

Audiovisual Translation, Accessibility, and Inclusion: State of the Art

Juan Pedro Rica Peromingo

Universidad Complutense de Madrid, España

Abstract The rise of media accessibility (MA) services – mainly Subtitling for the Deaf and Hard of Hearing (SDH) and Audio Description (AD) – has created a need to train professionals in these areas. MA, a subfield of Audiovisual Translation (AVT), focuses on audiences with sensory disabilities and connects to translation, film, and accessibility studies. This article reviews AVT's role in accessibility and inclusion in European universities, highlighting key AVT modes, projects, regulations, and teaching methods, and offers practical recommendations for advancing AVT as an accessibility tool.

Keywords Media accessibility. Inclusion. University context. Audiovisual translation. State of the art.

Summary 1 Introduction. – 2 Audiovisual Translation: A Key Tool for Accessibility. – 2.1 Modalities of Audiovisual Translation. – 2.2 AVT as a Tool for Accessibility. – 2.3 Benefits of AVT for Social Inclusion. – 3 Accessibility and Inclusion: Concepts and Global Context. – 3.1 Accessibility: Definition and Key Principles. – 3.2 Global Context of Accessibility and Inclusion. – 3.3 Challenges in Accessibility and Inclusion. – 4 State of the Art in Audiovisual Translation, Accessibility, and Inclusion. – 4.1 Accessibility in the Audiovisual Context. – 4.2 Global Trends in Inclusion and Accessibility. – 4.3 The European Context. – 4.4 Challenges in the Implementation of Accessibility in Audiovisual Translation. – 4.5 The Future of Accessibility and Inclusion in Audiovisual Translation. – 5 Methodology of Analysis in Audiovisual Translation Studies, Accessibility, and Inclusion. – 5.1 Methodological Approaches in Audiovisual Translation. – 5.2 Accessibility Analysis in AVT. – 5.3 Cultural and Semiotic Analysis in AVT and Accessibility. – 5.4 Empirical Research Methods and Mixed Methodology. – 6 Conclusions and Recommendations.



1 Introduction

Audiovisual Translation (AVT) has become a key discipline in addressing the challenges of accessibility and inclusion in a globalized world. Through modes such as subtitling, audio description (AD), and dubbing, AVT facilitates access to audiovisual content for individuals with sensory impairments and promotes cultural and educational inclusion. As Matamala and Orero (2016) point out, these tools allow for greater participation in cultural and social life, expanding opportunities for learning and communication. The advancement of media accessibility (MA) services in media and the proliferation of digital platforms in recent years have highlighted the need for training professionals, scholars, and researchers in these areas, particularly within the university context (Rica Peromingo, Sáenz Herrero 2019). This need is especially pressing in relation to linguistic accessibility and the inclusion of individuals with disabilities, specifically those with visual or auditory impairments (Rica Peromingo 2024). Concurrently, the growth in Subtitling for the Deaf and Hard of Hearing (SDH) and AD services provided by public and private media in Europe has spurred research in the fields of AVT, accessibility, and inclusion. Media accessibility has traditionally been viewed as a subfield of AVT that focuses on sensory-impaired audiences, particularly those with hearing or visual disabilities (Romero-Fresco 2018; 2019).

MA is as closely tied to audiovisual translation as it is to translation studies, film studies, and the broader domain of accessibility studies (Greco 2018). And all this progress is fundamentally driven by the fact that we are dealing with human rights and the fundamental right of every citizen, with or without disabilities, to access audiovisual materials under equal conditions. This principle is clearly reflected in the document *The Comprehensive Spanish Strategy for Culture for All: Accessibility to Culture for People with Disabilities* (Real Patronato sobre Discapacidad, Ministry of Health, Social Policy, and Equality 2011), which states that:

Accessibility is both a fundamental right and a crucial tool for supporting social inclusion, non-discrimination, and equality of opportunity and treatment. This is largely because the most common form of discrimination arises from the lack of accessibility to physical environments, information and communication, processes, products, and services.¹

¹ See the full report at: https://www.mdsocialesa2030.gob.es/derechos-sociales/discapacidad/docs/Estrategia_Integral_Espanola_Cultura_para_Todos.pdf (transl. by the Author).

Fortunately, in recent years, European institutions and the authorities of individual Member States have increasingly promoted regulations, legislation, and implementation measures aimed at fostering accessibility in media and inclusion, particularly for individuals with visual and hearing impairments. However, the regulations currently in place in some Member States are becoming somewhat outdated, as they fail to account for the audiovisual advancements enabled by new technologies, which significantly benefit individuals with disabilities seeking access to audiovisual content (Rica Peromingo 2025).

In the educational context, especially in European universities, accessibility is crucial to ensure the equitable participation of all students. AVT initiatives not only remove barriers for students with disabilities but also foster a more inclusive environment for a diversity of needs and cultural contexts. According to Greco (2018), accessibility should be integrated as a cross-cutting element in educational settings, not merely as a corrective measure but as a proactive strategy. To facilitate this access, university programs have been developed to promote accessibility and inclusion, training professionals and academics in the field of audiovisual translation. Also, research projects have been initiated to analyze the needs of end-users and identify potential updates to existing regulations. We will present teaching methodologies for AVT and accessibility within a Spanish university context. Additionally, we will emphasize the importance of learning national and European regulations concerning accessibility-related modalities. Finally, we strongly advocate for a focus on inclusion and accessibility that actively involves end-users, who are ultimately the primary beneficiaries of our research in this field.

We aim at analyzing the current state of AVT as a tool for accessibility and inclusion, with a specific focus on its application in the European university context. Additionally, it seeks to identify best practices, challenges, and future opportunities to promote inclusion through AVT.

2 Audiovisual Translation: A Key Tool for Accessibility

AVT refers to the process of adapting multimedia content (such as movies, TV shows, programs, videos, video games, etc.) from one language to another, not only at the linguistic level but also considering the cultural and contextual aspects of the original material. Its purpose is to make content accessible to audiences speaking different languages or to people with various disabilities, such as hearing or visual impairments. AVT plays a key role in enhancing the accessibility of audiovisual content and encompasses different modalities, each addressing specific audience needs (Díaz-Cintas et al. 2007).

2.1 Modalities of Audiovisual Translation

We can briefly analyze the different modalities of audiovisual translation, not only from the traditional perspective (subtitling for hearing audiences or dubbing) but also those more closely related to accessibility and inclusion (SDH, AD and SL - Sign Language).

1. **Subtitling for hearing population:** These texts transcribe the spoken words of characters in a video or movie and are presented on the screen for the audience to read while listening to the audio. This is one of the most common forms of AVT and is primarily used for language translation (Gottlieb 1992; Díaz-Cintas, Remael 2020).
2. **Dubbing:** Dubbing involves replacing the original voices of actors in a film or series with voices in another language, synchronizing the dialogue with lip movements. Although dubbing is commonly used to translate content into other language, it is also an important means for individuals with visual disabilities, as it allows them to access the content without needing to read subtitles.²
3. **SDH:** This type of subtitle not only translates the dialogue but also describes other important sounds (such as music, sound effects, or audience laughter) that are relevant for understanding the full context. It is a vital tool for people with hearing loss, as it enables them to enjoy the audiovisual experience more fully (Arnáiz-Uzquiza 2013; Zárate 2021; Neves 2021).
4. **AD:** They are an essential form of AVT that helps blind or visually impaired individuals understand what is happening visually in a program or film. Through additional narration at appropriate moments, relevant visual elements (such as action, movement, gestures, or the environment) are described to ensure that the plot is comprehensible without the need to see the content (Matamala, Orero 2016; Mendoza, Matamala 2019; Vázquez Martín 2019).
5. **SL:** Some productions may also incorporate sign language as a translation method, especially for deaf individuals or those with hearing impairments. This involves using sign language interpreters to translate dialogue or relevant information from the audiovisual work.³

² Authors such as Montero Domínguez 2017; Freddi, Pavesi 2009; Chaume 2012; Menéndez de la Rosa 2025.

³ CNLSE 2017; Tamayo 2022; Ávila Ramírez 2022; CNSE 2023.

2.2 AVT as a Tool for Accessibility

AVT is not limited to language translation but also includes an inclusive approach aimed at eliminating barriers for individuals with disabilities (Pawłowska et al. 2024). The importance of AVT lies in its ability to ensure that all people, regardless of their language or sensory abilities, can enjoy and comprehend audiovisual content.

1. **Accessibility for Deaf and Hard of Hearing Individuals:** AVT provides subtitles and audio descriptions, enabling people who are deaf or hard of hearing to experience audiovisual content. SDH subtitles not only transcribe the dialogue but also provide details about sounds and music that are crucial for understanding the context of a scene (Arnáiz-Uzquiza 2013; Zárate 2010).
2. **Accessibility for Blind and Visually Impaired Individuals:** Audio descriptions allow blind or visually impaired individuals to access visual aspects of the content, such as facial expressions, gestures, action scenes, or changes in the environment. This helps them have a fuller and richer experience of the audiovisual content (Orero 2022b; Maszerowska et al. 2014).
3. **Intercultural Accessibility:** Translating content into multiple languages also involves a strong component of cultural accessibility. In addition to linguistic translation, AVT must consider cultural adaptation to ensure that local or regional elements are understood by audiences from different contexts. This prevents misunderstandings and facilitates the acceptance of audiovisual works in various regions of the world (Katan 2004; Mansouri, Elias 2021).

2.3 Benefits of AVT for Social Inclusion

AVT is key to ensuring the social inclusion of individuals who might otherwise be excluded from the technological and cultural advances offered by the audiovisual world. Furthermore, it helps create a more equitable and diverse society by giving visibility to the needs of different groups. By making audiovisual content accessible to everyone, AVT also promotes greater mutual understanding between cultures and linguistic communities (Chaume Varela 2004).

Despite advances in AVT, several challenges remain in terms of quality and reach. One of the most significant challenges is ensuring that the translation is faithful to the original meaning, especially when dealing with culturally specific content. Another challenge is the integration of accessible resources in streaming platforms, as not all offer consistent options for subtitles or audio descriptions.

3 **Accessibility and Inclusion: Concepts and Global Context**

This section will focus on what we understand by accessibility and inclusion, how we define them, and the key aspects we must consider in the field of audiovisual translation. We will also discuss the global contexts of both terms and how they are being applied internationally, the challenges, and the different analytical approaches.

3.1 **Accessibility: Definition and Key Principles**

Accessibility is the process of designing and providing products, services, and environments that can be used by all people, regardless of their abilities or disabilities. This concept has evolved beyond its application to individuals with physical disabilities, now including those with sensory, cognitive, and mobility impairments. In its broadest sense, accessibility seeks to remove physical, social, and technological barriers that limit full participation in society. Mace (1985, 147) defines his concept of “universal design” as “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design”. The principle of accessibility lies at the heart of many international policies and legislative frameworks, such as the United Nations Convention on the Rights of Persons with Disabilities (CRPD) (2006),⁴ which emphasizes the importance of ensuring that environments, services, technologies, and communication systems are accessible to all, including individuals with disabilities. Universal Design and Design for All are two fundamental approaches that ensure accessibility is implemented in various contexts, from physical infrastructure to digital environments (Burgstahler 2008).

Inclusion goes beyond accessibility by focusing on the full integration of all people into society, regardless of their differences. It refers to creating environments where everyone, without discrimination, can actively participate in social, cultural, educational, and economic life. Inclusion is the process by which policies and practices ensure that all people, including those with disabilities, are valued and have the same opportunities to contribute and benefit from the same rights as the rest of society (Booth, Ainscow 2002).

Inclusion and accessibility are deeply interconnected. While accessibility refers to removing barriers that hinder access, inclusion aims to ensure that access is not only possible but also meaningful and

⁴ The complete text can be found at: <https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-crpd>.

complete, allowing active and equitable participation in all aspects of social life. In other words, accessibility is the first step toward effective inclusion, but inclusion involves a deeper commitment to equity and social justice (Orero 2022a).

3.2 Global Context of Accessibility and Inclusion

On a global scale, accessibility and inclusion are being promoted and regulated by a range of international initiatives. One of the most significant frameworks in this regard is the CRPD, adopted in 2006 and ratified by numerous countries. This convention establishes the obligation of states to promote accessibility in all aspects of public life, including information technologies, transportation, education, and employment. Universal Design is a central principle that encourages the creation of products and services that are accessible to everyone, without the need for additional modifications. The implementation of this principle can be observed in various areas, such as inclusive education, where schools adopt methods and technologies to ensure all students, including those with disabilities, have access to the curriculum without the need for further adaptations (Rose, Meyer 2007). At a technological level, digital accessibility has become a key area of global intervention, as more than 50% of the global population uses the Internet, and a significant portion of them has some form of disability. Accessible technologies, such as websites that comply with the Web Content Accessibility Guidelines (WCAG),⁵ updated as of December 12, 2024, and the development of assistive devices like screen readers, are crucial to ensuring that online information is accessible to all.⁶

3.3 Challenges in Accessibility and Inclusion

Despite significant progress, a few challenges remain in the effective implementation of accessibility and inclusion. These include the lack of public awareness about disabilities, resistance to adopting new accessible technologies, and disparities in infrastructure and resources available in different countries. According to a report by the World Health Organization (WHO) (2011),⁷ more than 15% of the

⁵ It may be consulted at: <https://www.w3.org/TR/WCAG22/>.

⁶ World Wide Web Consortium (W3C) available at: <https://www.w3.org/press-releases/2018/wcag21/>.

⁷ Full report available at: <https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability>.

global population lives with some form of disability, and many of these individuals face significant barriers in areas such as education, employment, and healthcare.

In terms of digital accessibility, significant obstacles still exist, such as non-compliance with accessibility standards by businesses and governments, as well as the digital divide affecting individuals from disadvantaged backgrounds. This highlights the urgent need for more inclusive public policies and a commitment to education and raising awareness about the rights of people with disabilities (Paciello 2000).

We believe that in order to move towards a more accessible and inclusive society, it is essential to adopt a multidimensional approach that not only focuses on the physical or technological aspects of accessibility but also on social and cultural attitudes towards people with disabilities. Awareness and education are crucial to transforming social attitudes and eliminating discrimination (Kushariyadi 2024). Furthermore, legal frameworks and public policies should align with the principles of the Convention on the Rights of Persons with Disabilities to ensure that people with disabilities can enjoy their rights on equal terms with the rest of the population.

4 State of the Art in Audiovisual Translation, Accessibility, and Inclusion

Audiovisual translation has evolved significantly with technological advancements and the rise of global content consumption. AVT encompasses a variety of modalities, including subtitling, dubbing, voiceover, and AD, all of which play a crucial role in making audiovisual content accessible. The expansion of streaming platforms and global access to content has made AVT an essential tool to ensure that people of various languages and sensory capabilities can enjoy the same content (Gottlieb 1992).

One of the most significant developments in the last decade has been accessibility-focused translation, which not only addresses language translation but also facilitates access to content for people with disabilities. Subtitles, dubbing, AD, and SDH have gained considerable prominence in the industry, responding to a growing demand for inclusion. As pointed out before, the CRPD has been a driving force behind this change, advocating for the creation of an accessible environment for all, including those with sensory disabilities.

4.1 Accessibility in the Audiovisual Context

In the audiovisual context, accessibility involves designing products and content that are accessible not only to people who speak different languages but also to those with sensory disabilities, such as deafness or blindness. In terms of subtitling and dubbing, accessibility is ensured through SDH and AD, which are key tools allowing individuals with hearing or visual impairments to fully engage with the audiovisual experience (Arnáiz-Uzquiza 2013). SDH differ from traditional subtitles in that they not only transcribe dialogue but also include descriptions of important sounds, sound effects, music, and other details essential for understanding the content. Audio descriptions are essential for individuals with visual impairments, as they provide narration of visual elements that are otherwise inaccessible, such as facial expressions, the environment, or actions taking place on screen (Matamala, Orero 2016).

4.2 Global Trends in Inclusion and Accessibility

Globally, the inclusion of individuals with disabilities in audiovisual translation is being driven by legal and regulatory frameworks. In 2018, the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions highlighted the importance of accessibility in the global distribution of cultural content, including AVT as a tool to ensure equity in access.⁸ This convention has prompted governments and media companies to integrate accessible options for people with disabilities across all content platforms. Additionally, Universal Design, a principle that promotes the creation of accessible products from the outset, has gained ground in audiovisual translation. The implementation of accessibility guidelines for digital media, such as the WCAG, has been fundamental in ensuring that streaming platforms like Netflix and Amazon Prime offer options like subtitles and audio descriptions in multiple languages.⁹ In fact, streaming platforms have begun to adopt this principle in their original productions and distributions, responding both to market demand and legal regulations.

⁸ The complete document is available at: <https://www.unesco.org/creativity/sites/default/files medias/fichiers/2023/01/260678eng.pdf>.

⁹ World Wide Web Consortium (W3C) available at: <https://www.w3.org/press-releases/2018/wcag21/>.

4.3 The European Context

Moving the focus to our continent, Europe has led the implementation of policies and projects aimed at ensuring audiovisual accessibility, supported by programs such as Erasmus+ and Horizon Europe. Projects like ADLAB PRO¹⁰ have contributed to the professionalization of audio description in the continent, establishing common standards and best practice guidelines. We can also highlight the European research project ATHENA,¹¹ whose fundamental objective is “to transform the higher education sector and to offer students education that will include knowledge on accessibility”. For this research team, such a transformation will enable the emergence of new teaching methods aimed at building a more inclusive society. The ATHENA project aims

to increase the quality and relevance of higher education teaching programs through the development and effective dissemination of guidelines and recommendations on incorporating accessibility in higher education curricula. (Brescia-Zapata et al. 2024)

Similarly, the EASIT¹² project focuses on developing easy-to-understand subtitles, audio description and easy news, promoting the inclusion of audiences with diverse linguistic and cognitive abilities. Recently, the WEL project¹³ (*From Written to Oral Texts in Easy Language: Easy Audios in Cultural Visits and Video Games*) aims at mapping current oral easy language (EL) practices in terms of creation processes, users and main features, evaluating some selected oral EL features in terms of comprehension, preferences, and acceptability, researching how easy audios could be developed considering existing access services and using video games as a case study and how easy audios could be developed considering access services and using cultural leisure visits as a case study, and, finally, continuing to raise awareness, communicate, disseminate

10 ADLAB PRO official webpage: <https://www.adlabpro.eu/>.

11 ATHENA official webpage: <https://athenaproject.eu/>.

12 EASIT official webpage: <https://webs.uab.cat/easit/es/>.

13 WEL official webpage: <https://webs.uab.cat/wel/en/>, project led by Carme Mangiron and Anna Matamala (TransMedia Catalonia research group: <http://grupsderecerca.uab.cat/transmedia/>) at Universitat Autònoma de Barcelona. This project is funded by the Spanish Ministerio de Ciencia, Innovación y Universidades, reference code PID2022-137058NB-I00. Main researchers: Miquel Edo Julià, Maria Jesús Machuca Ayuso, Estel·la Oncins (Universitat Autònoma de Barcelona) and Juan Pedro Rica Peromingo (Universidad Complutense de Madrid). The working group is composed of: Miguel A. Oliva Zamora, María Pujadas Farreras, Elisa Perego, María Mercedes Suárez de la Torre, Anne Parpan and Aida Villacéjia.

and transfer research results to key stakeholders. Other university research projects which can be mentioned include the AVLA project¹⁴ at the Universidad Complutense de Madrid which consists of the use of new methodologies and technologies applied to the teaching and learning of the different modes of AVT, specifically the ones related to accessibility: subtitling for the deaf and hard-of-hearing and audio description for the blind or partially-sighted. The main goal is to design materials, resources and evaluation processes in order to put into practice these new technologies and methodologies for teaching and learning. This project includes the compilation of the CALING corpus (*Corpus de Accesibilidad Lingüística*) which includes a database of different activities designed by the research group and used in different audiovisual translations university classes to teach the different modes of audiovisual translation: dubbing, subtitling for hearing population, SDH and AD. The corpus also includes real evaluations from end-users of student activities with the aim of proposing changes to the existing regulations in the European context (specifically the ISO standards on accessibility) and, more particularly, in the Spanish context (with the UNE standards on SDH¹⁵ and AD¹⁶) (Rica Peromingo forthcoming; 2024; 2022; 2019). Finally, and also at the international level, we can mention the Excellence Project *Inclusive Humanities 23/27*,¹⁷ within subproject WP 1.10, titled *Preparation and administration of questionnaires for different groups of students belonging to vulnerable categories, data collection, and knowledge transfer (Elaborazione di questionari destinati a diversi gruppi di discenti appartenenti a categorie vulnerabili, raccolta dati e trasferimento delle conoscenze)*,¹⁸ carried out at the Department of Foreign Languages and Literatures at the Università degli Studi di Verona (Italy). The main objective of the project is

to identify strategies that can facilitate access to audiovisual content for deaf and blind individuals. To this end, a series of questionnaires will be developed to assess the needs – particularly

14 AVLA official webpage: <https://www.avla.com/>, project led by Juan Pedro Rica Peromingo (TRADAVAL Research Group: <https://www.ucm.es/tradaval/>) at Department of English Studies, Universidad Complutense de Madrid.

15 AENOR UNE Standard on SDH published in 2012.

16 AENOR UNE Standard on AD published in 2005.

17 *Inclusive Humanities 23/27* official webpage: <https://inclusivehumanities.eu/en/>.

18 Official webpage for the subgroup: <https://inclusivehumanities.eu/en/audiovisual-accessibility-and-inclusion-in-the-university-setting/>, research project led by Rosa María Rodríguez Abella (Università degli Studi di Verona). The other researchers in the project are Luisa Chierichetti (Università degli Studi di Bergamo), Juan Pedro Rica Peromingo (Universidad Complutense de Madrid) and Maria Cristina Secci (Università degli Studi di Cagliari).

in the audiovisual domain – of people with hearing and visual impairments in various social contexts, such as universities, cinemas, theaters, musicals, operas, and more.

In addition to these projects, we can also mention academic research groups, such as the one at the Faculty of Philology at the Universidad Complutense de Madrid, called TRADAVAL¹⁹ (Translation, Audiovisual Translation, and Linguistic Accessibility). This group promotes research in translation in general, AVT in particular, and linguistic accessibility (SDH, AD, Spanish Sign Language – LSE). The team consists of researchers and professors in the fields of translation, audiovisual translation, and linguistic accessibility, most of whom have been working together on various national and international research projects, as well as on teaching innovation projects at the Universidad Complutense, for several years. The group intends to include undergraduate and postgraduate students, doctoral students, and professionals from other language departments at the Faculty of Philology, as well as professionals in LSE who are currently working at the Department of English Studies at the Universidad Complutense, in the near future.

In academia, institutions like the Universidad Complutense de Madrid, the Universitat Autònoma de Barcelona, the University College London or the University of Antwerp have incorporated accessible AVT into their curricula, offering specific modules on subtitling and audio description for Translation and Interpreting students. These strategies seem to not only benefit students with disabilities but also prepare future professionals for a job market that increasingly values accessibility competencies. The European Audiovisual Media Services Directive²⁰ (2018) has also played a crucial role by establishing mandatory accessibility requirements for audiovisual media services. This legislation has encouraged content producers to integrate tools such as subtitles and audio descriptions into all their productions, significantly improving access to information for individuals with disabilities (Greco 2018). Similarly, the European Accessibility Act,²¹ a mandatory transposition for all Member States within the European Union, which focuses on the

19 Official webpage: <https://www.ucm.es/tradaval/>, research group led by Juan Pedro Rica Peromingo at the Department of English Studies, Universidad Complutense de Madrid. Other researchers are: Arsenio Andrades and Ángela Sáenz (Universidad Politécnica de Madrid), Manuel Mata, Marta Nadales, Blanca Puchol, Ana Laura Rodríguez, Paloma Tejada and Matilde Vivancos (Universidad Complutense de Madrid).

20 The European Audiovisual Media Services Directive is available at: <https://digital-strategy.ec.europa.eu/en/policies/audiovisual-and-media-services>.

21 The European Accessibility Act is available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0882>.

accessibility requirements for products and services. This Directive applies to the following products placed on the market after 28 June 2025: computers and operating systems, payment terminals, automated teller machines, ticketing machines, check-in machines, consumer terminal equipment with interactive computing capability, used for accessing audiovisual media services, etc.

4.4 Challenges in the Implementation of Accessibility in Audiovisual Translation

Despite progress, several challenges remain in the implementation of accessibility in AVT. One of the primary issues is the lack of standardization in accessibility practices. While international guidelines have been established, implementation remains inconsistent. For example, the availability of SDH and AD is not uniform across all platforms or content, leaving many people with disabilities without adequate access to certain programs or films.

Another significant challenge is the lack of resources in some developing countries, where technology and infrastructure for implementing accessibility are limited. Despite global efforts, economic and technological disparities remain a significant barrier to ensuring universal inclusion in accessing audiovisual content.

Moreover, the cultural aspect of accessibility in AVT continues to be an important issue. Subtitles and dubbing translations do not always accurately reflect the cultural context of the target audience, which can lead to interpretation and comprehension problems, especially for individuals with disabilities (Katan 2004). It is essential that accessibility strategies take cultural and linguistic nuances into account to ensure that content is genuinely inclusive.

4.5 The Future of Accessibility and Inclusion in Audiovisual Translation

The future of AVT and accessibility is marked by advancements in artificial intelligence (AI) and assistive technologies. AI-based tools, such as automatic transcription and synthesized voice dubbing, are opening new possibilities for making content more accessible. However, these technologies also present ethical and quality challenges, as automation may not capture the cultural, contextual, or emotional nuances of the content accurately. As governments and international organizations continue to advocate for universal accessibility, further progress is expected in the integration of accessible technologies, facilitating equal access for individuals with disabilities worldwide. In the long term, inclusive design will become

standard practice in the AVT industry, making accessibility not just an option but a norm for all audiovisual content (Rose, Meyer 2002).

5 Methodology of Analysis in Audiovisual Translation Studies, Accessibility, and Inclusion

The methodology of analysis in AVT, accessibility, and inclusion requires a comprehensive approach that combines theories and practices from several disciplines, such as linguistics, translation theory, cultural studies, semiotics, and accessibility studies. To study these phenomena, different approaches and methodological tools are employed, which can vary depending on the aim of the study and the context in which the research is conducted (Diaz Cintas et al. 2007).

5.1 Methodological Approaches in Audiovisual Translation

AVT studies typically adopt a qualitative or mixed methodology, utilizing content analysis techniques, comparative analysis, and case studies to examine how audiovisual content is translated and adapted. One of the most commonly used approaches is textual analysis, which focuses on the study of subtitles, dubbing, and other elements of AVT. Textual analysis allows for the identification of equivalence, fidelity, and creativity in translation, as well as the influence of cultural factors in the adaptation process (Gottlieb 1992).

Comparative analysis between the original text and its translation is one of the most frequent methodologies used to examine the strategies employed by audiovisual translators. This approach focuses on identifying translation decisions, such as omission, substitution, or adaptation, made by translators when transferring content between languages and cultures (Katan 2004). Additionally, comparative studies can be complemented with reception analysis, which investigates how viewers perceive the quality and effectiveness of translations (Baker 2006).

5.2 Accessibility Analysis in AVT

Accessibility in AVT involves analyzing how audiovisual content is adapted for people with sensory disabilities, such as hearing and vision impairments. In this context, the evaluation methodology is based on the analysis of accessibility products, such as SDH and AD. The accessibility evaluation methodology includes both qualitative and quantitative approaches, assessing the accuracy, quality, and

effectiveness of these tools from different perspectives (Arnáiz-Uzquiza 2013; Rica Peromingo 2019).

A key tool in accessibility analysis is accessibility auditing, which can be carried out using standards such as WCAG or specific assessments of SDH and AD. These audits examine the extent to which audiovisual content is accessible to audiences with disabilities and whether it complies with international accessibility guidelines.²² Furthermore, accessibility studies can include user surveys and focus groups that provide direct feedback from end-users about the effectiveness of accessibility tools (Rica Peromingo 2022).

5.3 Cultural and Semiotic Analysis in AVT and Accessibility

A crucial aspect of the methodology for analyzing AVT and accessibility is cultural analysis. AVT is not only a linguistic practice but also a cultural one, involving the adaptation of cultural elements from one context to another. According to Nida (1964), translation must consider the norms and cultural expectations of the target audience. This implies the need to understand both the cultural and social contexts of the original audience as well as the receiving audience to ensure the content is meaningful and accessible.

In this regard, semiotic analysis of visual and auditory signs plays a fundamental role. The semiotics of AVT focuses on how visual and auditory signs are translated and how these signs are effectively communicated through subtitles (both for hearing and for non-hearing population), dubbing, and AD. Semiotic analysis examines how visual and auditory elements, such as facial expressions, music, and sound effects, contribute to meaning construction and how they should be adapted or described in translation to ensure an accessible and comprehensible experience (Baker 2006).

5.4 Empirical Research Methods and Mixed Methodology

In empirical AVT and accessibility studies, interviews and surveys are key tools for gathering data on viewers' perceptions of translation quality and accessibility options. These methods allow for the collection of information on how people with sensory disabilities experience AVT, how they evaluate the effectiveness of SDH and AD, and how inclusion impacts their experience of consuming audiovisual content.

22 World Wide Web Consortium (W3C) available at: <https://www.w3.org/press-releases/2018/wcag21/>.

Additionally, observation methods are useful in field studies. Researchers can observe user behavior while interacting with accessible content and gather data on how accessibility tools (such as SDH and AD) are used on different media platforms, such as cinema, television, or streaming services.

The use of mixed methodology is becoming a common practice in AVT and accessibility studies, combining qualitative and quantitative data to obtain a more complete view of the phenomenon under study. Quantitative studies may involve collecting data on the number of accessible contents, the frequency of use of subtitles and audio descriptions, and the results of surveys on the quality of these tools. These data can be complemented with qualitative analyses, such as interviews and case studies, which provide a deeper understanding of the user experience.

In our opinion, this methodological approach highlights the diverse tools and strategies employed to analyze audiovisual translation and accessibility, encompassing both theoretical and practical approaches, while providing a robust framework for research in this field.

6 Conclusions and Recommendations

AVT, in its various modalities, has become a fundamental tool for promoting accessibility and inclusion in educational and cultural contexts. In Europe, the commitment to inclusive regulations and collaborative projects has led to significant advancements. However, continued efforts are needed to raise awareness and develop sustainable resources to ensure full accessibility. We propose some specific recommendations: firstly, we should enhance professional training incorporating mandatory accessibility modules in Translation and Interpreting programs. For instance, the Universidad Complutense de Madrid, the Universitat Autònoma de Barcelona or the University of Antwerp already offer specific modules in this area, including training in SDH, AD and SL. This approach ensures that future translators are equipped with relevant skills for a market increasingly demanding accessibility competencies, preparing them to face the challenges of an inclusive labor market.

Our second recommendation is to promote international cooperation expanding partnerships between universities in different regions to share best practices and foster joint projects focused on audiovisual accessibility. Notable examples of such initiatives include projects like ADLAB PRO, which has established standards for audio description, and EASIT, which focuses on creating easy-to-understand subtitles, audio descriptions and easy news, the AVLA Project, which aims at proposing improvements and changes to the

existing regulations on accessibility at the local and European levels, or more recently the LEAD-ME COST project²³ whose aim was to help all stakeholders in the field of Media Accessibility and cross-cutting topics (e.g. AI and Interactive Technologies) in Europe to meet the legal milestones requested by the recently passed European legislation (Marcus-Quinn et al. 2024), or the above mentioned AVLA project from the UCM. These international collaborations not only drive innovation but also ensure knowledge transfer and capacity building across the academic sector.

Thirdly, we would like to recommend increasing empirical research, evaluating the long-term impact of accessibility initiatives on learning and employability, with a particular focus on the experiences of students with disabilities. Previous studies, such as Rica Peromingo (2022), have explored how the implementation of accessible tools in European universities has significantly improved opportunities for these students. Broader, longitudinal analyses are needed to identify best practices and areas for improvement.

Next, we would particularly encourage technological innovation, funding tools based on artificial intelligence and machine learning to facilitate accessibility, such as multilingual automatic subtitles and personalized audio descriptions. A recent example is the use of deep learning technologies to generate adaptive automatic subtitles, as developed by Google AI in collaboration with European universities (Wang, Zhuang 2024). These innovations have proven effective in improving the precision and accessibility of audiovisual content across multiple languages.

Our last recommendation urges to provide incentives for educational institutions so that they may allocate resources and promote recognition to those universities that adopt and implement inclusive strategies in their programs.

Among the future lines of research emerging from the study presented here on AVT, accessibility, and inclusion are the following: we propose a comparative analysis of inclusive policies in European and Latin American universities, the assessment of the impact of accessibility on academic performance and employability of students with disabilities, and the development of hybrid methodologies that integrate accessible AVT tools with innovative pedagogical approaches.

By strengthening AVT capabilities and fostering an inclusive approach, it is possible to transform educational and cultural dynamics, ensuring that all individuals have equal opportunities for participation and success. This effort must always center on the

23 More information about the LEAD-ME COST project can be found at: <https://www.cost.eu/actions/CA19142/#tabs|Name:overview>.

end-users, who are ultimately the focus of our research, teaching, and efforts to create a more just and inclusive university and society. It is vital to ensure that people with disabilities have access to audiovisual materials under the same conditions as those without disabilities.

We would like to conclude our study by reaffirming the motto used by individuals with disabilities – whether intellectual, motor, auditory, or visual – which inspires our commitment to a more just and equitable society and motivates us to continue promoting teaching, learning, and research in audiovisual translation, accessibility, and media inclusion: “Nothing about us without us”.

Bibliography

- AENOR (Asociación Española de Normalización y Certificación) (2005). *Audiodescripción para personas con discapacidad visual. Requisitos para la audiodescripción y elaboración de audioguías*. UNE 153020. Madrid: AENOR.
- AENOR (Asociación Española de Normalización y Certificación) (2012). *Subtitulado para personas sordas y personas con discapacidad auditiva. Subtitulado a través de teletexto*. UNE 153010. Madrid: AENOR.
- Arnáiz-Uzquiza, V. (2013). *Subtitling for the Deaf and Hard of Hearing: A Review of Practices and Challenges* [unpublished PhD Dissertation]. Barcelona: Universitat Autònoma de Barcelona. https://ddd.uab.cat/pub/tesis/2013/hdl_10803_117528/vau1de3.pdf.
- Ávila Ramírez, R. (2022). *Lengua de signos, accesibilidad, tecnología y traducción: Estado de la cuestión, reflexiones y propuestas* [tesis doctoral]. Córdoba: Universidad de Córdoba. <https://helvia.uco.es/xmlui/handle/10396/22707>.
- Baker, M. (2006). *Translation and Conflict. A Narrative Account*. London: Routledge.
- Booth, T.; Ainscow, M. (2002). *The Index for Inclusion: Developing Learning and Participation in Schools*. Centre for Studies on Inclusive Education. <https://www.eenet.org.uk/resources/docs/Index%20English.pdf>.
- Brescia-Zapata, M.; Matamala, A.; Mangiron Hevia, C. (2024). «Integración de la accesibilidad y el diseño universal en los currículos universitarios de artes y humanidades: aportaciones del proyecto ATHENA». Simón Márquez, M. et al., *Innovación docente e investigación en arte y humanidades: desafíos de la enseñanza y aprendizaje en la educación superior*. Madrid: Dykinson, 23-32. <https://doi.org/10.14679/3764>.
- Burgstahler, S. (2008). *Universal design in higher education: From principles to practice*. Harvard: Harvard Education Press.
- Chaume Varela, F. (2004). *Cine y traducción*. Madrid: Cátedra.
- Chaume Varela, F. (2012). *Audiovisual Translation: Dubbing*. London: Routledge.
- CNLSE, Centro de Normalización Lingüística de la Lengua de Signos Española (2017) *Guía de buenas prácticas para la incorporación de la lengua de signos española en televisión*. Madrid: Real Patronato sobre Discapacidad. Working group: M.L. Esteban Saiz, E. Aroca Fernández, D. Sánchez (CNLSE), M.J. Serna Serna, F.J. Trigueros Molina, S. Gracia Bernal, A.J. Marcos Calvo, F. Armero Real, P. Gómez Viñas, A. Armas Portela, M. Bosch Baliarda, P. Orero Clavero, E. Gil Sabroso, J.P. Rica Peromingo, F. Martín de Pablos y C.A. Martín Edo. <http://www.sis.net/documentos/ficha/529550.pdf>.

- CNSE, Confederación Estatal de Personas Sordas (2023). *Acercamiento a los derechos lingüísticos de las personas sordas: más allá de la discapacidad*. https://www.cnse.es/images/descargas/ESTUDIO_APROXIMACION_DERECHOS_LINGUISTICOS_2024.pdf.
- Díaz-Cintas, J.; Remael, A. (eds) (2020). *Subtitling: Concepts and Practices (Translation Practices Explained)*. London: Routledge.
- Díaz-Cintas, J.; Orero, P.; Remael, A. (eds) (2007). *Media for All: Subtitling for the Deaf, Audio description and Sign Language*. Amsterdam: Rodopi.
- Freddi, M.; Pavesi, M. (2009). *Analysing Audiovisual Dialogue. Linguistic and Translational Insights*. Bologna: CLUEB.
- Gottlieb, H. (1992). «Subtitling—a new university discipline». Dollerup, C.; Loddegaard, A. (eds), *Teaching Translation and Interpreting: Training Talent and Experience = Papers from the First Language International Conference* (Elsinore, Denmark, 1991). Amsterdam; Philadelphia: John Benjamins, 161-72. <https://doi.org/10.1075/z.56.26got>.
- Greco, G.M. (2018). «The Nature of Accessibility Studies». *Journal of Audiovisual Translation*, 1(1), 205-32. <https://doi.org/10.47476/jat.v1i1.51>.
- Katan, D. (2004). *Translating Cultures: An Introduction for Translators, Interpreters, and Mediators*. London: Routledge.
- Kushariyadi, K.; Mustofa, M.; Permatasari, A. (2024). «The Role of Technology in Inclusive Education: Challenges and Opportunities in Developing Countries». *International Journal of Educational Research Excellence (IJERE)*, 3(2), 854-61.
- Mace, R. (1985). «Universal Design: Barrier Free Environments for Everyone». *Designers West*, 147-52.
- Mansouri, F.; Elias, A. (2021). «The Intercultural Dialogue Index (ICDI): An Index for Assessing Intercultural Relations». *Social Indicators Research*, 155, 411-53.
- Marcus-Quinn, A.; Krejtz, K.; Duarte, C. (eds) (2024). *Transforming Media Accessibility in Europe: Digital Media, Education and City Space Accessibility Contexts*. Berlin: Springer.
- Maszerowska, A.; Matamala, A.; Orero, P. (eds) (2014). *Audio Description. New Perspectives Illustrated*. Amsterdam; Philadelphia: John Benjamins.
- Matamala, A.; Orero, P. (2016). *Researching Audio Description. New Approaches*. London: Palgrave Macmillan.
- Mendoza, N.; Matamala, A. (2019). «Panorama de la enseñanza de la audiodescripción en España: Resultados de un cuestionario». *MonTI. Monografías de Traducción e Interpretación*, 11, 155-85.
- Menéndez de la Rosa, I. (2025). *Challenges of Multilingual Dubbing. A Corpus-Based Analysis* [unpublished PhD Dissertation]. Madrid: Universidad Complutense de Madrid.
- Montero Domínguez, X. (ed.) (2017). *El doblaje. Nuevas vías de investigación*. Granada: Comares.
- Neves, J. (2021). «Subtitling for Deaf and Hard of Hearing Audiences: Moving Forward». Pérez-González, L. (ed.), *The Routledge Handbook of Audiovisual Translation*. London: Routledge, 82–95.
- Nida, E.A. (1964). *Towards a Science of Translating: With Special Reference to Principles and Procedures Involved in Bible Translating*. Leiden: Brill.
- Orero, P. (2022a). «Translation, Accessibility and Minorities». Bielsa, E. (ed.), *The Routledge Handbook of Translation and Media*. London: Routledge, 384-99.
- Orero, P. (2022b). «Audio Description Personalisation». Taylor C.; Perego, E. (eds), *The Routledge Handbook of Audio Description*. London: Routledge, 121-34.

- Paciello, M. (2000). *Web Accessibility for People With Disabilities: A Guide for Web Developers*. London: McGraw-Hill.
- Pawlowska, A.; Drozdowski, A.; Milerowska, M.; Dlugosz, P. (2024). «The Inclusivity of Art in City Space. Activities of Researchers from the University of Lodz to Support People with Sensory Disabilities. A Case Study from Łódź (Poland)». Marcus-Quinn, A.; Krejtz, K.; Duarte, C. (eds), *Transforming Media Accessibility in Europe: Digital Media, Education and City Space Accessibility Contexts*. Berlin: Springer, 135-51.
- Rica Peromingo, J.P. (2019). «El corpus CALING: docencia e investigación en traducción audiovisual y accesibilidad lingüística». *TRANS. Revista de Traductología*, 23, 263-98. <https://revistas.uma.es/index.php/trans/article/view/4990>.
- Rica Peromingo, J.P. (2022). «Accesibilidad y herramientas tecnológicas en traducción audiovisual (TAV): productos audiovisuales accesibles». *Tradumàtica. Technologies de la traducció*, 20, 284-94. <https://doi.org/10.5565/rev/tradumatica.318>.
- Rica Peromingo, J.P. (2024). «Academic Training in Media Accessibility in Audiovisual Translation at a University Level: The Case of the Spanish University System». Marcus-Quinn, A.; Krejtz, K.; Duarte, C. (eds), *Transforming Media Accessibility in Europe: Digital Media, Education and City Space Accessibility Contexts*. Berlin: Springer, 359-76.
- Rica Peromingo, J.P. (2025). «Accesibilidad lingüística: las normas europeas y nacionales de aplicación en aspectos traductológicos audiovisuales». Varela Salinas, M.J.; Plaza Lara, C. (eds), *Aproximaciones teóricas y prácticas a la accesibilidad desde la traducción y la interpretación*. Granada: Comares, 17-30.
- Rica Peromingo, J.P. (forthcoming). *Corpus Studies and Audiovisual Translation: Subtitling*. Frankfurt a.M.: Peter Lang.
- Rica Peromingo, J.P.; Sáenz Herrero, A. (2019). «Audiovisual Translation (AVT) Modes: Dubbing, Audio Description (AD) and Subtitling for Hearing and Deaf and Hard-of-Hearing (SDH) as an L2 Learning Pedagogical Tool». Herrero, C.; Vanderschelden, I. (eds), *Using Film and Media in the Language Classroom: Reflections on Research-Led Teaching*. Bristol: Multilingual Matters, 127-40.
- Romero-Fresco, P. (2018). «In support of a wide notion of media accessibility: Access to content and access to creation». *Journal of Audiovisual Translation*, 1(1), 187-204.
- Romero-Fresco, P. (2019). *Accessible Filmmaking: Integrating Translation and Accessibility into the Filmmaking Process*. London: Routledge.
- Rose, D.; Meyer, A. (2007). «Teaching Every Student in the Digital Age: Universal Design for Learning». *Educational Technology Research and Development*, 55(5), 521-5.
- Tamayo, A. (2022). «Sign Languages in Audiovisual Translation». *Journal of Audiovisual Translation*, 5(1), 129-49. <https://www.jatjournal.org/index.php/jat/article/view/167>.
- Vázquez Martín, A. (2019). *Audiodescripción, norma y experiencia*. Granada: Ediciones Tragacanto.
- Wang, S.; Zhuang, J. (2024). «Advancements in Deep Learning-Based Image Captioning». *Transactions on Computer Science and Intelligent Systems Research*, 5, 464-9. <https://doi.org/10.62051/d1jtx50>.
- Yeratziotis, A.; Fotiadis, T.; Granic, A.; Papadopoulos, G.A. (2024). «An Overview of Media Accessibility and Inclusivity in the Educational Domain». Marcus-Quinn, A.; Krejtz, K.; Duarte, C. (eds), *Transforming Media Accessibility in Europe: Digital Media, Education and City Space Accessibility Contexts*. Berlin: Springer, 173-85.
- Zárate, S. (2021). *Captioning and Subtitling for d/Deaf and Hard of Hearing Audiences*. London: UCL Press.
- Zárate, S. (2010). «Bringing the Gap between Deaf Studies and AVT for Deaf Children». Díaz-Cintas, J.; Matamala, A.; Neves, J. (eds), *New Insights into Audiovisual Translation and Media Accessibility. Media for All 2*. Amsterdam: Rodopi, 160-74.