The International Journal for Translation & Interpreting Research
trans-int.org

Pivot subtitling workflows in the age of streaming platforms

Rocío Baños
University College London, UK
r.banos@ucl.ac.uk

Harun Dallı
University of Antwerp, Belgium
harun.dalli@uantwerpen.be

Jorge Díaz-Cintas
University College London, UK
j.diaz-cintas@ucl.ac.uk

DOI: 10.12807/ti.117202.2025.a02

Abstract: The proliferation and popularity of non-English audiovisual productions have been fostered by streaming platforms in recent years. From the point of view of translation, the language diversity encountered in audiovisual content poses logistic, linguistic and culture-specific challenges to the entertainment and media localization industry, which has largely resorted to the use of pivot language translation. In the case of subtitling, this involves the creation of a master template in a third language (English) that mediates between the original text (e.g., in Korean) and the target texts (e.g., in Turkish, Spanish, German or Italian). Despite its central role in the global dissemination of non-English media, the practice of pivot subtitling remains largely under-standardized as well as under-researched. The limited studies carried out so far in this field suggest that indirect translation of audiovisual material through pivot templates undermines the quality of the final version and leads to more complex workflows (Oziemblewska & Szarkowska, 2020; Torres-Simón *et al*., 2023). Against this backdrop, this paper offers an overview of the pivot subtitling workflows implemented in the media localization industry world-wide, with a focus on the challenges they pose from the point of view of various stakeholders, including subtitlers. The discussion draws on information gathered from a project aimed at strengthening links between academia and industry and at furthering our understanding of current developments in media localization. The findings highlight the challenges that different pivot subtitling processes pose to the agents involved and reveal similarities and differences between direct and pivot subtitling workflows.

Keywords: pivot subtitling, workflows, templates, pivot template, media localization

1. Introduction

Gone are the days when Hollywood dominated the screens. Today, local media is captivating audiences worldwide, from Korean thrillers to Spanish rom-coms, and from Turkish series to Icelandic whodunnits. These stories, originating in diverse languages and cultures, find their way into our living rooms almost exclusively through pivot media localization. While the end product appears as a direct translation to the consumer, who watches a Swedish film with Portuguese subtitles, the process typically involves an intermediary step in which an English pivot template is employed. This means the Swedish dialogue is first translated into English, and then the Portuguese subtitles are created from

that English translation, rather than directly from the original Swedish. Despite being standard practice in the industry, the workflows involved remain elusive to academic scrutiny, constrained by strict non-disclosure agreements, and, hence, an averseness of industry stakeholders to disclose the process. This article seeks to bridge the industry-academia gap by focusing on the so-called *necessary evil* of today's mediascape, that is, the use of English templates, also known as English master templates, to translate media content originally shot in languages other than English. Benefiting from a Knowledge Exchange and Innovation funding opportunity offered by University College London (UCL), collaboration was struck with media localization company ZOO Digital to gain first-hand insights into pivot subtitling workflows, analysing actual pivot subtitling projects to understand the process and to gain awareness of the roles played by the different agents involved in the workflows. The funding was also used to organize a series of events held in London, namely, a roundtable discussion with academics and industry stakeholders to explore the pitfalls and promise of pivot subtitling, and a workshop aimed at postgraduate students of translation to familiarize them with real-life practices in the field.

The roundtable discussion reflected the discursive divide surrounding pivot subtitling and, while some participants related the implementation of this practice to the dearth of translators for non-English language combinations, others viewed it as an economic strategy designed to optimize costs and streamline the process. As in many other debates, it is fair to admit that the rationale is multifaceted and responds to different needs and interests. As the influx of local media onto prominent streaming platforms continues (Dallı, 2024), the traditional categorization of certain non-English language pairs as *exotic*, *peripheral* or *uncommon* becomes increasingly untenable. These emerging language combinations can sustain linguists through regular releases, and a linguist specializing in a given emerging non-English pair could expect a relatively steady workload throughout the year. Arguably, for such popular combinations, the recourse to English as the pivot language stems from financial and tactical decisions. On the other hand, less frequent non-English pairs may not justify a dedicated pool of linguists, rendering pivot subtitling a logistically sound solution. Language service providers (LSPs) face the challenge of having to cater to a vast array of language combinations, and have to modify their existing workflows and processes on a regular basis, while linguists' main priority is to seek steady work volume. Maintaining a dedicated pool of translators for infrequent projects becomes impractical from both a commitment perspective and a logistics point of view. As such, pivot subtitling emerges as the mechanism whereby LSPs balance the ever-diversifying linguistic demands of their clients with financial and logistical viability.

When it comes to the implications that this approach may have for *pivot subtitlers*, scholars such as Oziemblewska and Szarkowska (2020), Pięta *et al*. (2023), Torres-Simón *et al*. (2023), and Dallı and Sung (2024) have conducted innovative research exploring the experiences of practitioners, who often express frustration with workflows involving a pivot language. One of their main qualms is the added complexity of indirect translation, which is not reflected financially in the rates they receive. Although this raises questions about fair remuneration for the additional work that results from pivoting, a silver lining can also be observed, as pivot subtitling offers professionals a more stable work volume due to the high demand for content in various languages. The strategic advantage of translating from English is key here; as the de facto pivot language for most international content, English provides subtitlers with unparalleled access to a broader market of projects, far beyond what would be available through direct translations from a multitude of individual source languages. The prospect of a relatively steady stream of assignments and

income can be particularly attractive for freelancers navigating the uncertainties of project-based work. Nevertheless, while pivot subtitling offers a steady workstream for many, the recourse to English as the pivot language also diminishes the demand for direct translation skills in non-English language pairs (Oziemblewska & Szarkowska, 2020; Dallı & Sung, 2024), resulting in less work volume for specialized linguists. Consequently, the diversification of media content is not mirrored in the composition of linguist pools, which remain largely homogenous and tend to focus on English proficiency. Other concerns for practitioners include the threat that pivot subtitling poses to translation quality and cultural (mis)representation, and the ethical issues investigated in recent publications by Oziemblewska and Szarkowska (2020), Carrero Martín and Reverter Oliver (2024), Künzli (2023), Pięta *et al*. (2023), and Dallı (2024).

This article explores the role of the various localization agents who populate the pivot subtitling ecosystem world-wide, paying special attention to the workflows that characterize this practice and seeking to elicit the potential challenges that lurk in this inherently multilingual and multistep process. Before entering the debate, the next section examines the subtitling workflows that have traditionally dominated the media localization industry when working directly from English, in the hope that a holistic and wide-ranging overview will help better discern the similarities and differences that come with the introduction of processes involving a pivot language.

2. Workflows in media localization

As Díaz-Cintas and Remael (2021, p. 33) contend, gaining a comprehensive and updated overview of the workflows operating in media localization is a rather challenging task, given that "different companies work in different ways and new technological advances and commercial forces tend to have an immediate, disruptive impact on the subtitling profession". This means that processes are in constant flux, affected by changes taking place in the production and distribution stages. Some of these developments have been explored by several authors, including Pedersen (2018), who examines the impact of streaming on the evolving nature of subtitling norms, Díaz-Cintas and Massidda (2019), who highlight the significance of technological advancements, Nikolić and Bywood (2021), who discuss the future prospects of the media localization industry, and Massidda (2023), who analyses the disruptive effects of streaming on traditional workflows.

In the case of subtitling, both researchers and practitioners have argued that the introduction of templates in the 1990s, motivated by the emergence and blossoming of the DVD (O'Hagan, 2007; Georgakopoulou, 2012), caused a profound impact on both the subtitling profession and workflows (Artegiani & Kapsaskis, 2014; Nikolić, 2015; Georgakopoulou, 2019). As Georgakopoulou (2012) explains, the need for the centralized production of subtitle files arose in the 1990s as a solution to address the unprecedented volume of subtitles generated by the arrival of the DVD and to mitigate piracy-related concerns. This new working methodology at the time, instigated by the major LSPs in media localization, caused "a lot of brouhaha among traditional subtitlers and companies strongly embedded in local markets" (*ibid*., p. 81). The cornerstone of this centralized production approach involved the use of template files, also known in the industry as master files or genesis files, and the division of the subtitling process into two clear-cut tasks: the timing or spotting of the subtitles by a professional with the required technical know-how and the translation of those subtitles into a range of languages by different practitioners.

Template files provide a basic and standardized structure for a subtitle file, including the fixed in and out timecodes for each subtitle as well as the English dialogue to be used for translation into different languages, as illustrated in Figure 1:

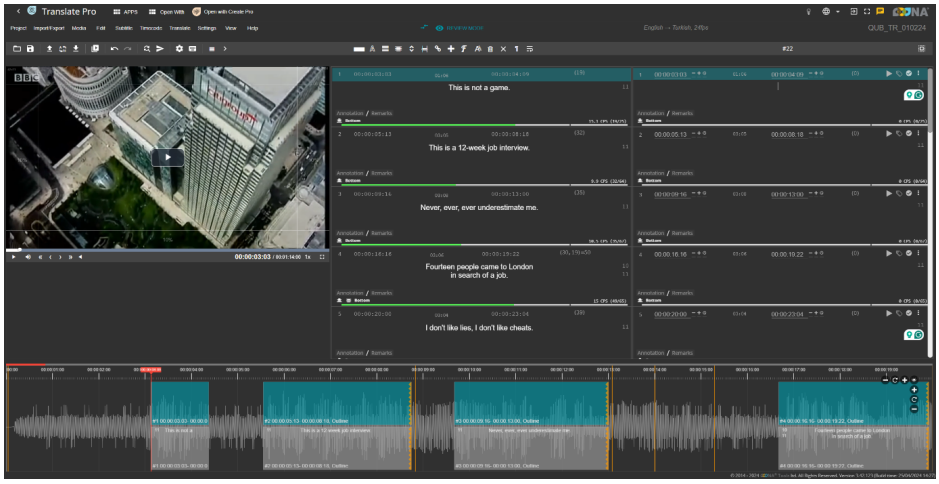

Figure 1: Example of an English master template on OOONA Translate Pro (ooona.net)

An alternative practice consists in the use of *blank templates*, that is, subtitle files containing only fixed timecodes with no text, which was already discussed by Nikolić (2015, p. 197) as a new development a decade ago, and was:

> often perceived as problematic by subtitlers, since the absence of text slows down and complicates the subtitling process. In this case, instead of using existing text as a reference, the subtitler has to focus both on the duration of the subtitle and on the timecode at the top of the screen in order to assess the amount of text that may be inserted.

Although the implementation of these blank templates seems relatively common in the media localization space, they have escaped academic scrutiny. Most published studies focus on templates that include the timecodes and English source text dialogue, in either a verbatim or edited rendition of what can be heard on screen. In the latter case, the original dialogue is "compressed to avoid subtitle display rates that exceed the agreed maximum" (Díaz-Cintas & Remael, 2021, p. 43). Research has shown that the use of non-verbatim templates can have a negative impact on the quality of the final product (Artegiani & Kapsaskis, 2014) and that subtitlers prefer to work with verbatim templates so that they can make the final decision on the source dialogue that will make it to the written subtitles (Oziemblewska & Szarkowska, 2020).

Timecodes in master templates can be locked, with subtitlers having to make their translation fit those temporal restrictions while adhering to guidelines on maximum subtitle length (in characters per line) and display rate (in characters per second). Timecodes can also be unlocked, and this option provides more flexibility to those responsible for their translation. Working with unlocked templates was hailed as a key practice to improve the process of subtitling with templates in the study carried out by Oziemblewska and Szarkowska (2020), in which they echo the views of subtitling professionals regarding templates and their quality. Drawing on questionnaire findings, the authors contend that subtitlers should be "allowed to adjust the time codes as

well as delete, merge and split the subtitles to suit the needs of their target languages" (*ibid*., p. 451). They also argue that templates should be verbatim, contain appropriate linguistic and cultural annotations, and undergo a process of quality control before they are sent to subtitlers to be translated into different target languages. In any case, scholars such as Díaz-Cintas and Remael (2021, p. 47) insist that templates should be used as reference materials, not as a *source of truth*, urging subtitlers to "be on the alert for any potential conflict between the written text found in the master titles and the information being relayed through the audio and the visuals".

Another relevant matter, especially in relation to the above-mentioned division of the subtitling process into two, i.e., spotting and translation, relates to the profile of the professionals in charge of the creation of these files. Díaz-Cintas and Remael (2021, p. 73) refer to the *spotters* or *templators* as those responsible for "the technical task of deciding the in and out times of the subtitles and for creating templates and master titles with relevant annotations for the translators" while foregrounding the fact that they tend to be native speakers of the language of the original programme. Nikolić (2015, p. 193) also refers to them as *template makers* and argues that the introduction of templates has caused terminological confusion vis-à-vis the term *subtitler.* While subtitling companies might refer to template makers as subtitlers, Nikolić (*ibid*.) contends that this is what translators working in subtitling call themselves, regardless of whether they produce subtitles in their target language using a template or whether they are also responsible for the spotting.

For media localization companies, the benefits of using templates are obvious. In addition to being a time and money-saving practice to cope with high volumes of subtitles into many languages, they promote standardization and allow companies to have greater control over the whole subtitling process, which in turn facilitates the work of project managers. From the point of view of the subtitlers, the use of templates has had a direct impact on key aspects such as rates, skills and quality. For instance, template-based workflows typically entail lower rates, as subtitlers no longer perform full spotting—with the exception of minor adjustments to subtitle events in unlocked templates. This trend concurrently transforms the required skill sets, prioritizing linguistic proficiency over technical competencies like timing. Ultimately, final subtitle quality becomes critically dependent on the master template's precision, particularly with locked templates where errors propagate unimpeded through downstream language versions. The pros and cons of the use of templates have been discussed in depth by authors such as Kapsaskis (2011), Georgakopoulou (2012, 2019) and Nikolić (2015), with other publications offering specific suggestions on how to improve workflows that rely on master files (Artegiani & Kapsaskis, 2014; Oziemblewska & Szarkowska, 2020).

The more recent emergence and consolidation of cloud-based ecosystems has been the catalyst for new developments in the industry. Broaching the topic of subtitling quality from a standpoint that embraces not only the final translation output, but also processes, environments, working conditions, and social actors, Artegiani (2021) maintains that the platformization of the industry has brought about a degree of unsustainability in the subtitling ecosystem. This is perceived in the fragmentation of subtitling tasks, i.e., the split between spotting and translation, which does not require the employment of well-rounded subtitlers able to perform all tasks and can thus lead to professional deskilling in the long-term. On the upside, the centralization of processes in the cloud allows for more agile workflows that can be easily monitored by project managers and clients, and facilitates the seamless integration of new technologies, such as automatic speech recognition (ASR) and machine translation (MT), among others. The use of templates has also been reassessed,

awarding more agency to subtitlers, who, depending on the LSP and their own experience, are often allowed to alter the templates to suit the needs of their target languages, by altering the timecodes, merging/splitting master subtitles, and recuperating information from the original spoken dialogue.

The use of templates is so widespread in the industry that most subtitling workflows discussed in the existing literature mention them. Although the synoptic overview of the typical subtitling workflow included in Díaz-Cintas and Remael (2021, p. 38) does not refer explicitly to the use of templates, it highlights in brackets the fact that the spotting might be done either by the LSP in charge of the project or by the subtitler, as shown in Figure 2:

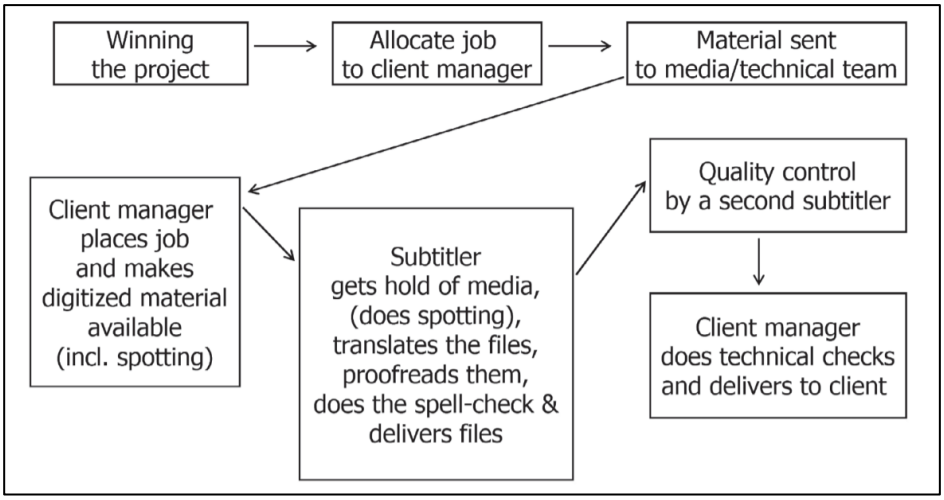

Figure 2: Typical subtitling workflow (Díaz-Cintas & Remael, 2021, p. 38)

The focus of this overview is on the different agents who take part in the process, and on subtitling being the result of a team effort. The authors also explain that if producers need a programme to be subtitled into many languages, it would be more convenient to task this job to a single multilanguage vendor, for whom it would be operationally easier and more cost-effective to create a master template in English, the language of the production, that then gets translated by freelancers into the various languages required by the client.

Drawing on Walker (2022) and distinguishing between pre-localization, localization and post-localization phases, Bolaños García-Escribano (2024) outlines the different steps of a regular workflow for the localization of pre-recorded programmes (Figure 3 below). Within the production stage, or localization, the author highlights processes related to the creation of a master template or script, including the translation and editing of such a script as well as the quality control (QC) of the technical and linguistic dimensions. The overview provided by Bolaños García-Escribano (*ibid.*) is general enough to be applied not only in subtitling, but also in the case of other different AVT practices. Indeed, templates are also becoming a common occurrence in dubbing, particularly when translating from languages other than English. In this case, a pivot language dialogue list (PLDL) containing an English template is employed instead of resorting only to the dialogue list in the original dialogue.

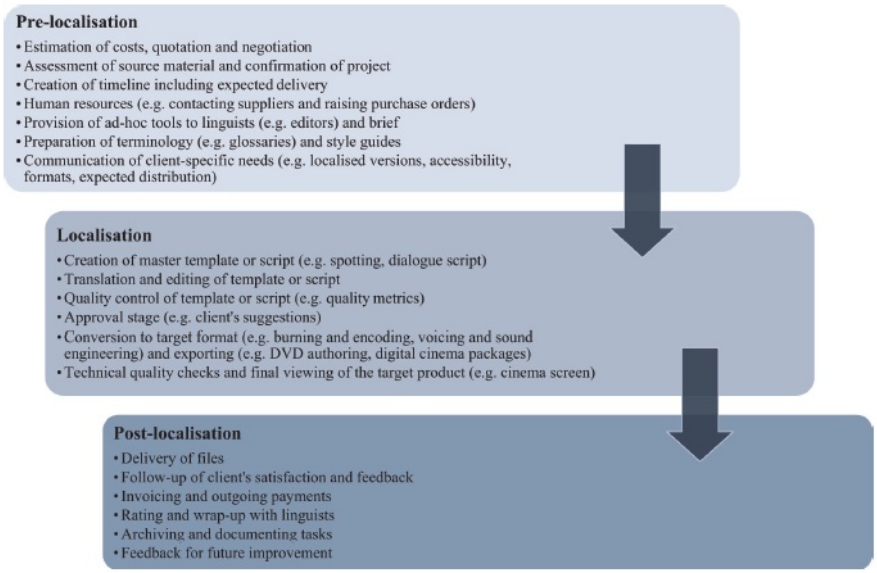

Figure 3: Generic AVT workflow (Bolaños García-Escribano, 2024, p. 16)

In addition to emphasising the importance of using templates to simplify workflows and handle higher volumes, Bolaños García-Escribano (2024) maintains that future processes are bound to change with the advent of technological developments in the field of artificial intelligence (AI). This is the focus of the study undertaken by Massidda and Sandrelli (2023), aimed at investigating the role of automation in subtitling workflows, and at highlighting how subtitlers can harness technology to increase productivity and efficiency. Acknowledging that cloud-based environments have simplified localization workflows and made it possible for virtual teams of professionals to work remotely, the authors set up various online cloud subtitling projects with MA Translation students to test the effectiveness of different subtitling workflows. The teams included a project manager, a spotter, a subtitler, and a reviser, and the workflows tested were: traditional (i.e., using only a cloud-based subtitling platform), semi-automated (using ASR for transcription of the original English dialogue and automatic spotting) and fully automated (relying on ASR, automatic timing and MT), thus revealing the variety and sophistication of current workflows in subtitling. Massidda and Sandrelli (*ibid.*) found that the semi-automated workflow yielded the most cost-efficient gains.

Tardel's (2023) proposed subtitling workflow model, with a focus on the production processes, is perhaps one of the most sophisticated to date. In an attempt to demonstrate the complexity of the production phase in subtitling, and drawing on the general ISO translation workflow model, ISO 17100:2015, Tardel (2023) describes general tasks and explores ways in which "they can be combined, integrated, and most importantly researched without getting into specific tools or technology approaches" (*ibid*., p. 144). Such complexity is illustrated in Figure 4, where the different workflows that can be implemented in an interlingual subtitling scenario for pre-recorded audiovisual material are elicited.

The interlingual subtitling model proposed by Tardel (*ibid.*) identifies five possible workflows, which may be implemented manually (MS) or assisted with the help of AI (AS). A clear distinction is made between direct subtitling workflows and template subtitling workflows. In the former, the tasks of transcribing, spotting, editing and translating are carried out either manually (Workflow 1) or with the use of ASR and MT (Workflow 2). In template subtitling workflows (Workflows 3-5), a template is created, either by a

technician or by AI, and subsequently edited and translated, with variations depending on the resources available and the level of automation involved. As the author contends, this model is particularly useful for the research of production processes in subtitling, as it caters for various scenarios and allows for different degrees of automation. The emphasis on QC, or quality assurance (QA), and the ways in which its implementation may vary according to different factors, is also of particularly significance. For example, it is argued that quality expectations when working with locked templates cannot be compared to projects involving the use of unlocked templates, where the spotting and segmentation of the dialogue can be adjusted (Tardel, 2023). It is also important to note that QC checks should ideally be implemented at different stages throughout a project, as illustrated in Figure 5, where we propose an overview of a basic, synoptic workflow, with a focus on the actual production process.

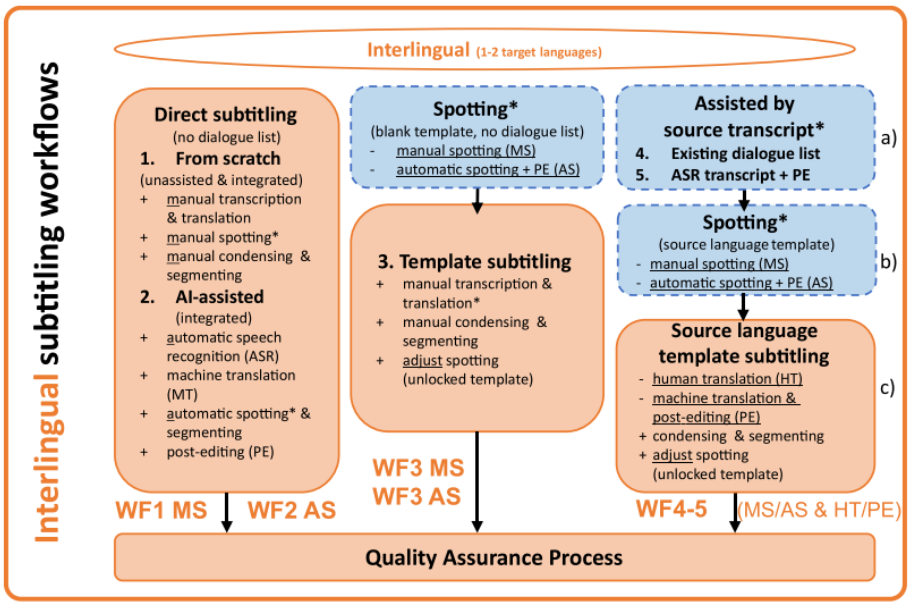

Figure 4: Interlingual subtitling workflow proposed by Tardel (2023, p. 163)

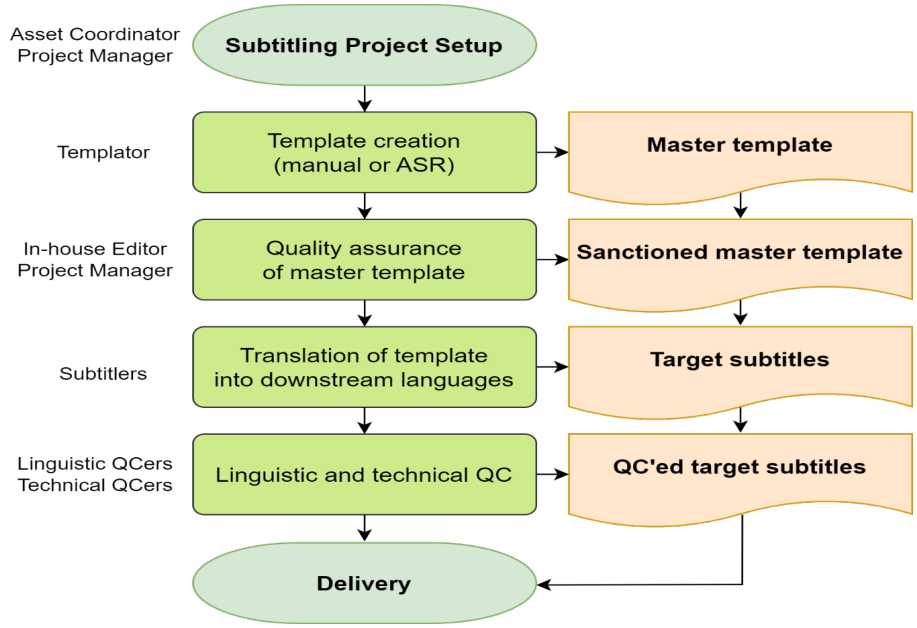

Figure 5: Synoptic workflow for direct subtitling projects

Interestingly, Tardel's (2023, p. 160) model of combined workflows, involving both interlingual and intralingual subtitling, also considers projects where a pivot language (typically English) is used, and emphasizes the need to undertake further quality checks in this case:

> The target language […] can be either the final target language or, in the case of multiple, especially low-resource source and target languages, the first iteration provides pivot language subtitles, typically English. To use this subtitle template for translations into further target languages, it should run through quality assurance iteration first.

Díaz-Cintas and Remael (2021, p. 43) also refer to the fact that although templates are usually produced in English for original productions in this language, "they can also be created in English to be used as a first or pivot translation in the subtitling of an audiovisual programme originally shot in a third language (say a film in Greek or Hindi that is to be translated into Czech or Icelandic with the support of English master titles as the relay language)". Nevertheless, as Nikolić (2015) explains, some companies might use blank templates and rely on other languages as pivot (e.g., a Swedish template or final subtitle files in this language might be used to translate a film into Croatian so that the spotting does not have to be carried out more than once).

Pięta *et al.* (2023, p. 4) contend that pivot templates became a "standard go-to solution" in the 2010s when streaming services "forced a new paradigm in the distribution of audiovisual content", which promoted non-English productions and relied on the use of English as a pivot or intermediary language. However, there are still many unknowns about how video-on-demand (VOD) services work with pivot templates and the specific challenges they face, especially if we consider that LSPs might resort to different processes depending on a vast array of factors. Dallı and Sung (2024), for instance, offer an in-depth investigation of the two main workflows implemented by Netflix. They delve into Netflix's semi-internal Direct Timed Text (DTT, gvm.netflixstudios.com) program, in which Netflix acts not only as a content provider, but also as a localization agent and software supplier. Within this partial outsourcing model, Netflix provides the organizational facilities, while DTT partners are responsible for linguist recruitment, vetting, training, quality, and overall linguist management and compensation. In contrast, the Netflix Preferred Fulfillment Partners (NPFP, npfp.netflixstudios.com) program involves complete outsourcing to vendors, who provide the entire process infrastructure, while Netflix's role is solely that of a content provider. Dallı and Sung's (*ibid.*) analysis reveals a surprising lack of uniformity in practice: even within the confines of a single content provider, the conditions and workflows of pivot subtitling can vary significantly.

To sum up, the use of a pivot language in media localization adds further complexity to the process and requires a range of aspects to be considered when planning, executing and delivering subtitling projects, which will be discussed in Section 4 below. However, before doing so, some methodological considerations on how the data provided has been obtained will be presented.

3. Understanding pivot subtitling workflows: Methodological considerations

This article reports on some of the findings gathered within the project 'Working with Pivot Language Translation in Media Localization: Challenges and Potential Solutions', supported by the Knowledge Exchange and Innovation

funding opportunity offered by University College London (UCL) from July to December 2023. The project involved collaborating with ZOO Digital Group plc, a provider of localization services, working with a wide range of high-profile clients in the entertainment industry, including major Hollywood studios, as well as other film and TV programme producers and global digital distributors of entertainment content. Since many of their clients were increasingly sourcing content from multiple countries that had been produced in languages other than English, ZOO Digital was in a unique position to support the authors in the investigation of the challenges involved in the use of pivot language translation in media localization. Throughout a series of meetings, this localization company shared with us key information and resources that enabled us to understand the challenges involved in the use of pivot subtitling. This included details about existing workflows, protocols and standards in relation to pivot subtitling activities, access to existing pivot templates for analysis in a wide range of languages and genres, and access to their proprietary subtitling software, ZOOSubs.

During the meetings with ZOO Digital, we mainly liaised with Ambrish Acharya, Head of Education, and Translation-training specialist Lydia Hayes-Harris, who provided us with an overview of how pivot localization was approached at ZOO Digital, explained which teams were involved, and also showed real-time pivot subtitling projects. In addition, two documents with a list of questions about pivot localization workflows were submitted and responses provided by our main contacts or referred to project managers within the English team at ZOO Digital. The questions were aimed at eliciting information about the challenges encountered and the processes involved in pivot subtitling projects, including how these were managed, the different agents involved and how they were selected. Many of these questions, especially those of a more generic nature, were also broached during the roundtable discussion with academics and industry stakeholders held at UCL, also as part of the above-mentioned project. The roundtable, which aimed to explore the pitfalls and promise of pivot subtitling, was attended by 10 panellists, including a representative from ZOO Digital as well as other professionals working at leading LSPs within the subtitling industry. The panel also featured companies specialising in the localization of non-entertainment content, academics, freelancers and representatives of Subtle (subtle-subtitlers.org.uk), a professional association of audiovisual translators in the UK.

The information gathered throughout this project, as well as our previous experience working and liaising with industry stakeholders involved in pivot localization projects has enabled us to recognize core operations across the media localization industry world-wide. Drawing on this knowledge, we have drafted some figures illustrating such processes (Section 4 below), identified some of the main challenges experienced by the different agents involved and extracted relevant conclusions. The discussion below will refer to these findings and reflections, which are not limited to processes at ZOO Digital or at a specific media localization company, but rather aim to generalise problems and solutions in relation to the topic being addressed, i.e., pivot subtitling workflows.

4. An overview of pivot subtitling workflows

This section outlines pivot subtitling workflows. A general framework is established in Figure 6, before we move to a granular examination of step-by-step procedures. While this figure illustrates a basic pivot subtitling workflow,

it is neither exhaustive nor definitive. Compared to direct subtitling, workflows with a pivot language demonstrably involve an increased number of agents, procedures, and outputs. In particular, a significant number of the localization agents do not have knowledge of the source language. In fact, the only agent familiar with the source language is the first linguist, who performs the first or initial translation into English.

As in Figure 5 above, the diagram below differentiates between processes (pistachio green rectangles) and outputs (orange shapes with bold text). This distinction is crucial, as the pivot template is essentially the output of a multistep process. That is, a pivot template is technically the first translation into English of a blank template. Once a native English speaker has reviewed the template, the workflow bifurcates based on the pivot template's intended function. Ideally, it is used exclusively as an internal file for indirect translation into downstream languages, although, occasionally, it serves as a deliverable. Shapes with dashed lines and italicized text depict this alternative workflow, where the pivot template is repurposed as English subtitles for public consumption.

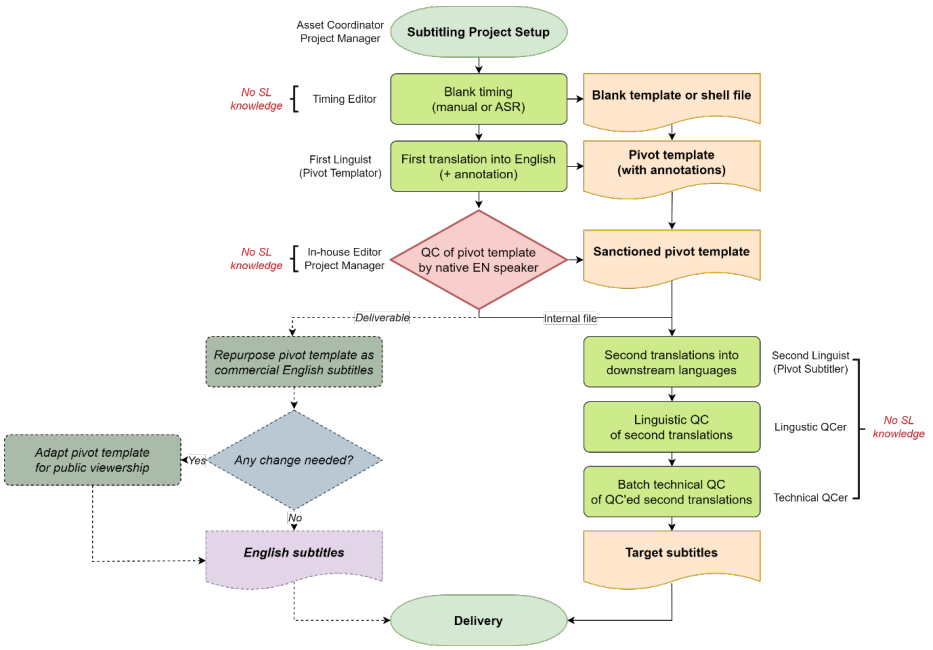

Figure 6: Overview of basic pivot subtitling workflow

The next subsections offer a detailed examination of each step, with further diagrams provided, as necessary.

4.1. Building English-centric linguist pools

Pivot subtitling, as a complex media localization process with multiple languages and stages, requires a strategic approach to linguist resources. Unlike direct translation, pivot subtitling leverages English as a bridge for the indirect translation of non-English media into a myriad of languages. This means that the role of linguists working from English is not limited to translating English originals, as they can now work from other languages via English. While the additional layer of indirect translation might seem to delay the process, it arguably reduces turnaround times by eliminating the need to employ specialist resources to cater to every possible non-English pairing. In addition, rates for translating from English are generally lower than those working from other

languages due to its wider market availability, which leads to cost savings in the long run.

Considering the vast number of language combinations involved in global media distribution, creating English pivot templates becomes a prerequisite for LSPs to execute the localization process. When the use of pivot templates is virtually a given, there are few economic or logistics incentives to invest in direct translation resources for non-English translation pairs. This also holds true for combinations involving relatively common languages like French, German, and Spanish, and even in the case of translating between closely related languages, i.e., when productions in Portuguese end up being translated into Italian via English. Even if a linguist may self-profess proficiency in a non-English combination, the onboarding is facilitated through English-based tests (Figure 7), and chances are that the LSP may not have the appropriate resources to validate the linguist's proficiency in the non-English pair:

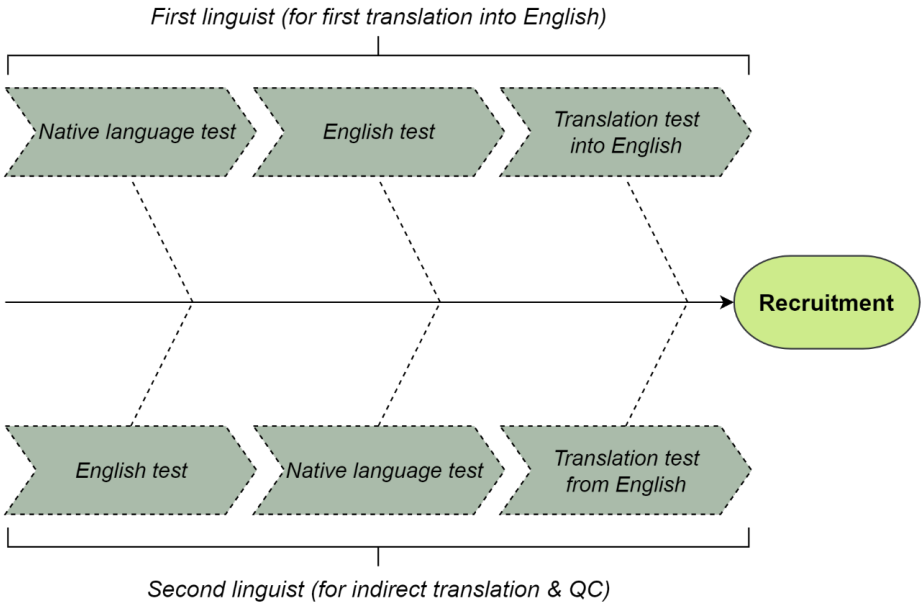

Figure 7: Typical linguist recruitment scheme for pivot subtitling

From a financial standpoint, both clients and LSPs typically set translation rates based on English. Thus, requesting a quote for direct translation between non-English languages would require a system upgrade for these agents. In addition, direct translation can lead to complications in the QC phase, as finding extra professionals with the appropriate language combination and experience becomes increasingly challenging. Therefore, standard practice in QC is based on English as the pivot language, and any inconsistencies between the English text given in the pivot template and a solution directly translated from the original language would be questioned and could lead to miscommunication between the translator and the quality reviewer. For these reasons, the English-centric nature of subtitler pools serves as the foundational framework for pivot subtitling.

4.2. Blank timing

As shown in Figure 8, the pivot subtitling workflow typically starts with the *blank timing* of a video proxy:

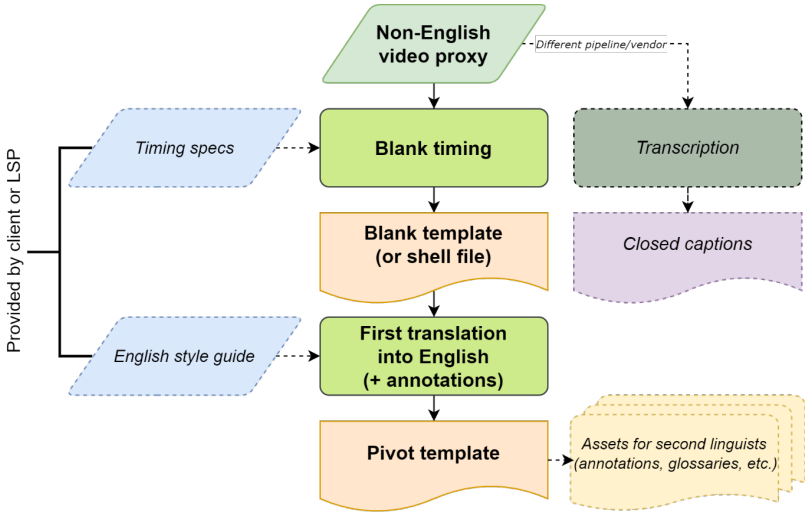

Figure 8: Initial production phase in pivot subtitling workflow

During this stage, a timing editor creates placeholder events within the *blank template* or *shell file* to mark the precise timecodes when utterances are heard, and when written text can be seen on screen. If required by the client, an intralingual transcription of the text is carried out simultaneously by an editor who knows the original language. The production of a template containing the transcription of the non-English dialogue is an essential task in dubbing workflows, but in subtitling it is less common because it is considered too time consuming. Hence, blank templates are used, especially when the client has not requested a subtitle file in the original version. In the latter scenario, the blank timing is performed by editors without knowledge of the source language, which is far from ideal, as it will be challenging for them to follow the cadence of the source language or to discern the various semantic and lexical units.

The resulting shell file with blank subtitle events is delivered in an unlocked format (i.e., allowing for timecode modification) to the first linguist, often referred to as the *templator* (Díaz-Cintas, 2021), who may perform the translation into English either entirely by ear or with the aid of a transcript if there is one. This unlocked format provides flexibility for the templator when translating the proxy into English, yielding what is termed a *pivot template*. The creation of the pivot template is typically a combined effort between the timing editor and the first linguist, who may be an English-native speaker with knowledge of the original language, or, more frequently, a native speaker of the original language translating into English as their foreign language. After going through a QC check, this template serves as the source for second translations into other languages, so-called *downstream languages*.

Because blank timing and templating are often outsourced to different external vendors, there is the risk that these agents might not communicate during the process. For instance, Korean media may be blank timed by an editor in India or Pakistan, translated into English by a linguist in Korea, and then translated into downstream languages (e.g., Turkish and Spanish) by in-territory second linguists (i.e., linguists based in the territory where the target language is spoken, Türkiye and Spain in this example). As such, LSPs capitalize on their English-centric pools to eliminate the need for specialists in specific non-English translation pairings (e.g., Korean into Turkish and Spanish).

While, as discussed, timing can be performed by a linguist familiar with the source language, the process of blank timing reflects the industry's differentiation between linguistic proficiency and technical skills during the onboarding process. That is, linguists are often recruited on the basis of only

one of these criteria. This distinction is further reinforced by industry certifications like AVTpro (avtpro.ooona.net), which distinguishes between *Subtitle Creation* (encompassing timing and transcription) and *Subtitle Translation* (working from a template) tasks.

The nature of timing itself is highly client- and project-specific. For example, the maximum duration of a subtitle event can vary based on client specifications or the target language, since some languages lend themselves to longer subtitles. For this reason, some LSPs may choose to establish a dedicated in-house timing editor team, while translators typically work as freelancers.

4.3. First translation into English (for the pivot template)

In pivot subtitling, the ideal scenario would be one in which the blank timing and the first translation into English, with annotations, are carried out by a templator, who is a native English speaker with in-depth knowledge of the source language and culture. Yet, the reality is different, as native English speakers fluent in other languages and with the necessary technical know-how of subtitling are a rare breed in the industry. As explained, most LSPs will distinguish between the two tasks and assign them to two different professionals. According to the key practices outlined by Oziemblewska and Szarkowska (2020, p. 451) when discussing direct subtitling, templates "should be made by native speakers of the language of the film", which traditionally was overwhelmingly English, and they explicitly recommend that "[p]ivot translation should be avoided". While their recommendation is clearly at odds with current practices in the industry, their advice on securing native speakers of the language of the film to create templates with a transcription of the dialogue is valid in the case of pivot subtitling, as it will help enhance the completeness and quality of the ensuing working documents. Nevertheless, observation of real practice foregrounds the fact that subtitling shell files with only timecodes are prepared by professionals with no knowledge of the source language and culture.

The current preference for a templator who is a translator stems from the nature of pivot subtitling, where the first translation occurs into English, and adheres to the terminology and style guide provided by the client. Industry norms generally dictate that translators work into their native language to ensure optimal accuracy and fluency. Nevertheless, finding native English speakers for all source languages may not be practical, and, in many cases, LSPs might have to rely on in-territory linguists with a strong command of English to perform the first translation. An advantage of this approach is that no intralingual transcription of the original dialogue is needed, as the linguist should be able to understand and translate the exchanges directly from the soundtrack.

In addition to the English pivot template, the first translation phase should ideally produce additional assets like annotations and glossaries intended for downstream linguists. Hence, beyond English proficiency, a successful pivot templator should possess a diverse skillset. They act as cultural ambassadors for the original content to second linguists and target audiences. This requires the ability to identify and elucidate cultural nuances or ambiguities present in the source material. While technically onboarded as translators, pivot templators are encouraged to leverage the flexibility of unlocked shell files and modify timings. Their technical know-how of subtitling allows them to better reflect the rhythm and natural flow of spoken dialogue in the source language, which is particularly important considering that the shell file is often created by an editor with no knowledge of the source language.

Prior to dissemination to second linguists, the pivot template undergoes quality control by a native English speaker, who can be drawn from the LSPs' pool of linguists or project managers, as illustrated in Figure 9:

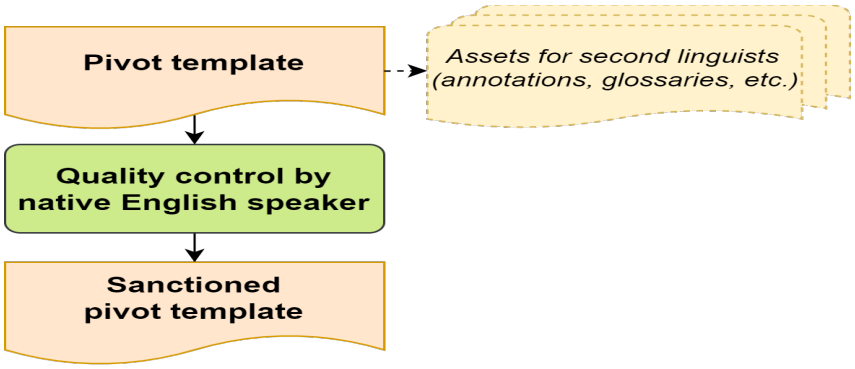

Figure 9: First translation and pivot template quality control

This independent verification step serves as a safeguard against a *broken telephone effect*, where the source message becomes progressively distorted with each layer of translation. In the best-case scenario, the native English linguist is familiar with the source language and culture, and can identify any potential misinterpretations or inaccuracies in the pivot template, thus acting as a filter and ensuring a clear representation of the source content for downstream translations, ultimately sanctioning the approved template as a *source of truth*. That is, the sanctioned pivot template serves as the actual source for second translations and QC checks. However, in most cases, the native English linguist is not conversant with the source language, and their role is limited to guaranteeing that English expression is correct and free of typos or ambiguities.

4.4. First deliverable/internal pivot file

Once the pivot template has undergone quality review, the workflow bifurcates into two paths, as shown in Figure 10:

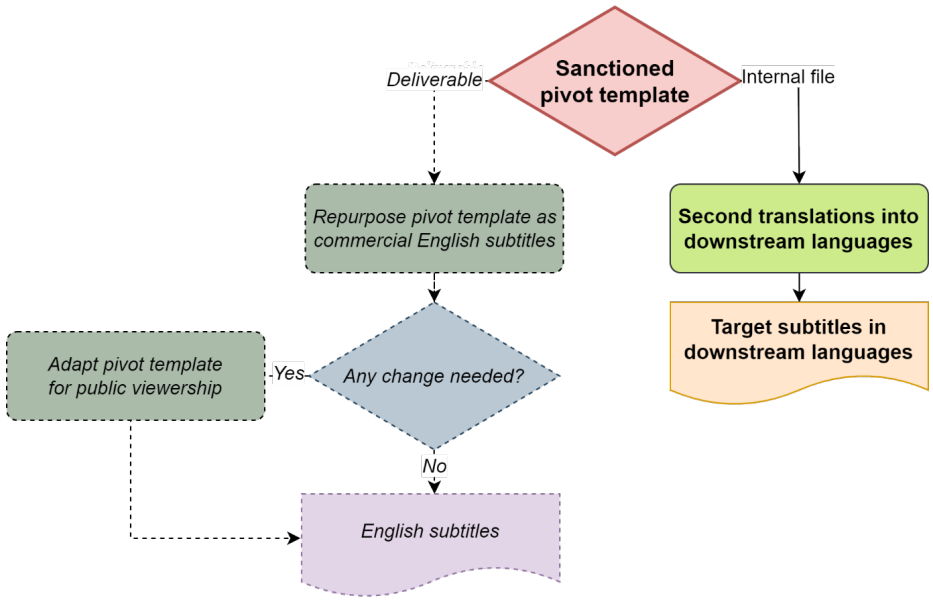

Figure 10: Pivot template as a deliverable and as an internal file

The sanctioned pivot template can serve a dual purpose: it can be used as a deliverable (i.e., as the final English subtitles for commercial viewership), or as an exclusively internal file for second translations into downstream languages. This dual function presents significant considerations.

Firstly, a (pivot) template intended for commercial release should be different from one designed for indirect translation, as it should be created with a specific target audience in mind, i.e., anglophone. Publicly available subtitles typically employ translation strategies tailored to the target culture and audience. The original dialogue may be condensed for readability, and cultural context may be adapted to enhance familiarity for viewers. Although such strategies may improve the viewing experience, they become redundant in pivot templates, whose sole purpose is to facilitate indirect translation into downstream languages. Pivot templates should ideally strive for a more literal rendering of the original, unconstrained by the subtitling conventions of the intermediary culture. The absence of a defined target audience theoretically allows for a closer representation of the source content, minimizing the introduction of extra cultural layers between the source material and the target subtitles. This closeness to the original language and culture is ideally enhanced with the inclusion of appropriate annotations that should facilitate the task of translation into subsequent languages. As foregrounded by Oziemblewska and Szarkowska (2020, p. 451), "[s]pecial focus should be placed on consistency within the show and on potential translation difficulties such as culture specific references, particularly in the case of pivot templates".

Secondly, if the pivot template functions solely as an internal file, additional resources are then needed to create English subtitles for public consumption. The LSP can either create the English subtitles from scratch or modify the existing pivot template for commercial release. Since cost-efficiency is a key driver of the subtitling industry, it is not uncommon to see pivot templates directly repurposed as publicly available subtitles, despite the inherent limitations and drawbacks discussed above.

4.5. Second translations, quality control, and delivery

Following the localization of the pivot template into each deliverable downstream language, a multi-stage quality control process ensures accuracy, as illustrated in Figure 11:

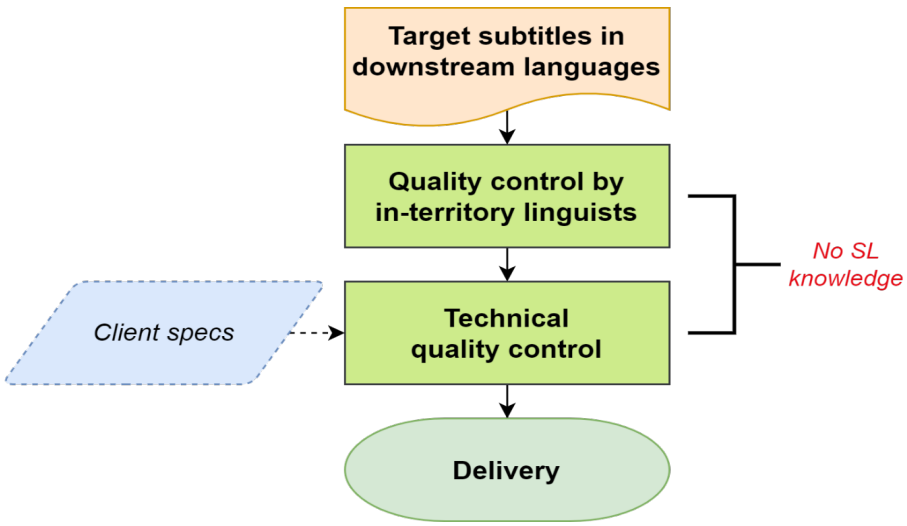

Figure 11: Quality control stages in pivot subtitling workflows

The initial QC step involves the review of the translation by in-territory linguists. While superficially similar to direct subtitling workflows, there is a key distinction as reviewers of pivot localization normally have no knowledge of the source language (Carrero & Reverter Oliver, 2023; Dallı & Sung, 2024). As already discussed, the pivot template itself becomes the source of truth for target subtitle QC. By default, linguists are not recruited on the basis of their proficiency in non-English languages. Therefore, they are not expected to review the target subtitles against the source material, and their remuneration is based on rates fixated to the English language, and according to the target language.

Figure 12 shows the typical process of pivot subtitling, illustrated through the use of the cloud-subtitling platform OOONA. Pivot subtitlers can leverage the audiovisual source for context, but the actual translation (right column) relies on an English pivot template, typically displayed next to the video proxy (left column). In an ideal scenario, an additional column with the original transcript should also be provided, as this could be useful for second linguists even if they do not understand the original. However, some subtitling platforms do not support having a third subtitle column and, as discussed earlier, a transcript in the original language might not be available.

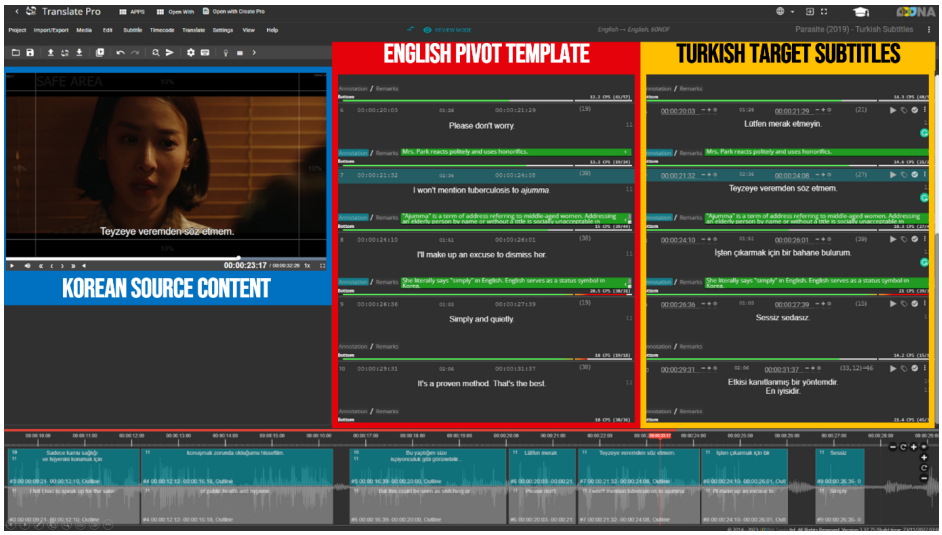

Figure 12: Typical pivot subtitling workflow (ooona.net)

Depending on the profile of the audiovisual content, target subtitles may undergo a second quality review by a separate linguist, who will also focus on the faithfulness of the translation with respect to the English master subtitles. Some workflows may include additional arbitration steps between the second linguist and the reviewers, particularly in cases where discrepancies might seem unsurmountable. Importantly, and like the initial reviewer, the second reviewer also lacks knowledge of the source language. In essence, the only agent with proficiency in the source language is often the first linguist, namely, the pivot templator.

Technical QC, on the other hand, focuses on ensuring that the subtitles meet client and platform specifications, including timing and styling. The technical team runs automatic tests against the pivot template to verify timing matches and identify any discrepancies. They flag errors such as exceeding character limits per line, respect of minimum gap between subtitles, appropriate display rates, subtitle positioning (to avoid overlapping onscreen text), lack of translator credits, and the like. While technical tests can be performed on

multiple streams in a batch process, each deliverable should ideally undergo separate checks. For this reason, some LSPs prefer locked templates for second translations to facilitate the technical QC process. If second linguists are allowed to modify timecodes, the technical team must then perform individual checks to ensure synchronization with the audio. This is why most locked templates only allow subtitlers to split and merge subtitle events to improve readability, but not to alter timecodes. After the quality control, the localized subtitles are deemed ready for delivery.

5. Overview of agents

Pivot subtitling workflows, with their multilingual nature and multi-stage operations, require the participation of a broader team of specialists compared to direct translation projects, as depicted in Figure 13:

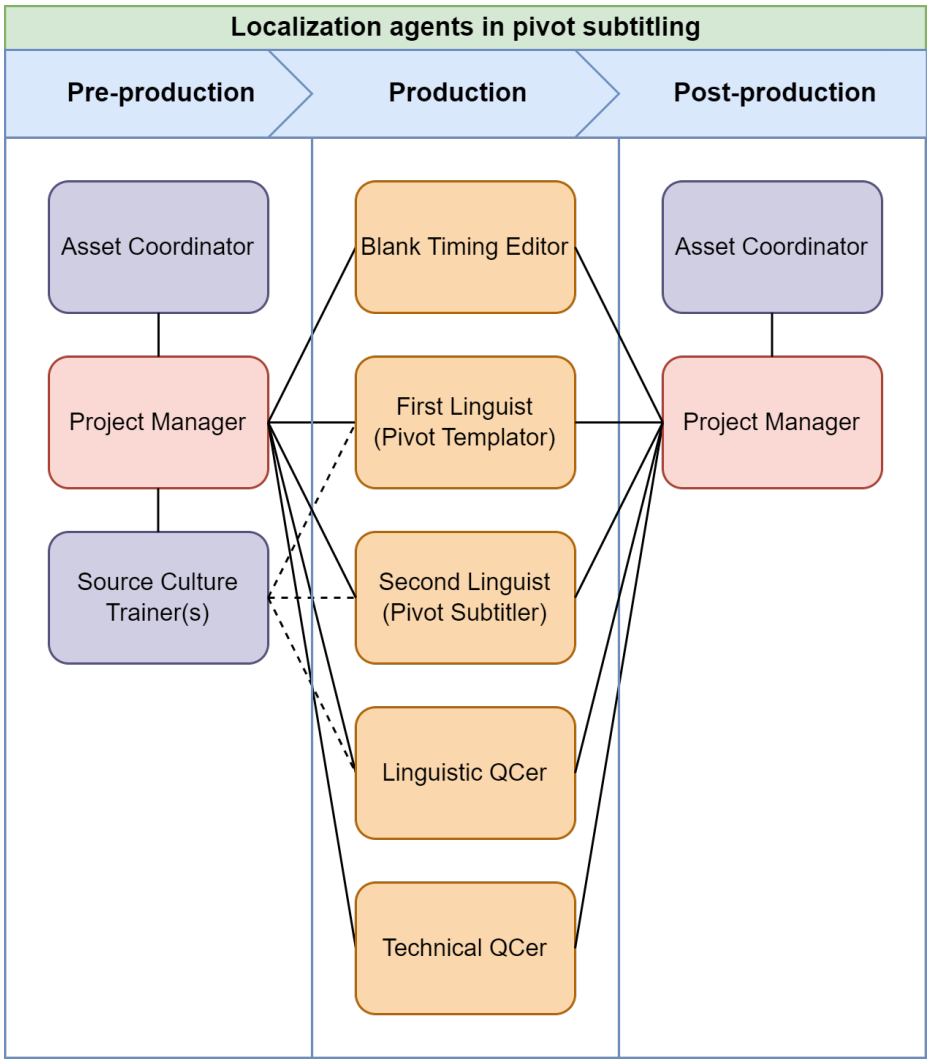

Figure 13: Overview of agents involved in pivot subtitling

At the core of the pre-production phase is the asset coordinator, the bridge between internal teams (technical, sales) and external vendors (content providers, streaming platforms), both in pivot and direct subtitling workflows. They ensure that all media assets, from proxies to dialogue lists and Key Names

and Phrases (KNPs) glossaries, are accounted for, delivered in the right format and at the right time. The project manager oversees the entire workflow and communicates with production teams, providing updates, direct technical information, and addressing any problems that may arise during the process.

One drawback is the lack of a direct communication line between the various production agents. While some LSPs have an arbitration step between the second translation and the linguistic QC, it is often the case that production agents cannot communicate directly with each other (Dallı & Sung, 2024). Although this anonymity helps to mitigate potential biases during the linguistic QC, it simultaneously hinders communication between the first and second linguists. This is particularly problematic in the case of pivot subtitling, as second linguists tend to lack knowledge of the source language, and a communication line with the pivot templator is crucial for clarifying cultural nuances and linguistic subtleties (Oziemblewska & Szarkowksa, 2020; Dallı & Sung, 2024). Instead, second linguists typically remain uninformed about post-submission processes and can only access their final translation when the content is commercially released. Although the project manager acts as a facilitator, this suggests a broader breakdown in communication between production agents, potentially impacting the output quality. As such, the true distinction between direct and pivot subtitling lies within the production phase.

To optimize costs, blank timing is often outsourced to external vendors. This approach leverages the industry separation between technical skills and translation expertise, as linguist rates are typically structured for translation only and are higher than those paid to the blank timing editors. At the heart of the translation, we can identify the linguistic assets, a group comprising both in-house and freelance linguists, who contribute across various stages, including creating the initial pivot template in English (first linguist) and translating it into different languages (second linguists).

Quality control itself is a multi-stage process. The initial check of the pivot template often falls to an in-house English team, ideally located in an English-speaking country. A linguistic quality control is done on the downstream languages by an in-territory linguistic QCer, and a separate technical quality control team (technical QCer), typically in-house, ensures the final product adheres to client and platform specifications.

While this outlines a common workflow, some LSPs take a long-term approach for high-volume non-English languages such as Hindi, Korean or Spanish. For such projects, they may invest in training linguists, who are unfamiliar with the source language and culture, on specific cultural, linguistic, and societal nuances. Trainers might come from various backgrounds, including project management, the existing freelance linguist pool, or external consultants.

6. Conclusion

There is no doubt that pivot subtitling is here to stay for the foreseeable future, as audiences continue to engage with non-English content, and streaming platforms will continue to promote this type of audiovisual material. This article has explored pivot subtitling workflows from an industry perspective, drawing attention to the roles of the various professionals involved, and highlighting the challenges attached to this inherently multilingual and multistep process. Although this research was conducted in collaboration with the ZOO Digital team, the workflows and roles outlined herein are broadly representative of prevalent industry practices across the global media localization landscape. While an attempt has been made to generalize processes, reflecting workflows

in writing is an arduous task, as capturing all conceivable variations is impossible. As a result, some of the graphs presented might appear too general or simple. However, they allow for further adaptation depending on a wide range of circumstances, such as the use of AI, the materials available, the level of QC required by clients, and the like.

When comparing how pivot subtitling workflows relate to their direct subtitling counterparts, this paper has highlighted the use of master templates and the separation between technical and linguistic skills as a similarity. Among the differences identified, the discussion has focused on the use of blank templates, which are often outsourced to external vendors, and on the importance of agents or roles that may not be as essential in direct workflows, as is the case with the asset coordinator and trainers. In this regard, it has been argued that pivot subtitling workflows require a broader team of specialists compared to direct translation projects, and that fluid communication across the different agents is crucial. While in direct subtitling workflows linguists usually translate into their native language, first linguists often translate out of their target language instead in pivot subtitling. Another key difference is that second linguists and final reviewers of pivot templates often have no knowledge of the source language, with the sanctioned pivot template in English becoming the source of truth for target subtitle translation and QC.

Our findings have shown how LSPs capitalize on their English-centric pools not only to save time and money, but also to streamline processes and overcome certain challenges (i.e., to eliminate the need for translators and QCers in specific non-English translation pairings for which the supply might be scarce). Our findings have also revealed that time-pressure and cost-efficiency could lead to the implementation of practices that endanger quality, such as the use of an English pivot template as a final deliverable, or the undertaking of technical roles without relevant linguistic competencies, and vice versa, thus risking professional deskilling in the long-term.

Although the focus of this article is on interlingual subtitling, findings could also be applied to other AVT practices. As discussed above, PLDLs are used in dubbing when translating from languages other than English, and given that dubbing workflows tend to be more complicated than subtitling ones, as a greater number of agents are involved in the process, and that LSPs might be tasked with producing both dubbing and subtitling assets, streamlining pivot localization processes becomes of paramount importance. In the latter case, PLDLs may also be adapted to be used as an English subtitling template which, as explained above, could be further altered to create commercial subtitles in English as well as used as a sanctioned pivot template to be translated into downstream languages. Commercial subtitles might also be further adapted to create intralingual subtitles for d/Deaf and hard of hearing viewers (SDH). The adaptation or reuse of assets, a common time and cost-saving operation in the media localization industry, adds further complexity and more opportunities for the perpetuation of errors if QC processes are not implemented systematically and carefully, especially in pivot localization.

The workflows illustrated in this paper allow for the implementation of AI in different forms throughout the subtitling process. However, the extent to which pivot subtitling will be benefited by automation is still to be determined, as it does not seem to play an essential role in current implementations yet, with LSPs reporting that extensive post-editing of both ASR and MT output is needed. Another question that arises is whether MT could replace the need to rely on pivot templates or whether MT output from the original language into downstream languages could be offered to second linguists as an additional resource to translate an English pivot template. Reception studies like the one conducted by Kuscu-Ozbudak (2021) are also needed to ascertain the potential

and impact of any of these practices, as well as of current pivot localization practices, since viewers' satisfaction should be a driving force in media localization workflows.

Acknowledgements

We would like to thank University College London for the funding provided to undertake the project referred to in this article, as well as all the professionals who shared relevant information with us, including ZOO Digital staff and roundtable participants. Special thanks go to Lydia Hayes-Harris and Ambrish Acharya for agreeing to be part of this project and for the many meetings and material exchanged to enable us to understand how pivot subtitling workflows are implemented in the industry. This research was also co-funded by the Research Foundation – Flanders (FWO) under project number 1119225N.

References

Artegiani, I. (2021). *Production processes and technologies: The making of quality in the platform subtitling industry*. [PhD Thesis]. Roehampton University.

Artegiani, I., & Kapsaskis, D. (2014). Template files: Asset or anathema? A qualitative analysis of the subtitles of The Sopranos. *Perspectives, 22*(3), 419–436. https://doi.org/10.1080/0907676X.2013.833642

Bolaños-García-Escribano, A. (2024). Practices, education and technology in audiovisual translation. Routledge.

Carrero Martín, J. F., & Reverter Oliver, B. (2023). El inglés como lengua pivote en la traducción audiovisual: industria y profesión en España. *Íkala, Revista de Lenguaje y Cultura, 28*(2), 1–18. https://doi.org/10.17533/udea.ikala.v28n2a03

Dallı, H. (2024). Pivot subtitling on Netflix: The case of Squid Game. *Journal of Audiovisual Translation, 7*(1), 1–24. https://doi.org/10.47476/jat.v7i1.2024.279

Dallı, H., & Sung, S. (2024). The state of pivot subtitling: A survey on Turkish subtitlers of Korean content. *FORUM. International Journal of Interpretation and Translation, 22*(2), 151–181. https://doi.org/10.1075/forum.23024.dal

Díaz-Cintas, J. (2021). AVT training and industry needs: Are we on the same page? Guest lecture, translating Europe workshop [Video]. Youtube. https://www.youtube.com/watch?v=1UsS_F7mGwc&t=829s

Díaz-Cintas, J., & Massidda, S. (2019). Technological advances in audiovisual translation. In M. O'Hagan (ed.) *The Routledge handbook of translation and technology* (pp. 255–270). Routledge.

Díaz-Cintas, J., & Remael, A. (2021). *Subtitling: Concepts and practices.* Routledge.

European Union. (2018). *Directive (EU) 2018/1808 of the European Parliament and of the Council of 14 November 2018 amending Directive 2010/13/EU on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) in view of changing market realities. European Union*. https://eur-lex.europa.eu/eli/dir/2018/1808/oj

Georgakopoulou, P. (2012). Challenges for the audiovisual industry in the digital age: the ever-changing needs of subtitle production. *The Journal of Specialised Translation, 17*,78–103.https://jostrans.soap2.ch/issue17/art_georgakopoulou.pdf

Georgakopoulou, P. (2019). Template files: The holy grail of subtitling. *Journal of Audiovisual Translation, 2*(2), 137–160. https://doi.org/10.47476/JAT.V2I2.84

Kapsaskis, D. (2011). Professional identity and training of translators in the context of globalisation: the example of subtitling. *The Journal of Specialised Translation, 16*, 162–184. https://jostrans.soap2.ch/issue16/art_kapsaskis.pdf

Künzli, A. (2023). How subtitling professionals perceive changes in working conditions: an interview study in German-speaking countries. *Translation and Interpreting Studies, 18*(1), 91–112.

https://doi.org/10.1075/tis.20107.kun
Kuscu-Ozbudak, S. (2021). The role of subtitling on Netflix: An audience study. *Perspectives, 30*(3), 537–551. https://doi.org/10.1080/0907676X.2020.1854794
Massidda, S. (2023). Disruptive AVT workflows in the age of streaming: The Netflix equation. *Target, 35*(3), 455–475. https://doi.org/10.1075/target.00021.mas
Massidda, S., & Sandrelli, A. (2023). ¡Sub! localisation workflows (th)at work. *Translation and Translanguaging in Multilingual Contexts, 9*(3), 298–315. https://doi.org/10.1075/ttmc.00115.mas
Nikolić, K. (2015). The pros and cons of using templates in subtitling. In R. Baños-Piñero & J. Díaz-Cintas (Eds.), Audiovisual translation in a global context: Mapping an ever-changing landscape (pp. 192–202). Palgrave Macmillan.
Nikolić, K. & Bywood, L. (2021). Audiovisual translation: The road ahead. *Journal of Audiovisual Translation, 4*(1), 50–70. https://doi.org/10.47476/jat.v4i1.2021.156
O'Hagan, M. (2007). Impact of DVD on translation: Language options as an essential add-on feature. *Convergence*, *13*(2), 157–168.
Oziemblewska, M., & Szarkowska, A. (2020). The quality of templates in subtitling. A survey on current market practices and changing subtitler competences. *Perspectives, 30*(3), 432–453. https://doi.org/10.1080/0907676X.2020.1791919
Pedersen, J. (2018). From old tricks to Netflix: how local are interlingual subtitling norms for streamed television? *Journal of Audiovisual Translation, 1*(1), 81–100. https://doi.org/10.47476/jat.v1i1.46
Pięta, H., Valdez, S., Torres-Simón, E., & Menezes, R. (2023). Pivot templators' challenges and training: Insights from a survey study with subtitlers and subtitler trainers. *Íkala, Revista de Lenguaje y Cultura, 28*(2), 1–21. https://doi.org/10.17533/udea.ikala.v28n2a02
Reverter Oliver, B. (2024). Traduire le français en français dans l'audiovisuel: le multilinguisme dans le doublage d'Emily in Paris. *Thélème*, *39*(2), 301–312. https://doi.org/10.5209/thel.92479
Tardel, A. (2023). A proposed workflow model for researching production processes in subtitling. *Trans-Kom, 16*(1), 140–173. https://www.trans-kom.eu/bd16nr01/trans-kom_16_01_09_Tardel_Subtitling.20230706.pdf
Torres-Simón, E., Valdez, S., Pięta, H., & Menezes, R. (2023). Is indirect translation a friend or a foe of sustainable development? *Translation Spaces, 12*(2), 204–230. https://doi.org/10.1075/ts.22025.tor
Walker, C. (2022). *Translation project management.* Routledge.