A Research-Informed Training Course for Interlingual Respeaking

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Abstract

As audiovisual material is increasingly and globally streamed live, there is a growing demand for this live content to be made accessible in a foreign language. This calls for interlingual live subtitling, which is intended for both foreign-language and hearing-impaired viewers, illustrating the wide and inclusive notion of Media Accessibility (MA) where access is needed for audiences with and without disabilities (Romero-Fresco, 2018). This paper begins with an overview of interlingual respeaking including research, demand and training. Empirical results of interlingual respeaking experiments are presented with an emphasis on the task-specific skills required, which have been validated through experimental research. Then, a research-informed training model for interlingual respeaking is presented that acts as a framework upon which to base the proposal of a training course. This is regarded as an essential step to help consolidate interlingual respeaking as a viable access service and to produce quality live subtitles to benefit a wide audience.

Key words: interlingual respeaking, live subtitling, training, task-specific skills, media accessibility.

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1. Introduction

Respeaking is a technique used to produce live subtitles. It is among the youngest modes of translation situated within Audiovisual Translation (AVT) and Media Accessibility (MA) and is used to make live and pre-recorded television accessible to a wide audience. Intralingual respeaking has been practiced since 2001 (Romero-Fresco, 2011), but there is now a growing demand for live content to be made accessible in a foreign language. This calls for interlingual respeaking, which is intended to produce interlingual live subtitles for a wide audience, including hearing-impaired, hearing and foreign-viewers as well as children and the elderly, illustrating the wide and inclusive notion of MA where access is needed for audiences with and without disabilities (Romero-Fresco, 2018).

The widely used definition of intralingual respeaking was coined by Romero-Fresco (2011, p. 1):

> a technique in which a respeaker listens to the original sound of a live programme or event and respeaks it, including punctuation marks and some specific features for the deaf and hard of hearing audience, to a speech recognition software, which turns the recognised utterances into subtitles displayed on screen with the shortest possible delay.

The process of creating interlingual live subtitles via speech recognition (SR) differs from intralingual respeaking due to a change in language. This above definition has been used as a basis to create a proposed definition for interlingual respeaking, which could be defined as:

> a technique in which one listens to the original sound of a (live) programme or event *in one language* and respeaks (interprets) it *in another language*, including punctuation marks and some specific features *for an audience who cannot access the sound in its original form*, to a speech recognition software, which turns the recognised utterances *into text displayed on screen* with the shortest possible delay.

The inevitable addition of "in one language" and "in another language" clarifies the shift from intra- to interlingual respeaking. Interlingual respeaking intends to provide access for a wide audience, so from a universalist point of view, "specific features for the deaf and hard-of-hearing audience" has become "specific features for an audience who cannot access the sound in its original form". The amendment of "into subtitles displayed on screen" to "into text displayed on screen" recognises that the written output may be displayed as subtitles (for television) or live-titles (for live events) (Pöchhacker & Remael, 2019).

Academia seems to have anticipated the didactic development of interlingual respeaking, which is still only experimental, hence more academic studies than implemented training exist in this area. So far, only a few studies have explored interlingual respeaking, in areas such as comparisons between intra- and interlingual respeaking (Eugeni & Marchionne, 2014), quality (Robert & Remael, 2017; Romero-Fresco & Pöchhacker, 2017), the respeaking process (Chmiel et al., 2017a; Szarkowska, Krejtz, Dutka, & Pilipczuk, 2018) and performance (Chmiel, Lijewska, Szarkowska & Dutka, 2017b). For intralingual live subtitling, the LTA (Live Text Access) project aims to design effective and certified curricula and develop open-source training resources, to meet industry and societal needs for real-

time intralingual respeakers and velotypists. For interlingual live subtitling, the ILSA (Interlingual Live Subtitling for Access) project has led the way for recent research, which aims to identify the skills and the profile of the interlingual live subtitler, develop the first training course on interlingual respeaking, and provide a protocol for its implementation in various settings. Prior to ILSA, experimental studies had only tested interlingual respeaking on a small-scale (Davitti, Sandrelli, & Romero-Fresco, 2018; Dawson, 2019). As a result of ILSA, survey-based research has explored the profile of the interlingual live subtitler (Robert, Schrijver, & Diels, 2019a) and perceptions of training (Robert, Schrijver, & Diels, 2019b), theory-based research has explored the required competences (Pöchhacker & Remael, 2019), and experimental research has tested interlingual respeaking performance (Dawson, 2019; Dawson & Romero-Fresco, forthcoming in 2020).

Media corporations have recently expressed an interest in interlingual respeakers with different language combinations to respeak sporting and gaming events. Broadcasters, such as the BBC and the VRT, as well as political institutions have also highlighted a need to find professional interlingual respeakers (Robert et al., 2019a). A handful of universities offer intralingual respeaking training, but training is still scarce. Training tends to focus on dictation, respeaking and subtitling, and is mainly practical (Robert et al., 2019a). Industry training or tailor-made courses have, up until recently, focussed on intralingual respeaking. The duration and structure of industry training vary and could take the form of training on-the-job or coaching from colleagues; some training includes theoretical introductions on respeaking (Robert et al., 2019a).

The first interlingual respeaking course was delivered online by the University of Vigo, the results of which (see section 2.2) have informed this paper. Interlingual respeaking workshops have also preceded recent conferences, such as Languages & the Media (2018) and Intermedia (2019). Interlingual respeaking has been introduced on a small-scale and is usually given at the end of a module in translation, subtitling, AVT or interpreting rather than occupying a whole module. In the UK, the University of Roehampton delivers a 3-hour session on interlingual respeaking on the Professional Translation module of the BA in Modern Languages. A theoretical introduction is given, students create voice profiles, practice dictation and carry out two intralingual respeaking exercises before moving on to sight translation and interlingual respeaking practice. In Austria, the Universities of Graz and Vienna have a respeaking module on the MA in Translation & Interpreting. Students have 90 minutes of weekly taught sessions for 12–14 weeks. Sessions focus on intralingual respeaking, but at the University of Vienna, an attempt is made to devote the last 2–3 weeks to interlingual respeaking from English into German (F. Pöchhacker, personal communication, October 6, 2019). In Belgium, the University of Antwerp delivers two hours of respeaking per week and students complete two hours of independent study. Intralingual respeaking is taught in the first 15 weeks followed by seven weeks of interlingual respeaking training with extended class time of three hours in the last four weeks and extra assignments (A. Van Hoey, personal communication, October 9, 2019).

A heightened interest in interlingual respeaking calls for a model to guide the successful implementation of training. At the turn of the century, intralingual respeaking became a popular method to produce live subtitles. However, universities and private organisations went about

training on their own, leading to different approaches to training, and the absence of streamlined training has resulted in respeaking courses at university level being few and far between (Romero-Fresco, 2018).

Section 2 presents a summary of empirical research on interlingual respeaking and outlines quality assessment models that have been used to analyse the intra- and interlingual respoken outputs of the experiments. The empirical results shed light on the task-specific skills required for interlingual respeaking, which are presented in section 3. The empirical results, task-specific skills and existing approaches to translator and interpreter training (section 4) informed the creation of a training model for interlingual respeaking. The training model (section 5) acts as a foundation upon which to base interlingual respeaking training, which is in demand by governmental regulators, user associations and subtitling companies (Romero-Fresco, Melchor-Couto, Dawson, Moores, & Pedregosa, 2019). As an instantiation of the training model, a proposal for an interlingual respeaking course is presented in section 6.

2. Empirical Research on Interlingual Respeaking

Over the past three years, extensive research has been carried out to identify the task-specific skills and the best-suited professional profile for interlingual respeaking. The research has also informed Intellectual Output 2 (IO2) of the ILSA project. Results of a small-scale pilot study (Dawson, 2019) and a large-scale study (Dawson & Romero-Fresco, forthcoming in 2020) informed the creation of an interlingual respeaking module for the first known online interlingual respeaking course delivered by the University of Vigo. All interlingual respeaking exercises were carried out from English into Spanish. Empirical results (see section 2.2) have shown that extensive training allowed participants and trainees to perform better, which suggests that good quality interlingual respeaking is feasible providing interlingual respeakers undergo appropriate training.

2.1. Quality Assessment Models

Before briefly presenting highlights of the empirical results, an explanation of quality assessment for intra- and interlingual live subtitling is required to contextualise the quantitative results. Quality assessment can be carried out with the NER model (Romero-Fresco & Martínez, 2015) for intralingual and the NTR model (Romero-Fresco & Pöchhacker, 2017) for interlingual live subtitling. Both models require accuracy rates of 98% for live subtitles to be deemed acceptable for live broadcast.

Figure 1.

The NER Model

$$\text{Accuracy} = \frac{N - E - R}{N} \times 100$$

CE :

Source: *Romero-Fresco & Martínez, 2015.*

The NER model considers the number of words in the respoken text (N); edition errors caused by strategies applied by the respeaker (E); and recognition errors that are usually caused by mispronunciations, or by the respeaker not giving the SR technology enough context (R). Correct editions (CEs) account for editing that has not caused loss of information. Edition and recognition errors are penalised depending on their severity: recognisable (*minor*, -0.25), causing confusion or loss of information (*standard*, -0.5), or introducing misleading information (*serious*, -1). The NER formula in Figure 1 is applied to calculate the accuracy rate of the text.

Figure 2.

The NTR Model

$$\text{Accuracy} = \frac{N - T - R}{N} \times 100$$

EE :

Source: *Romero-Fresco & Pöchhacker, 2017*

The NTR model considers the number of words in an interlingually respoken text (N); the translation errors (T); and the recognition errors (R). Translation errors are subdivided into content (omissions, additions and substitutions) and form (correctness and style) errors. Errors are also penalised as per severity: recognisable (*minor*, -0.25), causing confusion or loss of information (*major*, -0.5), or introducing misleading information (*critical*, -1). Condensed information and synonyms are not penalised but are scored as effective editions (EEs). Once the respoken text has been assessed for translation and recognition errors, the NTR formula in Figure 2 is applied to calculate the accuracy rate and give an equivalent score out of 10. As high accuracy rates are more common in intralingual than in interlingual live subtitling, the NTR model recalculates the accuracy rate on a standard 10-

point scale (Table 1). An accuracy rate of 98% is equivalent to a 5/10 on a 10-point scale, which indicates that 98% is satisfactory.

Table 1.

Recalculation of accuracy rates on a 10-point scale

Accuracy (in percent)	10-point scale
< 96	0/10
96.4	1/10
96.8	2/10
97.2	3/10
97.6	4/10
98	5/10
98.4	6/10
98.8	7/10
99.2	8/10
99.6	9/10
100	10/10

Source: Romero-Fresco & Pöchhacker, 2017

Although quality assessment models focus on the end product, they can also be used in training as a form of self-assessment as the quantities of errors could aid trainees to identify their strengths and weaknesses in interlingual respeaking.

2.2. A Summary of the Empirical Results

For the pilot experiment (Dawson, 2019), 8 participants with backgrounds in subtitling, interpreting and intralingual respeaking received one hour of respeaking training and dictation practice before carrying out interlingual respeaking exercises with 2-minute video clips: a narration (102 words per minute, wpm) and a speech (101 wpm). Participants obtained an average accuracy rate of 97.35% (3.5/10), which at first glance may make interlingual respeaking seem more than feasible; however, the video clips used had slow speech rates and short durations with no specialised or challenging terminology. Good performers made more recognition errors and poor performers made more translation errors, suggesting that those with strong live translation skills performed better, but not knowing how to dictate well let them down.

For the large-scale study (Dawson & Romero-Fresco, forthcoming in 2020), 44 participants with subtitling and interpreting backgrounds received four weeks of online training on dictation, intra- and interlingual respeaking. Participants spent approximately two hours per week on respeaking exercises before completing an interlingual respeaking test in the final week. Longer training and

larger groups of participants allowed for concrete assumptions to be made regarding the task-specific skills required. Participants achieved an average accuracy rate of 98.22% (5/10) in intralingual and 97.37% (3.5/10) in interlingual respeaking. Those with interpreting experience performed slightly better than those with more subtitling experience with accuracy rates of 97.42% (3.5/10) and 97.33% (3.5/10) respectively. Results show that some sub-types of translation error are more difficult to manage than others. Content omission errors are the most common type of translation error, followed by content substitution (mistranslation) errors. Participants occasionally struggled to transfer the correct grammar from one language into another. However, maintaining the correct register did not pose difficulties. Participants with interpreting backgrounds performed better in terms of dictation, which resulted in them making fewer recognition errors than participants with subtitling backgrounds.

For the interlingual respeaking course (Dawson, 2020), two 8-week modules on simultaneous interpreting (SI) and intralingual respeaking preceded the 8-week interlingual respeaking module. Trainees were expected to spend two to three hours per week on the exercises. Longer and more focussed training appears to have been effective, as trainees obtained an average accuracy rate of 98% (5/10). Similar to the large-scale study, trainees struggled with omissions and mistranslations. Trainees who performed well (over 98%) had good dictation, a strong ability to multitask and demonstrated good language, source text (ST) comprehension, target language (TL) expression and memory skills. Those who did not perform well (under 98%) could not keep up with the ST and obtained poor recognition results and thus had poor dictation. Extensive training allowed trainees to train their voice profiles and have better recognition results than in the previous experiments. The quantitative results do not point to a particular profile as being best suited to interlingual respeaking. However, participants and trainees deemed an interpreter or an intralingual respeaker to be initially best placed for the task.

3. Task-Specific Skills Required for Interlingual Respeaking

Experimental research has also shed light on the task-specific skills required for interlingual respeaking. The top five task-specific skills, as identified by participants and trainees, are: multitasking, live translation, dictation, command of source and target languages and comprehension (Dawson & Romero-Fresco, forthcoming in 2020). The term *live translation* refers to a general skill that is understood as the ability to produce an immediate oral translation of an oral text (F. Pöchhacker and L. Alonso Bacigalupe, personal communication, April 26 2018). In this article, live translation is referred to both as a task-specific skill required for interlingual respeaking and as a process of listening in one language and speaking in another. Given the hybrid nature of interlingual respeaking, the skills required originate from subtitling, SI and intralingual respeaking. Some differences lie between subtitling and respeaking and include the translation situation (offline/live) and the translation mode (written/oral) (Romero-Fresco, 2011). For subtitling skills to be useful for interlingual respeaking, skills must be adapted to respond to its live nature, such as translation to live

translation, written punctuation to oral punctuation and edition and revision to live-error correction. Many similarities lie in the skills required for SI and respeaking, as both tasks require simultaneous listening and speaking with a language transfer. Skills needed for intralingual respeaking are also relevant for interlingual respeaking, such as dictating to speech recognition software while enunciating punctuation and live-error correction. Pöchhacker & Remael's (2019) competence model accounts for three stages of the respeaking process: pre-process, peri-process and post-process. Preparation is the main requirement of the pre-process, where activities include familiarisation with the SR software, researching the topic to be respoken and searching for terminology. Peri-process skills refer to the skills required to carry out a live translation, such as multitasking, interpreting, dictation and punctuation, language, ST comprehension, TL expression, live-error correction, edition and short-term memory. The post-process begins after the task has taken place and includes reflection and improvement, highlighting the importance of feedback to close the respeaking process. Post-process skills include critical analysis and reflection as well as ongoing skills required during multiple stages of the task, such as working at speed, technical skills, long-term memory and teamwork. Figure 3 categorises the task-specific skills required for interlingual respeaking and groups them as per pre-, peri and post-process skills. The four skills on the far-right are required during more than one stage.

Figure 3.

Task-Specific Skills Required for Interlingual Respeaking

4. Approaches to Translator and Interpreter Training

Aside from the empirical research and task-specific skills, theoretical concepts and frameworks of translator and interpreter training are also at the core of the development of the training model. In translator training there has been a shift from the teacher-centred (transmissionist) tradition towards a student-centred (interactionist) approach to knowledge construction (Kelly, 2005). Given the many tasks and stages involved in interlingual respeaking, multiple approaches are used as training methods that suit the needs of what each stage intends to achieve for the learner. From Li's (2014) point of view, approaches should complement one another at different stages of the training process. For instance, a process-centred approach (Gile, 1995) is applicable to the need to listen in one language and speak in another as well as monitor the respoken output and correct errors that appear. This goes together with the task-based approach (Hurtado-Albir, 1999; González-Davies, 2004), which is relevant as it helps to organise training around the various tasks a respeaker must carry out. A product-centred approach (Gile, 1995) also applies to carrying out quality assessment with the NTR model to determine the quality of the end product. A social constructivist approach to training is a learner-centred knowledge-construction process, as knowledge is constructed by learners rather than being transmitted to them by their teachers (Kiraly, 2000).

As the empirical research focussed on the task-specific skills, a task-based approach has been used to design the training model. The task-based approach consists of designing training as a set of tasks seen as the foundation to organise learning and divided into preparatory tasks and final tasks (Hurtado Albir, 2015). Applying a task-based approach to interlingual respeaking training may entail using authentic tasks for pre-task activities, such as researching terminology and preparing the software, peri-task activities would take the form of longer videos of 15–30 minutes to respeak to reflect the amount of time a respeaker is expected to work for at a time, and post-task activities would entail carrying out a full analysis of the respoken text with the NTR model, highlighting the product-centred nature of the final stage.

For the interlingual respeaking module, approaches were taken to incorporate social constructivism and ensure a learner-centred approach to training. This was achieved by three means: (1) interactive tasks, (2) feedback, and (3) sharing and contributing to research. The social constructivist framework supports what is believed to be a suitable approach to interlingual respeaking training, as it is both a collaborative and individual practice, which requires ongoing training and a knowledge of the professional environment. The fundamentals of this approach are ideal to introduce as the overall approach to learning for an interlingual respeaking training model. Kiraly outlines four key principles of social constructivist education as: (1) multiple perspectives (the individual learner is never alone), (2) collaborative and cooperative learning (making sense of concepts and tasks together), (3) situating learning (learning through authentic action) and (4) scaffolding (signposting to guide learning). Kiraly (2000) explains that if students obtain competence in a professional domain, they will acquire the expertise and authority to make professional decisions, take responsibility for their actions and become empowered to follow a path of lifelong learning. Drawbacks of this approach for interlingual respeaking training include lack of structure and lack of rigid evaluation. Some students

may become lost with the freedom given in training and may require structure to avoid copying what others do rather than taking the liberty of starting class discussions and debates. Traditional grading is removed in favour of self-assessment to evaluate progress. A lack of rigid evaluation may not be suitable for some aspects of university education, which typically includes grade-centred objectives. However, the flexibility of the training model allows for modules, units, materials and assessment to be tweaked to cater for the specific needs of the trainees, training institution or organisation.

On a macro level, the training model takes on an overall social constructivist approach (Kiraly, 2000) to training in which the learner is at the centre. On a micro level, a task-based approach (Li, 2014) is taken to ensure that individual tasks focus on the task-specific skills required for interlingual respeaking. It is believed that both approaches to translator training can coexist if the former provides the main approach to training and the latter is introduced at task level (Marco, 2004).

5. A Research-Informed Training Model for Interlingual Respeaking

The proposal of a training model for interlingual respeaking (see Figure 4) consists of five modules: (1) Media Access; (2) Dictation and software management; (3) Simultaneous interpreting; (4) Intralingual respeaking; (5) Interlingual respeaking; and two discussion points to be fed through training: (1) The professional world and (2) New developments in respeaking. The full course is intended to last for 24 weeks (6 months). The model proposes that trainees spend around 4 hours per week over 24 weeks on respeaking tasks, which could lead to 96 hours of training. In a university setting it would be equivalent to a year-long respeaking module made of 2-hour sessions in class and 2-hour sessions at home over 24 weeks. The training model has the potential to be a full vocational training course or inform university education within a specialised postgraduate degree programme, such as Audiovisual Translation or Conference Interpreting. For the ILSA project a set of learning outcomes[1] has been drafted, they have been modified to suit the proposal of this training model.
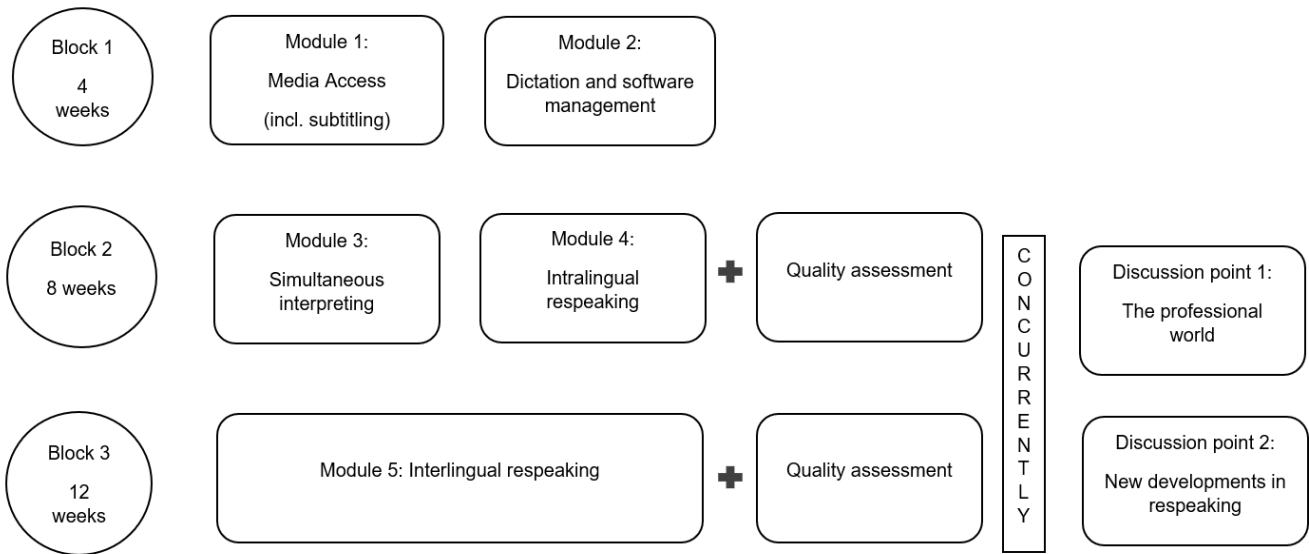
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[1] The learning outcomes can be found via the following link:
https://drive.google.com/open?id=1OX06iLKzDW4pw-KgVJ3AJXuozdrsGuMy

Figure 4.

A Research-Informed Training Model for Interlingual Respeaking

6. A Proposed Training Course for Interlingual Respeaking

As previously noted, the training model can be used as a framework upon which to base interlingual respeaking training. Therefore, as an instantiation of the training model, this section outlines how the model can be used to develop training. Each sub-section explores one of the five modules and two discussion points and includes thoughts on units (which represent topics of learning), materials and assessment.

6.1. Module 1: Media Access (incl. subtitling)

- Unit 1: Disability, users and services;

- Unit 2: Media Accessibility;

- Unit 3: Intralingual subtitling;

- Unit 4: Interlingual subtitling.

Task-specific skills to be acquired: Familiarisation with subtitling software, SL comprehension, TL expression and edition.

The Media Access module aims to introduce trainees to different types of access service provision and their uses in society, and to situate interlingual respeaking within the context of Disability Studies, MA and AVT. According to Greco (2019), accessibility cannot be regulated to just a minor

part of a module or merely diluted across many modules. Rather, MA requires a room of its own, in which students can form an overall understanding of accessibility, which they will base the rest of their learning on. Unit 1 includes an overview of access services, including audio description, dubbing, voice-over, subtitling, and respeaking. Unit 2 provides a space for trainees to engage with theory and form their own stance on access, which will aid them to consider how end users receive interlingual live subtitles. Units 3 and 4 introduce trainees to different variants of subtitling and creating subtitles. Trainees may use subtitling software and experiment with adding sound labels and speaker identification, as well as translating subtitles into another language.

6.2. Module 2: Dictation and Software Management

- Unit 1: An introduction to speech recognition software;

- Unit 2: Dictation practice 1 (Basic commands);

- Unit 3: Dictation practice 2 (Word lists and custom commands);

- Unit 4: Dictation practice 3 (Sight translation).

Task-specific skills to be acquired: Familiarisation with SR software and dictation (and punctuation).

The empirical results demonstrate that extensive software training is required to combat recognition errors. Participants and trainees who consistently reached 98% had good dictation as they managed to maintain a steady pace, volume, and had a strong command of the software. Unit 1 covers the basic mechanics of how SR software works and allows trainees to explore and compare different software. Unit 2 introduces dictation practices of easy-to-read texts that require simple commands, such as "comma", "full stop", "question mark", "exclamation mark" etc. Unit 3 focusses on creating word lists for specialised terminology and creating custom commands for speaker identification and describing sounds. Unit 4 requires trainees to progress from intralingual dictation to sight translation, which introduces language transfer in the early stages of training. The trainee could read a text (in their head) in one language and dictate it into another. Other exercises could focus on semiotic resources, such as handling of the written text, body posture and gaze (Felberg & Nilsen, 2017).

6.3. Module 3: Simultaneous Interpreting

- Unit 1: An introduction to interpreting;

- Unit 2: Interpreting strategies (Easy 1);

- Unit 3: Interpreting practice: Speeches (Easy 2);

- Unit 4: Interpreting practice: Conferences (Intermediate 1);

- Unit 5: Interpreting practice: Interviews (Intermediate 2);

- Unit 6: Interpreting practice: Specialised language (Advanced 1);

- Unit 7: Interpreting practice: Debates (Advanced 2);

- Unit 8: Situated learning task.

Task-specific skills to be acquired: Research-mining, cultural knowledge, multitasking, live translation, language, SL comprehension, TL expression and short-term memory.

As trainees take the interpreting and intralingual respeaking modules at the same time, it may be advisable for them to complete the work for the SI module first and then apply their learnings to the intralingual respeaking module. The interpreting module is split into three sections to account for three levels of difficulty: (1) *easy*, (2) *intermediate* and (3) *advanced*. Units 2 and 3 could focus on material with *low speech rates* with one speaker on a basic topic, units 4 and 5 on videos of a *medium speech rate* with one fast speaker or two speakers and topics that include some complex ideas and terminology, and for units 6 and 7 the course would use advanced material of *high speech rates*, complex information and multiple speakers.

Unit 1 seeks to introduce trainees to interpreting, through readings covering cognitive skills. Trainees could be introduced to aspects of the pre-process including domain research, bilingual terminology, and working individually and in teams. Readings on skills required for SI could be followed by a class discussion with a focus on connecting skills to respeaking. Unit 2 introduces trainees to the peri-process skills that SI and interlingual respeaking share, such as multitasking, simultaneous paraphrasing, reformulation and anticipation, etc. Trainees could be introduced to easy SI exercises with low speech rates and non-technical content to carry out phrase shadowing tasks. Phrase shadowing allows for a deep processing of content and is the immediate repetition of auditory input in the same language with greater latencies (Pöchhacker, 2016). Trainees could also be introduced to segmentation, which entails reformulating speech segments before the interpreter has a full picture of what the speaker wants to say (Gile, 1995).

Unit 3 covers the three tactics classified by Gile (1995), which are taught within the framework of practical exercises: comprehension tactics (delaying the response, reconstructing segments of text, using the boothmate's help and consulting documents in the booth), preventive tactics (taking notes, changing the ear-voice span, the time lag between comprehension and reformulation, and changing the order of elements in an enumeration), and reformulation tactics (replacing segments with superordinate terms or general speech, explaining or paraphrasing and instant naturalisation). Tactics could be introduced through readings, applied in practical exercises and their use for interlingual respeaking could be reflected upon in class discussion. Units 4–7 allow trainees to practice with intermediate and advanced material with preparatory tasks, practical interpreting tasks and time to reflect upon their performance and how tactics are applied.

For unit 8, trainees could carry out a situated learning task of a conference presentation with one speaker and a debate with two or more speakers. A brief could accompany each ST, including the

presentation or debate title, speaker names, presentation slides etc., which would allow trainees to research the topic and create bilingual word lists of terms that may be required. The task should last for around 15 minutes plus time given for preparation and for post-task analysis, in which trainees could comment on the impact errors had on the target text (TT) and how to improve in the future.

6.4. Module 4: Intralingual Respeaking

- Unit 1: An introduction to intralingual respeaking (Easy 1);

- Unit 2: Intralingual respeaking: Speeches (Easy 2);

- Unit 3: Intralingual respeaking: Sports (Intermediate 1);

- Unit 4: Intralingual respeaking: Interviews (Intermediate 2);

- Unit 5: Quality assessment (NER analysis);

- Unit 6: Intralingual respeaking: News and weather (Advanced 1);

- Unit 7: Intralingual respeaking: Entertainment (Advanced 2);

- Unit 8: Progression test (Situated learning task).

Task-specific skills to be acquired: Research-mining, cultural knowledge, dictation (and punctuation), multitasking, language, SL comprehension, TL expression, error correction, edition, short-term memory, critical analysis and reflection.

The intralingual respeaking module has been organised by increasing the level of difficulty leading to a situated learning task. Many elements of an audiovisual text must be considered when choosing appropriate material for respeaking exercises, such as: content, delivery, language, context and the sound and visual quality of the video. The length of videos could vary and begin with short videos of 2 minutes in length, increasing to 5 minutes, then 8 minutes, then 10 minutes. A variety of genres should be used in training, such as documentaries and slow speeches for an easy level (100–140 wpm); sport shows, interviews and speeches with some complex terminology for an intermediate level (140–180 wpm); and news, weather, chat shows and fast-paced speeches for an advanced level (180–220+ wpm).

In the introduction to intralingual respeaking, trainees get the idea of the five tasks involved in the process: (1) listening to the source text; (2) respeaking the TT; (3) monitoring the output; (4) watching the images on screen and (5) correcting the TT. Unit 1 covers the first step of listening and respeaking with a slow video of around 100–140 wpm of an easy genre. For unit 2, trainees could listen, respeak, and monitor their on-screen output. Videos could include slow speeches that have been delivered at a live event. For the first few videos of short durations, trainees could watch the video to note down any terminology (proper nouns and unfamiliar vocabulary) to introduce into the SR software. If trainees do this regularly and create custom commands, they will develop strong software management skills.

Units 3 and 4 aim for trainees to listen, respeak, monitor their on-screen output and attempt to watch the images on screen. This intermediate level could include respeaking sports programmes and interviews with material of around 140–180 wpm. Respeakers must be able to identify the key elements of the ST, discard unnecessary information and apply editing strategies (Arumí-Ribas & Romero-Fresco, 2008). To develop editing skills, trainees could listen to a speech to identify the main ideas, create a list of key words and links and create a conceptual map of ideas (Arumí-Ribas & Romero-Fresco, 2008) to emphasise how much information must be maintained and how much could be reformulated or condensed. For reformulation, trainees could respeak a video with a focus on paraphrasing each idea as opposed to respeaking each sentence verbatim. In interpreting studies, Gillies (2001) proposed that trainees rework the grammatical structure of sentences but without changing their meaning by changing passive verbs to active and removing subordinate clauses. In subtitling studies, Remael and van der Veer (2006) suggest giving students a transcription of the source text (ST) to rewrite and segment as subtitles.

Come unit 5, trainees will have experienced the pre- and peri-processes of respeaking, so it may be an appropriate point to introduce the post-process. Before exploring the NER model, trainees could carry out some independent research on working models and how they vary across countries and different parts of the sector. Once the NER model is introduced, tasks could include breaking up the transcript of a video to identify idea units and commenting on the impact that omissions or substitutions could have on the text. Peer NER analysis will provide further feedback for trainees and strengthen their skills to apply the NER model to their respeaking exercises in the following units. The open-access ILSA course has a ready-made video lecture exploring the NER model and a flowchart that illustrates the process of assessing errors; both resources could be used for training.

Units 6 and 7 cover advanced intralingual respeaking with speech rates of 180–220+ wpm and videos of the news, weather and chat shows. Once trainees have mastered speaking and listening at the same time, monitoring the output, and watching the images, they should aim to correct errors quickly and accurately to improve the accuracy rate of their respoken text. Trainees could experiment with live-error correction via voice commands or the keyboard. Trainees should be guided to correct standard and serious errors and avoid correcting all errors, as this is likely to create more. Tasks to develop live-error correction may include correcting a certain number of errors while respeaking the text, for example, the first three errors that appear and then comment on the impact the error correction had on the text (whether it improved the accuracy rate, or whether it slowed the trainee down or consequently led to more errors).

Unit 8 presents a situated learning task in which trainees carry out pre-task activities, such as researching a topic and subject-specific terminology to train the SR software. To reflect the amount of time a respeaker is expected to respeak, the audiovisual material should be around 15–20 minutes long. After the task, trainees could complete a NER analysis of their respoken text.

6.5. Module 5: Interlingual Respeaking

- Unit 1: An introduction to the task-specific skills and quality assessment (Easy 1);

- Unit 2: Interlingual respeaking: Sports (Easy 2);

- Unit 3: Interlingual respeaking: Speeches (Intermediate 1);

- Unit 4: Interlingual respeaking: Interviews (Intermediate 2);

- Unit 5: Interlingual respeaking: News and weather (Advanced 1);

- Unit 6: Interlingual respeaking: Entertainment (Advanced 2).

Task-specific skills to be acquired: Research-mining, cultural knowledge, dictation (and punctuation), multitasking, live translation, language, SL comprehension, TL expression, error correction, edition, short-term memory, critical analysis and reflection.

The interlingual respeaking module is split into six units, each of two weeks, which account for three levels of difficulty (easy, intermediate and advanced). Material of different levels, increasing speech rates and the use of different genres of television and live events can be used. Trainees could respeak three videos per week: a 5-minute video for a warm up exercise, a 10-minute video to roughly analyse the error rate, and a 15-minute situated learning task including research and terminology preparation and quality assessment.

Shared skills between intra- and interlingual respeaking should not be ignored as trainees may need to re-learn the required skills in the new context of the respeaking task, much like the need for interpreters to "unlearn" speaking in a pleasant tone. When trainees progressed from intra- to interlingual respeaking in the University of Vigo course, it was observed that some of the skills that trainees had successfully acquired during intralingual respeaking practice were not strong enough for interlingual respeaking. This could be caused by the extra layer of complexity added to the respeaking task in the form of a language transfer process. For example, in the interlingual respeaking course for the University of Vigo one trainee developed an impressive tone and pace for dictation in intralingual respeaking, which became erratic when faced with interlingual respeaking. Trainees should explore whether they too compensate skills due to the complexity of language transfer that interlingual respeaking introduces. This could be done by exploring the task-specific skills that were not previously required due to the monolingual language transfer of intralingual respeaking. Therefore, skills such as live translation, TL expression and knowledge of multiple cultures should be given some focus in interlingual respeaking tasks.

For units 1 and 2, it is recommended to begin interlingual respeaking practice with audiovisual material of a slow speech rate, such as 100–140 wpm with documentaries and slow speeches. As trainees will already be familiar with the NER model, it is advisable to introduce trainees to the NTR model at the beginning of the interlingual respeaking module so they can explore the five sub-types of translation errors and their severity early on. Although the NER and NTR models focus on

identifying errors and effective editions in the end product, they can be used in training to identify trainees' strengths and weaknesses. Fewer errors may identify strength in a particular area such as not omitting text (by having fewer content omission errors), or good grammar (by having fewer form correctness errors). More errors in an area may identify a weakness. The NTR model can be used as part of the learning process rather than a follow-up of teaching to enable learners to reflect on their performance and use this to plan further learning (Klimkowski, 2019). When quality assessment is first introduced, trainees may prefer to carry out individual NTR analysis of their own work to get to grips with the model. Encouraging peer review within training may reduce the subjectivity of trainees analysing their own respoken texts. A peer review process in the final few weeks of the course could reflect potential real-life scenarios for quality assessment in the professional world.

Units 3 and 4 could cover intermediate videos with speech rates of around 140–180 wpm with sports, cooking shows, slow news and speeches (for example parliamentary speeches). The empirical research shows the most common sub-types of translation errors are omissions and mistranslations. It is recommended to frame exercises around each translation error. For example, to focus on omissions and highlight the importance of dependent and independent idea units, trainees could analyse the ST to identify idea units. Questions on the number of omissions made, their impact on the text and how they could be avoided in the future would allow trainees to collectively reflect upon live translation performance at an early stage.

Units 5 and 6 use advanced level material with speech rates of around 180–220+ wpm of genres such as news, weather, chat shows, interviews and fast-paced speeches. The speed at which the trainee must produce a live translation can compromise its accuracy and result in mistranslations. Thorough preparation of the ST may limit mistranslations as trainees will have searched for ideas and terminology and identify potential translation difficulties. Despite the time constraint in live translation, interlingual respeakers still face the added difficulty of reworking the ST into a different language and maintaining natural expression. Once tasks and quality assessment have been carried out, trainees could collectively reflect on their performance and share information on the severity of their mistranslations and the impact on the text, as well as how to use reformulation and condensation to avoid mistranslations. Unit 6 could also present trainees with a situated learning task to use skills acquired throughout the course to complete a task expected in a professional environment. For example, two interlingual respeaking exercises: one for television and another for live events. The task should consider the pre-, peri- and post-task skills required to include preparation of a topic, respeaking a 15-minute audiovisual text and quality assessment.

For television, trainees could respeak a 15-minute segment of the news based on a major event. A specific topic would allow for preparation by researching the subject and terminology and for training the SR software with words and custom commands. For a live event, trainees could respeak a 15-minute clip of a conference presentation. For preparation, presentation slides and notes could be made available. After respeaking the clips, the NTR model can be used to assess the quality and to demonstrate trainees' understanding of translation and recognition errors and their impact on the respoken texts. According to Pym (2011), we are used to the traditional "didactic translation" model,

which involves trainees producing texts only for the teacher to read and evaluate as per the way in which the teacher translates, therefore, reproducing the concepts and skills of the teacher. A social constructivist approach could be integrated into the final assessment for trainees to take control of their own marking and feedback and, at the same time, apply their learnings from the course to a full respeaking project.

6.6. Discussion Point 1: The Professional World

- Topic 1: Live subtitling methods;

- Topic 2: Industry;

- Topic 3: Working conditions;

- Topic 4: The future of the profession.

The two concurrent discussion points in the training model are designed to be present during intra- and interlingual respeaking practice. Due to the novelty of interlingual respeaking, the first few groups of trainees could have a significant impact on the profession. Trainees may not have worked as interlingual respeakers and could benefit from an overview of the differences between live subtitling methods, such as QWERTY, stenography, and Velotype among others. Trainees could share their knowledge of subtitling and interpreting and discuss similarities and differences between the professions. The end-products of intralingual respeaking and subtitling are similar and despite the former being closer to SI, both professions receive similar rates. Interlingual respeaking is closer to SI due to the language transfer, but with added complexities of SR software, monitoring live subtitles and live-error correction. Thus, it is fundamental that interlingual respeaking trainees can debate working conditions and contribute to setting up the profession (including fair rates) appropriately. Professionals could also be invited to speak to trainees to share their knowledge of the industry. Another important discussion to have is on working conditions such as equipment and working patterns among other aspects that may arise as demand increases and the profession evolves.

6.7. Discussion Point 2: New Developments in Respeaking

- Topic 1: Speech recognition software;

- Topic 2: Automatic versus manual subtitling;

- Topic 3: Settings for interlingual respeaking;

- Topic 4: Requirements for future training.

Reflecting upon new developments in respeaking brings the sustainability of this proposed training course into question, which is an important point to address within the context of fast-paced technological advances. Trainees should understand how they can interact with technology to

enhance interlingual live subtitling. Given the fundamental need for quality in access services, it is unlikely that human intervention will not be required at all so trainees should be ready to adapt their skills to new situations. For instance, monitoring the output of a combination of automatic transcription and machine translation may entail correcting recognition errors and ensuring punctuation is accurate in the form of post editing a text before it is cued live. Should these developments occur in the future, the most suitable form of human intervention would be a trained interlingual respeaker, as they will have the relevant knowledge of translation errors that can be caused by machine translation, recognition errors caused by SR software and an understanding of the impact that errors and well-edited texts can have on an audience. In short, human-computer interaction may require a space in future interlingual respeaking training to address such developments. The authors of the NER model deem the model to be suitable to assess both live subtitles produced by a respeaker and those produced by automatic speech recognition, which further validates the decision to include quality assessment in training.

The context in which interlingual respeaking occurs is also evolving. Respeaking is more commonly known as a method to produce live subtitles for TV, but recently it has also provided access for public events (Moores, 2020) and has been used in the classroom (Romero-Fresco et al., 2019). When working in a professional environment, trainees will encounter different venues, equipment and set-up. Case studies and material on real-life setup of interlingual respeaking at public events and in the classroom would be of great use to illustrate such settings.

7. Conclusions

The ground covered in this training model could be considered ambitious; however, the suggested modules, units, material and tasks could be used flexibly to cater for the needs of different training programmes in-house, for university education or to inform vocational training courses. Some components of the training model may have more priority than others for different settings. For example, already existing courses in intralingual respeaking may want to include the Media Access module or the Simultaneous interpreting module to situate intralingual respeaking within other areas and to include quality assessment methods to make respeakers aware of what quality means in terms of the end-product. A course on subtitling may require respeaking material and could integrate this by using the suggestions given for the Intra- and Interlingual respeaking modules.

It is hoped that the training model can continue to evolve in light of practice. As parts of it are included in translation and interpreting education and training, the model may spark new research and development projects. Given the newness of interlingual respeaking and the infancy of this training model, there are many potential avenues for future research. Starting points could be testing the success of the training model in practice and extending the notion of MA into the delivery of interlingual respeaking training to train a wide audience of interlingual respeakers.

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