

Preparatory Exercises for Simultaneous Interpreting: Preliminary Results of a Didactic Experiment

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This paper presents the preliminary results of a didactic experiment in which Spanish–Italian students of the MA in Interpreting (University of Bologna) tested “Preparatory Exercises for Simultaneous Interpreting” (SI), the third unit of an online, asynchronous course for self- and collaborative learning hosted on a Moodle-based platform. The unit is grounded in a deconstructivist approach, whereby SI is temporarily decomposed into interrelated sub-skills that are practiced separately and then promptly reintegrated into the complex activity, as in an authentic working situation. Through a graduated sequence of intralingual and interlingual activities—shadowing with synonyms and reformulation, *décalage* adjustment, multitasking with concurrent sensory stimuli, sight translation, and the ‘cleaning’ of disfluencies and redundancies—the unit targets simultaneous listening and production, *décalage* management, lexical availability, and the integration of auditory and visual inputs. Adopting a mixed-methods design, the study triangulates ordinal-scale and open-ended self-assessment worksheets with anonymous questionnaires. While 46 students completed the unit, the analysis isolates the Spanish–Italian student cohort, allowing a granular qualitative reading of cognate-language difficulties such as calques and lexical ambiguities. Results indicate high overall satisfaction and very positive ratings for the platform’s technical, organizational, and interactive features; self-assessments identify *décalage* adjustment and disfluency ‘cleaning’ as areas of perceived improvement, while the management of multiple sensory inputs emerges as the sub-skill most in need of targeted practice—an increasingly critical competence in remote, hybrid, and AI-augmented interpreting. Although piloted on the Spanish–Italian pair, the pedagogical framework is conceived as language-independent.

Keywords: simultaneous interpreting; interpreter training; online learning; preparatory exercises; self-assessment

1. Introduction

Post-2020, the interpreting profession has not reverted to its pre-pandemic state; remote interpreting is now a consolidated market standard¹ (Jiménez Serrano 2021; Valero

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¹ The “2025 Nimdzi Interpreting Index” predicts strong, tech-driven growth in the interpreting sector through 2029. It notes that while AI (e.g., automatic speech recognition and glossary extraction) is advancing, human interpreters remain essential, and remote services are now the standard in healthcare, corporate, and institutional

Garcés and Cayron 2022; Birčák 2025). This shift, alongside the emergence of new remote modalities² and the rapid proliferation of digital tools for all assignment phases (Pöchlhammer and Liu 2024), compels a reconsideration of interpreter training. Programs must integrate these resources to harness their pedagogical potential and prepare students for a highly technologized labor market.

This renewal began in the early 2000s, as scholars (Sandrelli 2002; Sandrelli and Hawkins 2006; de Manuel Jerez 2006; Gorm Hansen and Shlesinger 2007; Blasco Mayor and Jiménez Ivars 2007) explored digital technologies for autonomous and collaborative interpreting practice, laying the foundations for CAIT (Computer-Assisted Interpreting Training) tools.

Over the past decade, research has evolved toward the design of innovative self-learning materials (Ibrahim-González 2011; Şahin 2013; Braun and Slater 2014; Setton and Dawrant 2016; Fantinuoli 2017; Castillo 2019), more specific technological applications such as collaborative practice tools (Rodríguez Melchor et al. 2020), the impact of new streaming platforms for remote SI (Spinolo 2020), and the design of comprehensive methodologies for online interpreting instruction (Mazzei and Ibrahim Aibo 2022). Despite these advances, much remains to be explored.

In response to these training needs, the present study is framed within the pedagogical innovation strategy of the University of Bologna (Strategic Plan 2022–2027),³ which promotes the creation of blended learning environments combining in-person instruction with online teaching. In line with these guidelines, the Department of Interpreting and Translation has launched a series of research projects aimed at implementing these pedagogical modalities.

One such project, “Continuous Self-Learning in Interpreting,”⁴ is designed to create a training pathway for students in the MA in Interpreting. At an advanced stage of

settings: “2025 Nimdzi Interpreting Index,” *Nimdzi*, accessed April 1, 2026, <https://www.nimdzi.com/interpreting-index/>.

² The term primarily covers cloud-based remote simultaneous interpreting (RSI), hybrid event management, and interfaces integrating ‘augmented interpreting’ tools (e.g., automatic speech recognition or real-time subtitles).

³ Particularly relevant is Principle P2 (“Teaching and Community”) of the Strategic Plan, which focuses on innovative learning models and participatory methodologies: “Strategic Plan 2022-2027,” *University of Bologna*, accessed April 1, 2026, <https://www.unibo.it/it/ateneo/statuto-norme-strategie-bilanci/piano-strategico>.

⁴ Official site of the University of Bologna’s “Continuous Self-Learning in Interpreting” teaching innovation project, detailing its objectives, methodology, and pedagogical resources: “Continuous Self-Learning in

development, the project has already completed and tested its main product: the online course “Continuous Self-Learning Workshop in Interpreting.” As a means of achieving the proposed pedagogical objectives, the materials have been structured in an online, asynchronous format to promote both self-learning and collaborative learning. The course was designed with several specific purposes:

- i. Foster autonomous, continuous learning (Sandrelli 2002; Gorm Hansen and Shlesinger 2007; Deysel and Lesch 2018), providing resources for training during and after university in a rapidly evolving technological sector (Fantinuoli and Prandi 2018);
- ii. Promote student cooperation via small working groups that facilitate peer learning (Blasco Mayor and Jiménez Ivars 2007);
- iii. Encourage collaborative use of interpreting technologies, moving beyond theoretical recommendations to practical implementation before, during, and after activities (Rodríguez Melchor et al. 2020; Bertozzi 2025a);
- iv. Establish a shared cross-functional competency pathway for all MA Interpreting students, using Italian as the vehicular language;
- v. Formally recognize autonomous practice (Schafer 2011) through ECTS credit allocation.

Beyond familiarizing interpreters with remote working environments, asynchronous didactic units offer significant pedagogical advantages: greater individualization of training, adapting to each student’s pace and cognitive needs (Gorm Hansen and Shlesinger 2007; Blasco Mayor and Jiménez Ivars 2007), and a more relaxed practice environment that reduces the anxiety inherent in the initial stages of interpreting training (Chiang 2009). This reduction in affective pressure facilitates the acquisition of complex skills (De Groot 2000) and promotes autonomous reflective practice (Schafer 2011).

2. Objectives of the Study

Within the pedagogical innovation project previously presented, this article⁵ aims to present the preliminary results of the piloting phase of Unit 3 “Preparatory Exercises for SI”

Interpreting,” *University of Bologna*, accessed April 1, 2026, <https://site.unibo.it/autoapprendimento-interpretazione/it>.

⁵ This article belongs to a broader publication series on the empirical study of the online course “Continuous Self-Learning Workshop in Interpreting.” Due to the project’s scope and data complexity, results are presented

with a cohort of Spanish–Italian interpreting students. More specifically, the article analyzes data from self-assessment worksheets and anonymous questionnaires administered to the student sample with the Spanish–Italian language combination (B and C languages)⁶ at the end of the unit.

The course, hosted on the University of Bologna’s Virtuale platform (based on Moodle)⁷, was designed according to these principles (Rodríguez Melchor et al. 2020, 73): adapting to each learning stage; responding to pedagogical objectives; promoting student autonomy and continuous self-learning; ensuring adequate accessibility (usability or user-friendliness); enabling the monitoring and tracking of activities carried out by students.

Following these principles, different areas of pedagogical intervention were delineated to articulate a structured and progressive didactic pathway (figure 1):

1. Active listening⁸ and speech memorization techniques, essential for optimizing interpreting quality (Zhong 2003; Setton 2010; Kriston 2012; Ma 2013);
2. Preparatory exercises for consecutive interpreting, integrating reception (note-taking and memorization) and oral production (reformulation and delivery) (Djovčoš 2020; Melicherčíková 2020; Sveda and Poláček 2020; Amato 2021);
3. Preparatory exercises for SI, focused on listening, oral production, *décalage* (or ear–voice span, EVS) management, and concurrent sensory stimuli (auditory input, visual supports, and voice self-monitoring) (Seeber and Delgado Luchner 2020; Mack 2021);
4. Consolidation of consecutive interpreting⁹ via digital tools for preliminary terminology, interpreting practice, and analysis (Goldsmith 2018; Carsten, Maskaliūnienė, and Perret 2020; Aguirre Fernández Bravo 2020);
5. Technologies and tools for collaborative interpreting practice, including resources for remote work,¹⁰ teamwork, and peer/self-assessment (Rodríguez Melchor et al. 2020; Mazzei and Ibrahim Aibo 2022);

progressively by training unit. For methodologies applied to other units, see complementary works in this series (Bertozzi 2024a, 2024c, 2025b).

⁶ See AIIC’s classification: “AIIC A-B-C,” *AIIC*, accessed April 1, 2026, <https://aiic.org/site/students/abc>.

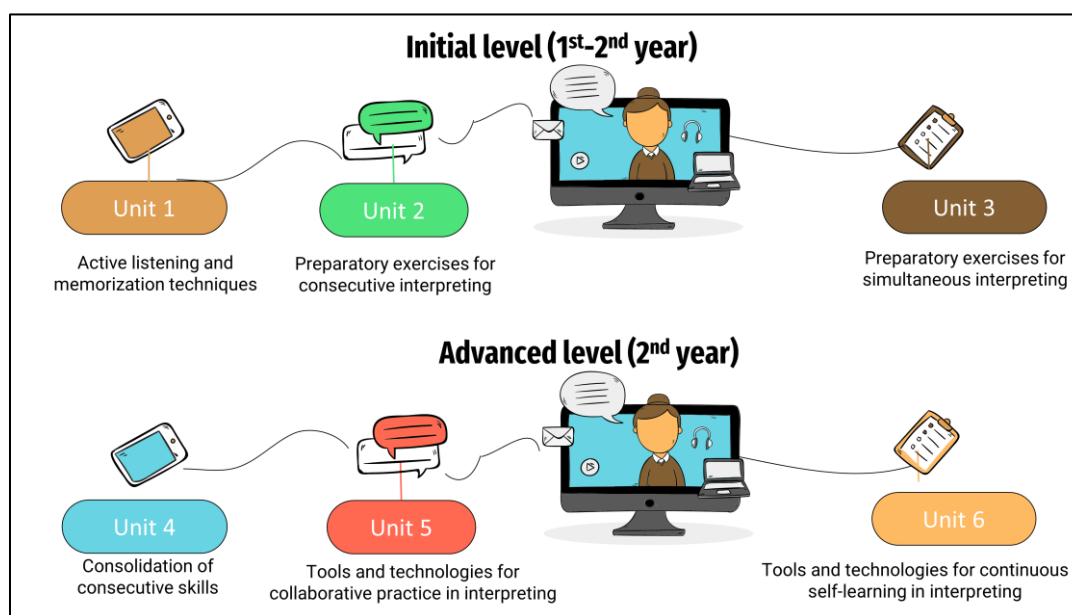
⁷ Moodle is a free, open-source learning management system (LMS) used to create and manage virtual learning spaces.

⁸ Analytical auditory reception where the interpreter processes meaning, identifies logical structure, and discards superfluous information (Bertozzi 2024c).

⁹ From this point onward, training is directed at second-year students.

6. Technologies and resources for continuous self-learning, consolidating remote interpreting and live platform use. These tools support progress tracking and professional development (Ziegler and Gigliobianco 2018; Horváth and Seresi 2020; Djovčoš 2020).

Figure 1. Structure and organization of the online course contents



3. The Didactic Unit “Preparatory Exercises for SI”

The online course “Continuous Self-Learning Workshop in Interpreting” was designed to meet the specific pedagogical needs and training objectives of the University of Bologna’s MA in Interpreting, using a methodology developed with teaching staff. The course consists of a planned sequence of activities supporting the entire training pathway from the first to the second year (figure 1), following a competence progression that advances gradually from preparatory skills to advanced practice.

Within this framework, the third unit addresses Preparatory Exercises for SI, grounded in recent studies on complex cognitive skills essential for interpreter training (Ponce Márquez 2011; Mack 2021; Li 2024). The skills involved in SI range from listening to and analyzing source-language discourse to simultaneously processing various sensory stimuli and producing target-language output (Mack 2021). Cognitive psychology has traditionally

¹⁰ Specifically, tools for multi-track recording, playback, and synchronous/asynchronous feedback are used. These platforms enable global and local evaluations via timestamped annotations on the audio playback or source transcription.

viewed interpreting as a complex activity divided into sub-competences (De Groot 2000), leading some authors (Kohn and Kalina 1996; Kalina 2000) to advocate automation through separate practice. However, as Robin Setton (2001) notes, these sub-competences should not be seen as independent components but as simultaneous, dynamically interacting processes aimed at a communicative goal.

Based on these studies, the pedagogical perspective adopted in the design of the activities for this unit is grounded in the deconstructivist approach, whereby SI is “a technique-skill composed of a series of sub-skills that are practiced separately, in a deconstructed and progressive manner” (Torres Díaz 2003, 98; author’s translation). However, the present study does not merely emphasize the need for progressive and separate training of said sub-skills but rather the temporary and limited decomposition of some of the skills involved, followed by reflection on the experience and their reintegration as soon as possible into the chain of complex interrelated activities, just as occurs in an authentic working situation (Mack 2021).

Drawing on these assumptions, “Preparatory Exercises for SI” was designed to consolidate simultaneous listening and production through multi-tasking exercises (with and without text). The unit focuses on calibrating *décalage* based on source speech characteristics and expanding the Italian lexical repertoire (the sample’s shared vehicular language) via synonyms and reformulation (Russo and Pippa 2004). Additionally, it develops analytical skills to filter disfluencies in spontaneous speech—preventing literal processing (Bazzanella 1994)—and to condense redundancies by identifying discourse macrostructure (Bertozzi 2014).

The unit’s initial steps clarify the purpose and execution of preparatory SI exercises. Given that interpreting is a complex cognitive exercise in meaning co-construction¹¹ (Wadensjö 1998), the approach utilizes real-time oral discourse analysis and concurrent production. These activities are not mechanical linguistic transpositions; rather, they involve active listening (Bertozzi 2024c), message selection/reworking, immediate lexical expansion (Iglesias Fernández 2007), synonym use, and reformulation (Russo and Pippa 2004). Crucially, all exercises incorporate student reflection and self/peer assessment (Bertozzi 2024b).

¹¹ Cecilia Wadensjö (1998) posits that interpreting is not a passive lexical transfer but a dynamic process where the interpreter and speaker jointly construct meaning.

The proposed working method relies on a gradual progression with increasingly complex activities, first intralingual and then interlingual (Mack 2021), using authentic speeches that were actually delivered, spontaneous or semi-planned, of increasing duration, speed, and lexical density. As it is an online asynchronous course, the operational modality is based on the recording of exercises, self-monitoring, and peer tracking (Bertozzi 2024b), maintaining a log of progress and difficulties in a sort of feedback diary available for consultation at any time (Mahyub Rayaa and Martin 2022).

To maximize the benefits of this training, the main problems encountered when learning SI are classified into three groups (Mack 2021): listening problems, when cognitive overload from reception impairs output control and *décalage* management (Gile 1999); processing problems arising from problem triggers such as speed, lexical density, numbers, or proper names; and production problems related to self-monitoring difficulties and obstacles in rapidly activating target-language vocabulary.

The first activity type is shadowing, an interlingual exercise of simultaneous listening and production (Kadota 2019). When combined with syntactic-lexical reformulation, shadowing can help manage input and output, activate synonyms and alternative formulations, and modulate the *décalage* without overloading short-term memory (Gillies 2013; Cavazzuti 2019). Different types of shadowing serve different purposes: shadowing of known speeches (recommended for beginners), shadowing of unknown speeches (with gradual progression), and shadowing of redundant speeches containing disfluencies (Bertozzi 2014; Mack 2021).

Following this approach, some activities target reception-phase sub-competences, including listening and intralingual summarization, and listening with automatic transcription for real-time correction (Mack 2021, 31). Others focus on the production phase through public speaking exercises. Finally, some activities aim to improve multitasking coordination, through intralingual listening and reformulation while changing the target audience or through intralingual simultaneous exercises with transcription to improve the management of multiple sensory inputs (Mack 2021, 36).

Another key aspect is self-assessment and peer assessment (Bertozzi 2024b), with two foci: first, oral production, self-assessed according to expressive clarity, coherence, language appropriateness, syntactic-lexical richness, pronunciation, and prosody (Mack 2021); second, collaborative work, including group evaluation of recordings using the parameters above, and

simulation exercises of documentary preparation prior to interpreting (glossary creation, terminology management) (Fantinuoli 2017).

Considering these principles and pedagogical needs, Unit 3 was designed on the basis of six activities, plus self-assessment and peer-assessment worksheets (figure 2).

Figure 2. Structure and organization of the activities in Unit 3

Unit 3 – Preparatory exercises for simultaneous interpreting (SI)		
01	SI with synonyms [in pairs]	Intralingual SI with synonyms and lexical-syntactic reformulations. Upload the recording (audio file) to the platform + complete the self-assessment and peer-assessment forms
02	<i>Décalage</i> or EVS adjustment	Intralingual SI using synonyms and reformulations NOT BEFORE a specified time delay (pre-set <i>décalage</i>). Upload the recording (audio file) to the platform + complete the self-assessment form
03	Intralingual SI of redundant speech with disfluencies [in pairs]	Intralingual SI based on a redundant speech containing various types of disfluencies, aiming to clean it up and render it more accessible. Upload the recording (audio file) to the platform + complete the self-assessment and peer-assessment forms
4A	Sight translation with vertical scrolling	Sight translation (from/into Language A) using DitLab Scroll. Upload the recording + self-assessment form
04	SI with text	SI from Language A into Language B with text Upload the recording + self-assessment form
05	Final self-assessment	Comprehensive self-assessment form for Unit 3

In the right-hand column (figure 2), a detailed description of the tasks to be completed (in bold) in each activity and the modality for uploading files to the platform and/or filling in the digital worksheets can be found. In this way, both instructors and students can consult the progression of exercises at any time, constituting an authentic portfolio of activities.

Each activity is accompanied by detailed instructions on its completion and on how and which files to upload to the platform, with indications for proceeding to the next activity (as they are strictly sequential and preparatory, it is not possible to advance without first having completed the activities in the indicated order), with a short video explaining the pedagogical purposes and execution modalities, and finally, with the complete transcription of the original speech (figure 3).

Figure 3. Screenshot of an activity in Unit 3 “Preparatory Exercises for SI”

ATTIVITÀ 4

- Visualizzare il video sotto con le istruzioni per l'Attività 4 e scaricare la trascrizione del discorso (disponibile sotto)
- Eseguire l'attività ascoltando il discorso da [questo link](#) (da min. 18:34 a 37:06)
- Caricare in fondo a questa sezione il **file audio** con la registrazione della propria resa+ compilare la **Scheda di Autovalutazione** sottostante. **Per caricare il file audio occorre cliccare sul pulsante in basso AGGIUNGI CONSEGNA, caricare i file desiderati, cliccare su SALVA e confermare l'invio dal pulsante CONSEGNA COMPITO.**
- ATTENZIONE: per poter passare da un'attività alla successiva occorre completarla integralmente e **spuntarla come completata**
- IMPORTANTE! Per considerare completata questa Attività, è necessario compilare e inviare il questionario SCHEDA DI AUTOVALUTAZIONE che si trova sotto questa Attività

Attività 4 (Modulo 3) – Simultanea con testo
Simultanea interlinguistica (IT>Lingua B) con testo

Da min. 18:34 a min. 37:06
Eseguire la simultanea avendo
sott'occhio la trascrizione. In che
misura l'esercizio è più o meno
facilitato?

**Ministro della Salute, Per una
salute mentale di comunità
(25/06/2021)**
<https://www.youtube.com/watch?v=ETUyGgqk1t4>
(CCHB/3/UP/area/Roba/ComunitaSaluteMente)



**Caratteristiche del
discorso**

- Totamente letto
- Ricco di riferimenti (potete fare
una breve ricerca prima di fare
l'esercizio)



Trascrizione discorso Attività 4.pdf 15 ottobre 2024, 08:40

4. The Didactic Experiment: A Study of a Spanish–Italian Cohort

This section details the Unit 3 “Preparatory Exercises for SI” pilot study, conducted with Spanish–Italian MA Interpreting students at the University of Bologna. This phase focused on student perceptions of the activities and self/peer assessment. Future projections include expanding the sample to include teaching staff—to evaluate these resources as instructional and tracking complements—and other MA stakeholders to assess the platform’s institutional curricular integration.

4.1 Materials and Methods

Following the pedagogical design phase, all materials for Unit 3 were implemented. In line with the methodological principles for research in interpreting pedagogy (Hale and Napier 2013), the pilot study was structured around evaluating students’ expectations, needs, and perceptions through anonymous questionnaires integrating quantitative and qualitative data, combined with the final self-assessment worksheet for Unit 3. This dual approach enabled combining general perception data with detailed student self-assessment information.

The self-assessment worksheet, composed of ordinal-scale and open-ended questions, was administered to 46 students, all of whom had completed Unit 3 by that point. Although seemingly small, this figure encompasses nearly all students enrolled in the MA in Interpreting at the University of Bologna in 2024/25.

For the specific purposes of the present study, the results corresponding to a cohort of students with the Spanish–Italian language combination (6 in total) were isolated. While it would be desirable to expand this sample, it is adequate to reflect the specific needs of this group, given that an average of 8 students with this language pair enroll annually in the MA in Interpreting at the University of Bologna.¹² Moreover, a reduced sample offers significant advantages in this context: it allows for more direct interaction with the researchers involved in the project, presents a certain homogeneity—as they share the same language combination, the same hours of in-person instruction, and the same autonomous practice in small working groups—and enables a more detailed analysis of the numerous and extensive responses provided to the open-ended questions (Hale and Napier 2013).

The anonymous questionnaire, in turn, includes two thematic blocks: on the one hand, questions relating to the experience with Unit 3 (technical aspects, degree of interactivity, time spent, prior competencies, usefulness of activities, and overall satisfaction) and, on the other, questions about competence self-assessment (progress relative to the baseline level, motivation, and specific difficulties). In this case, the survey was distributed to all participating students upon completion of the didactic unit.

Regarding the particularities of the sample with the Spanish–Italian language pair, the specialized literature on interpreting pedagogy offers an overview of the characteristic difficulties of this combination. Various studies have demonstrated that interpreting is not carried out in the same manner across all language pairs (Fusco 1990; Russo and Rucci 1997; Simonetto 2002; Padilla Benítez and Abril Martí 2003; Morelli 2008). These specificities, observable in both professional practice and instruction, range from the management of cognitive resources in language pairs with a certain syntactic or lexical distance (Gile 2005), through morphosyntactic asymmetries (Russo and Rucci 1997), morphological problems derived from the risk of calques between cognate languages (Fusco 1990; Simonetto 2002), to

¹² Data current as of academic year 2024/25.

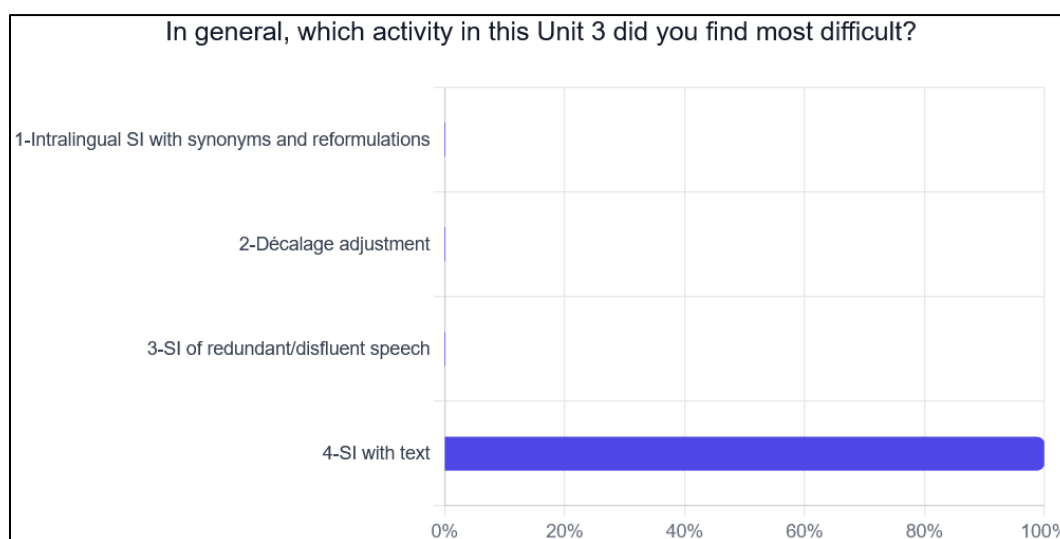
the need to effectively manage the *décalage* in the face of potential lexical ambiguities between Spanish and Italian (Morelli 2008).

4.2 Preliminary Results

The analysis of data from the surveys conducted among the cohort of Spanish–Italian students selected for the pilot testing of the didactic unit began with the analysis of the final self-assessment worksheet for “Preparatory Exercises for SI,” which contains seven closed-ended questions (ordinal scale) and six open-ended questions. Given the large volume of data collected in this worksheet, some especially relevant items were selected and analyzed for the purposes of this study (all ordinal scales and a selection of three series of open-ended responses).

The first set of data relates to the perception of difficulty and usefulness of the activities proposed in the didactic unit: all participants indicated Activity 4 (SI with text) as the most difficult (figure 4), while the perception of usefulness among students was evenly distributed (figure 5) among Activity 1 (Shadowing with synonyms and reformulations, 33.3%), Activity 2 (*Décalage* adjustment, 33.3%), and Activity 4 (SI with text, 33.3%).

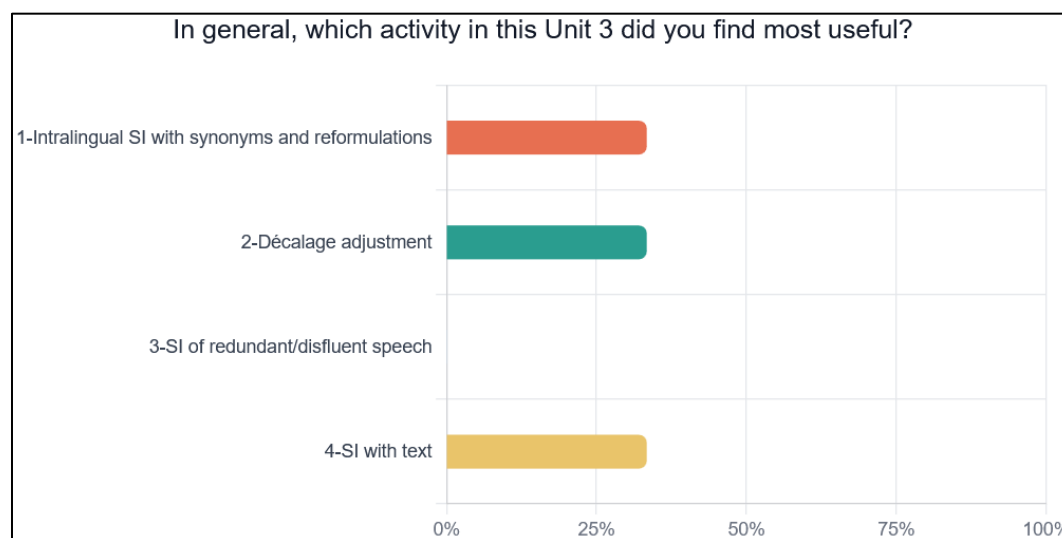
Figure 4. Self-assessment worksheet: perception of difficulty of activities



Cross-referencing the data in figure 4 with the open-ended responses provided by participants, it emerges that this marked perception of difficulty in the case of SI with text is mainly due to three factors: students’ limited familiarity with this type of exercise, difficulties

in managing multiple sensory inputs, and the speed of the original speech. It should be noted that this speech was chosen precisely because it was fast and contained a certain density of content, given that students had the complete transcription at their disposal and had been provided with all the specific terminology prior to the exercise.

Figure 5. Self-assessment worksheet: perception of usefulness of activities



Among the activities perceived as most useful (figure 5), Activities 1 (Shadowing with synonyms and reformulations), 2 (*Décalage* adjustment), and 4 (SI with text) stand out; the latter was simultaneously considered the most difficult. The open-ended responses confirm the pedagogical usefulness of working on syntactic-lexical availability (Kadota 2019; Mack 2021), of adjusting the *décalage* according to source text type and competence level (Russo and Pippa 2004; Setton and Dawrant 2016), and of practicing with multiple simultaneous sensory inputs (Baxter 2016; Seeber, Keller, and Hervais-Adelman 2020). Given recent advances in augmented interpreting with automatic speech recognition (ASR) and real-time captioning systems (Prandi 2023; Frittella 2023), the ability to manage multiple inputs has become increasingly relevant (Bertozzi and Cecchi 2023). The qualitative analysis focused on three fundamental SI skill areas: simultaneous listening and oral production (table 1), *décalage* adjustment (table 2), and lexical repertoire availability (table 3).

Table 1. Self-assessment worksheet: simultaneous listening and oral production capabilities¹³

Self-assessment of strengths and weaknesses (simultaneous listening and speaking)	
Strengths	Weaknesses
I think I manage to keep a good tone of voice.	Sometimes it takes me a little while to find the right words (synonyms in Italian, equivalents in other languages).
I try to maintain the coherence and cohesion of the speech (although I don't always succeed).	Sometimes I lag behind when the speaker talks too fast.
In general, I manage simultaneous listening and speaking well.	Difficulty in managing visual input along with auditory input.
I manage to reformulate when necessary.	Sometimes I lose information.
I manage names and numbers well.	Need to improve short-term memory.
I have a good rhythm and the ability to synthesize redundant concepts well.	Need to improve self-control and avoid calques.
If I have visual and auditory input, I manage them well.	Sometimes my <i>décalage</i> is too short and I lose coherence.
I always maintain a calm and convincing tone of voice.	I need to pay more attention to certain expressions.
Although I am aware that it has taken me some time, simultaneity is no longer so difficult for me.	When there are too many details, I often fail to memorize or manage them well in a short time.
Reformulation capacity to overcome difficulties caused by complex structures.	I cannot always find synonyms or the exact term in a short time.
	I still have difficulties when the speaker talks too fast.
	Sometimes I do not have complete control over my output and mispronounce some words.

Among the recurring elements in table 1, regarding strengths, the ability to listen and speak simultaneously, to reformulate, and to maintain a good tone of voice stand out; regarding weaknesses, problems of lexical availability, short-term memory, and managing a rapid speech rate recur. Some common elements also appear in the second block of qualitative data, those collected in the self-assessment worksheet on the ability to adjust the *décalage* (table 2).

¹³ All open-ended responses have been translated from Italian to English by the author.

Table 2. Self-assessment worksheet: *décalage* adjustment capabilities

Self-assessment of strengths and weaknesses (capacity to adjust the <i>décalage</i>)	
Strengths	Weaknesses
I try to modulate the <i>décalage</i> according to the characteristics of the original speech.	Sometimes I keep a <i>décalage</i> that is too long, and I fall behind.
In speeches with many disfluencies, I usually keep a long enough <i>décalage</i> to avoid them in the interpretation.	In some cases I could lengthen it a little more to allow me to reformulate better.
Good modulation of the <i>décalage</i> according to the needs of the speech.	If I shorten the <i>décalage</i> too much, I run the risk of producing calques.
I manage to eliminate disfluencies and redundancies.	I do not have a good short-term memory: if I lengthen it too much, I run the risk of losing information.
I know how to wait when necessary to understand the message.	I need to improve my short-term memory.
Even if I lose some element, I am able to adjust the <i>décalage</i> while interpreting.	I need to learn to wait more, as I am often sticking too closely to the original text.
Although it is difficult, I always manage to finish all sentences.	My <i>décalage</i> is too short and, when I lengthen it, I sometimes lose information.
If the text allows it, I maintain a short <i>décalage</i> that allows me a good interpretation.	I am not yet able to lengthen the <i>décalage</i> when I need to.
I avoid having a <i>décalage</i> that is too short so as not to produce calques that could be avoided by distancing myself a bit from the surface of the text.	When I realize that I am too far behind, I sometimes decide to omit sentences, which leads to major omissions.

In this section, some of the strengths emerge again (table 2), such as the ability to extend or reduce this time according to the characteristics of the original speech, while among the weaknesses, memorization difficulties when extending the *décalage* and calque problems when this waiting time is reduced recur. Other interesting qualitative data come from the last self-assessment block, concerning the availability of a broad lexical repertoire in SI (table 3).

Table 3. Self-assessment worksheet: lexical repertoire availability in SI

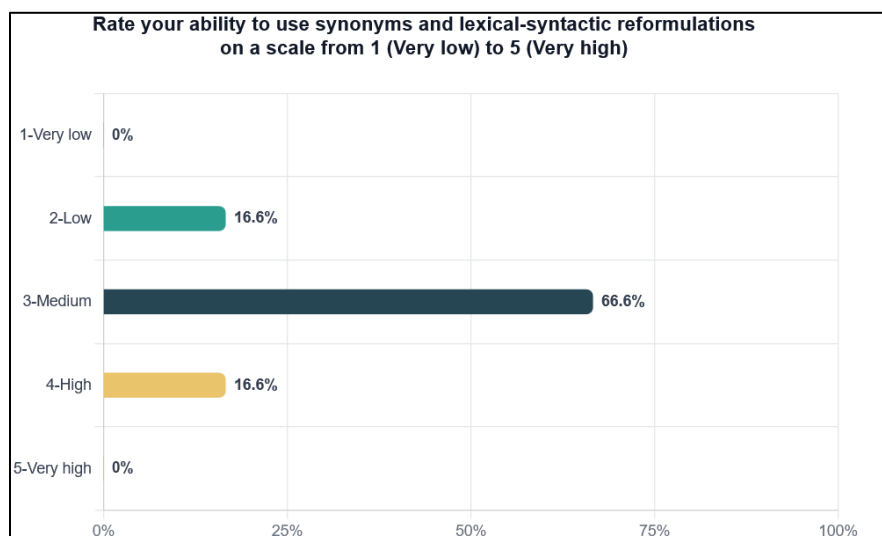
Self-assessment of strengths and weaknesses (readily available lexicon in SI)	
Strengths	Weaknesses
I have improved compared to before.	I often struggle to find synonyms and alternatives → risk of repetitions.
I am sometimes satisfied with the lexical	I keep using terms I am not convinced about

solutions I find.	because I cannot think of better alternatives.
I have occasionally found good lexical solutions.	The vocabulary I would like to use is not always readily available to me.
I manage to reformulate easily from a syntactic perspective.	I should learn to reformulate better at a lexical level.
I always find synonyms if the speech is slow.	I need to automate certain collocations.
I am able to reformulate syntactic structures rather than individual words, and I find synonyms from the context.	I must speed up the retrieval of synonyms from my memory.
In general, I try to take care of my mother tongue and use appropriate vocabulary.	When interpreting into the foreign language, since it is not my mother tongue, I do not have as many synonyms, and sometimes I condense the message too much.
I manage to find synonyms quickly so as not to get stuck if the exact word does not come to mind.	When experiencing cognitive overload, I tend to lower the register.
	When experiencing cognitive overload, I lose agreement between nouns and adjectives.
	I need to expand my vocabulary and improve particularly in searching for synonyms.

In this context, among the strengths, the ability to reformulate at the syntactic level and to find alternative lexical solutions stand out, especially in SI toward the mother tongue; among the weaknesses, some problems related to the use of idiomatic expressions or fixed phrases and difficulties in maintaining an appropriate register in situations of cognitive overload (table 3).

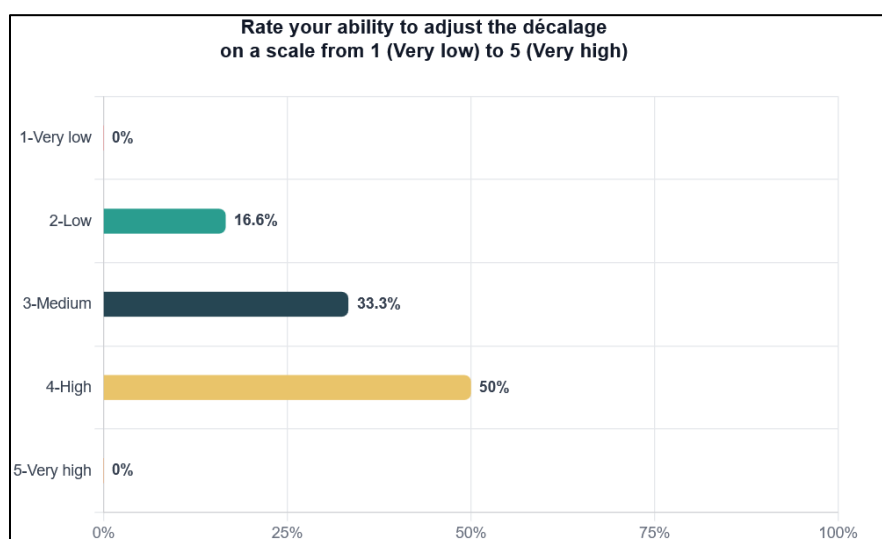
Returning to the quantitative data measured using the ordinal scale system, the self-assessment depicts the situation regarding the use of synonyms and syntactic-lexical reformulations (figure 6).

Figure 6. Self-assessment worksheet: ability to use synonyms/reformulations



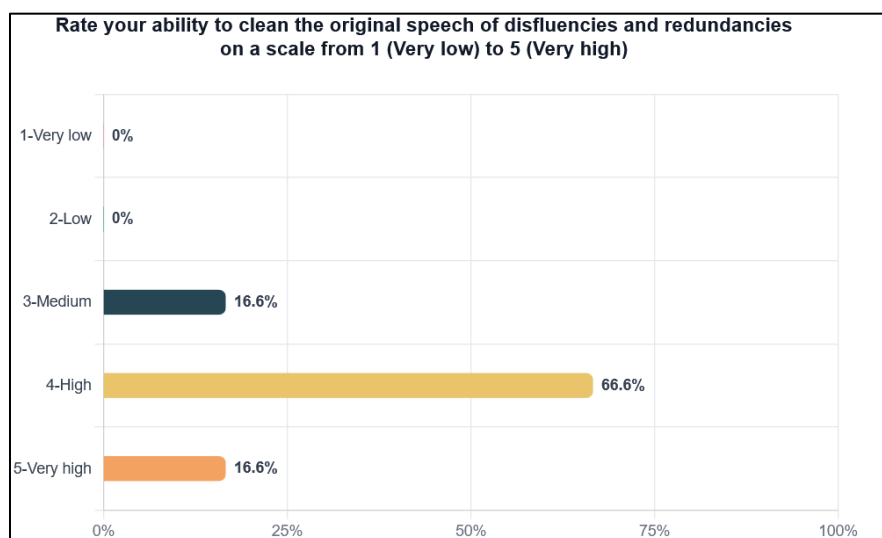
The homogeneous score distribution (figure 6) aligns with qualitative findings (tables 1–3): students show familiarity with synonyms and reformulations but struggle with register, repetitions, simplification, and partial meaning loss during fast speech or high cognitive load.

Regarding the ability to adjust *décalage* (figure 7), scores were high (50%), medium (33.3%), and low (16.6%). Although overall results are positive, qualitative data indicate a need to improve memorization when extending the *décalage* and to avoid calques when reducing it, a specific challenge in SI between cognate languages like Spanish and Italian.

Figure 7. Self-assessment worksheet: ability to adjust the *décalage*

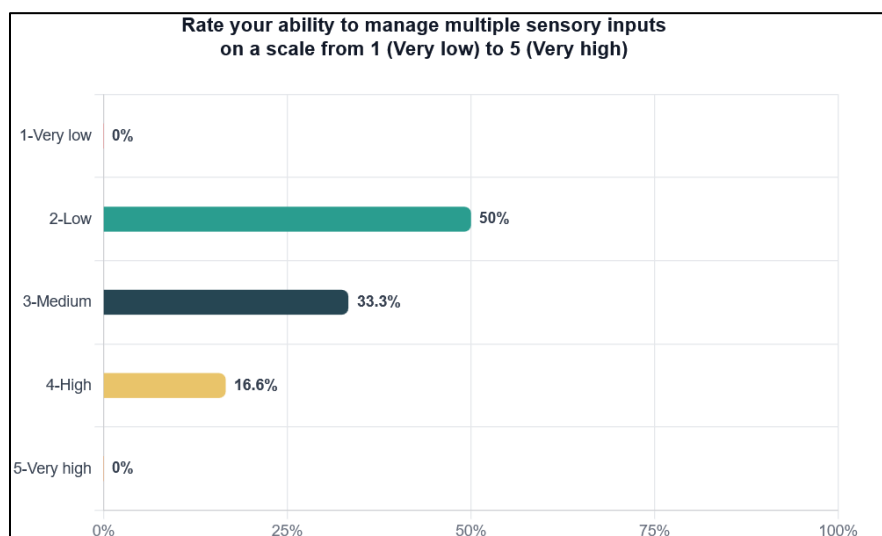
Scores were higher for the “ability to clean the original speech of disfluencies and redundancies” (figure 8). The unit featured a dedicated activity for ‘cleaning’ highly repetitive speeches containing pauses and unfinished sentences (Bertozzi 2014). These positive results confirm the importance of delivering a fluent, well-structured, and pleasant interpreted text.

Figure 8. Self-assessment worksheet: ability to clean the original speech



The ability to manage multiple sensory inputs, in contrast, received one of the lowest scores (figure 9), with 50% of self-assessments rated as ‘low,’ 33.3% as ‘medium,’ and only 16.6% as ‘high.’

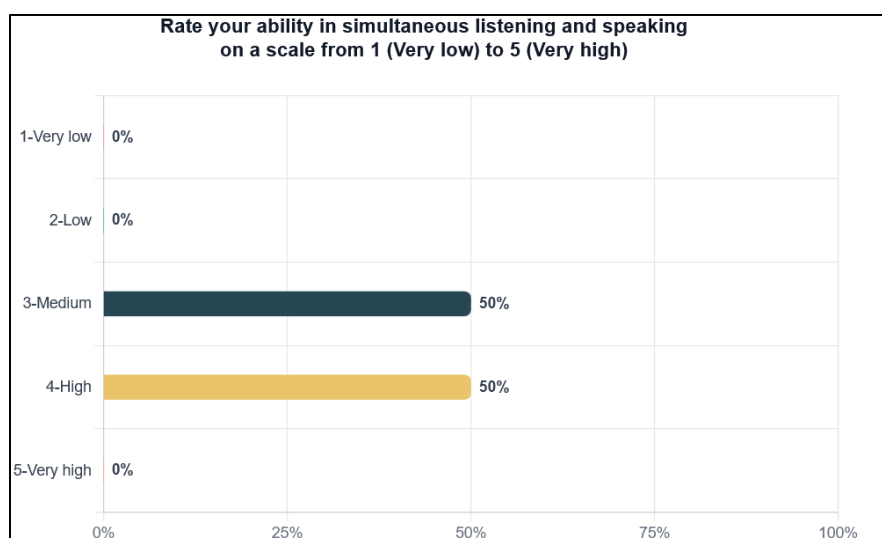
Figure 9. Self-assessment worksheet: ability to manage multiple sensory inputs



This sub-competence entails managing simultaneous auditory and visual stimuli (e.g., slides, transcripts), which has become increasingly important due to RSI platforms requiring multi-screen pair work (Ziegler and Gigliobianco 2018; Bertozzi and Cecchi 2023) and AI tools such as ASR-based tools. Consequently, specific pedagogical activities are necessary to train this skill for SI with text and modern, tech-enabled workflows.

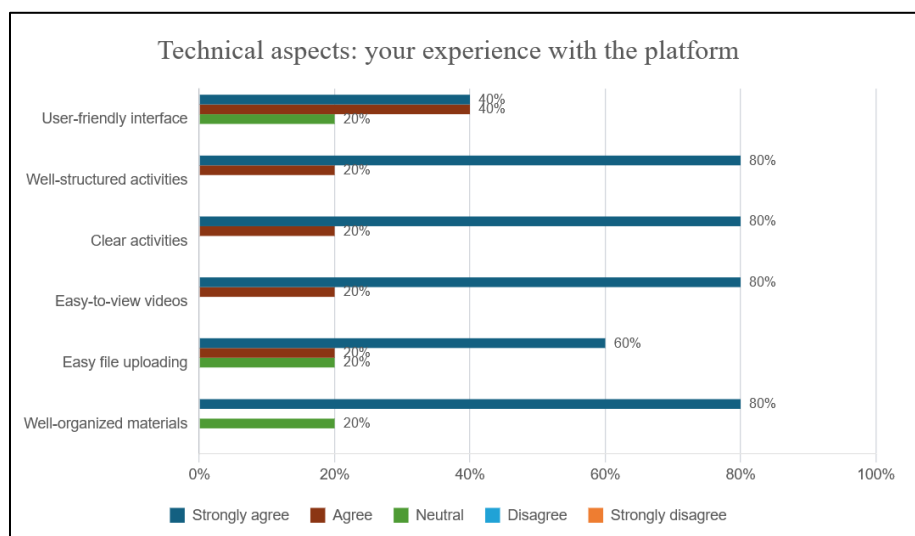
The final quantitative self-assessment indicator—simultaneous listening and speaking (figure 10)—yielded ‘medium’ scores in 50% of cases and ‘high’ scores in the remaining 50%. This aligns with qualitative findings (table 1), where students frequently identified this sub-competence as a strength, reflecting its continuous practice since the first year of the Interpreting MA.

Figure 10. Self-assessment worksheet: simultaneous listening and oral production ability



The analysis of the Spanish–Italian cohort continues with an anonymous questionnaire for pilot participants, assessing platform usability, time spent, skills, content organization, and overall satisfaction. The first data block (figure 11) evaluates technical aspects: interface usability, activity clarity, media/file handling, and material organization.

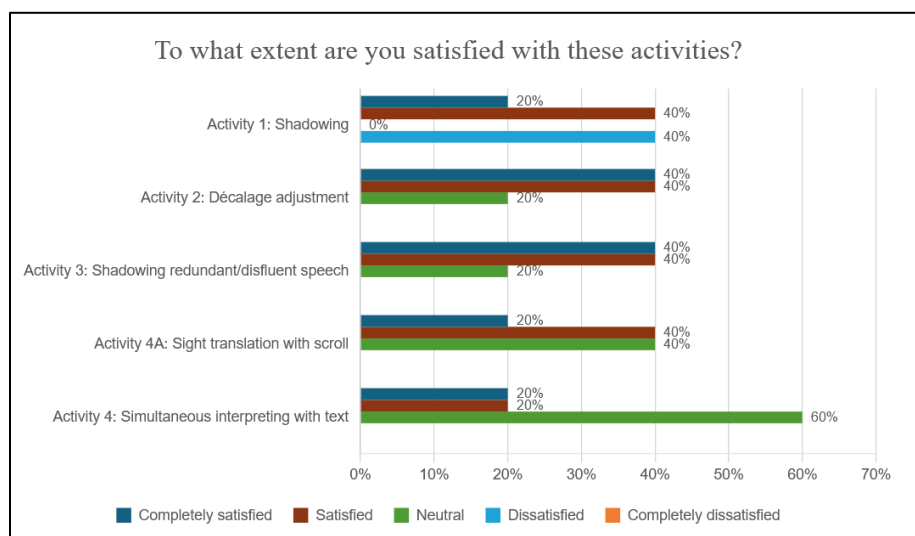
Figure 11. Anonymous questionnaire: technical aspects



The first questionnaire block (figure 11) reveals highly positive feedback for activity structure, clarity, and video viewing (80% ‘Strongly agree,’ 20% ‘Agree’). Results were also positive for interface usability (40% ‘Strongly agree,’ 40% ‘Agree,’ 20% ‘Neutral’), file uploading (60% ‘Strongly agree,’ 20% ‘Agree,’ 20% ‘Neutral’), and material organization (80% ‘Strongly agree,’ 20% ‘Neutral’). Another indicator measured in the anonymous questionnaire is the time, workload, and prior competencies needed to complete Unit 3: here, 100% of the sample indicated all three elements as ‘adequate’ in relation to the pedagogical objectives.

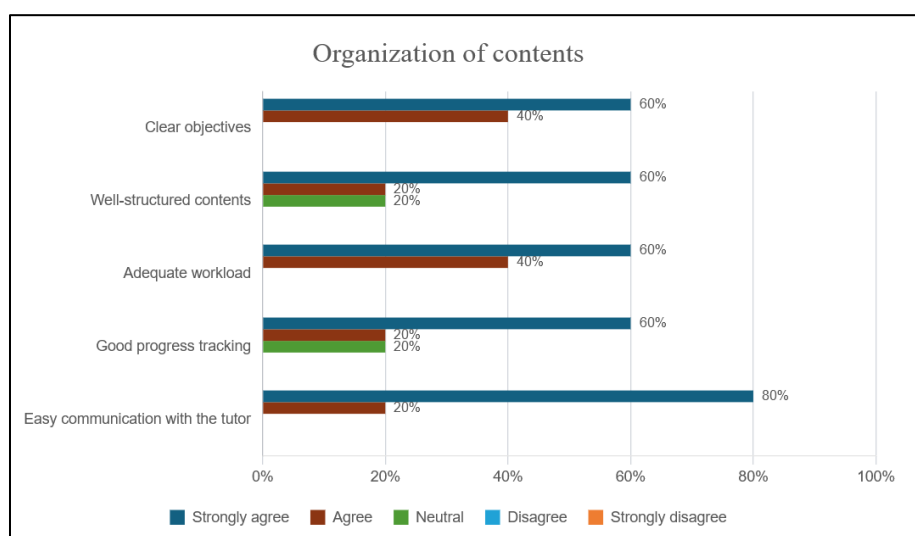
Student satisfaction was positive overall but varied across activities (figure 12). The highest scores went to Activity 2 (*décalage* adjustment) and Activity 3 (cleaning redundant/disfluent speech). Sight translation via auto-scrolling software—which mimics oral discourse processing through external time constraints—scored well (20% ‘Completely satisfied,’ 40% ‘Satisfied,’ 40% ‘Neutral’). Conversely, Activity 4 (SI with text) yielded more neutral results (20% ‘Completely satisfied,’ 20% ‘Satisfied,’ 60% ‘Neutral’), and Activity 1 (shadowing with synonyms/reformulations) received the only negative ratings (20% ‘Completely satisfied,’ 40% ‘Satisfied,’ 40% ‘Dissatisfied’). Cross-referencing qualitative self-assessments indicates Activity 4 was considered difficult due to speech rate and informational density, whereas Activity 1 was perceived as easier due to a slower, less technical source text.

Figure 12. Anonymous questionnaire: Unit 3 activities, satisfaction level



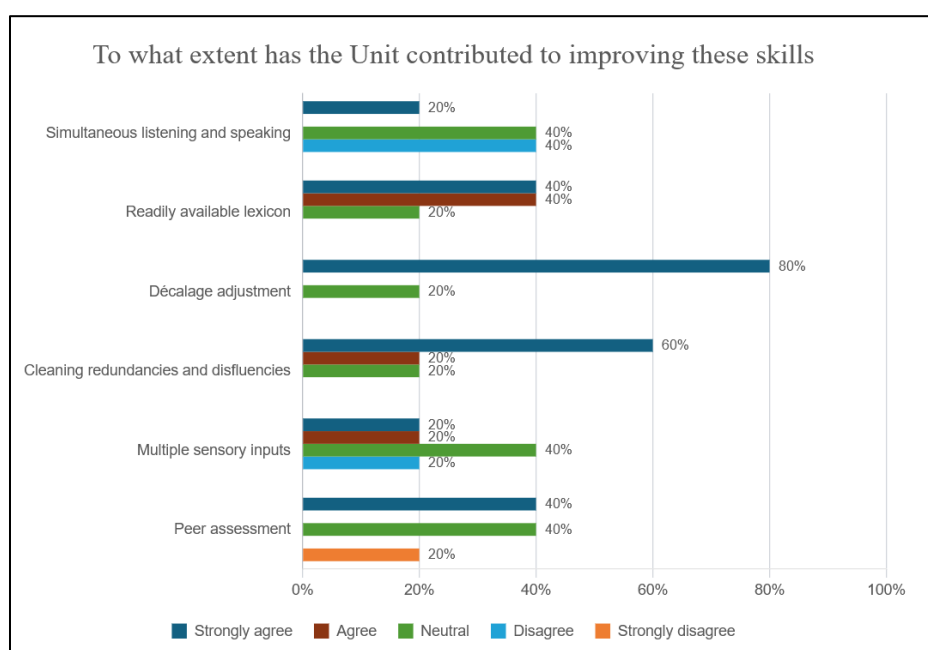
Another block of questionnaire responses refers to content organization, the possibility of interaction, and continuous tracking of pedagogical progress (figure 13). Here, all indicators are positive, with particularly high scores, as in the case of interaction/communication with the tutor (80% ‘Strongly agree’ and 20% ‘Agree’), clarity of objectives, and adequacy of workload (60% ‘Strongly agree’ and 40% ‘Agree’). Content structuring and the possibility of tracking progress registered slightly lower, though still positive, scores (60% ‘Strongly agree,’ 20% ‘Agree,’ and 20% ‘Neither agree nor disagree’).

Figure 13. Anonymous questionnaire: content organization



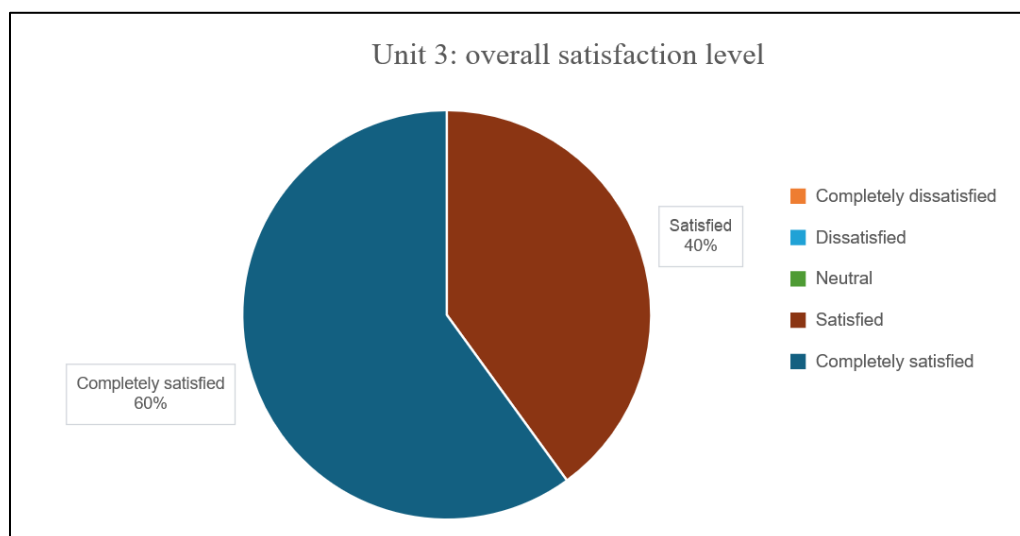
Comparing baseline and post-unit self-assessments (figure 14) reveals generally positive, yet varied, results across sub-competences. The most improved skill was adjusting *décalage* (80% ‘Strongly agree,’ 20% ‘Neither agree nor disagree’), followed by cleaning redundancies and disfluencies (60% ‘Strongly agree,’ 20% ‘Agree,’ 20% ‘Neither agree nor disagree’), and SI lexical availability (40% ‘Strongly agree,’ 40% ‘Agree,’ 20% ‘Neither agree nor disagree’). Peer assessment showed the most negative polarization (40% very positive, 40% neutral, 20% very negative). Nevertheless, its overall results remain quite positive. The entire course was designed to enhance this sub-competence, which is crucial both during and after university training. Furthermore, high scores for this indicator in other didactic units (Bertozzi 2024c) confirm a generally positive trend in improving peer assessment skills.

Figure 14. Anonymous questionnaire: competence improvement before/after the didactic unit



The last piece of data selected for analysis in this study is the overall satisfaction level (figure 15), which yielded very positive results, in line with the scores obtained in the previous didactic units (Bertozzi 2024c), “Active Listening and Memorization” and “Preparatory Exercises for Consecutive Interpreting.”

Figure 15. Anonymous questionnaire: overall satisfaction level



5. Conclusions and Future Developments

The pilot of the “Preparatory Exercises for SI” unit validated the virtual environment’s technical viability and the pedagogical design’s effectiveness for Spanish–Italian students. Despite a small yet highly representative MA sample, data analysis yielded solid conclusions: anonymous questionnaires confirmed excellent reception of the platform’s technical, organizational, and interactive aspects, while self-assessments revealed specific pedagogical requirements for this cohort, laying the groundwork for imminent project expansion.

The first data block reveals high overall satisfaction (figure 15), good interactivity and content organization (figure 13), and very high technical scores for the platform housing innovative materials (figure 11). This confirms the successful pedagogical design and selection of Virtuale (Moodle-based) for this asynchronous course, fulfilling the principles for virtual interpreting environments (Rodríguez Melchor et al. 2020, 73). Furthermore, data on objective clarity and adequacy (figure 13) reaffirm the methodological alignment with the “Continuous Self-Learning in Interpreting” course goals: fostering autonomous, continuous learning (Sandrelli 2002; Gorm Hansen and Shlesinger 2007; Deysel and Lesch 2018), promoting student cooperation (Blasco Mayor and Jiménez Ivars 2007), encouraging collaborative tech use (Rodríguez Melchor et al. 2020; Bertozzi 2025a), and establishing a shared cross-functional competences pathway for all MA Interpreting students.

Regarding the Spanish–Italian cohort’s self-assessments, a key conclusion is the need for increased practice in managing multiple sensory inputs in SI. This sub-competence was perceived as the most difficult—particularly during SI with complete transcription (figure 4)—yet was also identified as one of the most useful (figure 5). Despite its importance, self-assessment scores were low (figure 9) and showed minimal perceived improvement post-unit (figure 14), suggesting a need for more targeted practice in handling simultaneous auditory (speech) and visual (transcripts, slides, scripts) stimuli. This skill is increasingly critical as remote/hybrid modalities become standard, requiring interpreters to manage multiple screens and applications (Ziegler and Gigliobianco 2018; Bertozzi and Cecchi 2023). Furthermore, AI-based computer-assisted interpreting (CAI) tools—such as InterpretBank (Prandi 2023), Cymo Note (Russello and Carbutto 2023), or SmarTerp (Rodríguez et al. 2021)—utilize ASR and instant subtitling. While helpful, these systems may increase cognitive load due to high visual information density (Li and Chmiel 2024), underscoring the necessity for pedagogical activities specifically designed to integrate auditory and multiple visual stimuli.

A second consideration from the self-assessment worksheets is the perceived importance of adjusting *décalage*. This sub-competence was ranked among the most useful (figure 5), yielding positive self-assessment scores (figure 7), high satisfaction with the exercises (figure 12), and significant perceived improvement (figure 14). Literature indicates that *décalage* duration is affected by directionality, presentation modality, speech speed, and interpreter experience (Janikowski and Chmiel 2025). Therefore, interpreter training should include preparatory exercises helping students calibrate *décalage* based on speech type. The study sample specifically highlighted the utility of these activities for managing memory during *décalage* extension and avoiding calques during its reduction, a critical skill for cognate language pairs like Spanish and Italian.

A third conclusion concerns the importance of techniques for ‘cleaning’ original speech of redundancies and disfluencies, such as filled/unfilled pauses, unfinished sentences, and hesitations (Bendazzoli, Sandrelli, and Russo 2011; Collard and Defrancq 2019). Although activities to improve this sub-competence showed lower perceived usefulness (figure 5), a comparison with the qualitative data reveals the significant value students place on producing a fluent, pleasant target text. Indeed, quantitative indicators show high self-assessment scores (figure 8), high satisfaction with specific activities (figure 12), and strong perceived improvement post-unit (figure 14). Ultimately, while much has been achieved,

dedicating specific activities to consolidating this sub-competence remains essential in interpreter training.

While the present study offers valuable preliminary insights by isolating the data from the Spanish–Italian cohort, it represents only the first phase of a broader pedagogical evaluation. As noted, 46 students completed Unit 3 across various language combinations. The targeted analysis of the six Spanish–Italian students allowed for a granular qualitative assessment of cognate language difficulties, effectively piloting our evaluation methodology. Moving forward, the immediate next phase of this research project will involve a comprehensive analysis of the remaining 40 students’ data, representing the other language combinations of the MA in Interpreting at the University of Bologna. This future development will be structured around two primary analytical frameworks. First, we will employ descriptive and inferential statistics to process the quantitative self-assessment and questionnaire data across the entire cohort, determining whether the high satisfaction rates (60% completely satisfied; 40% satisfied) and perceived skill improvements are statistically consistent across different language pairs. Second, a comparative qualitative framework will be utilized to contrast the specific SI sub-skill hurdles (such as *décalage* management and disfluency cleaning) encountered by students in cognate language pairs versus those in non-cognate pairs. We anticipate completing this comparative analysis within the next academic year, ultimately aiming to propose a fully scalable, evidence-based CAIT model that can be customized for specific language typologies within remote and hybrid learning environments.

Going beyond Unit 3, future developments include completing the pilot testing and didactic experimentation for the remaining “Continuous Self-Learning in Interpreting” units. This will follow the same modalities used for “Active Listening and Memorization” and “Preparatory Exercises for Consecutive Interpreting” (Bertozzi 2024c, 2025b) to ensure homogeneous, comparable data analysis. Post-pilot, all units will be integrated into the MA in Interpreting curriculum, a development anticipated for the next academic year. This integration will significantly increase the number of students completing activities, self-assessments, and questionnaires. The resulting expanded sample will provide more comprehensive data, allowing new results to be added to the preliminary findings presented here.

Another future objective expected within the next academic year is the expansion of the survey to all actors involved in the training process, beginning with instructors. Although

instructors were included in interviews and discussion groups during the pedagogical design phase and the identification of pedagogical requirements, it would be appropriate to administer the same survey given to students to instructors (with the necessary modifications) in order to contrast the preliminary conclusions from a different perspective.

The project “Continuous Self-Learning in Interpreting” is generating interest in language-specific applications. Current collaborations and thesis projects aim to adopt these methodologies for specific language pairs by designing and testing *ad hoc* pedagogical materials. This simultaneously broadens the analytical horizon and facilitates replicability studies, which are essential within Interpreting Studies (Olalla-Soler 2020). The ultimate objective is to apply this methodology to language-specific activities tailored to diverse language combinations.

Finally, the preliminary results from the first three units (“Active Listening and Memorization,” “Preparatory Exercises for Consecutive Interpreting,” and “Preparatory Exercises for SI”) will inform new activities tailored to identified student needs. For this specific unit, *ad hoc* exercises will be designed and implemented, indicatively within the next two academic years, to improve the management of concurrent sensory stimuli in SI. This aligns with technological and professional evolutions, integrating hybrid working modalities—such as augmented interpreting, CAI software, and automatic speech transcription—into pedagogical programs.

References

- Aguirre Fernández Bravo, Elena. 2020. “The Impact of ICT on Interpreting Students’ Self-Perceived Learning: A Flipped Learning Experience.” In *The Role of Technology in Conference Interpreter Training*, edited by María Dolores Rodríguez Melchor, Ildikó Horváth, and Kate Ferguson, 203–220. Oxford: Peter Lang.
- Amato, Amalia. 2021. “L’Annotazione in Interpretazione Consecutiva.” [Note-taking in consecutive interpreting.] In *Interpretare da e verso l’Italiano. Didattica e Innovazione per la Formazione dell’Interprete* [Interpreting from and into Italian: Didactics and innovation for interpreter training], edited by Mariachiara Russo, 3–18. Bologna: Bologna University Press.
- Baxter, Robert Neal. 2016. “Exploring the Possible Effects of Visual Presentations on Synchronicity and Lag in Simultaneous Interpreting.” *Sendebare: Revista de Traducción e Interpretación*, no. 27, 9–23. doi:10.30827/sendebare.v27i0.3834.
- Bazzanella, Carla. 1994. *Le Facce del Parlare* [The faces of speaking]. Firenze: Nuova Italia.
- Bendazzoli, Claudio, Annalisa Sandrelli, and Mariachiara Russo. 2011. “Disfluencies in Simultaneous Interpreting: A Corpus-Based Analysis.” In *Corpus-Based Translation Studies: Research and Applications*, edited by Alet Kruger, Kim Wallmach, and Jeremy Munday, 282–306. London: Continuum.
- Bertozzi, Michela. 2014. “Analisi delle Disfluenze del Discorso durante l’Interpretazione Simultanea da Italiano a Spagnolo.” [Analysis of speech disfluencies during simultaneous interpreting from Italian to Spanish.] *Cuadernos AISPI*, no. 4, 149–164. doi:10.14672/4.2014.1040.
- . 2024a. “Continuous Self-learning for Conference Interpreting Trainees: The Case of the University of Bologna.” *The Interpreters’ Newsletter*, no. 29, 19–39. doi:10.13137/2421-714X/36971.
- . 2024b. “Didáctica y Evaluación en Interpretación: Autoevaluación, Evaluación entre Pares y Heteroevaluación.” [Didactics and evaluation in interpreting: Self-assessment, peer assessment and hetero-assessment.] *REDIT: Revista Electrónica de Didáctica de la Traducción y de la Interpretación*, no. 18, 3–13. doi:10.24310/redit.18.2024.19822.
- . 2024c. “Escucha Activa y Memorización para Intérpretes: Resultados Preliminares de una Experimentación Didáctica.” [Active listening and memorization for interpreters: Preliminary results of a didactic experiment.] *TRANS: Revista de Traductología*, no. 28, 131–155. doi:10.24310/trt.28.2024.19394.
- . 2025a. “Digital Tools and Technologies Before, During and After Simultaneous Interpreting: Towards a Chronological Workflow-Based Professional and Didactic Model.” *The Interpreters’ Newsletter*, no. 30, 57–83. doi:10.13137/2421-714X/37796.

- . 2025b. “Itinerario Didáctico en Línea de Autoaprendizaje Continuo en Interpretación entre Español e Italiano: Nivel Inicial.” [Online continuous self-learning didactic itinerary in interpreting between Spanish and Italian: Initial level.] In *Aprender a Traducir y Traducir para Aprender. Nuevas Herramientas y Metodologías para la Docencia Universitaria* [Learning to translate and translating to learn: New tools and methodologies for university teaching], edited by Óscar Ferreiro-Vázquez, José Yuste Frías, and Alba Quintairos-Soliño, 23–47. Berlin: Peter Lang.
- Bertozzi, Michela, and Francesco Cecchi. 2023. “Simultaneous Interpretation (SI) Facing the Zoom Challenge: Technology-Driven Changes in SI Training and Professional Practice.” In *Proceedings of the International Workshop on Interpreting Technologies SAY-IT 2023*, edited by Gloria Corpas Pastor and Carlos Manuel Hidalgo-Ternero, 32–40. Shoumen: INCOMA. <https://lexytrad.es/SAYIT2023/say-it-2023-e-proceedings/>.
- Birčák, Andrej. 2025. “Remote Interpreting in the Context of University Training in Slovakia During the Covid-19 Pandemic.” *Research in Language* 23:86–113. doi:10.18778/1731-7533.23.06.
- Blasco Mayor, María J., and Amparo Jiménez Ivars. 2007. “E-Learning for Interpreting.” *Babel* 53 (4): 292–302. doi:10.1075/babel.53.4.01may.
- Braun, Sabine, and Catherine Slater. 2014. “Populating a 3D Virtual Learning Environment for Interpreting Students with Bilingual Dialogues to Support Situated Learning in an Institutional Context.” In “Dialogue Interpreting in Practice: Bridging the Gap between Empirical Research and Interpreter Education,” edited by Elena Davitti and Sergio Pasquandrea. Special Issue, *The Interpreter and Translator Trainer* 8 (3): 469–485. doi:10.1080/1750399X.2014.971484.
- Carsten, Svetlana, Nijolė Maskaliūnienė, and Matthew Perret. 2020. “The Collaborative Multilingual Multimedia Project ORCIT (Online Resources in Conference Interpreter Training): Sharing Pedagogical Good Practice and Enhancing Learner Experience.” In *The Role of Technology in Conference Interpreter Training*, edited by María Dolores Rodríguez Melchor, Ildikó Horváth, and Kate Ferguson, 77–99. Oxford: Peter Lang.
- Castillo, Pedro. 2019. “Using NICTs for Media Interpreting Training: Bringing Interpreter-Mediated TV News and Radio Interviews to the Classroom.” *Revista Tradumàtica*, no. 17, 108–127. doi:10.5565/rev/tradumatica.232.
- Cavazzuti, Giulia. 2019. “Lo Shadowing e la Didattica dell’Interpretazione.” [Shadowing and the Didactics of Interpreting.] Unpublished master’s thesis, University of Bologna.
- Chiang, Yung-Nan. 2009. “Foreign Language Anxiety in Taiwanese Student Interpreters.” *Meta: Translators’ Journal* 54 (3): 605–621. doi:10.7202/038318ar.
- Collard, Camille, and Bart Defrancq. 2019. “Disfluencies in Simultaneous Interpreting, a Corpus-Based Study with Special Reference to Sex.” In *New Empirical Perspectives*

- on *Translation and Interpreting*, edited by Lore Vandevoorde, Joke Daems, and Bart Defrancq, 264–299. New York: Routledge.
- De Groot, Annette M. B. 2000. “A Complex-skill Approach to Translation and Interpreting.” In *Tapping and Mapping the Processes of Translation and Interpreting*, edited by Sonja Tirkkonen-Condit and Riitta Jääskeläinen, 53–68. Amsterdam: John Benjamins.
- de Manuel Jerez, Jesús. 2006. “La Incorporación de la Realidad Profesional a la Formación de Intérpretes de Conferencias mediante las Nuevas Tecnologías y la Investigación-acción.” [The incorporation of professional reality into conference interpreter training through new technologies and action research.] PhD diss., University of Granada.
- Deysel, Elizabeth, and Harold Lesch. 2018. “Experimenting with Computer-Assisted Interpreter Training Tools for the Development of Self-Assessment Skills: National Parliament of RSA.” In *Interpreting and Technology*, edited by Claudio Fantinuoli, 61–90. Berlin: Language Science Press.
- Djovčoš, Martin. 2020. “A Methodology for Tracking Interpreting Students’ Progress.” In *Interpreter Training - Experience, Ideas, Perspectives*, edited by Zusana Bohušova, Martin Djovčoš, and Miroslava Melicherčíková, 15–27. Vienna: Prae Sens.
- Fantinuoli, Claudio. 2017. “Computer-Assisted Preparation in Conference Interpreting.” *Translation & Interpreting* 9 (2): 24–37. doi:10.12807/ti.109202.2017.a02.
- Fantinuoli, Claudio, and Bianca Prandi. 2018. “Teaching Information and Communication Technologies: A Proposal for the Interpreting Classroom.” *Trans-kom: Journal of Translation and Technical Communication Research* 11 (2): 162–182. https://www.trans-kom.eu/bd11nr02/trans-kom_11_02_02_Fantinouli_Prandi_Teaching.20181220.pdf.
- Frittella, Francesca Maria. 2023. *Usability Research for Interpreter-Centred Technology: The Case Study of SmarTerp*. Berlin: Language Science Press.
- Fusco, Maria Antonietta. 1990. “Quality in Conference Interpreting Between Cognate Languages: A Preliminary Approach to the Spanish-Italian Case.” *The Interpreters’ Newsletter*, no. 3, 93–97. <https://www.openstarts.units.it/server/api/core/bitstreams/c0628a07-095b-48e3-ad10-410e114b5d1b/content>.
- Gile, Daniel. 1999. “Testing the Effort Models’ Tightrope Hypothesis in Simultaneous Interpreting - A Contribution.” *Hermes Journal of Linguistics*, no. 23, 153–172. doi:10.7146/hjlc.v12i23.25553.
- . 2005. “Directionality in Conference Interpreting: A Cognitive View.” In *Directionality in Interpreting. The ‘Retour’ or the Native?*, edited by Rita Godijns and Michael Hinderdael, 9–26. Gent: Communication & Cognition.
- Gillies, Andrew. 2013. *Conference Interpreting: A Student’s Practice Book*. London: Routledge.

- Goldsmith, Joshua. 2018. "Tablet Interpreting: Consecutive Interpreting 2.0." In "Community Interpreting, Translation, and Technology," edited by Nike K. Pokorn and Christopher D. Mellinger. Special Issue, *Translation and Interpreting Studies* 13 (3): 342–365. doi:10.1075/tis.00020.gol.
- Gorm Hansen, Inge, and Miriam Shlesinger. 2007. "The Silver Lining: Technology and Self-Study in the Interpreting Classroom." *Interpreting* 9 (1): 95–118. doi:10.1075/intp.9.1.06gor.
- Hale, Sandra, and Jemina Napier. 2013. *Research Methods in Interpreting: A Practical Resource*. London: Bloomsbury.
- Horváth, Ildikó, and Márta Seresi. 2020. "Virtual Classes: Students' and Trainers' Perspectives." In *The Role of Technology in Conference Interpreter Training*, edited by María Dolores Rodríguez Melchor, Ildikó Horváth, and Kate Ferguson, 155–178. Oxford: Peter Lang.
- Ibrahim-González, Noraini. 2011. "E-Learning in Interpreting Didactics: Students' Attitudes and Learning Patterns, and Instructor's Challenges." *JoSTrans: The Journal of Specialised Translation*, no. 16, 224–241. doi:10.26034/cm.jostrans.2011.495.
- Iglesias Fernández, Emilia. 2007. *La Didáctica de la Interpretación de Conferencias: Teoría y Práctica* [The didactics of conference interpreting: Theory and practice]. Granada: Comares.
- Janikowski, Przemysław, and Agnieszka Chmiel. 2025. "Ear–Voice Span in Simultaneous Interpreting: Text-Specific Factors, Interpreter-Specific Factors and Individual Variation." *Interpreting* 27 (1): 28–51. doi:10.1075/intp.00116.jan.
- Jiménez Serrano, Óscar. 2021. "Hay Primeros Estudios que Indican que se ha Trasladado el Grueso de la Interpretación a la Remota." [There are early studies indicating that the bulk of interpreting has moved to remote.] *CLINA* 7 (1): 43–55. doi:10.14201/clina2021714355.
- Kadota, Shuhei. 2019. *Shadowing as a Practice in Second Language Acquisition: Connecting Inputs and Outputs*. Abingdon: Routledge.
- Kalina, Sylvia. 2000. "Interpreting Competences as a Basis and a Goal for Teaching." *The Interpreters' Newsletter*, no. 10, 3–32. <https://scispace.com/pdf/interpreting-competences-as-a-basis-and-a-goal-for-teaching-2o8v8gp0f3.pdf>.
- Kohn, Kurt, and Sylvia Kalina. 1996. "The Strategic Dimension of Interpreting." *Meta: Translators' Journal* 41 (1): 118–138. doi:10.7202/003333ar.
- Kriston, Andrea. 2012. "The Importance of Memory Training in Interpretation." *Professional Communication and Translation Studies* 5 (1-2): 79–86. doi:10.59168/XATP5420.

- Li, Tianyun, and Agnieszka Chmiel. 2024. "Automatic Subtitles Increase Accuracy and Decrease Cognitive Load in Simultaneous Interpreting." *Interpreting: International Journal of Research and Practice in Interpreting* 26 (2): 253–281. doi:10.1075/intp.00111.li.
- Li, Xiangdong. 2024. "Research in Interpreter and Translator Education (1955-2022): A State-of-the-Art Review." *The Interpreter and Translator Trainer* 18 (4): 523–545. doi:10.1080/1750399X.2024.2407684.
- Mack, Gabriele. 2021. "L'Interpretazione Simultanea." [Simultaneous interpreting.] In *Interpretare da e verso l'Italiano: Didattica e Innovazione per la Formazione dell'Interprete* [Interpreting from and into Italian: Didactics and innovation for interpreter training], edited by Mariachiara Russo, 19–40. Bologna: Bologna University Press.
- Mahyub Rayaa, Bachir, and Anne Martin. 2022. "Remote Simultaneous Interpreting: Perceptions, Practices and Developments." *The Interpreters' Newsletter*, no. 27, 21–42. doi:10.13137/2421-714X/34390.
- Ma, Jing. 2013. "A Study of Interpreting Skills from the Perspective of Interpreting Process." *Journal of Language Teaching and Research* 4 (6): 1232–1237. doi:10.4304/jltr.4.6.1232-1237.
- Mazzei, Cristiano, and Laurence Jay-Rayon Ibrahim Aibo. 2022. *The Routledge Guide to Teaching Translation and Interpreting Online*. London: Routledge.
- Melicherčíková, Miroslava. 2020. "Mapping Progress in Students' Consecutive Interpreting Skills." In *Interpreter Training - Experience, Ideas, Perspectives*, edited by Zusana Bohušova, Martin Djovčoš, and Miroslava Melicherčíková, 28–46. Vienna: Prae Sens.
- Morelli, Mara. 2008. "Estudio sobre la Ambigüedad en la Interpretación Simultánea y en la Traducción a la Vista Español-Italiano." [Study on ambiguity in Spanish-Italian simultaneous interpreting and sight translation.] PhD diss., University of Granada.
- Olalla-Soler, Christian. 2020. "Practices and Attitudes Toward Replication in Empirical Translation and Interpreting Studies." *Target: International Journal of Translation Studies* 32 (1): 3–36. doi:10.1075/target.18159.ola.
- Padilla Benítez, Presentación, and Isabel Abril Martí. 2003. "Implicaciones de la Dirección Inglés-Español en la Adquisición de la Técnica de Interpretación Simultánea." [Implications of the English-Spanish direction in the acquisition of the simultaneous interpreting technique.] In *La direccionalidad en traducción e interpretación. Perspectivas teóricas, profesionales y didácticas* [Directionality in translation and interpreting: Theoretical, professional and didactic perspectives], edited by Dorothy Kelly, 391–406. Granada: Atrio.

- Ponce Márquez, Nuria. 2011. “Modelo de evaluación de la comunicación oral en el proceso de enseñanza/aprendizaje de la interpretación simultánea.” [Model for evaluating oral communication in the teaching/learning process of simultaneous interpreting.] *REDIT: Revista Electrónica de Didáctica de la Traducción y de la Interpretación*, no. 7, 1–15. doi:10.24310/REDIT.2012.v0i7.1946.
- Pöschhacker, Franz, and Minhua Liu. 2024. “Interpreting Technologized: Distance and Assistance.” *Interpreting: International Journal of Research and Practice in Interpreting* 26 (2): 157–177. doi:10.1075/intp.00112.poc.
- Prandi, Bianca. 2023. *Computer-Assisted Simultaneous Interpreting: A Cognitive-Experimental Study on Terminology*. Berlin: Language Science Press.
- Rodríguez Melchor, María Dolores, Ildikó Horváth, and Kate Ferguson, eds. 2020. *The Role of Technology in Conference Interpreter Training*. Oxford: Peter Lang.
- Rodríguez, Susana, Roberto Gretter, Marco Matassoni, Daniele Falavigna, Álvaro Alonso, Oscar Corcho, and Mariano Rico. 2021. “SmarTerp: A CAI System to Support Simultaneous Interpreters in Real-Time.” In *Proceedings of the Translation and Interpreting Technology Online Conference*, edited by Ruslan Mitkov, Vilelmini Sosoni, Julie Christine Giguère, Elena Murgolo, and Elizabeth Deyssel, 102–109. Shoumen: INCOMA Ltd. <https://aclanthology.org/2021.triton-1.12/>.
- Russello, Claudio, and Matilde Carbutto. 2023. “Enhancing Numerical Accuracy in Simultaneous Interpreting Students: An Exploratory Study Comparing Human and AI-based Support.” *The Interpreters’ Newsletter*, no. 28, 69–90. doi:10.13137/2421-714X/35551.
- Russo, Mariachiara, and Marco Rucci. 1997. “Verso una Classificazione degli Errori nella Simultanea dallo Spagnolo all’Italiano.” [Towards a classification of errors in simultaneous interpreting from Spanish into Italian.] In *Nuovi orientamenti negli studi sull’interpretazione* [New trends in interpreting studies], edited by Laura Gran and Alessandra Riccardi, 179–199. Trieste: SSLMIT.
- Russo, Mariachiara, and Salvador Pippa. 2004. “Aptitude to Interpreting: Preliminary Results of a Testing Methodology Based on Paraphrase.” *Meta: Translators’ Journal* 49 (2): 409–432. doi:10.7202/009367ar.
- Sandrelli, Annalisa. 2002. “Computers in the Training of Interpreters: Curriculum Design Issues.” In *Perspectives on Interpreting*, edited by Giuliana Garzone, Peter Mead, and Maurizio Viezzi, 189–204. Bologna: CLUEB.
- Sandrelli, Annalisa, and Jim Hawkins. 2006. “Computer Assisted Interpreter Training (CAIT): What is the Way Forward?” In *Proceedings of Accessible Technologies in Translation and Interpreting Conference*.

- Schafer, Gertrude. 2011. “Developing Expertise Through a Deliberate Practice Project.” *International Journal of Interpreter Education* 3 (1): 16–27. <https://open.clemson.edu/ijie/vol3/iss1/4>.
- Seeber, Kilian G., and Carmen Delgado Luchner. 2020. “Simulating Simultaneous Interpreting with Text: From Training Model to Training Module.” In *The Role of Technology in Conference Interpreter Training*, edited by María Dolores Rodríguez Melchor, Ildikó Horváth, and Kate Ferguson, 129–151. Oxford: Peter Lang.
- Seeber, Kilian G., Laura Keller, and Alexis Hervais-Adelman. 2020. “When the Ear Leads the Eye – The Use of Text During Simultaneous Interpretation.” *Language, Cognition and Neuroscience* 35 (10): 1480–1494. doi:10.1080/23273798.2020.1799045.
- Setton, Robin. 2001. “Deconstructing SI: A Contribution to the Debate on Component Processes.” *The Interpreters’ Newsletter*, no. 11, 1–26. <http://hdl.handle.net/10077/2443>.
- . 2010. “From Practice to Theory and Back in Interpreting: The Pivotal Role of Training.” *The Interpreters’ Newsletter*, no. 15, 1–18. <https://www.openstarts.units.it/server/api/core/bitstreams/052c7c4d-066c-44da-b48e-a536cc35cad5/content>.
- Setton, Robin, and Andrew Dawrant. 2016. *Conference Interpreting: A Trainer’s Guide*. Amsterdam: John Benjamins.
- Simonetto, Francesca. 2002. “Interference Between Cognate Languages: Simultaneous Interpreting from Spanish into Italian.” In *Perspectives on Interpreting*, edited by Giuliana Garzone, Peter Mead, and Maurizio Viezzi, 1–18. Bologna: CLUEB.
- Spinolo, Nicoletta. 2020. “Nuevas Tecnologías para la Transmisión de la Interpretación Simultánea: Una Revolución ya en Marcha.” [New technologies for the transmission of simultaneous interpreting: A revolution already underway.] In “Technology and Interpreter Education and Practice,” edited by Nicoletta Spinolo and Amalia Amato. Special Issue, *inTRAlinea*. <https://www.intralinea.org/specials/article/2516>.
- Sveda, Pavol, and Ivo Poláček. 2020. “Student Progress in Interpreter Training: An Empirical Study.” In *Interpreter Training - Experience, Ideas, Perspectives*, edited by Zusana Bohušová, Martin Djovčoš, and Miroslava Melicherčíková, 47–62. Vienna: Prae Sens.
- Şahin, Mehmet. 2013. “Virtual Worlds in Interpreter Training.” *The Interpreter and Translator Trainer* 7 (1): 91–106. doi:10.1080/13556509.2013.10798845.
- Torres Díaz, María Gracia. 2003. “El Trabajo en Equipo y el Aprendizaje Cooperativo en la Formación del Intérprete en la Modalidad de Simultánea.” [Teamwork and cooperative learning in interpreter training in the simultaneous mode.] *TRANS: Revista de Traductología*, no. 7, 97–104. doi:10.24310/TRANS.2003.v0i7.2951.

- Valero Garcés, Carmen, and Samantha Cayron. 2022. “El Impacto de la Pandemia de COVID-19 en la Traducción e Interpretación en los Servicios Públicos (TISP) y su Evolución en el Futuro.” [The impact of the COVID-19 pandemic on public service translation and interpreting (PSTI) and its future evolution.] *FITISPos International Journal* 9 (1): 7–23. <https://fitisposij.web.uah.es/OJS/index.php/fitispos/article/view/336/298>.
- Wadensjö, Cecilia. 1998. *Interpreting as Interaction*. London: Longman.
- Zhong, Weihe. 2003. “Memory Training in Interpreting.” *Translation Journal* 7 (3). <http://www.translationjournal.net/journal/25interpret.htm>.
- Ziegler, Klaus, and Sebastiano Gigliobianco. 2018. “Present? Remote? Remotely Present! New Technological Approaches to Remote Simultaneous Conference Interpreting.” In *Interpreting and Technology*, edited by Claudio Fantinuoli, 119–139. Berlin: Language Science Press.