreed. The names suggested by the participants are displayed in Table 2.2. Table 2.3 shows the comments on this topic.

**Figure 3.8. Does the name real-time intralingual subtitler describe correctly your profession?**



**Table 3.2. Suggested names and number of mentions.**

Name	Mentions
Captioner	1
Court reporter	1
Intralingual live subtitler	1
Live Subtitler	1
Real-time captioner	3
Real-time speech to text typist	1
Real-time speech-to-text transcriber	1
Realtime Stenographer	1
Speech to text writer	1
Speech-to-text interpreter (intralingual or interlingual)	5
Stenographer	2
Writing/Typing/audio interpreter	1



**Table 3.3. Comments about the name of the profession**

Comments <sup>2</sup>
That's the problem. Depending on the public I use different terms. Writing interpreter, live subtitler, typing interpreter, audio interpreter.
I don't have a better name. The term text interpreter (schrijftolk) is generally accepted, but doesn't cover the work. I often switch between modalities and languages, depending on the situation. I use Dutch sign language, text interpreting, spoken languages, and total communication, and adapted forms of communication for deafblind people.
I can't think of another name right away, but something with communication and portation. I will think about this.
1. Stenographer 2. Realtime Stenographer 3. Stenographer that provides realtime services upon request. 4. Captioner NOTE: In USA we call those that are not captioners, we call them court reporters, it's the name that stuck here, but it's not great either.
Differentiating between "intralingual live subtitler" and "(intralingual) speech-to-text interpreter" is still useful.
Speech-to-text interpreter, who can work as an intralingual as well as an interlingual interpreter. Live subtitling suggests a particular form of presentation, namely in the form of subtitles. This is only available for TV, however, or might be available when using text-on-top transmission. That the process of transmitting spoken language into written language is interpreting has been argued for repeatedly in the literature.

### 3.2.2 Prospective trainee

Answer B, I would like to become a real-time subtitles delivered a total of 13 answers.

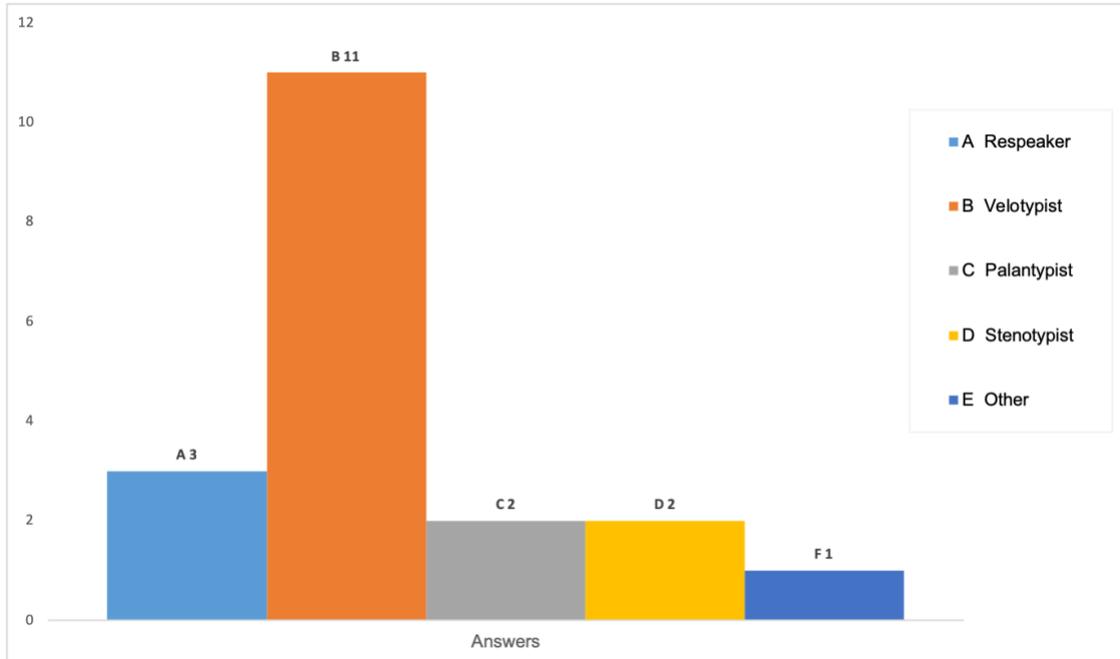
Respondents were then asked to chose the preferred technique. The question allowed for multiple answers. The figure shows a higher number of responses for velotyping (11), followed by respeaking (3), pantelotypist (2), stenotypist (2), and other. However, users that chose this last option did not specify further.

<sup>2</sup> Comments have not been corrected. The wording has been left as written in the survey.



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

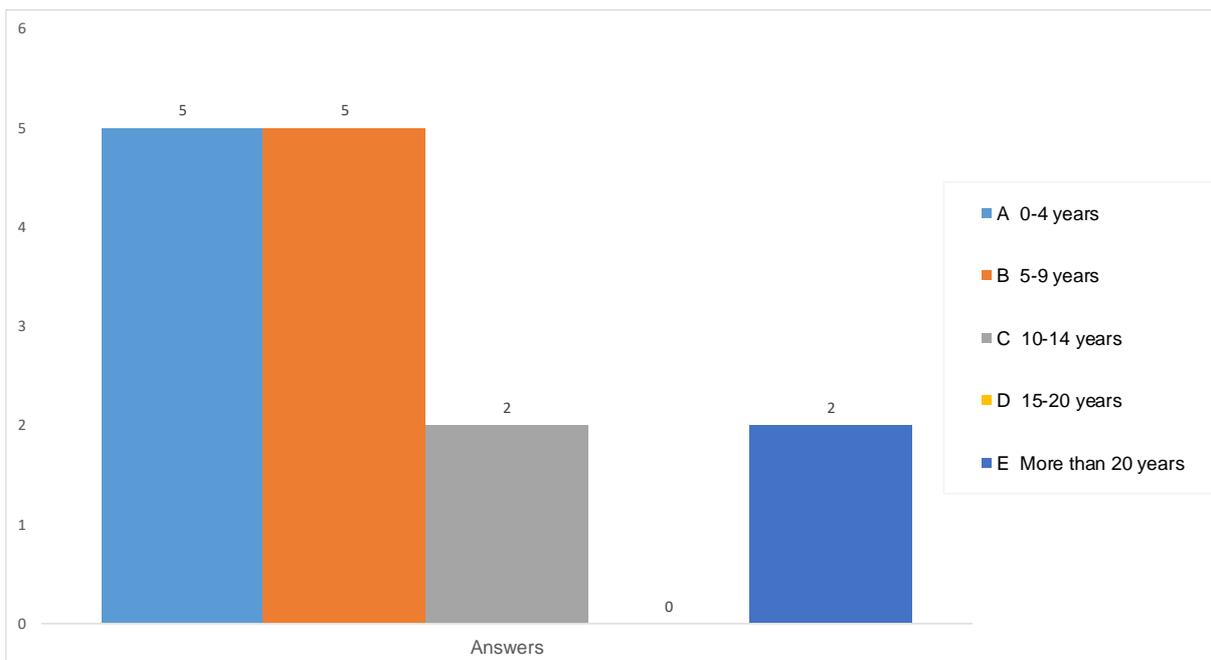
**Figure 3.9. In which professional profile are you interested?**



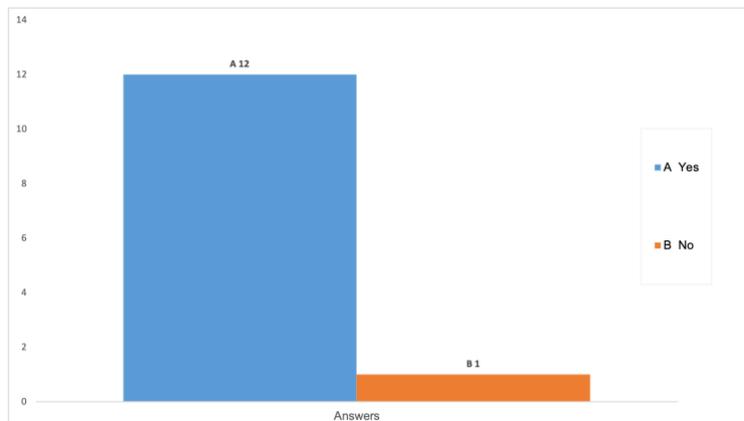
### 3.2.3 Trainer

Answer C, I train real-time intralingual subtitlers, delivers a total number of 13 responses: 4 from the German questionnaire, 3 from the Dutch, 1 from the Catalan, and 4 from the English. Five trainers have been training for 0 to 4 years (A); five for 5 to 9 years (B), two for 10 to 14 years (B); none for 15 to 20 years (D); and two for more than 20 years (E). All trainers agreed to be interviewed at a later stage.

**Figure 3.10. How long have you been training real-time intralingual subtitlers?**



**Figure 3.11. During the project, we will carry out interviews with trainers and a specific online survey. Would you like to participate in these activities?**

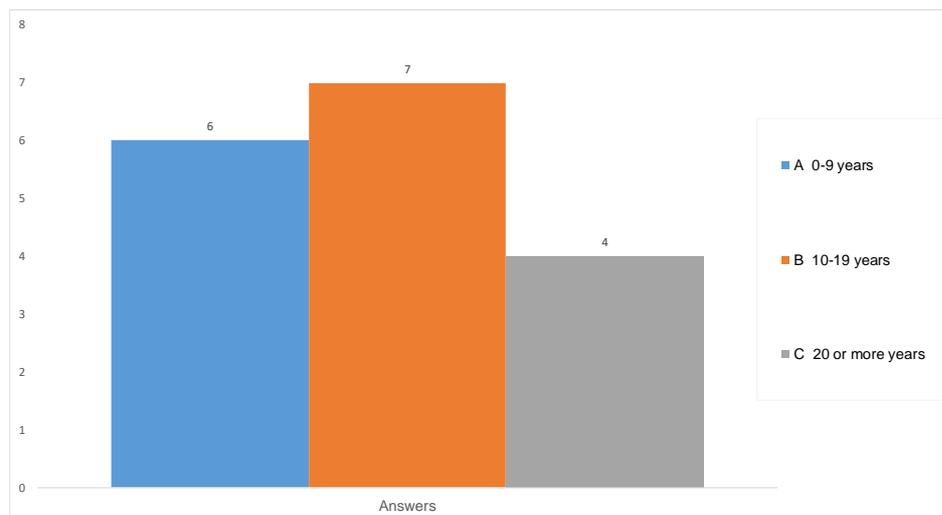


Project Ref: 2018-1-DE01-KA203-004218: LTA Quality Training in real time subtitling across EU and EU languages

### 3.2.4 Provider

Answer D, I am a provider of real-time intralingual services, was chosen by 17 participants as shown in the figure below. This group was asked to specify for how long they have been working in the field. Six providers chose option A (0 to 9 years), seven option B (10 to 19 years), and four C (20 or more years).

**Figure 3.12. How long have you been working as a provider of real-time intralingual subtitling services?**



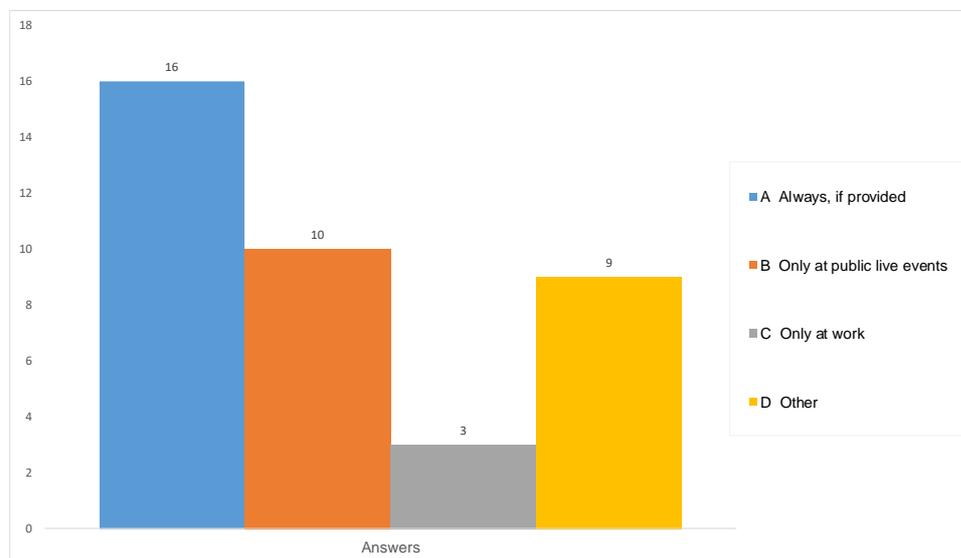
### 3.2.5 User

Answer E, I am a user of real-time intralingual subtitling services, was answered by 29 respondents. This is the second largest group of participants in the survey (see Figure 2.1). The question about when they use these services (Figure 2.13) shows that 16 participants always use them, if available (A), 10 users only at public live events (B), 3 only at work (C), and 9 respondents in other situations.

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

The free-text answers about this type of participant focused upon two topics: contexts and frequency of use. As for the contexts, users mentioned both work and private settings. Regarding work, participants named volunteer work, meetings. They also specified that they use subtitles especially in meetings with large audiences such as symposium, lecturers, and workshops, and were questions are expected or when the distance to the speaker is big. One respondent from Vietnam stated that real-time intralingual subtitles are not offered in Vietnam, and their organisation (Center for Research and Education of the Deaf and Hard of Hearing [CED] offers it, by some fast typists, at their events/trainings. Regarding private occasions, participants named at the movies, conversations, museum visits as well as important conversations and events with multiple persons. One participant specified that the use depends on the programmes. As for the frequency of use, the free-text answers varied greatly from sometimes and “only when is needed”, to daily, 30 hours a year, monthly and whenever it is available.

**Figure 3.13. When do you use real-time intralingual subtitles?**



### 3.3 Conclusions

The demographic data shows that the type of participant matched the stakeholders targeted in the project. According to the data, most professionals are between 40 to 59 years old, work mainly in their mother tongues (81%), and are freelancers (72.5%).



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

Regarding the name of the profession, 66,7% (38) agreed with it whereas 29,8% (17) disagreed. The qualitative data displays a list of suggested names. Those with the largest number of mentions were speech-to-text interpreter (5) and real-time captioner (3).

Prospective trainees chose velotyping as the preferred technique followed by respeaking.

Thirteen trainers and seventeen providers filled the questionnaire. The data shows certain asynchronicity since most trainers have been working in the field for 0 to 9 years and only 2 for over 20 years, while most providers have been offering their services for 10 to 19 years. This can point out that professionals who have been working longer might have develop their abilities on the job and not at training.

## 4 Competence areas

This section presents the collected data about the six competence areas. Two different types of questions were used: scale and free-text questions. The scale questions included the skills from the drafted skills card for both professionals, respeakers and velotypists. They aimed to evaluate their importance by delivering individual scores per skill and competence area. The highest score was 3 points. Table 3.1 and Table 3.2 show that the competence areas obtained a mean amount of 2 points across languages, being over average. Out of 48 skills, 47 scored a mean amount of 1,5 points. Free-text answers<sup>3</sup> allowed for collecting qualitative data.

The next sections present the results by competence area and individual skills together with the qualitative data emerging from the free-text responses.

**Table 4.1. Importance of the suggested competence areas by language**

		Competence area					
		Knowledge about accessibility	Linguistic	Entrepreneurship and Service	IT	Respeaking	Velotyping
Survey language	Catalan	▲ 2,3	▲ 3,0	▲ 2,6	▲ 2,8	▲ 2,8	▲ 2,5
	Danish	▲ 2,0	▲ 2,6	▲ 2,4	▲ 2,5	▲ 2,3	▲ 2,5
	English	▲ 2,3	▲ 2,6	▲ 2,3	▲ 2,5	▲ 2,3	▲ 2,3
	Italian	▲ 2,2	▲ 2,7	▲ 2,5	▲ 2,1	▲ 2,1	▲ 2,1
	French	▲ 2,2	▲ 2,3	▲ 2,0	▲ 2,4	▲ 2,2	▲ 2,1
	German	▲ 2,0	▲ 2,5	▲ 2,2	▲ 2,1	▲ 2,2	▲ 2,2
	Dutch	▲ 2,1	▲ 2,2	▲ 2,1	▲ 2,1	▲ 1,9	▲ 1,9
	Spanish	▲ 1,6	▲ 3,0	▲ 2,3	▲ 2,8	▲ 2,8	▲ 2,7
Mean value (all surveys)		2,1	2,6	2,3	2,4	2,3	2,3

### Legend

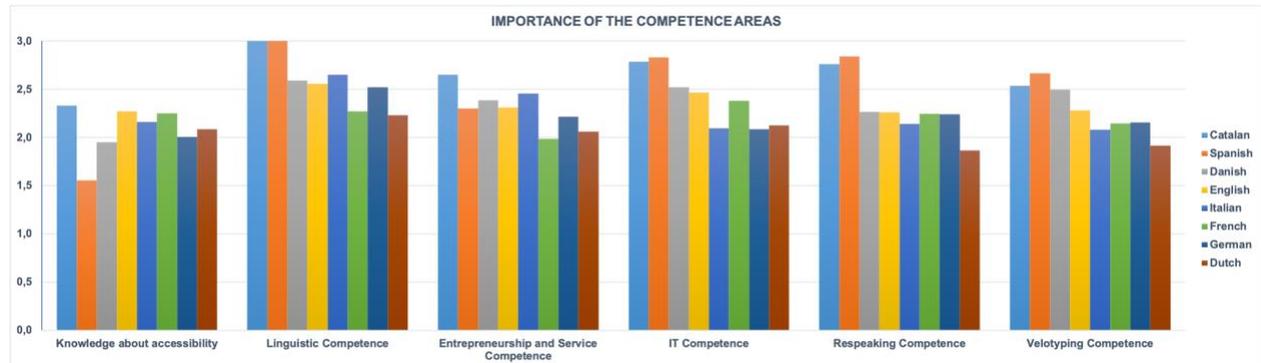


Highest importance: 3  
 High importance: 2,5 to 3  
 Important: 1,5 to 2,5  
 Minor importance: 0,5 to 1,5  
 Low importance: 0 to 0,5  
 Lowest importance: 0

<sup>3</sup> Free-text answers have been included as written in the survey.



**Table 4.2. Importance of skills within each competence area**



## 4.1 Competence area: Knowledge on accessibility

This section displays the results concerning the skills of the professional in the competence area Knowledge about accessibility. Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using the four-item scale. In the second step, they were asked to add their comments to this competence area.

### 4.1.1 Scale responses

The scale questions presented a total of nine skills. The items were shown as an unordered list introduced by the phrase: “To deliver a good quality service, a real-time intralingual subtitler should be able to:”.

The skills replicated the ones included in the first drafted skills cards, where they appear classified into these three macro-categories:

- Basic concepts about accessibility (skills 1 to 3 to in the tables)
- Target groups and their needs (skills 4 to 6 to in the tables), and
- How accessibility is embedded in the environment (skills 7 to 9 to in the tables)

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.



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

**Table 4.1. Knowledge about accessibility: mean points by skill**

Skill	Mean points
1 Explain the concepts of disability, accessibility and the differences among them.	1.9
2 Explain the concept of multimodality and how multimodality can support and enhance accessibility.	2,0
3 Explain the concept of universal design and how to implement it in real-time intralingual subtitling services.	2.1
4 Adjust the output to the working setting.	2.7
5 Implement in his/her work ways of raising awareness for the hard-of-hearing and deaf community and other end users.	1.7
6 Communicate in sign language in basic situations.	1.4
7 Explain the role and competences of the real-time intralingual subtitler.	2.3
8 Classify real-time intralingual settings according to the types of accessible audio-visual media and events.	2.4
9 Advise customers about how to best set up an accessible working environment.	2.1

**Table 4.2. Knowledge about accessibility: total number of responses by item**

Skill	No importance	Minor importance	Important	Very important
1 Explain the concepts of disability, accessibility and the differences among them.	2	23	56	34
2 Explain the concept of multimodality and how multimodality can support and enhance accessibility.	1	21	47	43
3 Explain the concept of universal design and how to implement it in real-time intralingual subtitling services.	4	24	50	35
4 Adjust the output to the working context and the needs and cultural particularities of the hard-of-hearing and deaf community, and other end users of real-time intralingual subtitles.		4	35	76
5 Implement in his/her work ways of raising awareness for the hard-of-hearing and deaf community and other end users.	3	33	49	31

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

Skill	No importance	Minor importance	Important	Very important
6 Communicate in sign language in basic situations.	14	45	36	21
7 Explain the role and competences of the real-time intralingual subtitler.	1	8	44	63
8 Classify real-time intralingual settings according to the types of accessible audio-visual media and events.	2	15	37	38
9 Advise customers about how to best set up an accessible working environment.	6	27	32	51
<b>Total</b>	<b>33</b>	<b>200</b>	<b>386</b>	<b>392</b>

#### 4.1.2 Free-text responses

The responses are shown as written in the survey. **They have not been corrected.** This section classifies the answers according to the three macro-categories used in the skills cards

- Basic concepts about disability, accessibility, multimodality and universal design,
- Target groups and their needs, and
- How accessibility is embedded in the environment.

The category Other includes answers referring to new categories or other issues emerging from the survey.

#### Basic concepts: disability, accessibility, multimodality and universal design

**Answer 1.** It is important who the various questions should be explained to. Whether it should be explained to users or to other participants who may find this type of accessibility redundant.

#### Target groups and their needs

**Answer 2.** For me, it is important that they interpret and write the spoken word, so I can follow along. I will probably be ambassador and explain about hearing loss etc. Their task is that the technical equipment works so that they can interpret it softly.



They should be invisible and the fly on the wall. Having said that, it is important to me that they have an eye for every conceivable situation in which to write interpreters. Videos with speech etc.

**Answer 3.** Understand the differences between Deaf and hard of hearing. Understand the role of Sign Language Interpreters.

### **How accessibility is embedded in the environment**

**Answer 4.** Their task is that the technical equipment works so that they can interpret it softly. They should be invisible and the fly on the wall. Having said that, it is important to me that they have an eye for every conceivable situation in which to write interpreters. Videos with speech etc.

**Answer 5.** The question "classify the live intralingual situations according to types of audio visual media and events" is difficult for me to answer. I don't understand what's meant with this question.

**Answer 6.** It is very important to understand in advance the type of environment that you will be working in. It is important to dress appropriately - for example - a suit, so that you blend in with your client and their colleagues. It is important to be courteous towards your client's colleagues and to remember that your role is as a conduit of information and not to show favouritism or express opinions - this is often difficult!

**Answer 7.** Last question not really applicable - we serve interpreter users, not customers

**Answer 8.** It probably has to be clarified for the above answers if the intralingual live subtitler is self-employed or works as an employee in a company. Depending on that, competences such as advising, or a deep understanding of the community, might be important.

**Answer 9.** When answering the questions, I exclusively considered my day-to-day work and assessed to what extent the competence areas addressed actually play a role in my work. The items 1, 2, 5, 6 are definitely good to know, but of no importance when it comes to live subtitling. I do not understand the meaning of the items 3 and 8. The last item is more important for account management rather than for live subtitlers.



## Other

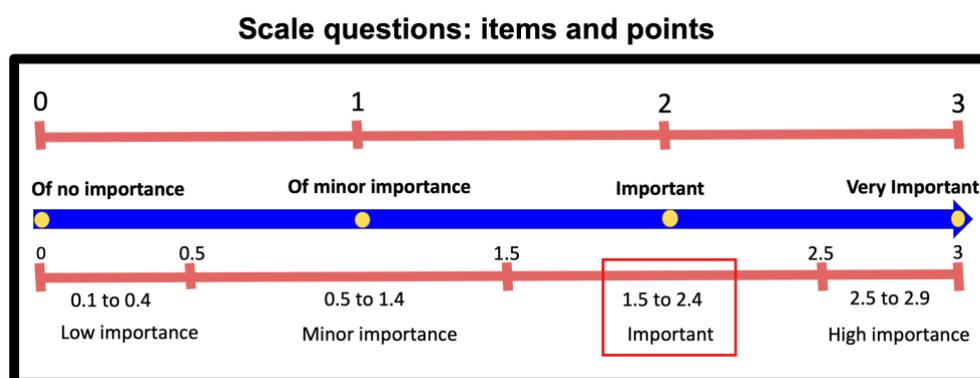
- Answer 10.** The last statement is more towards a task for a jobcoach. As an interpreter you are allowed to give advice, but to my opinion this is only until a certain level.
- Answer 11.** The tasks should be clear. When you are a velotypist, are you also an advisor of accessibility or just delivering a service? The questions above give the impression it is a combination. Not everybody can deal with that in a good way.
- Answer 12.** Most of it doesn't seem the task of the interpreter. There are other professions for this.
- Answer 13.** I think there will be specialists for this, to end user and kind of events. I think to be allround for every situation is not doable because of the very big time investment it requires, and the work settings for many text interpreters. The work area is very busy, the educational possibilities are limited, and a lot of text interpreters work parttime.
- Answer 14.** Advising customers is not a task for the interpreter, as far as I know. I have this doubt with multiple questions. Although I do agree it is important people know it.
- Answer 15.** Consult with, hire as assistants, and/or work with the HOH community in order to maximize and offer the highest quality experience.
- Answer 16.** Accessibility is very important that make a person become disable or not. Asia-Pacific Region does not have much accessible environment, specially to people who are hard of hearing and need captioning for communication and for development. LTA is a dream for us. Thank you. Duong Phuong Hanh Director of Asia Pacific Federation of the Hard of Hearing and Deafened (APFHD)
- Answer 17.** Countries in Asia and Africa need more attention as they have less technology and equipment.
- Answer 18.** Developing standards to set the bar between what is acceptable quality and what is not is of paramount importance.
- Answer 19.** I don't think respeaking is of a good enough standard to be included in the profession. It's in regulated and we have had many complaints about the accuracy and lack of content by clients coming to us after using it.
- Answer 20.** In my opinion, in this competence area it is important to differentiate between freelancers or employed subtitlers as well as companies providing the real-time intralingual subtitles. Not every point is as important to the one subtitler as to the other.

**Answer 21.** I think that instead of the real time intralingual subtitler taking on the full responsibility of the set up, it should be the deaf person to act as a consultant as they are the consumers after all.

### 4.1.3 Conclusions

The competence area Knowledge about accessibility obtained an overall amount of 2.1 points out of a maximum of 3, and is, therefore, considered “Important” by the participants.

**Figure 4.1. Overall importance of the competence area.**



According to the scale responses, one skill was considered as of “High importance”, namely, to adjust the output to the working setting. This ability refers to the need of knowing the target audiences and their needs, which received two mentions in the free-text responses. Six skills were referred to as “Important” and one as of “Minor importance”, namely, to communicate in sign language in basic situations.

Three main topics arose from the qualitative data: the need to clearly describe the role and tasks of the professional and how they differ from other profiles; the uneven provision of accessibility services across countries; and the need of establishing quality standards for the profession. As for the role of the professional real-time intralingual subtitler, the scale answers show consensus on the need for having basic knowledge of accessibility concepts. The skills directly related to the quality of the output: “Adjust the output to the working setting” and “Classify real-time intralingual settings according to the types of accessible audio-visual media and events” received the largest amount of points. Free-text responses related to the role disclosed the need to define what the job and the role mean. Questions arise whether the skills in this competence area are necessary for respeakers and velotypists or if there are other professionals for this, such as job adviser, job coach, account manager, business owner,



accessibility advisor, other. One participant warns about combining both and states: “Not everybody can deal with that in a good way”. Respondents also specify that the need for having these skills depends on the type of employment and that they are more critical for the first group. According to the demographic data, the number of professionals working as freelancers more than doubles the number of permanent employees (see Figure 2.7). The role of the HOH community is also mentioned. Respondents advise to consult, hire, and collaborate with the community to maximise and offer the highest quality experience.

As for the other two topics arising, one respondent defines the need for setting quality standards that describe what is acceptable quality as of paramount importance. Regarding the uneven provision of these services, Africa and the Asia-Pacific Region are described as regions that have less accessible environments and that request for higher attention since they also have less technology and equipment.

The answer “Understand the role of Sign Language interpreters” was not further explained in the free-text comment. It can be understood as a profession that shares specific skills and works in similar settings.

The results in this competence do not show the need for adding any further skills to the skills card. Regarding the skills related to the basic concepts, the topics and the level of understanding seem to harmonise with the opinion of the respondents. Within the group Target groups and their needs, it could be considered to remove the skills “Communicate in sign language in basic situations” and include it under “Explain the role and competences of the real-time intralingual subtitler”, which deals with the role of the professionals. The curricular implementation of this skill should target to clearly define how the role of the real-time intralingual subtitler differs from other profiles. This matter could also be studied during the interviews, which are planned for IO2.

## **4.2 Competence area: Linguistic competence**

This section displays the results concerning the linguistic skills of the professional. Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using a four-item scale. In the second step, participants were invited to add their comments to this competence area.

#### 4.2.1 Scale questions

The scale questions presented a total of eight skills. The items were shown as an unordered list introduced by the phrase: “To deliver a good quality service, a real-time intralingual subtitler should be able to:”.

The skills replicated the ones included in the first drafted skills cards, where they appear classified into these three macro-categories:

- Functionality: accuracy, readability, and legibility (skills 1 to 3 to in the tables)
- How to cope with speech-related challenges (skills 4, 5, and 8 to in the tables), and
- Strategies to acquire and develop specific thematic knowledge (skills 6 and 7 in the tables)

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.

**Table 4.3. Linguistic competence: mean points by item:**

Skill	Mean points
1 Deliver the accuracy needed in each setting (e.g. correct grammar, spelling of basic and difficult words, of names, job-specific terminology, description of the sound, other).	 2.8
2 Apply readability indicators to the transcribed text (e.g. indicating the name of the speaker or a switch of speakers, specifying when someone speaks unclearly or too fast, other).	 2.8
3 Improve legibility of the transcribed texts (increase font-size, line spacing, improve contrast and font-type, other).	 2.5
4 Carry out both verbatim (word for word) and edited subtitling/captioning in compliance with readability standards and when exit strategies (e.g. reformulation) are necessary.	 2.7
5 Simplify the syntactic structure for readability reasons.	 2.5
6 Search terminology, identify reliable sources and manage the terminology and implement it in real-time situations.	 2.6
7 Draft a glossary useful during an event by starting from the title of the presentation and by asking questions to the organisation committee and the speaker before the event.	 2.6
8 Deal with different cultural approaches to real-time intralingual subtitling (e.g. preference for verbatim or edited subtitling/captioning).	 2.3



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

**Table 4.4. Linguistic competence: total number of responses by item**

Skill	No importance	Minor importance	Important	Very important
1 Deliver the accuracy needed in each setting (e.g. correct grammar, spelling of basic and difficult words, of names, job-specific terminology, description of the sound, other).		3	23	94
2 Apply readability indicators to the transcribed text (e.g. indicating the name of the speaker or a switch of speakers, specifying when someone speaks unclearly or too fast, other).		2	37	81
3 Improve legibility of the transcribed texts (increase font-size, line spacing, improve contrast and font-type, other).	1	8	33	75
4 Carry out both verbatim (word for word) and edited subtitling/captioning in compliance with readability standards and when exit strategies (e.g. reformulation) are necessary.		6	41	73
5 Simplify the syntactic structure for readability reasons.	3	19	45	47
6 Search terminology, identify reliable sources and manage the terminology and implement it in real-time situations.	1	9	35	68
7 Draft a glossary useful during an event by starting from the title of the presentation and by asking questions to the organisation committee and the speaker before the event.	2	13	46	55
8 Deal with different cultural approaches to real-time intralingual subtitling (e.g. preference for verbatim or edited subtitling/captioning).		22	68	25
Total	7	82	328	518

## 4.2.2 Free-text responses

This section classifies the answers according to the three macro-categories used in the skills cards:

- Functionality: Accuracy, readability, and legibility,
- How to cope with speech-related challenges (Exit strategies and ad hoc solutions), and
- Strategies to acquire and develop thematic knowledge.

The category Other includes answers referring to new categories or other issues emerging from the survey.

### Functionality: Accuracy, readability, and legibility

- Answer 1.** Accessibility also means having access to the exact words that were actually said... not edited, censored or simplified. If this is what the hearing heard... this is what the HOH/Deaf should see.
- Answer 2.** A writing interpreter must be so skilled and quick that it is not relevant / necessary to reformulate or select in a text.
- Answer 3.** It's important an interpreter understands what needs to be interpreted. I asked an interpreter once for a lecture of a famous person who is famous for quick jokes and the interpreter said: He makes a joke, too fast. Yes, but that's why I asked you in the first place???
- Answer 4.** In this case, the context/situation is important: the guidelines for TV subtitlers are different and mostly defined in a style guide, which addresses the editing of the subtitles as well as the typeface and font size.
- Answer 5.** Editing speech to make sense is very important. Verbatim is not good communication support as people don't often make sense verbatim. But not getting enough down and editing too much also affects understanding. You need to be fast enough to edit comfortably and accurately.
- Answer 6.** A text interpreter follows the style of the speaker. When the grammar of a speaker is incorrect, the text interpreter will not correct the grammar at first. That's the style of the speaker and can influence the setting of interpreting. When a text interpreter produces correct grammar, while the speaker continues with incorrect grammar, the customer doesn't understand it at all when there is a reaction from the setting

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

of interpreting regarding the incorrect grammar of the speaker. As an interpreter you take away the style of the speaker and you have in my opinion influence on the interpretation setting.

**Answer 7.** This strand is extremely important, probably more important than the technical although they both go hand in hand as after all everything they use is technical and the output ability is from the person as well as I do expect the intrlingual real-time subtitler to go the extra mile when making sure that their output is good otherwise there is no point having them there if a lot of what they output is unintelligible or makes me even more confused!

**Answer 8.** It is important to have knowledge about the users' different reading methods, eg. in relation to different types of events, so best possible method (s) or combination of methods can be used.

**Answer 9.** Yes, Real-time STTRs should be aware that hearing people acquire knowledge through an implicit understanding of context and tone and that typing a verbatim text of the spoken word is not enough to convey meaning to deaf clients. For example, a speaker says: "We will combine paragraphs 9,11,12 and 13" - pausing slightly between each number and upping their tone at the end. So that the hearing person understands the meaning to be: "We will combine paragraphs 9.11, 9.12 and 9.13."

**Answer 10.** With the question: "Add indicators to improve the readability of the produced text", for that a subtitle line is too small. During text interpreting this could be possible.

### **How to cope with speech-related challenges (Exit strategies and ad hoc solutions)**

**Answer 11.** The statement about "simplifying syntactic structure", I would include changing/adapting in general (because it is not simplifying per se)

**Answer 12.** Matching the language level in the process of live subtitling/speech-to-text interpreting for clients with a lower written language competence by simplifying the language structure and lexis or by using synonyms. Also used in written correspondence with the client.

**Answer 13.** Simplifying the syntactic structure for reasons of readability: this should only take place when interpreting into plain language.

**Answer 14.** Word-for-word and edited outputs are two different modalities, each requiring its own specialized training. Each requires a different type of mental processing, and



here in the US, each is performed by a different type of provider with a different training credential, using their own proprietary software and equipment. I do not think it's reasonable to expect a single provider to be able to perform in both modalities, nor to switch between these different modalities on-the-fly. I think providers must specialize in one or the other so that their skill can be evaluated in one or the other. Hence, the appropriate type of trained provider should be selected for each assignment based on the consumer's needs and preferences.

### **Strategies to acquire and develop specific thematic knowledge**

- Answer 15.** A good preparation (intake with job requester and reading about the terminology) is important. I think a text interpreter should be paid for these preparation hours and include them in the offer. Quality takes time. Always. I'm in favor of a rule at European level which not only justifies the hours of interpreting themselves, but also the preparation and work afterwards (for the produced tekst) with clear terms of delivery and agreements (beforehand).
- Answer 16.** When circumstances allow it, I think it should be useful for the translator to learn and become familiar with the technical language of the specific field the event is about, although this is not always possible, because sometimes the translator doesn't have the time to do it.
- Answer 17.** Concerning glossaries: this is very important for preparation. On that basis, macros (for speech recognition) and abbreviations are created (there are a lot of speech-to-text interpreters in the German-speaking area who use the conventional method — typing on a computer keyboard — even though this method might not be considered in the project). A comment on word-for-word interpreting: word-for-word speech-to-text interpreting is only reasonable in the rarest cases, because readability is not ensured in most cases.
- Answer 18.** We always provide our writers with lots of documents and prep before there jobs and agree the technical set up with clients.
- Answer 19.** These competences are correlated with the preferences of the customer. As a text interpreter you certainly should be able to adapt the text to the wishes of the customer. I let the customer arrange it himself as much as possible to let me interpret better, so passing on the terminology and things like that. In case the

customer can't get this information or doesn't know it, the text interpreter should be able to get the necessary information beforehand.

## Other

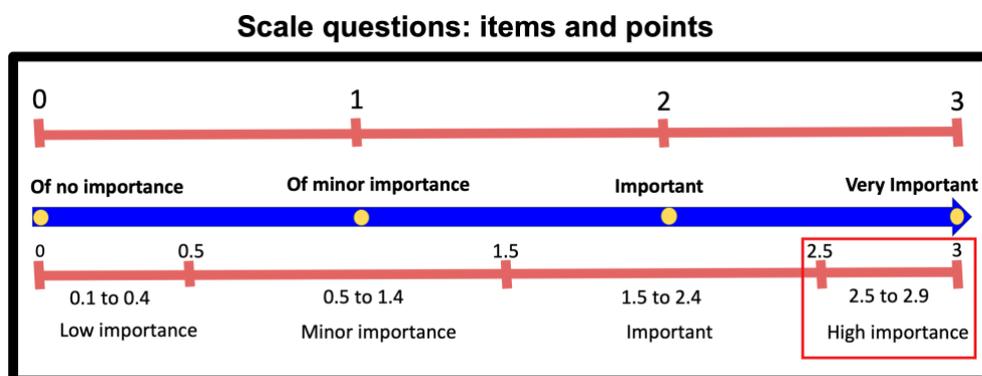
**Answer 20.** These seem to be standard competences of the text interpreter/velotypist? To what extent these issues are included in the education?

**Answer 21.** Wow, we already do so much! I wasn't aware of that but I recognize everywhere where I chose as being very important, all the aspects I use during my work.

### 4.2.3 Conclusions

The competence area Linguistic competence obtained an overall amount of 2.6 points out of a maximum of 3, and is, therefore, considered as of “High importance” by the participants.

**Figure 4.2. Overall importance of the area Linguistic competence.**



According to the scale responses, the two skills with a highest score of 2.8 relate to functionality: “Deliver the accuracy needed in each setting [...]” and “Apply readability indicators to the transcribed text [...]”. The other skills are also considered as of high importance (2.5 to 2.9 points) except for one, namely, “Deal with different cultural approaches to real-time intralingual subtitling”, which is scored as important.



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

The scale responses that relate to functionality (accuracy, readability, and legibility) show that accuracy and readability score higher than legibility. As for accuracy, the qualitative data reveal two different approaches. Some respondents relate accuracy to verbatim transcriptions, others, however, understand accuracy as the result of interacting factors. These include understanding the limits of verbatim transcriptions and the constraints of each context/setting (e.g. line length in subtitling), and of acknowledging what needs to be interpreted. One topic arises concerning the style of the speaker and throws up the question when and if the professional should react.

The scores of scale responses about how to cope with speech-related challenges are consistent with the proposed skills. Free-text answers focus on simplification, which is understood as both a linguistic simplification and, in a more generic sense, as an adaptation. As for language simplification, responses reflect two contrary perspectives. Some respondents claim the need to adapt the language to the language level of the audience, for instance, by simplifying the language structure and vocabulary or using synonyms. Others state that simplifying the syntactic structure to improve readability should only take place when interpreting into plain language.

As for adaptations or simplifications generically, respondents identify limiting factors such as context and situation, relevant guidelines and moment of simplification. For instance, TV subtitling guidelines entail already line length restrictions and style recommendations about typeface and font-size, that need to be met. As for the moment of adaptation, one respondent specifies the moment at which simplification or adaptation must or should take place: "The text interpreter will not correct the grammar at first if it is incorrect. When a text interpreter produces correct grammar, while the speaker continues with incorrect grammar, the customer will not understand it when there is a reaction from the setting of interpreting regarding the incorrect grammar of the speaker."

Regarding the strategies to acquire and develop specific thematic knowledge, respondents agree that a professional preparation includes learning and acquiring the terminology, and generating glossaries, where possible in collaboration with the speakers. Moreover, they identify the need for creating macros and abbreviations for the job situation. A related issue arises, namely, the question whether preparation hours and those hours after the interpretation (e.g. terminology research and transcript delivery) should also be paid for, and the need for a standardised procedure within Europe.



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

The results in this competence area do not show the need for removing skills from the skills cards either. Regarding functionality, the free-text responses support the formulated skills regarding accuracy and readability. As for readability, the curriculum design could incorporate the suggested strategy of providing trainees with knowledge about the users' reading methods and about how to apply them to enhance readability. The emerging topic about if the real-time intralingual subtitler should modify the style of the speaker could be further studied at the interviews planned in IO2.

The free-text answers raise the question whether verbatim and edited outputs are two different modalities, which require own training and are performed by two different professionals. This issue should be addressed during IO2 associated with the techniques.

### **4.3 Competence area: Entrepreneurship and Service**

This section displays the results concerning the entrepreneurship and service skills of the professional. Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using a four-item scale. In the second step, participants were invited to add their comments to this competence area.

#### **4.3.1 Scaled responses**

The scale questions presented a total of ten skills. The items were shown as an unordered list introduced by the phrase: "To deliver a good quality service, a real-time intralingual subtitler should be able to:"

The skills replicated the ones included in the first drafted skills cards, where they appear classified into these four macro-categories:

- Management skills (skills 1 to 2 to in the tables)
- Interpersonal skills (skills 3 to 6 to in the tables)
- Stress management (skills 7 to 8 to in the tables)
- Business strategies (skills 9 to 10 to in the tables)

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.



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

**Table 4.1. Entrepreneurship and service competence: mean number of points by item**

Skill	Mean points
1 Plan job-related tasks by considering other dependencies such as schedule, costs, human and physical resources.	2.3
2 Identify managing risks, classify them by type of risk (technical, cost, schedule, other), evaluate the associated loss and suggest actions to handle the identified risks.	2.2
3 Respond to a customer's inquiry or problem in a timely and effective manner.	2.7
4 Manage customers' accessibility needs.	2.8
5 Follow up on customer requests to ensure that accessibility service needs are met.	2.7
6 Proactively seek feedback from customers to improve his/her own skills, strategies, and accuracy rates.	2.4
7 Explain the main causes of stress derived from real-time situations and list coping techniques.	2.1
8 Explain the role of personal resilience as an own critical skill.	2,0
9 Prepare himself/herself to conduct professional interviews with customers and potential customers.	2,0
10 Develop an own service portfolio and adapt it to the market needs.	2.3

**Table 4.2. Entrepreneurship and service competence: total number of responses by item**

Skill	No importance	Minor importance	Important	Very important
1 Plan job-related tasks by considering other dependencies such as schedule, costs, human and physical resources.	2	17	49	42
2 Identify managing risks, classify them by type of risk (technical, cost, schedule, other), evaluate the associated loss and suggest actions to handle the identified risks.	5	25	43	31
3 Respond to a customer's inquiry or problem in a timely and effective manner.	2	7	39	65
4 Manage customers' accessibility needs.	1	2	35	73



Skill	No importance	Minor importance	Important	Very important
5 Follow up on customer requests to ensure that accessibility service needs are met.	1	7	38	66
6 Proactively seek feedback from customers to improve his/her own skills, strategies, and accuracy rates.	1	13	48	53
7 Explain the main causes of stress derived from real-time situations and list coping techniques.	3	15	47	46
8 Explain the role of personal resilience as an own critical skill.	4	21	58	23
9 Prepare himself/herself to conduct professional interviews with customers and potential customers.	5	26	46	29
10 Develop an own service portfolio and adapt it to the market needs.	5	24	47	33
Total	29	157	450	461

#### 4.3.2 Free-text responses

Current section classifies the answers according to the five macro-categories used in the skills cards:

- Management skills,
- Interpersonal skills,
- Stress management skills,
- Conflict management skills
- Business strategy skills

The category Other includes answers referring to new categories or other issues emerging from the survey.

#### Management skills

**Answer 1.** Time management and self-confidence are critical skills and often undervalued!  
My biggest challenge is turning down assignments because experience has taught



me that I need to build in "run-over" time and rest time between real-time assignments. This is challenging because I am self-employed and I wish to keep each individual client happy and make a profit.

- Answer 2.** Knowledge, awareness raising, continuous implementation of a professional code and a code of ethics. Particularly, when it comes to issues that prevent or impede a qualitatively appropriate performance of the service, prior to or during the process.
- Answer 3.** As a user... the basics need to be covered again and again. Meaning... making sure that it works BEFORE the event starts. Be on time, the first word spoken out-loud better be the first word I see. Spell the speakers' names correctly. Get a list or copy beforehand. It is more important to get the information correct than it is to keep up with the speaker. Nothing more annoying than rushed gibberish that does not make any sense or utilize the basic rules of grammar.
- Answer 4.** Self reflection on quality/professionalism is an important competence for tekst interpreters, I think. After a good intake with the requester of the job to know exactly what and how the optimal service can be realised for the end user. So to be able to refer to a colleague in case own capabilities and experience is not sufficient or to consider cooperation (for professional growth)

### Interpersonal skills

- Answer 5.** "Preparing for professional interviews with (potential) customers." It is not really applicable to interpreters?
- Answer 6.** It is important to be neutral during the work and social competences with the target group, individual or groupsh.
- Answer 7.** Usually the deaf/hard of hearing person are quite new to the field of access and need someone to champion their needs but without being overpowering and respect the deaf/hard of hearing person's journey of discovering what works for them. In some case - sometimes the cheapest provision is not always the best and the client have to understand that our service is not always cheap, there are many reasons why it costs that much, i.e. specialist skill, lots of expensive and technical equipment, risk for RSI (repetitive strain injury), processing skill which is very tiring. There is nothing worst than having a subtitler who is defensive about their outputting skill. I noticed that those who use palantype machines are much

more likely to make more outputting errors in comparison to steno machines. it is important for the real-time subtitler to explain the stresses of their jobs, but I do expect that they have bought all the necessary equipment to minimise the stress, i.e. headphones, back up laptops etc.

**Answer 8.** “Manage customers’ accessibility needs.” — this is not an actual part of the job of a speech-to-text interpreter. “Follow up on customer requests to ensure that accessibility service needs are met.” — this is also not part of the job of a speech-to-text interpreter. Rather, the work of a speech-to-text interpreter is a contribution to accessibility.

**Answer 9.** Writers need to be professional with clients and skilled at their software and able to adapt to each different job situation. Clients aren’t always deaf and hard of hearing people so you need to be able to advocate for their needs to the client while understanding and balancing the client needs. They then should be writing at 99% accuracy and similar content.

### **Stress management**

**Answer 10.** Service is important, but customers also have to understand that text interpreters are people and are not reachable or available 24/7. Customers can react very negatively when a text interpreter doesn't respond immediately to a request. I find this inappropriate. Text interpreters also have a private life, other customers, other work and being reachable 24/7 is impossible. The other way around customers can respond very late or the interpreter has to send a reminder for them to react to certain messages. That's what we have to deal with as text interpreters.

### **Conflict management**

**Answer 11.** There is nothing worst than having a subtitler who is defensive about their outputting skill. I noticed that those who use palantype machines are much more likely to make more outputting errors in comparison to steno machines. it is important for the real-time subtitler to explain the stresses of their jobs, but I do expect that they have bought all the necessary equipment to minimise the stress, i.e. headphones, back up laptops etc.



## Business strategies

**Answer 12.** Preparing for professional interviews with (potential) customers." It is not really applicable to interpreters?

**Answer 13.** I don't work commercially as a text interpreter very often yet. Partly because the mediation of interpreters is well organized in the Netherlands.

## Other

**Answer 14.** I don't think these questions are for the user of the interpreter?

**Answer 15.** There are some questions that I do not really know about the consequences. If it is the case that the interpreters will contact the speakers etc. outside the interpreter user and thereby may seem patronizing or put the use outside so that we are not in the center, I think that this is not their task. It is important that the interpreters are neutral, the fly on the wall, invisible both before and after. If there are circumstances that are thought to affect the quality of the interpretation, eg lack of breaks, bad chairs, etc. Then the user must also know it.

**Answer 16.** It is important to be neutral during the work and social competences with the target group, individual or groupsh.

**Answer 17.** For a big part this is the own choice of the entrepreneur how he/she responds to this.

**Answer 18.** I don't work commercially as a text interpreter very often yet. Partly because the mediation of interpreters is well organized in the Netherlands

**Answer 19.** Again, this area depends on the mode of employment and/or the perspective on providing subtitles.

**Answer 20.** People with hearing loss and their organization need to be offered the real-time intralingual subtitle service in Asia Pacific but we are almost self-help group and do not have finance to afford us. Training us is one of solutions to Make the Right Real.

**Answer 21.** Questions related to cost I did not answer as it is illegal here in the USA to discuss costs in a group like this, antitrust. Because of my position with NCRA, I want to make sure I do not breach this.

**Answer 22.** These questions seem to omit or minimize the role of a professional service coordinator. In the U.S., at least in the educational setting, there is a service

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

coordinator (to which the speech-to-text provider reports) who manages the accessibility needs of the consumer. Perhaps in a freelance setting, the provider takes on additional roles as an entrepreneur. Is that a necessary competence, though, if they are NOT working as a freelancer/entrepreneur?

**Answer 23.** The question is about things that are not really transparent to me – what are the consequences If it is that you think that the interpreters will contact the presenters etc without being in touch with the user of STTI and thereby may happen to perform paternalistic or set the user aside in a way that we – users – are not in the center of all this, I do think, that this is not their task. It is important that the interpreters are neutral, fly on the wall, invisible both before, under and after. If there are things that seem to affect the quality of the interpretation, eg lack of breaks, bad chairs etc, then the user must be informed.

**Answer 24.** Not relevant for permanently employed live subtitlers (as opposed to freelancers, of course), hence I didn't answer these questions.

**Answer 25.** The last two items are not part of my job as a live subtitler

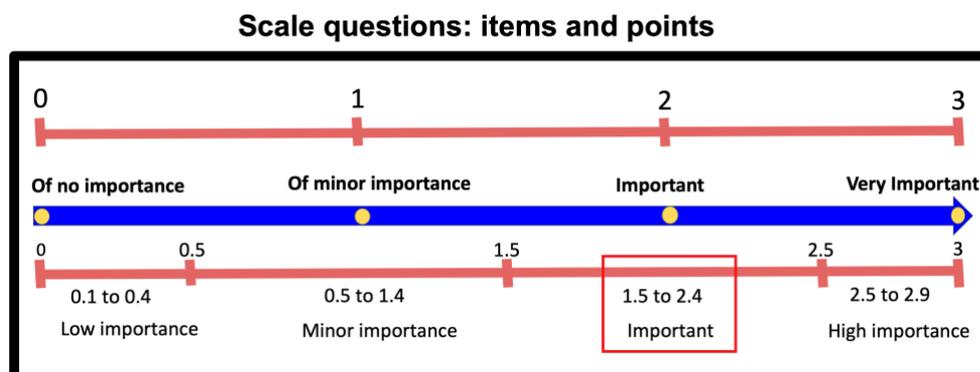
**Answer 26.** Answers to these questions may differ depending on whether one is self-employed or employed on a regular basis. As a freelancer, one surely needs entrepreneurial skills, which is not the case for salaried employees.

**Answer 27.** It would be useful to take part more often in meetings and conferences about this field, where you can meet and exchange ideas with other colleagues.

### 4.3.3 Conclusions

The competence area Entrepreneurship and service competence obtained an overall amount of 2.3 points out of a maximum of 3, and is, therefore, considered "Important" by the participants.

Figure 4.3. Overall importance of the area Entrepreneurship and service competence.



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

The scale responses show that the interpersonal skill “Manage customers’ accessibility needs.” obtains the largest number of points, 2.8, and it is therefore considered as of “High importance” by the participants. The next two skills with a total of 2.7 points also belong to this macro-category and are “Respond to a customer’s inquiry or problem in a timely and effective manner.” and “Follow up on customer requests to ensure that accessibility service needs are met.”. The other skills are considered “Important” with a mean number of points ranging from 2,0 to 2.4.

Free-text answers focus on the topics interpersonal and personal skills, type of employment, and role of the professional. As for the interpersonal skills respondents emphasise the need of observing a code of conduct, meaning, to provide the accessibility service and support, where needed, without patronizing, and to stay objective and open to dialog. Some of these suggestions were also brought up under the section Knowledge about accessibility, in which a appropriate dress code was also mentioned.

Participants express that the importance of acquiring and utilizing these skills depends on the type of employment and specify that they are more relevant for freelancers. One participant relate them to a different professional profile, namely the Service coordinator, who is in charge of managing the user needs of the consumer in educational settings in U.S.

There are no new skills to add to the skills card. However, the macro-category Interpersonal skills could be renamed to “Interpersonal and personal skills” as to include also the ones emerging from the survey (self-confidence, being objective and neutral, social competence). Also, the macro-category Conflict management could be removed and dealt with under Interpersonal and personal skills.

#### **4.4 Competence area: IT competence**

This section displays the results concerning the IT skills of the professional. Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using a four-item scale. In the second step, participants were invited to add their comments to this competence area.

##### **4.4.1 Scale answers**

The scale questions presented a total of seven skills. The items were shown as an unordered list introduced by the phrase: “To deliver a good quality service, a real-time intralingual subtitler should be able to:”

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

The skills replicated the ones included in the first drafted skills cards, where they appear classified into these three macro-categories:

- How to set up the working environment (skills 1 to 3 to in the tables)
- Input tools (skill 4 to in the tables), and
- Output tools (skills 5 to 7 to in the tables)

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.

**Table 4.3. IT competence: mean number of points by item**

Skill	Mean points
1 Set up the hardware and software for each type of trained setting.	 2.7
2 Identify the risks of each setting and to solve problems.	 2.6
3 Use the hardware and software for each type of trained setting and solve problems.	 2.7
4 Know the different input tools available on the market	 2.4
5 Know the different output tools available on the market (TV subtitling software, other).	 2.4
6 Explain the advantages of Text on Top and similar software by the provision of the service.	 1.9
7 Know the different language tools, machine translation and crowdsourcing tools available on the market.	 2,0

**Table 4.4. IT competence: total number of responses by item**

Skill	No importance	Minor importance	Important	Very important
1 Set up the hardware and software for each type of trained setting.		4	43	66
2 Identify the risks of each setting and to solve problems.		7	49	58
3 Use the hardware and software for each type of trained setting and solve problems.	1	4	40	66
4 Know the different input tools available on the market	1	16	54	44

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

Skill	No importance	Minor importance	Important	Very important
5 Know the different output tools available on the market (TV subtitling software, other).	3	21	42	43
6 Explain the advantages of Text on Top and similar software by the provision of the service	5	26	39	31
7 Know the different language tools, machine translation and crowdsourcing tools available on the market.	5	32	46	26
Total	15	110	313	334

#### 4.4.2 Free-text responses

This section groups the answers according to the three macro-categories used in the skills cards:

- How to setup a working environment,
- Input tools, and
- Output tools.

The category Other includes answers referring to new categories or other issues emerging from the survey.

#### How to set up the working environment

**Answer 1.** IT competence or better IT professionalism determines the higher value of the text interpreter. That's how the text interpreter makes a professional impression. To the job requester and the end user(s).

#### Input tools

**Answer 2.** As text interpreter you have to know the possibilities in the field of work connected to the methods of interpretation and the possibilities of different devices to be able to deal with the different situations for which you can be asked. If you should have knowledge of everything with the speed of the developments nowadays? I'm not sure if that's possible.

## Output tools

### Other

- Answer 3.** In Denmark it is extremely important, because the users have so little knowledge, on how good it can actually get. So it seems there is a need to have it both explained and demonstrated – so that we can learn what is the difference. The terminology will most likely be difficult to remember, in particular in the beginning, when it is still not practised at this level.
- Answer 4.** Who should explain the benefits to the interpreters .. again vague question and I miss understanding what the background is for the question .. who should have it explained and have it demonstrated - therefore I do not know
- Answer 5.** This is a part where during the Dutch text interpretation education is very little attention for. Which also results for me with the thought: How should I deal with it? While there are certainly points which are very valid.
- Answer 6.** I am curious to the combination of velotypist/ live subtitler with (possibilities and limitations of) speech recognition.
- Answer 7.** Because for example Text on Top is not completely accessible for blind text interpreters and/or blind end users, I have marked this question as not relevant. When you talk about accessibility in all areas, first the accessibility of the software being used for text interpreters/subtitlers/respeakers should be dealt with.
- Answer 8.** Subtitlers at TV stations have system administrator privileges. As users, they don't need to take care of IT.
- Answer 9.** As was the case with the preceding questions, answers to these questions may differ depending on whether one is self-employed or employed on a regular basis. As a self-employed person, one surely needs some IT skills that a salaried employee doesn't.
- Answer 10.** A real-time intralingual subtitler can ask for help from IT in some situations. Nobody is perfect.
- Answer 11.** I have worked with a couple of intralingual real-time subtitlers who are proactive and purchase the latest technology or extra tablets and equipment, they are in high demand and very versatile and provides many users access in different situations i.e. they provide tablets and use text on top for the main screen so we can switch between the main screen for the keynotes and then hide it for the

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

breakouts and use the tablets on the tables for personalised access. I also believe that the subtitles should provide their own headphones as well as other fiddly bits as each clients does not always have everything, so it is always good for the realtime subtitlers to be fully prepared and understand how to set up or explain to the others in simple terms on how to set up.

**Answer 12.** It's important that clients understand that AI is not suitable for communication support for deaf and hard of hearing people. We need to be able to explain why using a qualified speech to text reporter is the best choice for providing the service. And explaining why quality of TV subtitling is poor and the kinds of technology used. Knowing your software and how it interacts with AV equipment is of high importance. Also being able to offer a variety of solutions using a variety of softwares and knowing which one will suit and being able to diver that solution is very important.

**Answer 13.** Keep your equipment tidy and stored well. This will assist when setting up and packing away under pressure and in unfamiliar surroundings. I use little coloured dots stuck to my work laptops and steno machine - just above the various usb/hdmi ports. I then have corresponding coloured dots stuck on the usb cables, dongles so that I can find the correct ports in a hurry - orange dot = orange cable, yellow = the yellow dotted ToT dongle. Lable everything! A small sticker with email address can help a client let you know if you've left an adaptor behind.

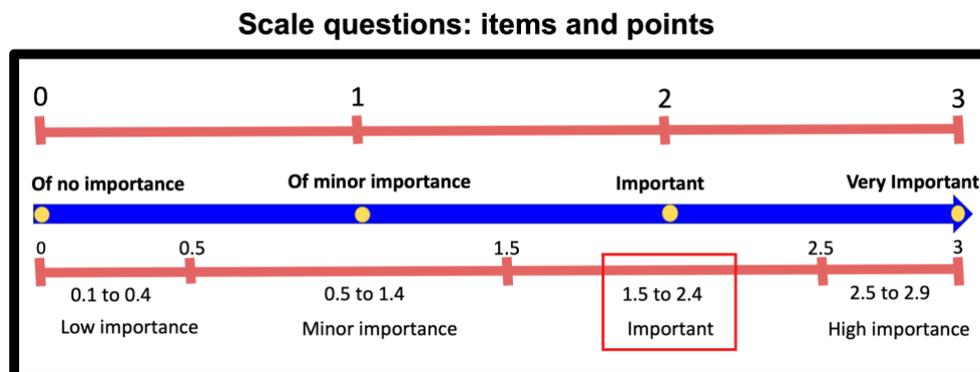
**Answer 14.** It's important not only to know the available tools, but also to be always updated on any useful technological development.

**Answer 15.** It is very difficult to follow the changes in both software and hardware enough. There are no standards in the use of platforms and hardware. Consequence for me is that I have very little knowledge of the different systems. Uniformity would be a solution I would think.

#### 4.4.3 Conclusions

The competence area Entrepreneurship and service competence obtained an overall amount of 2.4 points out of a maximum of 3, and is, therefore, considered "Important" by the participants.

**Figure 4.4. Overall importance of the area Entrepreneurship and service competence.**



In the scale questions, two skills obtain a score of 2.7 and are, therefore, considered as of “High importance” by participants. The next best score is 2.6 points. They all belong to the first macro-category How to set up the working environment. In the free-text responses, some participants relate the importance of acquiring competences about how to set up the working environment to the type of employment, since permanently employed real-time intralingual subtitlers have access to the software and can refer to the company’s IT department for assistance.

The other skills are identified as “Important” in the scale questions. The skills with the less number of points belong to the macro-category “Output tools, namely, “Explain the advantages of Text on Top and similar software by the provision of the service.

Free-text responses coincide with the scale answers. One participant express its importance by stating: “IT competence or better IT professionalism determines the higher value of the text interpreter”. Respondents point out the difficulty of keeping up with new developments and suggest uniformity as a solution. They also reveal that these skills are less trained in some educational systems, for instance in the Dutch educational system.

The emerging topic related to the limits of automatic interpreting can be dealt with as part of skill number 7, which already includes machine translation. The arisen topic about the type of hardware that a text interpreter may offer to their clients could be studied at the interviews in IO2. The free-text responses also include advice about hardware maintenance and management. These contents could be foreseen in IO2 in the didactic design of skill number 1. As for the remark “The software must be accessible itself. This is the first step towards accessibility.”, this is a module related topic, which is also linked to awareness raising and can be dealt with generally in both macro-categories Input and Output tools.

## 4.5 Competence area: Respeaking competence

This section displays the results concerning the respeaking skills of the professional.

Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using a four-item scale. In the second step, participants were invited to add their comments to this competence area.

### 4.5.1 Scale responses

The scale questions presented a total of 15 skills and 4 items related to the provision of transcripts. The items were shown as an unordered list introduced by the phrase: “To deliver a good quality service, a real-time intralingual subtitler should be able to:”.

The skills presented were taken from the drafted skills cards, where they appear classified into these four macro-categories:

- Psycho-cognitive skills (skills 1 to 4 in the tables),
- Metalinguistic skills (skills 5 to 7 in the tables),
- Prosodic skills (skills 8 to 12 in the tables), and
- Interface interaction (skills 13 to 15) in the tables.

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.

**Table 4.5. Respeaking skills: mean value by item, all respondents**

Skill	Mean points
1 Reformulate, edit and correct the text to be respoken during the listening (spelling, lexis, grammar, punctuation, proper nouns and numerals).	 2.8
2 Remember full sentences while lagging behind because of editing/quick speech/other difficulties.	 2.6
3 Deal with slides, videos, and other material used by speakers to produce coherent text while respeaking	 2.4
4 Activate exit strategies while respeaking if she/he realises the speaker is challenging (confuse/too intricate grammar, too quick speech-rate, background noise, other).	 2.8
5 Identify which non-verbal elements of speech need to be turned into verbal for each working context.	 2.5



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

Skill	Mean points
6 Implement non-verbal elements for each working context by applying different techniques as changing colours or font-size, or by inserting labels	2.3
7 Dictate punctuation while keeping the pace of the speaker.	2.4
8 Identify own typing mistakes during typing, decide how relevant these are (minor, major or critical) and correct them, if necessary.	2.6
9 Demonstrate command of voice projection, pacing and modulation to support dictation (e.g. when dictating homophones or near homophones).	2.5
10 Use breathing to support dictation and endurance.	2.6
11 Communicate with good pronunciation.	2.9
12 Respeak verbatim (word by word) with no mistakes at the average speech rate in the working language.	2.4
13 Train the respoking software with the right macros.	2.5
14 Reduce the gap with the speaker as much as possible when necessary (e.g. short turn, quick interaction between two speakers, fast speaker, interaction with images, reaction from audience)	2.6
15 Select terminology that the speech recognition software can best process.	2.5
16 Provide a corrected version of the produced transcript/subtitles to the client.	2.3
17 Apply an additional fee for providing corrected version of the produced transcript/subtitles to the client.	2.2
18 Provide a <b>no</b> corrected version of the produced transcript/subtitles to the client.	1.1
19 Apply an additional fee for providing no corrected version of the produced transcript/subtitles to the client.	1.4

Table 4.6. Respeaking skills: total number of responses by item.

Skill	No importance	Minor importance	Important	Very important
1 Reformulate, edit and correct the text to be respoken during the listening (spelling, lexis, grammar, punctuation, proper nouns and numerals).	5	14	25	61

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

Skill	No importance	Minor importance	Important	Very important
2 Remember full sentences while lagging behind because of editing/quick speech/other difficulties.	2	9	41	56
3 Deal with slides, videos, and other material used by speakers to produce coherent text while respeaking	5	14	41	43
4 Activate exit strategies while respeaking if she/he realises the speaker is challenging (confuse/too intricate grammar, too quick speech-rate, background noise, other).		5	40	59
5 Identify which non-verbal elements of speech need to be turned into verbal for each working context.	2	15	43	43
6 Implement non-verbal elements for each working context by applying different techniques as changing colours or font-size, or by inserting labels	5	21	41	31
7 Dictate punctuation while keeping the pace of the speaker.	2	16	42	44
8 Identify own typing mistakes during typing, decide how relevant these are (minor, major or critical) and correct them, if necessary.		6	34	67
9 Demonstrate command of voice projection, pacing and modulation to support dictation (e.g. when dictating homophones or near homophones).	3	13	42	37
10 Use breathing to support dictation and endurance.	4	12	40	38
11 Communicate with good pronunciation.	1	3	31	64
12 Respeak verbatim (word by word) with no mistakes at the average speech rate in the working language.	3	13	41	43
13 Train the respeaking software with the right macros.	1	9	34	42

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

Skill	No importance	Minor importance	Important	Very important
14 Reduce the gap with the speaker as much as possible when necessary (e.g. short turn, quick interaction between two speakers, fast speaker, interaction with images, reaction from audience)		11	36	49
15 Select terminology that the speech recognition software can best process.	3	8	38	35
16 Provide a corrected version of the produced transcript/subtitles to the client.	8	31	36	27
17 Apply an additional fee for providing corrected version of the produced transcript/subtitles to the client.	9	20	36	20
18 Provide a <b>no</b> corrected version of the produced transcript/subtitles to the client.	25	34	26	6
19 Apply an additional fee for providing no corrected version of the produced transcript/subtitles to the client.	36	18	22	6
<b>Total</b>	<b>114</b>	<b>272</b>	<b>689</b>	<b>771</b>

#### 4.5.2 Free-text responses

This section groups the free-text answers according to the four macro-categories used in the skills cards:

- Psycho-cognitive approach: How to listen and speak simultaneously,
- Metalinguistic skills: Turning non-verbal elements into verbal,
- Prosodic skills: speaking fluently, quickly, and unambiguously, and
- Interface interaction.

The category Transcripts includes answers related to the delivery of transcripts. The category Other includes answers referring to new categories or other issues emerging from the survey. Participant's input regarding speech rate and accuracy are under Speech rate and accuracy.

## Psycho-cognitive skills

This category includes the skills that are necessary to listen and speak simultaneously.

- Answer 1.** I am not a big fan of respeaking but I can see that the service would work well in a music venue where a person can output the lyrics and then provide access for the live bits which is very short so allowing them to have sufficient breaks for their voice.
- Answer 2.** For TV subtitling, two-line subtitles should preferably be spoken. The goal is to be as close to the source as possible, but literal/word-for-word is not feasible.
- Answer 3.** 'Exit strategies' are never discussed during the education, only asking to repeat.
- Answer 4.** Especially in education you make use of all visual information that is being offered together with spoken information. Editing of sentences is not only important with respeaking. Giving the text is a thing... It is too complex to answer this in 1 question. There are so many parts to this question.
- Answer 5.** The Respeaker should know the speed rates in this specific field and apply them conscientiously.
- Answer 6.** Distance to speaker: Of course, the speech-to-text interpretation should follow as fast as possible, but a delay is crucial in order to produce a coherent target text when working with redundant speakers or speakers who often interrupt their sentences.
- Answer 7.** Applying heavy text reduction while keeping the loss of content as low as possible in interpretations with spacial and temporal restrictions, such as in two-line representation during respeaking using a subtitling software such as Text on Top and others.

## Metalinguistic skills

This category includes the skills that are necessary to turn non-verbal elements into verbal.

- Answer 8.** I don't know exactly what's meant with the question: "Implementing non verbal elements for every work situation by using different techniques, like changing the color or font size or adding labels".
- Answer 9.** Dictating punctuation and keeping up the speaker's tempo: when using speech recognition.



**Answer 10.** Also "implementing non verbal elements for every work situation by using different techniques, like changing the color or font size and adding labels": No idea this is/was possible, because the software I use as text interpreter doesn't come with a manual.

### Prosodic skills

This category includes the skills that are necessary to speaking fluently, quickly, and unambiguously.

**Answer 11.** I have time and time again seen them lagging and making silly sound likes words come up which is extremely distracting and i have seen it on TV - my viewing experience has become less enjoyable because of the respeaking.

**Answer 12.** I am somewhat uncertain about respeaking area, I am not satisfied with the system that is being used. It is too slow and too may mistakes.

**Answer 13.** I don't think resoeandfs should produce no correction transcripts as we have recorded some and they can be unreadable. In the UK companies are turning away from this method of live text production and turning back to stenographers, ITV is an example.<sup>4</sup>

### Interface interaction

**Answer 14.** Also "implementing non verbal elements for every work situation by using different techniques, like changing the color or font size and adding labels": No idea this is/was possible, because the software I use as text interpreter doesn't come with a manual. It is expected that people find out themselves how to use it optimally, but as a (starting) interpreter you don't have time for this.

### Other

**Answer 15.** Respeaking is not ideal for quiet environment or being in the same room as a public lecture, they would need their own sound proof booths.

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<sup>4</sup> This remark refers to both accuracy and provision of transcripts and, therefore, it appears in both sections.



- Answer 16.** Answering these questions can differ per situation. Beforehand (intake job) agree on agreements and expectations (job requester/taker). Also from the requester of the job can be expected that the basic attitude for good communication should be respected. The organiser or host has an intermediate role to fulfil by informing the guest speakers how to cooperate with the text interpreter. Together aiming for optimal and pleasant communication
- Answer 17.** When there is the situation of the image the customer uses, Text on Top should be used. With Powerpoint presentations this should be standard (which is also my experience).
- Answer 18.** Cannot answer – we do not use respeakers in Denmark.
- Answer 19.** If a real-time intralingual subtitler has these competences, it's very good. If not, needing to have 2 real-time intralingual subtitlers at a same time is also a solution. These competences look like much pressure.
- Answer 20.** Some of the phrasing of the questions I am having a hard time with because I am just not sure what it's asking. The terms are used differently in the USA.
- Answer 21.** I don't think respeaking is of a good enough standard to be included in the profession. It's in regulated and we have had many complaints about the accuracy and lack of content by clients coming to us after using it.

## Transcripts

- Answer 22.** Transcripts should never be delivered without revision.
- Answer 23.** Live transcripts should on NO account be delivered without revision. A corresponding paper has already been published. The reasons for that are primarily of a legal nature.
- Answer 24.** Before you give an edited or unedited file of the text/subtitles to the customer, you should ask it first. Also agreement from the people present. It is important to emphasize that (anyway in case of unedited texts) no rights can be taken from this.
- Answer 25.** We are not used to be getting written prints of the STT/subtitling, that has been used at an event. It is prohibited in Denmark. Men it could be something, we need to work on, because it also relates to our memory.
- Answer 26.** The last four questions are somewhat misleading: If a client wants to receive a revised version of the subtitles/transcript, it is a matter of negotiation whether or

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

not a fee is charged for it. This cannot be classified into categories (not important/very important) and is rather part of the service category? In my opinion, it makes little sense to deliver an unrevised version.

**Answer 27.** The items concerning billing are not within my responsibility area. As a freelance live subtitler, of course, one should have these skills.

**Answer 28.** Unrevised transcripts should never be delivered to the client. A revised transcript against payment, and after receiving a consent of the speakers, is a good option.

**Answer 29.** What does the delivery of an unrevised or revised version have to do with the respeaking competence?

**Answer 30.** As an stti, providing transcripts seems like an unethical practice, all the more so against payment

**Answer 31.** A lot of questions are about respeaking. I don't have experience with it. Besides that giving the text to the customer is discussed. Basically the customer isn't entitled to the text (unless people present are okay with this, which often is the case).

**Answer 32.** Giving the text is certainly at European level a very difficult item.

**Answer 33.** I would say the transcript should be shared as it's been created during the event; ideally some very quick corrections would come with that. Given it does require some work from the respeaker, this should be taken into account when pricing for the job (but shouldn't be an additional charge).

**Answer 34.** Related to "Provide a corrected version of the produced transcript/subtitles to the client," this would depend on the context.

**Answer 35.** De last sentences: me as user of the interpreter is not being asked if I want to pay for edited or unedited text. Now I can only refer to the level of importance.

**Answer 36.** I think in the Netherlands there should not be the possibility of saving the texts at all. There is always discussion about it, sometimes even before the job. Only in very exceptional situations (for example customers with memory problems) the text can be saved. But anyway, according to the Dutch law, this is not allowed because of the impairment of the customer.

**Answer 37.** Nonsense not to give the produced text without payment, because it is already paid for.

**Answer 38.** I don't think resoeandfs should produce no correction transcripts as we have recorded some and they can be unreadable. In the UK companies are turning



away from this method of live text production and turning back to stenographers, ITV is an example. It's not suitable for technical and fast work even on simple work meetings it's been problematic. There should be more focus on training people in proven methods. Respeaking is not cheaper than regular methods and not as flexible or as accurate.

**Answer 39.** With giving the texts it is important this is in accordance with the new 'GDPR' guidelines and the text interpreter cannot be held responsible of the content of the text afterwards.

**Answer 40.** There should not be an additional fee for transcripts. It is not the fault of the HOH/Deaf person if there is a mistake by the subtitler.

**Answer 41.** Before you give an edited or unedited file of the text/subtitles to the customer, you should ask it first. Also agreement from the people present. It is important to emphasize that (anyway in case of unedited texts) no rights can be taken from this.

### **Speech rate and accuracy**

**Answer 42.** Speech rate German survey:

- 140 wpm. It is more reasonable to apply the number of characters instead of words as the basis.
- 160 wpm
- Starting from 600 characters per minute
- It depends on the source text. At least 120 wpm faultlessly when a "close word-for-word" interpretation is desired.
- At least 120-130 words per minute, but it generally depends on the customer's requirement and the operating conditions.
- We rather consider the delay between the spoken text and the subtitles, which should be 6-7 seconds at the most.
- The term "word rate" is misleading and unsuitable.

**Answer 43.** Speech rate English survey:

- 160-180 wpm



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

- 180 wpm I think is ideal, but nearly impossible to control speakers. Certified to a minimum of 225 words per minute at 99 percent accuracy for realtime will produce great quality product.
- 200 words per minute.
- 240 WPM
- In a rate in which he/she can provide all the correct information in a reasonable time. It is normal he/she is late with the typing but it shouldn't be more than one longer sentence.
- It completely depends on whether they are a word-for-word or meaning-for-meaning provider, as these are two distinct modalities, and they both have their own pros and cons in terms of readability and usefulness to the consumer.
- I would like to be the same as a manual intralingual real-time subtitler otherwise they will fall far behind and it is not really verbatim access at the end of the day.
- Not familiar with the practice
- One they are able to work competently at! The speech rate will vary according to different settings, and this may be the deciding factor in how work is allocated.
- Slowly is good.
- To a level that works in its task

**Answer 44.** Speech rate Catalan survey:

- 106-190 depending on the speaker and the type of speech

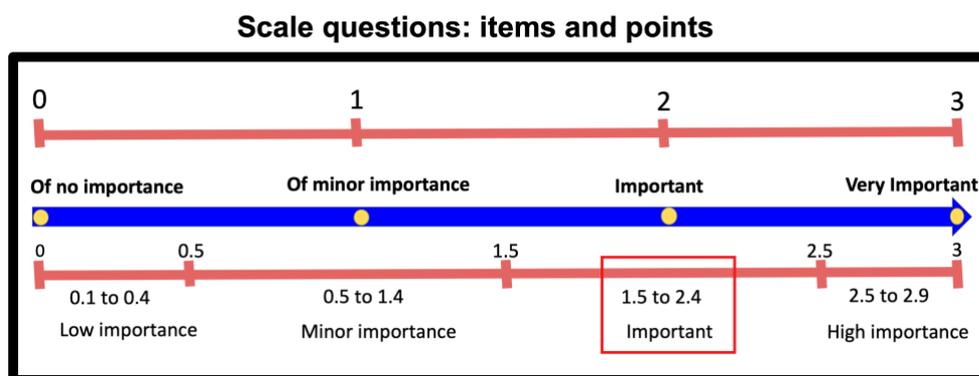
**Answer 45.** Speech rate Danish survey:

- 400 words per minute (preferably 5-600)
- 99% accuracy and content. I don't think respeaking is a viable service and it has been rejected by deaf and hard of hearing people in the UK. I wouldn't employ writers with the accuracy and content from the respeakers I've seen. It's money wasted that could be spent on a qualified reporter.
- Delay is crucial in order to produce a coherent target text when working with redundant speakers or speakers who often interrupt their sentences.
- It must follow the spoken word with the least possible delay, possibly by delaying the broadcast / program
- Normal speech speed
- As close to the rate of speech used in that event.

### 4.5.3 Conclusions

The skills in the competence area Respeaking competence obtained an overall amount of 2.3 points out of 3, and is, therefore, considered “Important” by the participants.

Figure 4.5. Respeaking competence: overall importance of the skills



According to the scale responses, 4 skills were considered as “Important” and 11 as of “High importance”. As for the first ones, three reached 2.4 points: one refers to the psycho-cognitive ability to deal with slides, videos and other material; one to the metalinguistic ability to dictate punctuation while keeping pace with the speaker; and one to the prosodic ability to respeak verbatim without mistakes at an average speech rate. The skill with the fewer amount of points, namely 2.3, belongs to the macro-category metalinguistic skills and concerns the ability to implement non-verbal elements of speech. The skills identified as of highest importance was to Communicate with good pronunciation, which reached 2.9 points. The ability to reformulate, edit, and correct the text as well as to activate exit strategies obtained 2.8 points. The other ones achieved 2.5 to 2.6 points.

Free-text responses support the demand for good pronunciation. One participant explains that “[...] making silly sound likes words” are extremely distracting and affect the viewing experience. Also, the ability to reformulate, edit, and correct the output is mentioned. Participants specify that the type and scope of the reformulation and editing depend on the constraints of the context (TV subtitles, live, other), the speed of speech, the ability to apply exit strategies and the overall goal of avoiding content loss.

As for the provision of transcripts after the job, most participants agree on handing out edited versions. Some participants are against this practice, which does not seem to be legal in some countries according to the feedback. One respondent points out that there is no standardised procedure in Europe. Several participants do not consider this task as part of the job. One

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

respondent underlines that the provision of transcripts might depend on the context. As for payment, some participants consider it to be included in the price already; others regard it as a supplementary task, which needs to be paid for.

Concerning speed rates, they range from 106 words per minute (wpm) to 400 wpm. Participants subordinate this parameter to the quality of the output, the context, and the type of output (verbatim or rephrased). An accuracy of 99% is mentioned twice. Some participants refer to this parameter in terms of delay. One respondent considers the term “word rate” misleading and unsuitable.

The data gathered does not suggest the need for removing skills from the skills cards. The responses provide data for the curriculum design in IO2. Pronunciation is recommended to be at focus. Learning activities should be designed according to the constraints of the working context in order to meet the overall demand for avoiding delay and content loss. The question arisen in the Linguistic competence section about *verbatim* and *sensatim* outputs being two different modalities, which require own training and are performed by different professionals should be studied in connection with respeaking. The results might give rise to two separate skills in the skills card. This topic should be part of the interviews in IO2.

## **4.6 Competence area: Velotyping competence**

This section displays the results concerning the velotyping skills of the professional. Participants were asked to evaluate the skills in two steps. First, they were requested to rate the importance of each item by using a four-item scale. In the second step, participants were invited to add their comments to this competence area.

### **4.6.1 Scale responses**

The scale questions presented a total of 11 skills and 4 items related to the provision of transcripts. The items were shown as an unordered list introduced by the phrase: “To deliver a good quality service, a real-time intralingual subtitler should be able to:”.

The skills presented were taken from the drafted skills cards, where they appear classified into these four macro-categories:

- Psycho-cognitive skills (items 1 to 4 in the tables)
- Skills related to mastering the keyboard (items 5 to 6 in the tables)



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

- Typing skills (items 7 to 8 in the tables)
- Skills related to factors of high performance (items 9 to 11 in the tables)
- Transcripts (items 12 to 15 in the tables).

The following two tables summarise the results. The first one shows the number of mean points achieved per skill; the second the number of responses per scale item.

**Table 4.7. Velotyping skills: mean points by item**

Skill	Mean points
1 Type, edit and correct the text during the listening (spelling, lexis, grammar, punctuation, proper nouns and numerals) at a word speech rate of at least 500 characters per minute.	2.6
2 Remember full sentences while lagging behind because of editing/quick speech/other difficulties.	2.8
3 Deal with slides, videos, and other material used by speakers to produce coherent text while velotyping.	2.5
4 Activate exit strategies while velotyping if she/he realises the speaker is challenging (confuse/too intricate grammar, too quick speech-rate, background noise, other).	2.6
5 Produce content using all keyboard combinations at a minimum speed of 500 characters per minute.	2.5
6 Produce content at the minimum speed of 500 characters per minute while delivering the accuracy and readability needed in each setting (e.g. description of the sound).	2.4
7 Type with a high spelling accuracy of at least 99%.	2.5
8 Identify own typing mistakes during typing, decide how relevant these are (minor, major or critical) and correct them, if necessary.	2.8
9 Implement strategies or techniques for self-motivation, trying to reach the best quality of work at all time and in all circumstances.	2.5
10 Discipline themselves to practice and improve their skills daily, to reach higher speed and accuracy.	2.3
11 Implement strategies or techniques for training and enhancing concentration	2.4
12 Provide a corrected version of the produced transcript/subtitles to the client.	2.3
13 Apply an additional fee for providing a corrected version of the produced transcript/subtitles to the client	2,0
14 Provide a <b>no</b> corrected version of the produced transcript/subtitles to the client	1.2



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

Skill	Mean points
15 Apply an additional fee for providing a no corrected version of the produced transcript/subtitles to the client	 1.2

**Table 4.8. Velotyping skills: total number of responses by item**

Skill	No importance	Minor importance	Important	Very important
1 Type, edit and correct the text during the listening (spelling, lexis, grammar, punctuation, proper nouns and numerals) at a word speech rate of at least 500 characters per minute		7	29	52
2 Remember full sentences while lagging behind because of editing/quick speech/other difficulties.	1	6	20	52
3 Deal with slides, videos, and other material used by speakers to produce coherent text while velotyping.	2	15	39	41
4 Activate exit strategies while velotyping if she/he realises the speaker is challenging (confuse/too intricate grammar, too quick speech-rate, background noise, other).		6	39	49
5 Produce content using all keyboard combinations at a minimum speed of 500 characters per minute.		6	29	44
6 Produce content at the minimum speed of 500 characters per minute while delivering the accuracy and readability needed in each setting (e.g. description of the sound).		7	29	45
7 Type with a high spelling accuracy of at least 99%.	2	20	34	37
8 Identify own typing mistakes during typing, decide how relevant these are (minor, major or critical) and correct them, if necessary.	1	4	37	56
9 Implement strategies or techniques for self-motivation, trying to reach the best quality of work at all time and in all circumstances.	1	4	41	46

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

Skill	No importance	Minor importance	Important	Very important
10 Discipline themselves to practice and improve their skills daily, to reach higher speed and accuracy.	2	10	49	35
11 Implement strategies or techniques for training and enhancing concentration.	3	13	41	36
12 Provide a corrected version of the produced transcript/subtitles to the client.	8	26	36	19
13 Apply an additional fee for providing a corrected version of the produced transcript/subtitles to the client.	10	21	30	14
14 Provide a <b>no</b> corrected version of the produced transcript/subtitles to the client.	19	31	25	6
15 Apply an additional fee for providing a no corrected version of the produced transcript/subtitles to the client.	31	20	15	6
<b>Total</b>	<b>80</b>	<b>196</b>	<b>493</b>	<b>538</b>

#### 4.6.2 Free-text responses

This section groups the free-text answers according to the four macro-categories used in the skills cards:

- Psycho-cognitive skills (items 1 to 4 in the tables)
- Skills related to mastering the keyboard (items 5 to 6 in the tables)
- Typing skills (items 7 to 8 in the tables)
- Skills related to factors of high performance (items 9 to 11 in the tables)
- Transcripts (items 12 to 14 in the tables).

The category Transcripts includes answers related to the delivery of transcripts. The category Other includes answers referring to new categories or other issues emerging from the survey.



## Psycho-cognitive skills

This category includes the skills that are necessary to listen and speak simultaneously.

**Answer 1.** High speed and correcting typing mistakes differs per situation and customer. As an interpreter you always aim for 100% accurate text, but text interpreters are also people. Nobody is perfect. Most customers don't mind the spelling mistakes, as long as there is speed<sup>5</sup>.

## Mastering the keyboard

**Answer 2.** Concerning the minimum speed of 500 strokes: when using interpreting strategies well, fewer keystrokes are required, but not fewer than 420-450. In this way, better texts are mostly produced. In the cases where it is just about producing at least 500 strokes there are often a lot of filler words, or common abbreviations are not used. This impairs readability.

**Answer 3.** The 500 cpm demand should not stand in the way for development using abbreviations and applying higher level interpreting strategies.

**Answer 4.** The speed of speech is 500 cpm. A certified text interpreter can type at 500 cpm, WHEN the speech is at this speed. In an interpretation setting in practice the speed is much lower (around 300/400 cpm).

**Answer 5.** I do not really use velotyping but I think it is similar to electronic notetaking. It would work well for educational setting as there is a lot of editing and the 1005 verbatim access would be overwhelming for younger people so velotyping is ideal.

## Typing skills

**Answer 6.** Practice constantly and keep the typing speed.

**Answer 7.** High speed and correcting typing mistakes differs per situation and customer. As an interpreter you always aim for 100% accurate text, but text interpreters are also people. Nobody is perfect. Most customers don't mind the spelling mistakes, as long as there is speed.

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<sup>5</sup> This remark refers to both macro-categories Psycho-cognitive and Typing skills, and appears, therefore, twice.



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

**Answer 8.** The important thing is anyone producing live text should do so at 99% accuracy and content. How you do that is up to you. You shouldn't be in the market if you can't do that. You should know your software well and have a variety of ways to produce text on screens to suit clients.

**Answer 9.** A high accuracy of spelling of at least 99% can cause a lower speed and delay. I prefer a less high quality of spelling and a higher speed, and not too far behind of the source of speech. In that case I can ignore small spelling mistakes. Besides that, it is something you have to discuss with the customer(s).

**Answer 10.** Precision: on what basis is an achievement of 99% expected? NER model? The Swiss TV demands 98% in accordance with the NER model. The NER model, however, is an insufficient way of qualifying a speech-to-text interpreted target text.

### Factors for high performance

**Answer 11.** The issue of motivation and concentration are to my opinion too personal to give a general opinion about.

### Other

**Answer 12.** DAB+ Radio Untertitelung fehlt!! DAB+ radio captioning is missing!! DAB+ radio-ondertitels ontbreken!! DAB+ subtítulos de radio que faltan!! DAB+ radio sottotitoli mancanti!!

**Answer 13.** As I own a velotype but am not yet able to use it, I am not going to answer this question. However, which type of STTR/STTI is used is secondary.

**Answer 14.** Velotype is not used in Denmark.

**Answer 15.** Velotyping is not used by TV stations for live subtitling.

**Answer 16.** I do not really use velotyping but I think it is similar to electronic notetaking. It would work well for educational setting as there is a lot of editing and the 1005 verbatim access would be overwhelming for younger people so velotyping is ideal.

**Answer 17.** A well known point of attention is the sound of the keyboard during velotyping. Certain elements play a role in this. Acoustics of the room and the situation (for example during a funeral), cold fingers/strong stroking of the keyboard, etc. It is good to discuss this point beforehand and talking about the expectations and



communicate with the end users to avoid disappointment, irritation and frustration towards the textp interpreter during his/her work.

## Trascripts

- Answer 18.** The last four questions are somewhat misleading: If a client wants to receive a revised version of the subtitles/transcript, it is a matter of negotiation whether or not a fee is charged for it. This cannot be classified into categories (not important/very important) and is rather part of the service category? In my opinion, it makes little sense to deliver an unrevised version.
- Answer 19.** No delivery of unrevised transcripts. Revised transcripts or notes only against payment.
- Answer 20.** The text interpreter cannot be held responsible for the content of the text afterwards.
- Answer 21.** According to Dutch law, saving the texts is not allowed.
- Answer 22.** Saving the produced texts should only be allowed in exceptional situations (for example customers with memory problems)
- Answer 23.** Nonsense not to give the produced text without payment, because is is already paid for.
- Answer 24.** Charge extra for giving the edited text/subtitles to customer". In the current system of invoicing in the Netherlands this is not possible now. Besides that it is the question if you want this as interpreter (because it takes a lot of extra time) and if it is desirable because the text is for own use only.
- Answer 25.** "Provide a corrected version of the produced transcript/subtitles to the client," depends on the context.
- Answer 26.** It depend on the demands of clients. Clients need a transcript then (I met some situations that suppliers did not deliver transcripts that made difficulties for who took responsibilities towrite a minutes).
- Answer 27.** As a customer of course I don't want to pay for a file. But paying for an edited file is logical.
- Answer 28.** As a text interpreter I don't edit texts. I don't charge extra money for this. I prefer texts are not being saved.

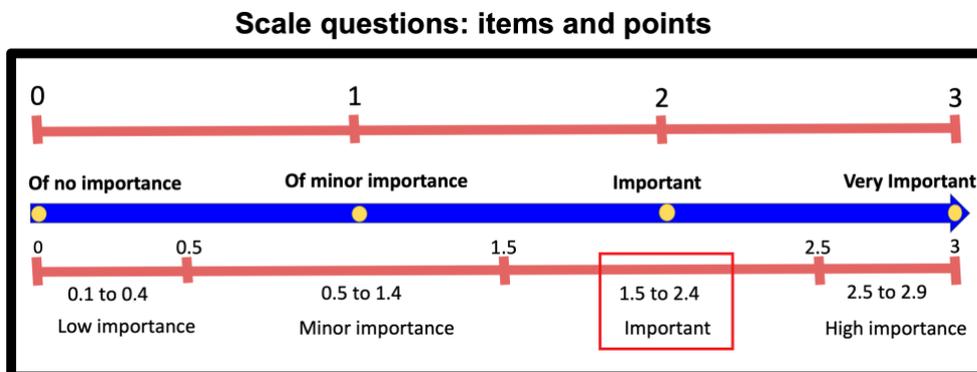
Project Ref: 2018-1-DE01-KA203-004218: LTA Quality Training in real time subtitling across EU and EU languages

- Answer 29.** Same remark as with respeaking. Giving the text it is important this is in accordance with the new GDPR guidelines and the text interpreter isn't responsible for the content of the text afterwards.
- Answer 30.** Providing interpreter users with transcripts goes against the ethos of an STTI in our local context.
- Answer 31.** As before: we cannot currently print out the writing interpretation that has taken place at a given event. It may be a need in Denmark that we work on that opportunity, because it is important for our memory that we concentrate more during the actual communication, so it can be harder to remember afterwards. And it is of course also harder to take note yourself because we bind our views more on following the writing text.

#### 4.6.3 Conclusions

The skills in the competence area Velotyping competence obtained an overall amount of 2.3 points out of 3, and is, therefore, considered “Important” by the participants.

Figure 4.6. Velotyping competence: overall importance of the skills



According to the scale responses, three skills were considered “Important” and nine as of “High importance”. Two of the three skills perceived as “Important” belong to the category Factors of high performance and refer to the ability to discipline to practice with the keyboard and to train own concentration skills. The third one belongs to the category Mastering the keyboard and refers to the typing at a minimum speed while delivering good quality. The other nine skills were perceived as of “High importance”. The two highest rated skills obtained 2.8 points. One belongs to the psycho-cognitive skills category and concerns remembering full sentences while lagging. The second is related to the typing skills category and refers to the ability to identify own typing mistakes and correct them, if necessary.



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

Speed, accuracy, delay, and interpreting strategies are also topics arising from the free-text responses. Answers show that they are interconnected. Speed rates ranging from 420 to 500 characters per minute (cpm) should be achieved, and a 99-100% spelling accuracy should be the goal. However, respondents categorise both parameters, typing speed and spelling accuracy, as subordinated to the overall goals of minimising delay and of applying higher level interpreting strategies.

The free-text answers present two new aspects. First, the need to setup clear standards to measure the precision of the output and to ground the used parameters on a suitable model. Second, the appropriateness of the technique for certain contexts since the sound of the keyboard during velotyping must be taken into account.

As for the provision of transcripts after the job, participants point out the need to address this topic with the customer as well as to consider the context and the legal regulations. Two new aspects emerge. First, the fact that the interpreter cannot be held liable for the content and that there is a need to observe the code of ethics in the profession. As for payment, as in the previous section, some respondents consider the provision of transcripts as included in the price; others regard it as a supplementary task, which needs to be paid for.

The results of the survey do not support the necessity of adding or removing any of the skills. However, responses raise some issues that could be solved during IO2 and IO3. These include setting clear and grounded parameters to measure precision and defining the appropriateness of the technique for specific contexts. As in the previous section, the question of whether verbatim and edited outputs are two different modalities, which require own training, and are performed by different professionals should also be further studied in connection with the technique.



## 4.7 Other results of the survey

The free-text responses pointed out that radio subtitling had not been included in the survey. This type of subtitles can be included in IO2 as part of the content. Radio subtitles are verbatim, often automatically generated, and belong to the working context Broadcasting. The creation of radio subtitles by human requires the same abilities and, therefore, no skills must be added. However, the constraints of the type of media should be defined as well as the setting "online" or "relay".

## 5 Updated skills cards

The development of the skills cards will continue throughout the project. The first draft will be published on the webpage after IO2, curriculum design.

## 6 Dissemination of the results

To the date of the publication of this report, the skills cards have been disseminated through these channels.

- Conferences: First draft: the skills cards were presented at the 6th International Symposium on Live Subtitling and Accessibility in Milan and at the ILSA Intralingual Live Subtitling for Access, on February 21<sup>st</sup>
- LTA event in Munich, March 28<sup>th</sup> 2019
- Journal articles: journals: LANS-TTS, Cultus 12 and EuroScientist
- Webpage: [www.ltaproject.eu](http://www.ltaproject.eu)
- Facebook and Twitter

The following dissemination products have been created:

- Poster
- Skills cards

For a final list of dissemination activities and products, please refer to the dissemination report.



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