SEM23. AI and human audiovisual translation and media accessibility: Ethical and practical challenges for translators and language learners

12 September h. 16:30-19:00, room 1 Moro (first floor)

Convenors
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Abstract
In recent years, the rise and application of sophisticated technologies and tools powered by Artificial Intelligence (AI) have become increasingly pervasive in training audiovisual translation professionals and facilitating second language acquisition, particularly in English as a lingua franca. Among these are speech-to-text applications for subtitling (e.g., Speechmatics, Turboscribe, Broadstream), machine translation tools (e.g., Google Translate, DeepL), machine learning applications (e.g., ELSA Speak, Loora, Talkpal, TalkMe), and language-learning platforms (e.g., Duolingo, Babbel, Rosetta Stone, Pi). More recently, ChatGPT has also become an integral part of interlingual communicative processes.

Within Audiovisual Translation and Media Accessibility training and practice, several studies have highlighted the advantages that AI can offer (cf. for instance, Georgakopoulou, 2019). However, this more-than-human agency has raised not only methodological but also ethical concerns among practitioners and scholars (cf. the AVTE Statement 2024; Oziemblewska & Szarkowska, 2020). In the realm of language learning, conversational AI tools that simulate real-life conversations with learners can enhance the learning process (Sone et al., 2023), regardless of their economic situation (Dugošija, 2024). These tools offer ubiquitous access, foster learner autonomy, and often employ gamification principles (Al-Dosakee & Ozdamli, 2021), thus making it more enjoyable and rewarding. However, their limitations include the (in)ability of chatbots to interpret and respond to user inputs in a manner resembling human interaction (Rapp et al., 2021), as well as difficulties in recognizing and accommodating language variations (e.g., accents, British vs. American English, etc.).

In this light, this seminar seeks to address the following key issues:

- What are the benefits and limitations of using AI tools and technologies in training and learning contexts?
- How effective are these tools and methodologies in improving learners' skills?
- What appreciable differences can be detected in the comparison of human vs. more-than-human agency?
- Can any theoretical and methodological lessons be learned? If so, can such lessons be systematically conceptualized to enhance AVT teaching and/or language learning?

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SEM23. Papers

12 September h. 16:30-19:00, room 2 Moro (second floor)

- *Lesson learnt? The use of AI tools and technology in Translation Training to enhance awareness and competence* (Margherita Dore, Sapienza Università di Roma)

- *Using software, AI tools and technology in English language learning: The case of audio description* (Vincenza Minutella, Università di Torino)
- *The human touch in accessible media: AI and pedagogical innovation* (Alessandra Rizzo, Università degli Studi di Palermo / Maria Luisa Pensabene, Università degli Studi di Palermo)
- *Post-editing MT output in subtitling: what are the challenges?* (Annalisa Sandrelli, UNINT Università degli Studi Internazionali di Roma)
- *Deaf-led, AI-assisted International Sign > English subtitling:Toward a more ethical workflow* (Gabriele Uzzo, Università degli Studi di Palermo)

SEM23. Abstracts

Lesson learnt? The use of AI tools and technology in Translation Training to enhance awareness and competence
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The integration of Artificial Intelligence (AI) into translation training is transforming the landscape of language education and professional development for translators (Siu 2023). However, the rapid spread of AI-powered tools employing neural machine translation (NMT) and deep learning has raised methodological and ethical concerns among scholars and practitioners (cf. the AVTE Statement 2024; Oziemblewska and Szarkowska 2020). The reliability and quality of ChatGPT-driven translation has also been recently put to the test with interesting results (cf. Jiao et al. 2023), confirming how dramatically such tools are reshaping the way translation is taught, practiced, and assessed.

With these premises in mind, this paper discusses the results of task-based activities completed by master's students specialising in translation practice at Sapienza University of Rome. Students were asked to work on a set of translations generated via NMT tools such as Google Translate, DeepL, and ChatGPT, compare them, and create a human post-edited version. These activities not only allowed students to become familiar with these technologies and how they can enhance translator training by providing real-time feedback and automating routine tasks, but also exposed them to their limitations. Most importantly, students were able to identify the major shortcomings of these AI-driven practices, particularly in terms of questionable linguistic patterns and word choices. The findings prompted deep reflections on the pedagogical implications of incorporating AI into curricula, including the development of critical thinking, post-editing skills, and ethical awareness.

While AI offers significant advantages in terms of speed and scalability, it also raises challenges related to quality assurance, over-reliance, and the evolving role of human translators. This study highlights the importance of integrating AI literacy into translation programs to prepare future professionals for a dynamic, tech-driven industry.

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Using software, AI tools and technology in English language learning: The case of audio description
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Several studies have highlighted the benefits of using audiovisual translation and media accessibility in Language Learning (see Lertola 2019; Talaván&Lertola 2022; Talaván et al. 2024). More specifically, some studies have highlighted how audio description for the blind and the visually impaired can be used in foreign language education (see Navarrete 2018 and 2023; Talaván et al. 2024). Combining audiovisual translation modalities and technology can enhance language learning and boost students' interest. Several software and AI tools can be exploited in the classroom to improve

language and digital skills both in trainers and learners, though it is important to be aware of the limitations of such tools and of ethical issues (see Dugošija 2024; Son et al. 2025).

The aim of this paper is to investigate the way in which software tools, AI tools and technology can be used in English language teaching and learning, focussing on audio description. The paper provides practical examples of how speech-to-text applications for transcription (e.g., sonix.ai, turboscribe.ai), machine translation tools (e.g., DeepL and Google Translate), audio description software containing text-to-speech applications (e.g., adauthor, see Minutella 2022) and AI-assisted audio description software (e.g., audiblesight.ai) can be used in the context of English language teaching and learning and in Audiovisual Translation and Media Accessibility training. The challenges, benefits and limitations of using such tools will be discussed.

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The human touch in accessible media: AI and pedagogical innovation

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In recent years, the emergence of concepts such as cultural interaction and inclusion has helped reshape the landscapes of Audiovisual Translation (AVT) and Foreign Language Education (FLE) (Navarrete 2024) to the extent that the revised version of the CEFR Companion Volume (Council of Europe 2020) has incorporated updated descriptors for language interaction. This has encouraged the replacement of integrated skills (writing, listening, reading, speaking) with new communicative activities (reception, production, interaction, and mediation) as part of the learning process including mediation as a new communicative strategy (Pensabene 2023). These significant changes have played a pivotal role in integrating AVT into FLE curricula within which translation can enable students to work with language in dynamic contexts (Talaván, Lertola and Fernández-Costales 2023). More specifically, the use of Audio Description (AD) and Subtitling for the Deaf and the Hard-of-Hearing (SDH) as audiovisual translation practices encompasses the idea of mediation strategies in Didactic Audiovisual Translation (DAT), while also fostering engagement and awareness among students (Brescia-Zapata and McDonagh 2024).

This study offers a contrastive analysis of audio descriptions (AD) and subtitles for the deaf and the hard-of-hearing (SDH) across three translation modalities: professional human translations provided by Netflix, AI-generated texts, and creative translations produced and post-edited by students from Master's programs in Languages and Translation. Using selected episodes from two Netflix series, the research focuses on the transfer of cultural references (i.e., idioms, historical allusions, and sociolinguistic nuances) (Sanz-Moreno 2017) that are essential for creating accessible and contextually rich audiovisual content. Framed within the growing field of accessibility in education, the study emphasises how AVT serves not only as a professional practice but also as a pedagogical tool to promote inclusive communication, intercultural awareness (Jankowska 2022; Rizzo and Spinzi 2023), and linguistic sensitivity in training for translators (Bolaños García-Escribano 2024; Cui, Liu, Moratto 2024). Accessibility is approached as both a technologically-driven workspace in the real-world audiovisual translation industry (Díaz-Cintas and Massidda 2020) and an academic opportunity to foster linguistic skills and cultural awareness among foreign language students.

The comparative analysis reveals substantial differences in how cultural content is handled across the three modalities in terms of adaptability, contextual awareness, and creative problem-solving, The student-created versions, in opposition to AI-generated texts that tend to be more literal and lack sensitivity to cultural nuances, often demonstrate innovative and pedagogically informed solutions that bridge linguistic and cultural gaps. To support this educational dimension, the project integrates two cloud-based platforms - Video-to-Voice and OOONA - which allow students to engage directly in the creation and post-editing of AD and SDH materials, fostering both technical skills and intercultural competence (Díaz Cintas and Remael 2021). Ultimately, this research advocates for a human-centered approach to accessible media that capitalise on AVT not only for inclusion but also for innovation in language learning.

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Post-editing MT output in subtitling: what are the challenges?

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In recent years, cloud-based environments have radically altered traditional subtitling workflows, as subtitlers can now collaborate from all corners of the Earth (Bolaños-García-Escribano et al. 2021). Moreover, automatic speech recognition (ASR) and machine translation (MT) tools are being integrated into platforms to speed up the process. This has important training implications. While it would seem relatively straightforward to integrate ASR and MT tools into subtitling workflows, this is far from accurate. In the ¡*Sub!: Localisation Workflows that Work* and *Sub!2* projects, postgraduate

students and recent graduates from UNINT and Roehampton University worked in teams over a period of a few weeks in a series of cloud subtitling experiments exposing them to three workflows with different degrees of automation. Each team comprised a Project Manager, a Spotter, a Translator and a Reviser, collaborating on the subtitling of a science documentary according to the instructions received for each workflow (conventional, semi-automated and fully automated). The target language (TL) subtitles they submitted were analysed to identify the workflow that ensured the best quality output in the tightest turnaround time (Massidda & Sandrelli 2023, Sandrelli 2024a). In relation to speed, the fully automated workflow (in which the teams had to post-edit the automatic subtitles produced via ASR and MT tools) was the most time-efficient, but when tackled in the first week of experiments, it was the slowest. Moreover, this workflow initially produced a higher number of technical and translation errors. In their answers to the post-experiment questionnaire, several participants pointed out that dedicated training in post-editing MT output applied to AVT would be needed (Sandrelli 2024b). As the teams documented all the steps of the subtitling process (via a team logbook, screen recordings of work sessions, Quality Assessment forms and workflow reports) and submitted all the drafts produced before coming up with their "final" TL version, the proposed paper aims to identify the changes made by team members to the drafts and pinpoint the most frequent errors. The results of this fine-grained analysis will be used to inform the design of a dedicated module in post-editing MT output in subtitling, thus hopefully contributing to better training.

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Deaf-led, AI-assisted International Sign > English subtitling:Toward a more ethical workflow

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Subtitling sign languages is still an exploratory craft practised by a small pool of professionals (Papastratis *et al*., 2021). One of the workflows put forth by empirical studies is the relay method: a Deaf professional produces a draft in written English, then a hearing subtitler reshapes that draft into correct and idiomatic written text. While linguistically sound, this arrangement is slow, costly and leaves final authorship in hearing hands, perpetuating the marginalisation of Deaf practitioners reported in accessibility studies (Oziemblewska & Szarkowska, 2020).

On the one hand, fully automated conversion of sign languages into written subtitles is not yet possible. This is due to the scarcity of data: researchers have only small, studio-style video corpora to train on, and those clips do not reflect the diversity of real-world signing (Papastratis *et al.*, 2021). On the other hand, large language models (LLMs) such as GPT-4, can already take a rough draft in any written language and polish it into clear, well-formed sentences in that same language (OpenAI, 2024).

Leveraging this asymmetry, the present pilot tests whether an LLM can assume the hearing-side tasks while Deaf subtitlers retain control of meaning and style. This approach is consistent with the rights-based AI framework adopted by UNESCO (2021) and with Audiovisual Translators Europe's call for "meaningful human control" over generative technologies (Audiovisual Translators Europe, 2024).

To test this hypothesis, a short video in International Sign was subtitled into written English via two workflows. Conventional relay: a Deaf translator produced a draft in written English; a hearing subtitler converted it into polished written English, handling punctuation, segmentation, and other elements. Deaf + AI workflow: a single Deaf translator generated the draft in written English, then used ChatGPT-4o to draft the polished written English subtitle, including linguistic and stylistic improvements.

The results have been tested via a mixed focus group of Deaf and hearing viewers and the preliminary findings suggest that automating hearing-side tasks yields efficiency gains and consolidates Deaf agency. The logic aligns with the Erasmus+ project "SUBSIGN: Subtitling Sign Languages", which centres Deaf professionals in workflows for Italian and

Slovak Sign Languages. More broadly, the study illustrates how a more ethical deployment of generative AI can begin to redress, rather than reproduce, long-standing power imbalances in media accessibility.

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