MEDIA ACCESSIBILITY TRAINING

FOR TRANSLATION AND INTERPRETING STUDENTS

THROUGH AN ALTERNATIVE SDH GUIDELINE

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BOĞAZİÇİ UNIVERSITY

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Through an Alternative SDH Guideline

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DECLARATION OF ORIGINALITY

I, Mert Moralı, certify that

- I am the sole author of this thesis and that I have fully acknowledged and documented in my thesis all sources of ideas and words, including digital resources, which have been produced or published by another person or institution;
- this thesis contains no material that has been submitted or accepted for a degree or diploma in any other educational institution;
- this is a true copy of the thesis approved by my advisor and thesis committee at Boğaziçi University, including final revisions required by them.

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ABSTRACT

Media Accessibility Training for Translation and Interpreting Students Through an Alternative SDH Guideline

MA has gained attention as a research topic within TS especially in the last 20 years. Despite the increasing attention given to MA in Türkiye, its pedagogical aspect remains under-explored. The present study contributes to the pedagogical research on MA in Türkiye with a special focus on SDH. This study investigates whether and how T&I students can be trained to produce interlingual and intralingual SDH that would both meet the needs of d/Deaf and hard of hearing ("end-users") and enhance their viewing experience, while simultaneously raising students' overall awareness of MA. To this end, a training model is proposed grounded in Pablo Romero-Fresco's CMA approach and Donald Kiraly's social-constructivist approach towards translation education. During the training, students collaborated to produce creative SDH content guided by an alternative SDH guideline that improved upon standard SDH guidelines. Two sets of questionnaires were administered to both groups. The first set of questionnaires was conducted prior to the training to identify students' initial level of MA awareness and to learn about the end-users' needs. The second set was administered at the end of the training to assess possible changes in awareness levels and to gather the end-users' opinions on the student-produced content. Results indicated a marked increase in students' MA awareness and a strong preference among end-users for the SDH content produced by the students.

ÖZET

Alternatif Bir Ayrıntılı Alt Yazı Çevirisi Yönergesi ile Mütercim Tercümanlık Öğrencilerine Yönelik Medya Erişilebilirliği Eğitimi

Medya erişilebilirliği çeviribilim alanında özellikle son 20 senede büyük ilgi görmüştür. Türkiye'deki çevirilim araştırmalarında medya erişilebilirliğine yönelik ilgi artmaktadır fakat konunun pedagojik yönlerine dair çalışmalar kısıtlıdır. Bu tez, ayrıntılı alt yazı çevirisine odaklanarak Türkiye'deki pedagojik medya erişilebilirliği araştırmalarına katkı sunmayı amaçlamaktadır. Bu kapsamda bir grup mütercim tercümanlık öğrencisi, diliçi ve dillerarası ayrıntılı alt yazı çevirisi eğitimine tabi tutulmaktadır. Eğitim, öğrencilerin S/sağır ve işitme engelli bireylerin ("son kullanıcılar") hem iletişim ihtiyaçlarını karşılayacak hem de seyir zevklerini iyileştirecek alt yazılar üretmelerini sağlamayı ve öğrencilerin medya erişilebilirliği bilincini arttırmayı hedeflemektedir. Bu amaç doğrultusunda, Pablo Romero-Fresco'nun Yaratıcı Medya Erişilebilirliği ve Donald Kiraly'nin sosyal yapılandırmacı çeviri eğitimi yaklaşımları temelinde bir eğitim modeli önerilmektedir. Eğitim kapsamında öğrenciler; mevcut yönergelerin iyileştirilmesiyle oluşturulmuş alternatif bir ayrıntılı alt yazı çevirisi yönergesine göre yaratıcı ayrıntılı alt yazılar üretmiştir. Katılımcılara ikişer anket uygulanmıştır. İlk anketler, öğrencilerin medya erişilebilirliğine dair bilinç seviyelerini ölçmüş ve son kullanıcıların ihtiyaçlarını öğrenmiştir. İkinci anketler ise öğrencilerin bilinç seviyesindeki değişiklikleri ölçmüş ve son kullanıcıların öğrencilerin ürettiği yaratıcı alt yazı hakkındaki görüşlerini edinmiştir. Sonuçlara göre öğrencilerin bilinci önemli ölçüde artmış ve son kullanıcılar öğrencilerin ürettiği yaratıcı alt yazıları olumlu karşılamıştır.

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To my mom and dad

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ABBREVIATIONS

Audio Description (AD)

Audio-visual Translation (AVT)

British Sign Language (BSL)

Closed Caption (CC)

Convention on the Rights of Persons with Disabilities (CRPD)

Creative Media Accessibility (CMA)

European Union (EU)

European Accessibility Act (EAA)

European Disability Forum (EDF)

European Union of the Deaf (EUD)

Media Accessibility (MA)

National Associations of the Deaf (NAD).

National Captioning Institute (NCI)

Sign Language Interpreting (SLI)

Subtitles for the d/Deaf and hard of hearing (SDH)

Translation and Interpreting (T&I)

Translation Studies (TS)

Zone of Proximal Development (ZPD)

CHAPTER 1

INTRODUCTION

Accessibility requires an active commitment of multiple stakeholders to protect the rights of people with disabilities by ensuring that no one is marginalised because of their physical, sensory and cognitive differences. The scope of accessibility is extensive since it entails the design of products, services, environments, and all other forms of information to make them accessible for all people irrespective of their disabilities. Thanks to its potential to overcome barriers in healthcare, education, and the judicial system, it holds a central role in the creation of an inclusive society fit for the 21st century.

The evolution of accessibility as a topic of attention has been gradual. Early efforts were often limited since accessibility was considered optional rather than an essential aspect of public life. However, in recent years, there has been a significant change in social perception of the concept. It has been acknowledged that all individuals have the right for equal access to services within the society regardless of their disabilities. This positive change has made it possible to reshape theoretical and practical approaches towards accessibility. Particularly, MA came to the forefront with the rapid dissemination of digital services. It has become a pivotal tool in breaking down barriers through SDH, AD, SLI, which rendered previously inaccessible services accessible. As a result, the 21st century witnessed the birth of a digitally inclusive society where individuals with disabilities could contribute to and engage with the digital landscape.

Although the idea of accessible audio-visual content gained momentum in the early 2000s, its history goes back much further. Various broadcasters and

organisations have played an important role in promoting MA services starting in the 1980s. The BBC was one of the first institutions to offer accessible services in their content. That is, a documentary about deaf children became the first BBC programme to offer captioning based on Ceefax technology. Shortly after, one of the most popular programmes of the channel, *The Living Planet*, was captioned to make it accessible to a wider audience. Eventually, the BBC began adding subtitles to its live programmes with *Blue Peter* becoming the first live programme to include subtitles. After subtitling a variety of programmes, technological developments enabled the addition of subtitles to news as well. The integration of subtitles was followed by the introduction of AD to the BBC content in 2000. In the same year, various programmes were supported with BSL option as well.

Another major player in the provision of accessible content in the recent history has been the PBS. PBS was one of the first providers of CC on American television. Although attempts to provide CC on television date back to the early 1970s, thanks to the efforts of the National Bureau of Standards, PBS became the first network to regularly incorporate CC into its programmes in the early 1980s. *Masterpiece Theatre*, a popular show on PBS, became one of the first shows to have CC support. In the same years, other broadcasters such as ABC started adding subtitles to their programmes. In the wider promotion of CCs on American TV, NCI played a significant role. The institute provided technical support to TV channels by developing pre-recorded captions for popular shows such as *The Wonderful World of Disney* and *The ABC Sunday Night Movie*. According to the estimations, CC became so widespread on American TV that the institute had captioned 3600 hours of content by 1985.

The quality and quantity of accessibility services increased rapidly in the early 2000s with the transition from analogue teletext-based technology to digital broadcasting. The BBC significantly expanded its accessibility services to equip their content with various modes of MA such as AD, SLI and SDH to such extent that accessibility options have become a standard application across a wide range of BBC programmes as of 2025. However, particularly with the emergence of online streaming platforms such as Netflix, Hulu and Amazon Prime Video, offering accessibility solutions in audio-visual content took on a new dimension. These platforms did not only support their content with accessibility features, but also introduced customisable subtitling options and multi-language tracks equipped with AD. These recent developments have paved the way for the removal of barriers that the viewers with disabilities encounter in everyday life when consuming audio-visual content.

As accessible content has become more popular and widespread, the legal framework supporting accessibility has improved significantly as well. This may suggest a symbiotic relationship between industry practices and legal steps taken by the lawmakers because as one progressed, the other followed suit. For this reason, the legal aspect of accessibility deserves a thorough discussion. Over the last 20 years, many countries have enacted laws and regulations to protect the rights of their citizens with disabilities and promote their equal participation in society. In this regard, the most important and comprehensive document is the CRPD, which was adopted by the United Nations on 13 December 2006 and entered into force on 3 May 2008. The United Nation notes that thanks to the Convention, there has been a change in the perception of people with disabilities from being seen as objects in need of protection and charity, to being treated as equal citizens who can claim their

rights and equally participate in public life. Article 21 of the Convention stipulates that signatories should provide their citizens with disabilities with equal access to information through Braille, SLI and other methods of communication and encourage media service providers to provide accessible services to their viewers.

In addition to the CRPD, the EAA comes to the fore as a game changer. Adopted in April 2019, the EAA aims to ensure that EU citizens are offered accessible products and services. Although 2019 can be considered as a rather late date for the adoption of such a critical document, it should be noted that Member States already had their own domestic legislation in place before the adoption of the EAA. However, with the adoption of the EEA, accessibility has become an issue that the Union is actively working on and regularly monitoring legal steps taken by the member states. For example, the AccessibleEU initiative strives to work on different dimensions of accessibility such as the environment, information technologies, public planning and so on. It regularly updates its website to announce the latest regulations and developments on accessibility and MA in line with the regulations of the EAA.

It can be claimed that the active presence of non-governmental associations in Europe advocating for the rights of people with disabilities played a significant role in encouraging lawmakers to take the necessary legislative steps to promote accessible services throughout the European Union. Founded in 1985 and defined as a not-for-profit European non-governmental organisation, the EUD is the only supranational organisation that aims to represent deaf people at the European level and whose official members are the NAD. The EUD strives to build a bridge between EU institutions with the support of its member organisations. EUD's vision is to ensure that Deaf people living in EU countries have equal access to both private

and public services. The EUD promotes the use of sign language and other forms of accessible communication at various levels, including education, employment and information. Similarly, the EDF aims to ensure equal access to public services in Europe. Established in 1996, the EDF works closely with various EU institutions. EDF stresses that its values share common ground with the CRPD in the sense that it supports the full inclusion of people with disabilities in society by providing them with equal opportunities. What makes EDF a strong stakeholder in promoting accessibility is the fact that it adopts comprehensive long-term strategies with concrete steps. The EDF Strategy 2025-2030, for instance, outlines four pillars for its approach towards a disability-inclusive Europe. These pillars include advocacy for inclusive programmes across Europe, increased engagement with its member organisation, regular communication with media representatives and policy makers, and building cooperative engagements with stakeholders around the world.

In Türkiye, there are similar laws and regulations governing the rights of people with disabilities. The Turkish Disability Act [Engelliler Hakkında Kanun], adopted in 2005 before the CRPD, aims to secure that all Turkish citizens with disabilities have the right to full participation in society with equal opportunities. The Act covers different categories such as education, employment, accessible services, and so on, and stipulates that disabled citizens cannot be discriminated against on the basis of their disabilities.

The Regulation on Improving the Access of the d/Deaf and Hard of Hearing to Broadcasting Services [Sağırların, İşitme ve Görme Engellilerin Yayın Hizmetlerine Erişimin İyileştirilmesine İlişkin Usul ve Esaslar Hakkında Yönetmelik], which was adopted in 2019, can be considered as a crucial step in accessibility related legislation since it explicitly establishes the rules to be followed

by national TV channels regarding the provision of accessible content. The Regulation specifies the minimum amount of accessible content that broadcasters should provide in the form of SDH, AD and SLI. According to the Regulation, within 5 years of its adoption, at least 45% of the programmes broadcast by TV channels must provide accessibility options for people with disabilities. As a proof of compliance with the regulation, all broadcasters must submit their statistics to the RTÜK [The Radio and Television Supreme Council] on a monthly basis.

Vision without Barriers 2030 [2030 Engelsiz Vizyon], published by the Ministry of Family and Social Services, offers a comprehensive strategy that regulates accessibility services focusing on different aspects of public life. With the introduction of the Accessibility Evaluation Module [Erişilebilirlik Değerlendirme Modülü - ER-DEM], the Ministry created a platform that would facilitate the implementation of accessibility regulations in the country and encourage various stakeholders to apply for guided support from the Ministry to assure that their services are accessible. Finally, through the Türkiye Accessibility Awards [Türkiye Erişilebilirlik Ödülleri], the Ministry actively encourages the development of accessibility solutions in public institutions, including universities, schools, and municipalities.

These legal measures support the provision of accessible content by Turkish broadcasters. TV channels such as TRT, NOW and Kanal D offer SDH in their audiovisual content, which is available free of charge on their websites. In addition, some channels now employ sign language interpreters to make their prime-time news accessible. Streaming services also offer accessibility options such as SDH and AD to a limited extent.

The above shared legislation on accessibility shows that there has been an increasing focus on accessibility to build a more inclusive society, particularly in the last 20 years. The efforts of public authorities to enact rules and regulations have also been reflected in the practices of industry, even though the existence of accessibility legislation does not guarantee the widespread use of accessible services in public life and industry. Still, it should be noted that when the legislative aspect of accessibility became more visible, the broadcasting industry showed an increased interest in making their products accessible to the viewers with disabilities. As a result, accessibility, rather than being a mere afterthought, has gained prominence as a matter of design in audio-visual content. In parallel with these developments, accessibility has drawn the attention of academic research as well.

TS was one of the first disciplines to focus on accessibility and, more specifically, MA from a disciplinary perspective. Early research on the topic emerged in the early 2000s. As one of the pioneers of MA research, Josélia Neves (2005) focused on SDH in her doctoral thesis *Audiovisual Translation: Subtitling for the Deaf and Hard of Hearing*. By placing SDH as a research topic within TS, Neves paved the way for further studies on SDH and also on other modes of MA such as AD and SLI. This doctoral thesis by Neves (2005) was followed by the publications that focused on MA from a broader perspective. The third issue of *Translation Watch Quarterly* was one of the first journal publications to address MA from a TS perspective. Considering that MA was a new field of research in TS in the early 2000s, a special issue on this emerging field of research could be seen as visionary because it saw the potential of MA research in TS. The articles in this special issue put emphasis on mapping the prevailing practices of different modes of MA in Spain from multiple perspectives. Furthermore, *Media for All: Subtitling for the Deaf,*

Audio Description, and Sign Language (2007), edited by Jorge Diaz Cintas, Pilar Orero, and Aline Remael, was one of the first compilations of research on MA within TS that provides a comprehensive overview of studies on the different modes of MA. The editors describe the aim of the book as "to improve the access of certain social groups to information and to entertainment widely disseminated via the Internet [. . .] and other public spaces" (2007, p. 11), because despite the rapid development of new technologies, the content provided as of the publication date of the book was not inclusive of people with disabilities.

Following this early pioneering research, MA research within TS has diversified considerably over the last 20 years. Studies now address different aspects of accessibility, ranging from industry practices to educational implications. The present study focuses on the pedagogy of MA, specifically SDH from a user-centred perspective. Its main research problem investigates whether and how T&I students can be trained to produce interlingual and intralingual SDH that meet the needs of d/Deaf and hard of hearing individuals and enhance their viewing experience, while at the same time raising student's awareness of MA. To achieve this, the study proposes a training model that incorporates an alternative, audience-tailored guideline.

Chapter 2 of this thesis provides a detailed examination of the relevant research and theoretical framework that informed the main research problem of the present study. The literature review part is divided into two main categories: research in Europe and research in Türkiye. The first main category investigates SDH research in Europe. Europe can be considered the birthplace of the first systematic academic research on MA, and more specifically on SDH, as shown in studies discussed in this chapter. The present study draws extensively on research conducted

within the European context. Thus, this main category is further divided into three thematic subcategories. The first subcategory includes research that explores the multi-semiotic nature of SDH and the potential for creative[1] interventions within SDH practices. This line of research considers SDH not only as a verbal transcription of dialogue, but as a multimodal construct that integrates different sign systems such as acoustic and visual elements. This approach is an important step towards the development of more engaging and inclusive content for d/Deaf and hard of hearing audiences. The second subcategory encompasses research that adopts pedagogical perspectives towards SDH. These studies do not only focus on in-class training but also address the professional development of SDH professionals within the industry. The third and final subcategory concentrates on the functionality of SDH standards. It examines existing guidelines and critically evaluates whether the SDH content produced by the SDH professionals is truly functional and accessible for d/Deaf and hard of hearing viewers. Taken together, these thematic strands define the theoretical scope of the present study in multiple ways. Firstly, the present study is situated within the pedagogical research on MA with a specific focus on SDH. Secondly, it adopts a multi-semiotic and creative understanding of SDH as an integral part of in-class training. Thirdly, it critically questions the functionality of the existing SDH guidelines and aims to improve upon them via an alternative, audience-tailored guideline encouraging creative interventions in SDH. The second main category in the literature review investigates research conducted in Türkiye. However, since MA remains an underexplored field of research within Turkish TS, this section presents a

[1] Creativity has multiple definitions in literature, inherently resisting prescriptive labelling. For this study, however, creativity is defined as a concept encompassing any generative human thoughts, expressions, actions, processes, and products. It's considered generative because, regardless of its form, it produces something new, often in relation to its previous similar or dissimilar forms or representations. This study specifically frames creativity as a human endeavour, something individuals produce through their innate artistic perspective on existence.

broader overview of research exploring various modes of MA rather than focusing solely on SDH.

As mentioned above, Chapter 2 also presents the theoretical framework of the present study. Although the research discussed in the literature review significantly informs the present study from a theoretical perspective, the primary theoretical foundation of the present study lies in the CMA approach (Romero-Fresco, 2021; Romero-Fresco & Chaume, 2022; Romero-Fresco & Brown, 2023), Gian Maria Greco's pedagogical perspectives on MA (Greco, 2018; Greco, 2019), the social-constructivist pedagogical approach of Donald Kiraly (Kiraly, 2000; 2003; 2006; 2012), and Yong Zhong's (2002) approach to translation education. These perspectives are discussed in detail in the theoretical framework section. However, a brief introduction may be useful. CMA promotes non-standardized, creative interventions in the production of MA content. Greco's pedagogical approach aligns with this perspective because it advocates for a user-friendly, universalist perspective that encourages students to engage in critical thinking when producing MA content. Kiraly's and Zhong's pedagogical frameworks for translation education support a teacher-centred model, where the instructor acts as a mediator who fosters analytical thinking of the students and create learning environments based on real-life scenarios. The present study regards this social-constructivist perspective as an ideal space for creative thinking within the classroom. In line with this perspective, the present study emphasizes the importance of the social-constructivist approach in putting Romero-Fresco and Greco's theories into practice within a classroom.

To implement such a training model, the present study proposes an alternative, audience-tailored guideline. This guideline builds upon existing SDH guidelines and promotes creative interventions in a flexible, non-prescriptive

manner. Chapter 3 provides a comprehensive analysis of four major SDH guidelines commonly used within the industry: SEBEDER, BBC, Netflix, and DCMP. Subsequent to the analysis, the present study outlines the principles of the audience-tailored guideline by demonstrating how it adds to the existing guidelines with distinct improvements.

As part of its main research problem, the present study utilizes four surveys administered to two participant groups: T&I students and d/Deaf and hard of hearing individuals ("deaf" with lower case denotes a medical meaning of the word. "Deaf" with capital D, on the other hand, refers to people who identify themselves as part of the Deaf community). The student surveys aim to assess to which extent the training has increased students' general awareness of MA. The end-user surveys seek to understand the needs and expectations of d/Deaf and hard of hearing individuals regarding SDH and invite them to evaluate whether the SDH content produced by the students is in line with the audience-tailored guideline. The qualitative data obtained through surveys are analysed using manual coding, while the quantitative data are subjected to inferential analysis. Chapter 4 offers a detailed presentation of the methodology used in the present study and the educational materials used throughout the training process.

Chapter 5 of the present study shares the analysis of the data collected through the surveys alongside a detailed account of the training process. The data analysis begins with a descriptive presentation of the findings, and it is followed by a comprehensive discussion of the findings in relation to the present study. The training process is outlined step by step revealing the challenges faced by the students and the solutions implemented by them to address these challenges. In other

words, this chapter brings together all key information gathered throughout the course of the research.

Lastly, to address its main research problem, the present study is guided by the following research objectives:

i. Raising students' general awareness of MA,
ii. Enhancing the viewing experience of the d/Deaf and hard of hearing individuals via non-standardised, creative accessibility solutions,
iii. Promoting the implementation of an SDH training model based on CMA,

In light of the limited research on the pedagogy of MA and user-centred SDH in Türkiye, achieving these objectives can allow the present study to make the following contributions to the literature:

i. Filling the gap in the literature on MA training within T&I curricula, either as a standalone course or as a component of AVT classes,
ii. Preparing T&I students for the future by helping them acquire the skills and competences required for the 21st century with a focus on harnessing the potential of technology in the translation process,
iii. Paving the way for further empirical research on user-centred SDH through a concrete, step-by-step training model,
iv. Offering an alternative, creativity-oriented approach that could also be embraced by the industry in the production of accessible audiovisual content.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter provides a review of the literature on SDH research in TS. It is followed by the theoretical framework of the present study. The literature review is divided into two sections. The first section provides an overview of research on SDH in the European context with different thematic focuses: the multi-semiotic nature of SDH and creative interventions to SDH, pedagogical approaches, and the functionality of SDH standards. The second section deals with MA and SDH research in Türkiye. Due to the relatively limited research on SD in Türkiye, the studies presented in this section also explain the other two types of MA such as AD and SLI. The division of research according to geography was necessary because such a division has the potential to show how the theoretical framework of the present study has been shaped by the various research conducted abroad and where this dissertation is positioned within the MA research conducted in Türkiye. Needless to say, although the target group of the present study is the Turkish d/Deaf and hard of hearing individuals and T&I students, it also aims to contribute to the MA research in general without any geographical limitations.

Following a thorough review of the literature relevant to the present study, the theoretical framework which benefits greatly from most of the research discussed in the literature review is presented in a separate section. However, it should be noted that the backbone of the present study is built on Pablo Romero-Fresco's call for CMA, Gian Maria Greco's pedagogical approach to MA, and Donald Kiraly's social constructivist approach to translation education.

2.1 Literature review

2.1.1 Research on SDH in Europe

2.1.1.1 SDH's multi-semiotic nature and creative interventions

This section of the literature review presents research that focuses on the multi-semiotic aspect of SDH and offers creative ways to enhance the viewing experience of the d/Deaf and hard of hearing viewers.

Although it is not specifically related to the multi-semiotic aspect of SDH and creative interventions, Josélia Neves' *Audiovisual Translation: Subtitling for the Deaf and Hard of Hearing* (2005) is one of the very first academic publications on SDH in TS. Within the Portuguese context, Neves (2005) conducts a descriptive analysis of the use of SDH in Europe with the aim of identifying the norms that influence the prevailing SDH practices and shape the guidelines used in the production of SDH. In addition to a descriptive analysis, she contributes to improving the quality of SDH practices in Portugal by proposing a guideline that places the d/Deaf and hard of hearing viewers at the centre. Throughout her research, Neves (2005) offers a perspective of SDH that is not limited to the transfer of the audial elements to the visual forms merely through words and she suggests that SDH "are to be read as multidimensional wholes" (2005, p. 310). Her emphasis on the multidimensional aspect of SDH means that "not only do they [SDH] convey messages through the words they contain but also through their actual form (font formatting, position, colour, and even, at times, motion)" (Neves, 2005, p. 310). Although Neves does not explicitly suggest a creativity oriented, non-standardised approach to SDH, her research lays the groundwork for the present study by with its understanding of SDH based on multiple sign systems. This perspective is consistent with the audience-tailored guideline used for the training of the students in the

present study. In addition to this multi-semiotic approach, the emphasis on the end-users, and the attempts to improve the quality of SDH in general are also in line with the main principles of the present study.

Civera and Orero's "Introducing Icons in Subtitles for the Deaf and Hard of Hearing: Optimising Reception?" (2010) is another study that is closely related to the present study with its multi-semiotic approach to SDH. In their article, Civera and Orero (2010) offer a pioneering perspective towards SDH for its time, which encourages the use of iconography in SDH to improve the reception of audio-visual content by the target audience. The authors suggest that emoticons can be used to convey sounds, identify characters and reveal the emotions of the characters (2010, p. 150). The potential role of the use of iconography in SDH to create an equivalent effect for the target audience, as claimed in Civera and Orero's article, can be considered as a rather unconventional and innovative approach. However, the article provides only limited examples and does not clearly explain how iconography can be used to describe mood changes or sound effects (gunshots, gloomy atmosphere changing into a positive one, etc). Furthermore, the article lacks reception data regarding the use of emoticons in SDH. This was tested as part of the main research question of the present study through reception-oriented research and found to be helpful for the viewing experience of the viewers. In other words, Civera and Orero's research is closely aligned with the present study due to its creative approach towards the description of sound effects.

Furthermore, Anna Pereira's article "Criteria for Elaborating Subtitles for Deaf and Hard of Hearing Adults in Spain: Description of a Case Study" (2010) is another noteworthy study that tests the functionality of various parameters used in SDH. In her study, Pereira (2010) conducts reception-oriented research to test the

parameters for SDH, both for its standard and non-standard features such as smileys, different colours, etc. Although the article does not include a pedagogical aspect, it is similar in principle to the present study in the way that it invites a group of d/Deaf and hard of hearing viewers to share their opinion regarding the use of non-standard features of SD. Thus, it can be argued that its unconventional approach to SDH encouraged the present study (and possibly further studies) on the potentials of creative approaches to SDH.

In a similar vein, in his "Accessible Filmmaking: Joining the Dots Between Audiovisual Translation, Accessibility and Filmmaking," Romero-Fresco (2013) also offers a perspective regarding the multi-semiotic aspect of SDH. In his article, he explores the potential contributions of a collaboration between translators and filmmakers, which could be enhanced via a creativity-focused approach. By expounding on his short documentary on AD, *Joining the Dots* in the article, Romero-Fresco (2013) reveals his pre-production interventions such as the addition of transition shots to convey sound effects clearly and to alleviate the load of subtitles on the screen. He points out that to emphasise the sound of rain, a transition shot was added in the pre-production stage of the documentary to visually show the audience that that it was raining. According to the author, these interventions can exemplify the potential collaboration between translators and filmmakers in SDH production. While acknowledging that creative intervention is not something applied merely by the SDH professionals, Romero-Fresco (2013) sheds light on the benefits of collaboration based on a creativity focused approach to producing accessible content. In this sense, he emphasizes the critical role of SDH professionals in "read [ing] the film and understand [ing] how meaning is created through the use of film language and visual aesthetics" (Romero-Fresco, 2013, p. 210).

Romero-Fresco's (2013) focus on collaboration between multiple actors and the responsibility of SDH professionals is reflected in the present study in several ways. Although the present study does not include a collaboration during the pre-production process, it does include a collaborative production process that involves students and d/Deaf and hard of hearing viewers. Although d/Deaf and hard of hearing viewers as the end-users of the SDH content were not in direct contact with the students, the students were informed by the trainer about the needs and expectations of the end-users. In other words, there was an indirect collaboration between several actors in the training process. Moreover, the students acted as SDH professionals and had a decisive influence on the final outcome, as suggested by Romero-Fresco (2013) regarding the role of SDH professionals.

In addition to Romero-Fresco's (2013) article on the issue of creative interventions and collaboration, Rebecca McClarty's "In Support of Creative Subtitling: Contemporary Context and Theoretical Framework" (2014) also offers a rather intriguing perspective towards SDH. In her article, McClarty (2014) defines the concept of creativity in subtitling as a practice that rejects the "one-size-fits-all approach" (2014, p. 593). She highlights the profound potential of creativity in serving as an alternative to conventional subtitling practices and in transforming the verbal aspects of movies into an enhanced cinematic experience for the audience. By emphasising that creative subtitling should not be seen as a replacement for conventional subtitling, but rather as an alternative, she underscores the potential contributions that creative subtitling can make to improve the viewing experience of d/Deaf and hard of hearing viewers, particularly through creative SDH (2014, p. 603).

McClarty's (2014) call for the use of creative interventions in subtitling in general to improve the cinematic experience of the audience resonates strongly with the main research problem of the present study because the audience-tailored guideline proposed for the training aims to improve the viewing experience of d/Deaf and hard of hearing viewers through creative ways to describe sound effects in SDH. Furthermore, McClarty's focus on creativity as a notion that defies "standards for all" is a principle upon which the present study builds. As acknowledged in the limitations of the present study, no approach can and should be functional for "all end-users." Still, creativity can be an important step in creating alternatives for "each end-user."

Agullo and Matamala's (2019) article “Subtitling for the Deaf and Hard-of-Hearing in Immersive Encumbrances: Results From a Focus Group” is another research worth mentioning. The authors use cutting-edge technology to invite a group of d/Deaf and hard-of-hearing participants and professionals to share their opinions about the use of some non-standard features of SDH. As part of their study, they explore the use of SDH content in an immersive environment with the help of 360º virtual reality goggles. According to the results, d/Deaf and hard of hearing participants express that some basic standards of SDH should be maintained, but new possibilities such as the use of icons to convey non-speech information can be discovered through the use of technology. e.g. a lightning emoji to indicate the sound of a storm. Agullo and Matamala's (2019) research is related to the present study in the sense that it uses technology to encourage a group of d/Deaf and hard of hearing viewers to test non-standard, creative SDH features. Although the present study does not include the use of wearable devices as part of testing non-standard SDH parameters, it benefits from the technology through a set of software. That is,

students used multiple software to produce creative SDH content during the training, and this content was evaluated by a group of d/Deaf and hard of hearing viewers. Furthermore, in terms of having a multi-semiotic perspective towards SDH, the article is similar to the present study. As a further step, the main research problem of the present study can also be tested by using augmented reality to allow the end-users to make their evaluations in a more immersive environment. Such an approach would combine pedagogy, cutting-edge technology and creative/multi-semiotic SDH in one melting pot. Table 1 below demonstrates a brief summary of research conducted with a focus on multi-semiotic and creative aspects of SDH to help the readers to remember what was discussed in this section:

Table 1. SDH Research on Multi-semiotics/Creativity

Study	Focus	Contribution	Relevance to the present study
Audiovisual Translation: Subtitling for the Deaf and Hard of Hearing - Josélia Neves (2005)	Descriptive analysis of SDH in European countries	Perception of SDH as multidimensional wholes and mapping of SDH guidelines	Multi-semiotic approach towards SDH/guideline analysis
"Introducing Icons in Subtitles for the Deaf and Hard of Hearing": Optimising reception?" - Clara Civera & Pilar Orero (2010)	The use of iconography in SDH	The significant potential of non-conventional means to express sound effects in SDH	Suggesting icons/emoticons to convey effects
"Criteria for Elaborating Subtitles for Deaf and Hard of Hearing Adults in Spain: Description of a Case Study" - Anna Pereira (2010)	The testing of various SDH parameters	The use of empirical data to test both standard and non-standard features of SDH	Asking a group of d/Deaf and hard of hearing individuals to evaluate some SDH features
"Accessible Filmmaking: Joining the Dots Between Audiovisual Translation, Accessibility and Filmmaking" – Pablo Romero-Fresco (2013)	The collaboration between translators and filmmakers to produce accessible content	Investigation of collaboration to offer enhanced viewing experience to end-users in pre-production step	Non-standard ways to improve the quality of access to content through a collaborative setting
"In Support of Creative Subtitling: Contemporary Context and Theoretical Framework" - Rebecca McClarty (2014)	The role of creativity in subtitling, not specifically SDH	The potential of creativity as an alternative to conventional practices	Enhancing the viewing experience of end-users via creative interventions in a manner that ignores "one size fits all"
"Subtitling for the Deaf and Hard-Of-Hearing in Immersive Encumbrances: Results From a Focus Group" - Belén Agulló & Anna Matamala (2019)	The use of SDH in immersive environments via augmented reality technology	Promoting the use of cutting-edge technology to improve the quality of SDH for end-users backed by empirical data	The testing of SDH features (both standard and creative uses) by end-users through the use of latest technology to improve their viewing experience

2.1.1.2 Pedagogical perspectives towards SDH

This section examines research focusing on the pedagogical aspects of MA, more specifically, SDH. The research reviewed here does not only focus on translation education as carried out within the classroom but also sheds light on the training of SDH professionals. Their common emphasis to promote SDH training strongly aligns with the main research problem of the present study.

Pereira and Lorenzo's (2007) "Teaching Proposals for the Unit 'Subtitling for the Deaf and Hard of Hearing' Within the Subject Audiovisual Translation (English-Spanish)" can be considered one of the first studies on SDH training. In their article, the authors highlight that a training "unit" has only recently been included in the curriculum of Audiovisual Translation (AVT) courses in Spanish universities. They outline a syllabus of their AVT course and share concrete examples of the tasks they have assigned to students to help them acquire basic SDH skills. In the article, the recognition of SDH as a subject requiring specific training deserves attention. Moreover, the fact that they shared a curriculum alongside tasks assigned as part of their course places Pereira and Lorenzo's study to an exploratory line of SDH research rather than a descriptive one. In terms of implementing SDH training in a classroom setting via a pre-designed syllabus, the article is similar to the present study since it also uses a structured syllabus as part of the training conducted with students in a collaborative learning setting. However, the pedagogical perspective in Pereira and Lorenzo's research differs significantly from the present study in the sense that the present study applies a social-constructivist perspective to translation education, as discussed in detail in the theoretical framework section. In addition, the present study promotes independent MA and SDH courses within the curriculum, while within the article the training was conducted as part of an AVT course.

Nevertheless, in terms of drawing attention to the importance of SDH in an AVT course and recognizing that SDH requires a special set of skills, the article is a pre-cursor of the present study since it puts theory into practice in an actual classroom environment.

Furthermore, with regard to the specific set of required SDH skills, Neves' (2008b) "Training in Subtitling for the d/Deaf and the Hard-of-Hearing" emphasizes the importance of training in SDH by identifying the necessary skills and competencies. Neves (2008b) highlights that SDH competencies include: a solid understanding of the needs and expectations of the d/Deaf community and factors such as redundancies, relevance and coherence, and an expertise in filmography to appreciate the role of sound among the other filmographic elements. In order to learn the needs of d/Deaf and hard of hearing individuals, she suggests engaging in direct interaction with the target audience through collaborative projects with the associations. Neves (2008b) states that these projects can bring together "teachers/researchers, professionals, providers and recipients with a common goal" (2008a, p. 187). For the pedagogical aspect of the issue, she underlines the necessity to teach SDH skills and competencies in a classroom setting with a carefully designed syllabus that would potentially raise awareness among SDH trainees (2008a, p. 172). In this training, according to Neves (2008b), the trainer should act as a "facilitator, organiser and mediator, staging each learning opportunity to make the most of each experience" (p. 188).

Neves' article deserves attention for several reasons. First and foremost, as far as I have been able to ascertain, it is the first to provide a comprehensive list of skills and competencies required for SDH. This list includes a wide range of exercises such as paraphrasing skills, writing skills, filmographic knowledge, and proficiency in

using subtitling software. Secondly, the article places the end-user at the centre of the SDH production process and encourages interaction with the Deaf community to better understand their needs. Finally, it calls for a structured and well-designed curriculum at the university level.

All these aspects are implemented and/or observed as part of the main research problem of the present study. Although the present study refrains from offering a strict set of skills and competencies that may be required for SDH, the skills proposed by Neves (2009) were observed to be essential as part of the training in the present study. For instance, among the strategies used by the students in the production of both intralingual and interlingual SDH content, paraphrasing skills were found to be central since students had to rewrite certain sentences as discussed with concrete examples in Chapter 5. Furthermore, by taking into account the needs of the end-users, which were obtained through a survey, the students had to trust their own interpretation of a scene before applying creative interventions to convey certain effects. In addition, through a structured syllabus and audience-tailored guide, students also engaged in a learning environment in which the trainer acted as a facilitator. In this sense, Neves' (2008b) approach to SDH training is consistent with the pedagogical perspective of the present study.

With a specific emphasis on evaluation criteria of SDH quality from a pedagogical perspective, Andino and Merchán's (2018) article "Using Evaluation Criteria and Rubrics as Learning Tools in Subtitling for the d/Deaf and the Hard of Hearing" examines evaluation criteria and rubrics as tools that can be useful in SDH training. After presenting existing research on quality assurance and evaluation methods in SDH training at university level and in industry, the authors present a case study on the evaluation of prevailing SDH practices in Spain. As part of the case

study, they employ questionnaires to draw a portrait of SDH evaluation practices by elucidating the responses of trainers from 12 universities in Spain and five different companies that offer SDH services. In the light of the elucidated data, the authors propose evaluation criteria and a rubric to help students acquire an understanding of these tools for evaluating SDH. They also offer students a series of graded tasks, which they expect to be useful in their learning process.

Andino and Merchán's (2018) approach to SDH has several advantages. First, through questionnaires, they identify the lack of a systematic evaluation method in the industry that would facilitate monitoring the quality of SDH in audio-visual content. By providing a systematic set of evaluation criteria based on the standards in Spain and the data obtained through the questionnaires, the authors encourage service providers within the industry to improve their methods of quality assessment of the SDH services they offer. Secondly, through a rubric developed in accordance with data collected from trainers, they offer a systematic roadmap that can be useful for trainers and also encourage students to reflect on their work.

The article by Andino and Merchán (2018) problematises the inadequate quality of SDH in the industry and uses empirical data to offer an alternative approach. This is closely aligned with the present study because its main research problem also questions the functionality of existing SDH standards and draws on the end-user data to verify the functionality of content produced by the students as part of the training. However, it should be noted that the present study refrains from proposing a prescriptive set of rules when questioning the existing practices. Additionally, via its suggestion of a rubric that would allow students to self-reflect on their work, the article puts the focus on the students and their analytical thinking process. This is something that the present study also aimed to achieve through

collaborative training. In other words, Andino and Merchán's (2018) research is similar to the present study in the sense that it criticises the industry standards and refers to the pedagogical aspect of the issue by focusing on SDH training and the importance of improving students' analytical thinking.

In their "Media Accessibility Training," Mazur and Vercauteren (2020), point to the increasing prevalence of different modes of MA in the industry. According to the authors, this has led to a growing demand for professionals who can design AD and SDH for audio-visual content. They note that, in line with this demand, a number of projects such as ACT, ADLAB, PRO, LTA, ILSA, and so on, have contributed to the training aspect of MA from a practical and theoretical point of view. As an essential part of MA training, Mazur and Vercauteren (2020) propose a pedagogical approach that incorporates real-life contexts into the classroom where students can experience taking on a real responsibility to overcome potential barriers. They call for incorporating recent technological advancement into the curricula of training programmes to ensure that students are well-prepared for the future. As part of its main research problem, the present study echoed Mazur and Vercauteren's (2020) emphasis on the increasing demand for professionals who can produce accessibility solutions and their call to train such professionals. It provided students with real-life tasks as part of their training to encourage them to act as professionals who are responsible for producing stimulating and functional SDH with the help of the latest software. Table 2 below summarises research shared in this section in a concise manner:

Table 2. Research on the Pedagogical Aspects of SDH

Study	Focus	Contribution	Relevance to the present study
"Teaching Proposals for the Unit 'Subtitling for the Deaf and Hard of Hearing' Within the Subject Audiovisual Translation (English-Spanish)" – A. Pereira & Lourdes Lorenzo (2007)	SDH training as part of an AVT class at a T&I department	Offering a syllabus based SDH training at university level with T&I students/invitation to include it within curricula	Training based on a pre-designed syllabus showing teaching methods and tasks assigned to the students/an attempt to familiarise students with SDH with empirical research
"Training in Subtitling for the d/Deaf and the Hard-of-Hearing" - Josélia Neves (2008a)	The skills and competences required in SDH training	Identifying SDH as a practice that requires special skills and competences	Call for SDH training within a classroom setting/placing SDH as a subject requiring a dedicated attention
"Using Evaluation Criteria and Rubrics as Learning Tools in Subtitling for the d/Deaf and the Hard of Hearing" – Irene de Higes Andino & Beatriz Cerezo (2018)	Quality assurance and assessment in the industry and academia with a focus on SDH	Presentation of evaluation criteria and rubric based on empirical data received by service providers and trainers at university level	Problematising the quality of SDH within the industry and reflecting on ways to enhance improve SDH quality with an industry focused pedagogical perspective
"Media Accessibility Training" - Gert Vercauteren and Iwona Mazur (2020)	Increasing prevalence of pedagogical research on MA	Offering a comprehensive map of research conducted so far with a particular focus on curriculum design, skills and competences, and training materials	Advocating training that integrates real-life contexts to in-class settings and use of technology to further promote MA training

2.1.1.3 The functionality of SDH standards

This section examines research that investigates functionality of existing SDH standards. Most of the studies discussed here can be classified as empirical research. However, there are also some that do not draw on empirical data as part of their hypotheses. These studies discuss the issues of standardisation and functionality from a descriptive perspective. The common points of this research are the fact that they examine functionality as a concept in close relation to the end-users. In other words, they question the feasibility of SDH standards by asking whether standards are functional from the perspective d/Deaf and hard of hearing individuals. This investigation does not necessarily have a negative connotation. Some studies attempt to create a new set of standards by concentrating on the issue of functionality, and they use empirical data to support their claims.

In her "Sampling Subtitling for the Deaf and the Hard-of-Hearing in Europe," Remael (2007) provides a comprehensive and systematic overview of existing SDH practices in Europe. She highlights that each country follows a different path in terms

of SDH practices because they have their own preferences and conventions such as the political organisation of people with hearing disabilities and national legislation in place. What makes the article a valuable source of information is its methodological approach. It involves data received via questionnaires employed to AVT professionals in different European countries, which offers a comprehensive perspective on MA from the industry's point of view.

Remael's (2007) article is relevant to the present study since it concentrates on the infeasibility of standardisation attempts in SDH practices. However, while Remael (2007) underlines the difficulty of standardisation between various countries, the present study argues that standardisation is not possible even within a single country because d/Deaf and hard of hearing people are not a homogeneous entity and they have different needs and expectations. As will be discussed in detail in Chapter 5, the level of education of participants is an important factor that influences their preferences. Still, Remael's (2007) research deserves praise for laying the foundations for the present study as one of the first publications questioning standardisation attempts.

Joselia Neves' "10 Fallacies Sbout Subtitling for the d/Deaf and the Hard of Hearing" (2008a) can be regarded as one of the pioneering studies to first address the misconceptions surrounding SDH. In a similar vein to Remael (2007), Neves (2008a) opposes the notion of standardisation in SDH and questions its credibility and reasonability. She poses the question of whether the norms (or standards) are relevant or useful at all in the production of SDH or whether they are extensively used by SDH producers within the industry (2008a, p. 134). The article approaches the issue of standardisation towards SDH in the same way as the present study. The present study also questions the standards by presenting two sets of SDH content to

the end-users, one standard and one creative produced by students, as part of the training. Still, Neves' (2008a) questioning of whether these standards are indeed followed in the industry is open to discussion, since the present study confirmed that standard SDH content, taken directly from the Netflix platform and presented to the participants for comparison, strictly adhered to the Netflix guideline.

Zarate's (2010) "Bridging the Gap Between Deaf Studies and AVT for Deaf Children" also offers relevant findings to the present study as it problematises the functionality of SDH guidelines and existing practices. In her article, Zarate (2010) emphasises that children's programmes on UK TV channels should be provided with SDH to enable children to access the content. According to the author, when developing SDH for children, it is crucial to pay close attention to reading speed and use of language because it is much easier for deaf children to become alienated from the content or to feel inadequate (Zarate, 2010, p. 1). Zarate (2010) highlights that unlike their hearing peers who have access to both visual and auditory channels, deaf children rely on subtitles to understand the content, and this necessitates greater engagement and active participation. Poorly designed subtitles may cause deaf children to fall further behind their hearing peers in terms of understanding the written content (Zarate, 2010, p. 2). According to Zarate (2010), the majority of research on children's reception of SDH is outdated and not supported by empirical data. Therefore, she calls for more empirical research on the reception of SDH to make meaningful improvements to the quality of SDH in children's programmes. Although the present study is not strictly based on a specific group of d/Deaf and hard of hearing people, it also questions the functionality of SDH content within the industry. It draws attention to factors such as reading speed, use of language, and so

on, to prevent the audience from being alienated from the content or ending up not understanding it well.

Similar to Zarate's (2010) questioning whether the target audience can indeed comprehend SDH content, in her article "Interlingual Subtitling for the Deaf and Hard-of-Hearing," Neves (2009) criticizes SDH guidelines for failing to meet the needs of end-users because they consider their target audience, d/Deaf and hard of hearing people, to have the same needs (2009, p. 153). She emphasises the importance of distinguishing between the terms of "deaf" and "hard of hearing" and moves on to argue that the subtitler bears the responsibility to tailor subtitles to the needs of their intended audience, which is a notably challenging task (2009, p. 157). Neves (2009) further highlights that SDH subtitlers frequently encounter difficulties in this regard since they "rarely have true knowledge of the cognitive environment of their target audience" (p. 157). This could be due to their inadequate training or lack of knowledge regarding the culture of their audience (2009, p. 157). She points to the technological limitations in the verbal transfer of non-verbal items (e. g. sound effects, music) and stresses that the subtitlers should still strive to produce "an analogous aesthetic effect" in SDH (2009, p. 165). Neves' work addresses the most critical issues regarding SDH such as the inadequate training of subtitlers and the lack of end-user oriented SDH within the industry. While these issues remain valid, it should be noted that Neves does not propose a systematic solution to address these challenges.

Neves' emphasis on the misconception that the needs of d/Deaf and hard of hearing people are identical is an issue discussed in the present study as well. The findings of the present study supported Neves' claim in the sense that there were variations in the preferences of the end-users for standard and creative content

depending on their level of education. Furthermore, the main research problem of the present study can be considered as a response to Neves' call to SDH professionals to tailor subtitles according to the needs of their target audience and the urgent need to train professionals who have such competences.

The following studies also focus on the inadequacy of SDH practices and I infeasibility of standards. However, they use empirical data to support their claims of inadequacy and improve the quality of existing standards. Morettini's research (2012) makes the same claims about the inadequacy of SDH and the role of poorly trained professionals in producing non-functional SDH content. However, it differs from the above shared examples since it supports its claim with empirical data. In her "Profiling Deaf and Hard of Hearing Users of Subtitles for the Deaf and Hard of Hearing in Italy: A Questionnaire-Based Study," Morettini (2012) points out the lack of academic interest in SDH despite its prevalence in Italy since 1986 and stresses that there is not much data on the expectations and preferences of Italian audiences (p. 323). According to Morettini (2012), due to the lack of structured training programmes for SDH, professional translators take on the role of producing SDH. However, they fail to produce functional SDH because they do not have a solid understanding of their target audience's worldview and cultural environment (p. 325). To fill this gap, through her reception-oriented research she attempts to provide empirical data that can serve as a guide for professional subtitlers to produce functional SDH that meets the needs of the target audience.

Morettini's (2012) complaints apply to the present study for several reasons. Firstly, the present study also problematizes the lack of structured SDH training and finds it important to train qualified SDH professionals who can produce functional accessibility solutions for end-users. However, it differs from Morettini's (2012)

research in the sense that it refrains from proposing a prescriptive SDH guideline to improve the quality in the industry. Instead, it offers only a creativity-based guideline that may help the industry professionals to produce stimulating content for end-users by enhancing their filmographic experience. Secondly, Morettini's (2012) attempt to gather the opinions of end-users in order to provide empirical data to professionals is similar to the aim of the present study since the SDH content produced by the students as part of the training is also tested by a group of end-users to verify its feasibility.

Moreover, *Listening to Subtitles: Subtitles for the Deaf and Hard of Hearing*, edited by Anna Matamala and Pilar Orero (2010), can be considered one of the most notable publications on SDH research in Europe that includes articles that use empirical data to test the feasibility of standards. As the culmination of the project "Research and Development of the Criteria Regarding the Creation of Subtitles for the Deaf and Hard of Hearing for Digital Television (SUBSORDIG)," which brings together several researchers from different disciplines, the book aims to "improve the quality of accessible audiovisual material whose users have hearing problems" (Matamala & Orero, 2010, p. 11). Matamala and Orero (2010) define the SUBSORDIG project as the first step in developing SDH guidelines for d/Deaf and hard of hearing individuals in a comprehensive and empirical manner. According to the authors, these guidelines can be a part of the local legislation to ensure the standardisation of SDH practices in different platforms, which has been expected by the d/Deaf and hard of hearing individuals for years (2010, p. 11). To this end, the research group working under the project first identified the technical criteria of SDH, such as the number of lines, the positions of the subtitles, the format of the words, the duration of the display of the subtitles on the screen, the synchronisation

etc. Subsequently, in order to measure whether the SDH produced based on these criteria was indeed functional in terms of meeting the expectations of the Spanish d/Deaf and hard of hearing audience, the researchers designed a reception-oriented study by disseminating subtitled clips and questionnaires to the universities involved in the project. A group of 30-40 d/Deaf people watched the clips and filled in the questionnaires, which provided valuable information for the research.

The book is particularly valuable because it presents exploratory research that tests existing and new hypotheses about SDH with a particular focus on the functionality of standards. It can be claimed that the end-user focus of the SUBSORDIG project paved the way for research that includes the involvement of the target audience. This publication served as a basis for further reception-oriented studies and encouraged researchers to conduct exploratory research on the topic. In terms of paying attention to empirical research and delineating prevailing conventions and conceptions about SDH, the book is relevant to the present study since it serves as a pioneer for the research carried out in the present study, both methodologically and theoretically. Methodologically, because it benefits from empirical data acquired from end-users to support their claims. Theoretically, because it focuses on questioning the feasibility of current standards, even though the primary objective is to create a new set of standards in direct opposition to the present study.

Furthermore, featured in the book, "The Positioning of Subtitles for the Deaf and Hard of Hearing" by Bartoll and Tejerina (2010) deserves particular praise for offering a critique of conventions and seeking to support this critique with data obtained directly from end-users. Based on data received from d/Deaf and hard of hearing viewers who are members of different associations in Spain, the article

presents information on the use of optimal font type, size and position on the screen in SDH content. As for the methodology of the article, several SDH content with different features were produced for the film *Stuart Little 2* and were tested by the volunteer d/Deaf and hard of hearing audience. The results of the research show that in terms of readability, the mixed position of the subtitles on the screen (8. 4) is the option most preferred by the deaf audience, followed by the bottom (8. 0) and top (5. 6) positions (Bartoll & Tejerina, 2010, p. 75). In terms of intelligibility, the mixed position comes first (7. 6), while the bottom position (7. 2) comes second and the top position comes third and last (6). As for the clear distinction between sound and dialogue, the ranking is the same as in the two previous categories with points of 8, 6. 8 and 6. 4 respectively. It is interesting to note, however, that in the overall rating, the bottom position comes first (9. 2), followed by the mixed position (6. 8) and the top position (4. 8), even though the mixed position was the most preferred when the audience was asked to rate individual features (Bartoll & Tejerina, 2010, p. 77). The authors explain the contradiction between the results of the single feature ratings and overall ratings with the viewing habits of the audience. That is, Catalan channels broadcast SDH subtitles in the bottom position, while Spanish channels use a mixed position for SDH subtitles, and the majority of participants watch Catalan channels, which explains the "balanced result" (2010, p. 78).

In terms of creating thematic categories regarding SDH and asking end-users to express their preferences, the present study is similar to the article by Bartoll and Tejerina (2010), as the present study also asked end-users to share their opinions regarding different features of SDH as used in standard and creative content. Also, the article is based upon the premise that SDH, as we know them, may not be functional, which was the claim of the present study as well. However, it should be

noted that the article differs from the present study in the sense that it only focused on existing practices with limited variations, whereas the present study asked end-users to share their preferences for both standard and creative SDH and elicited comprehensive data in a comparative manner.

Another interesting article based on empirical evidence is "The Effect of Text Editing and Subtitle Presentation Rate on the Comprehension and Reading Patterns of Interlingual and Intralingual Subtitles Among Deaf, Hard of Hearing and Hearing Viewers" by Szarkowka et al. (2016). The article investigates the effects of subtitle presentation rate and text editing on the comprehension and reading patterns of deaf (n=44), hard of hearing (n=33), and hearing (n=60) individuals. Contrary to the findings of previous studies, the research conducted by Szarkowska et al. (2016) revealed an interesting conclusion: verbatim subtitles that strictly adhere to the audio and are presented on screen at 15 characters per second scored better in terms of comprehension by deaf and hard of hearing participants compared to edited subtitles that were simplified for better comprehension and presented on screen at 12 characters per second. The difference was found to be more pronounced in the case of intralingual subtitles (p. 202). This challenges the belief that an edited text with a slower speed would be more functional in terms of comprehension for d/Deaf and hard of hearing people.

Another interesting finding of the study was that d/Deaf and hard of hearing participants were found to fixate on intralingual subtitles more than interlingual subtitles. The authors argue that this may highlight that the target audience processes intralingual subtitles at a deeper level than interlingual subtitles (2016, p. 201). According to the authors, this could also be due to the fact that the participants attempted to lip-read the audio in intralingual subtitles. They could not do so in

interlingual subtitles due to the target audience's insufficient English proficiency (2016, p. 201).

The very fact that the article by Szarkowska et al. challenged a deeply entrenched belief about SDH deserves particular attention. It shows that empirical studies can make profound contributions to our understanding of the SDH, especially when they challenge preconceived assumptions and offer alternative suggestions based on empirical data. However, this conclusion can be considered meaningful only in the Polish context. Additionally, it should be kept in mind that although eye-tracking has the potential to provide objective and quantifiable results, subjective responses may lead to exactly the opposite results. The study by Szarkowska et al. (2016) is also important because it focuses on both types of SDH by approaching the issue from the perspective of both intralingual and interlingual translation, which was what the present study also did. Comparing the results of the audience's preferences regarding the intralingual and interlingual SDH can potentially reveal interesting findings. For example, as discussed in more detail in Chapter 5, the scores for the intralingual clips in the present study were visibly higher than the scores for the interlingual clips. In this sense, it can be claimed that the work of Szarkowska et al. (2016) informed the present study in terms of its multi-focused scope.

In addition, "The Reading Comprehension Skill of d/Deaf and Hard-Of-Hearing Poles and its Importance for Media Accessibility: A Pilot Study" by Pawel Aleksandrowicz (2019) is similar to that of Szarkowska et al. (2016) in terms of measuring end-user comprehension. To assess the reading comprehension levels of a group of 87 d/Deaf and hard of hearing participants in Poland, Aleksandrowicz (2019) adapts a test originally designed to evaluate the Polish language skills of foreigners to d/Deaf and hard-of-hearing individuals. The results show that 85% of

the participants scored below 50% of the points, which may suggest that understanding non-edited subtitles can be challenging for d/Deaf and hard of hearing individuals (Aleksandrowicz, 2019, p. 49). However, a moderate positive correlation was found between the reading comprehension and education level of the participants. Aleksandrowicz (2019) suggests that the ideal solution would be offering multiple subtitles tailored to the varied needs of the target audience, which is overlooked by broadcasters. According to the author, given that broadcasters tend to favour a single type of SDH over multiple options at varying levels, it may be advisable for MA professionals to develop a general understanding of the reading comprehension skills of their target audience. This would enable them to select the most suitable method that ensures optimal comprehension and satisfaction among a broad range of viewers with diverse hearing abilities (Aleksandrowicz, 2019, p. 30).

Aleksandrowicz's (2019) research poses a critical question for both academia and industry: can the target audience comprehend what they read on the screen? Answering this question can help professionals improve the quality of SDH significantly on audio-visual content offered by broadcasters. It also has the potential to encourage researchers in academia to consider the reading comprehension skills of participants in a reception-oriented study. It is important to note that most reception-oriented studies do not provide sign language services to assist participants in understanding the questions posed to them. It should be acknowledged that their comprehension may be partial and that they may hesitate to admit that they do not understand questions. Although it is not easy to conduct a reading comprehension test at the start of every reception-oriented study, a preliminary interview with the participants via a sign language interpreter to identify their comprehension levels might be needed. The present study did not include a proficiency test for the d/Deaf

and hard of hearing participants. However, during several preliminary interviews, the general language skills of potential participants were assessed with the help of a sign language interpreter, and the questionnaires were designed according to their expected comprehension skills. As part of the training, the students were also informed about the participants' level of general language skills. Particularly during the design process of SDH content, the students tried to use simpler language to facilitate the understanding of the participants. This issue was also addressed in the audience-tailored guideline that the students referred to during their production process.

Furthermore, "The Effects of Deaf and Hard-of-Hearing Subtitles on the Characterisation Process: A Cognitive Stylistic Study of *The Wire*" by Dan Mclntyre and Jane Lugea (2015) can be considered as one of the most innovative and interesting articles on SDH with respect to identifying the comprehension levels of d/Deaf and hard of hearing participants in line with the strategies employed in SDH. In their article, the authors investigate how disparities between audio and SDH can affect the audience's perception of characters in the TV series, *The Wire*. The research findings indicate that omissions in SDH can hinder characterisation as perceived by the target audience, particularly in contexts where these omissions are critical for understanding interpersonal relationships between characters. The authors emphasise that while it is natural and acceptable for SDH professionals to apply reductions in subtitling, in the case of *The Wire*, where the interpersonal relationships show the operation of the whole system in the plot, each dialogue plays an essential role (2015, p. 78).

It can be suggested that the article's originality lies in its adoption of a methodology from the field of cognitive sciences to receive empirical data regarding

the use of SDH. More significantly, the research not only identifies the issue, but also proposes that cognitive analysis and similar methodologies can make significant contributions to SDH professionals. This approach may also pave the way for interdisciplinary research on SDH with its potential to show the impact of specific linguistic decisions on characterisation and narrative in a content (Mclntyre & Lugea, 2015, p. 63).

Although the present study does not use a cognitive methodology to confirm the preferences of the Deaf and hard of hearing participants, the negative effect of omissions, as indicated in Mclnyture and Lugea's article, may also be observed in the results of the present study. Of course, results can be contradictory as well. Omissions may turn out to increase comprehension as shown within the limitations of the present study. Furthermore, one of the results of the present study points to the role of characterisation in the higher scores assigned by the participants to *Börü* clips.

In terms of conducting a parameter-based SDH study, there is also research that builds on larger datasets. Romero-Fresco's (2010) "D'Artagnan and the Seven Musketeers: SUBSORDIG Travels to Europe" emerges as a seminal work that offers a comprehensive data set. The article itself is an examination of the preliminary results of the D'Artagnan project, the aim of which is "the optimisation and possible harmonisation of SDH across Europe" (p. 186). The project consists of two phases. In the first phase, questionnaires were used to identify audience preferences for SDH, with a particular focus on font, size, position and character identification. In the second phase, the same parameters would be measured using eye-tracking technology. For the first phase, the experiment was carried out in several countries, including Italy, the UK, Denmark, Poland and Spain. However, the articles only

cover the partial results of the first phase, the preferences of the Spanish and British audiences since as of the date of publication of the article, the second phase had not yet been completed.

According to the results, contrary to the objective of standardising SDH across Europe, a heterogeneity between the preferences of the audiences in two countries has been identified. Namely, the Spanish audiences preferred a font size of 28, whereas the British audiences preferred 32 in subtitles. The same heterogeneity was also observed in other parameters. Although the results contradict the aim of the project and the article, they confirm the challenges of standardising SDH across countries whose conventions widely differ from each other. These different conventions are quite understandable considering the differing profiles of the d/Deaf and hard of hearing communities in these countries. The level of education, the opportunity to access education and accessible content, their familiarity with audio-visual content that offers accessible services, and so on, may play a decisive role in influencing the preferences of audiences. Romero-Fresco (2010) also admits that the deaf audience most likely answered the questionnaires based on the conventions of the SDH as used in their respective countries (p. 188). In other words, they chose what they were used to seeing on TV.

One of the positive aspects of the article is that it is an excellent example of multi-stakeholder projects based on collaboration between universities, broadcasters and service providers in different countries. Bringing industry and academia together in a collaborative project can pave the way for the development of functional SDH by providing broadcasters and service providers with empirical data. These empirical data can potentially shed light on the varying needs of the d/Deaf and hard of hearing audience based on the different demographics and conventions of each country.

Particularly in the age of streaming platforms offering services in multiple countries, the creation of SDH guidelines that meet the expectations and needs of the target deaf community can make a profound contribution to the production of quality SDH and accessible audio-visual content that can be enjoyed by the target audience.

The results of the article are significant for the present study in several ways. Firstly, it highlights the challenges behind standardisation and shows how standards fail to meet the expectations of end-users due to different conventions. Secondly, the fact that participants were asked to rate different parameters as part of Romero-Fresco research is similar to the methodology of the present study in the sense that the present study also asked participants to rate parameters from different categories. Also, the collaboration between the different stakeholders in the article is relevant to the present study, since the author of the present study contacted deaf associations and tried to ensure collaboration between the members of these associations and T&I students when attempting to create a balanced participant group. As a further step, the present study has the potential to involve industry as the third component of its main research problem.

A similar study on measuring audience preferences for SDH is *The Reception of Subtitles for the Deaf and Hard of Hearing in Europe*, edited by Pablo Romero-Fresco (2016). The book brings together articles revealing d/Deaf and hard of hearing viewers' perception of quality SDH. In the introduction to the book, Romero-Fresco (2016) highlights that there has been a shift in MA research from an interest in the quantity of SDH to a quality-focused line of research (p. 9). Indeed, the majority of publications before 2010 tended to be descriptive in the sense that they map the different practices of SDH measured in quantity without offering empirical data. While this does not mean that there was no empirical research prior

to 2010, especially from 2012 onwards, there was a noticeable shift towards end-user oriented research.

The articles in this book are the result of research based on a collaboration between academia and industry, *Digital TV for All*. The majority of studies in the book opted for questionnaires and eye tracking methods to obtain the options and viewing preferences of the target audience to provide guidelines for SDH in different countries, which until now have not been developed in accordance with empirical data (Romero-Fresco, 2016, p. 10). In contrary to its objective, Romero-Fresco (2016) points to an unexpected and interesting result of the project: although the aim was to develop a standard to ensure harmonisation between SDH guidelines and corresponding practices in European countries, research included in the book revealed the heterogeneity of the conventions and standards of each country regarding SDH in a similar manner to Romero-Fresco's article on the D'artagnan project (2010). Another interesting conclusion from the majority of the articles was that there was a discrepancy between the subjective and objective data, which means that what d/Deaf and hard of hearing audience thought was good was not actually consistent with data received through eye-tracking. All of these findings show the importance of a mixed methods approach to SDH research, which allows the researcher to obtain both qualitative and quantitative data and to cross-validate the results. They also reveal that SDH standardisation may not be feasible across multiple countries since even within countries there are differences depending on the groups of participants. The methodology of the studies in the book is critically relevant to the present study because the present study also used a mixed methods approach to obtain data from both the students and the end-users as part of the research to cross-validate the findings.

However, the main difficulty in the present study was to obtain meaningful responses to a limited number of open-ended questions addressed to the end-user group. This was a particular challenge due to their relatively low level of language proficiency. Nevertheless, particularly in the analysis of the student response data, the open-ended responses were cross-validated with the closed-ended responses, which showed a high degree of consistency.

Furthermore, although the findings in the book that show heterogeneity between deaf groups are also reiterated in Romero-Fresco's previous research (2010); the fact that the book included a larger amount of data received from a different group of participants further verified the heterogeneity of conventions regarding SDH and the difficulty of harmonisation.

Research shared here demonstrate the multiplicity of research conducted on the challenges of standardisation attempts in SDH. The majority of these studies criticize the standards for not being feasible in offering end-users quality SDH by replying to their needs and expectations. In this sense, they are closely related to the main research problem of the present study and has potential to inform future research on the topic as well. To summarise these lines of research in detail, Table 3 reveals their contributions and relevance to the present study in concise manner:

Table 3. Functionality of SDH Standards

Study	Focus	Contribution	Relevance to the present study
"Sampling Subtitling for the Deaf and the Hard-of-Hearing In Europe" – Aline Remael (2007)	Existing SDH practices and standards in Europe	The use of empirical data received via multiple questionnaires to identify practices and standards	Critique of standardisation backed by empirical data
"10 Fallacies About Subtitling for the d/Deaf and the Hard of Hearing" - Josélia Neves (2008b)	Misconceptions surrounding SDH practices	Opposing the concept of standardisation.	Questioning the feasibility of existing SDH standards
"Bridging the Gap Between Deaf Studies and AVT for Deaf Children" – Soledad Zarate (2010)	SDH produced for Deaf children	Drawing attention to an under-explored line of research	Questioning the viability of SDH claimed to be produced for a group of end-users and invitation for further empirical research on the issue
"Interlingual Subtitling for the Deaf and Hard-of-Hearing" - Josélia Neves (2009)	The problematic aspects of SDH production with a focus on interlingual SDH	Pointing out the reason behind low quality SDH: The lack of training.	Encouraging training of SDH professionals in a manner that tailor accessible content to the needs of target audience by understanding their needs and expectations
"Profiling Deaf and Hard of Hearing Users of Subtitles for the Deaf and Hard of Hearing in Italy: A Questionnaire-Based Study" – Agnese Morettini (2012)	Identification of Deaf and hard of hearing's perceptions.	Offering a portrait of differing needs of Deaf and hard of hearing people.	Serving as a precursor of the present study with its employment of detailed questionnaires to receive the opinions of end-users.
Listening to Subtitles: Subtitles for the Deaf and Hard of Hearing - Anna Matamala and Pilar Orero (2010)	A compilation of various research conducted on SDH	Bringing together various early research on questioning the viability of standards	Using different methodological instruments to support the validity of hypotheses and encouraging further empirical research on the topic
"The Positioning of Subtitles for the Deaf and Hard of Hearing" – Eduard Bartoll & Anjana Martínez Tejerina (2010)	Various features of SDH tested by a group of end-users	Presenting multiple features of SDH to the evaluation of a group of d/Deaf and hard of hearing.	The investigation of varying features of SDH, in detail and submitting it to the evaluation of end-users to further refine future solutions
"The Effect of Text Editing and Subtitle Presentation Rate on the Comprehension and Reading Patterns of Interlingual and Intralingual Subtitles Among Deaf, Hard of Hearing and Hearing Viewers" - Szarkowka et al. (2016)	The effect of editing in interlingual and intralingual SDH on the comprehension of end-users	Reflecting on specific strategies used in SDH and their role in hindering/promoting the comprehension of target audience.	Discovering both intralingual and interlingual SDH and testing specific subtitling strategies via reception-oriented research by challenging accepted beliefs regarding intralingual and interlingual SDH
"The Reading Comprehension Skill of d/Deaf and Hard-of-Hearing Poles and its Importance for Media Accessibility: A pilot Study" - Pawel Aleksandrowicz (2019)	Reading proficiency of d/Deaf and hard of hearing people with a focus on SDH	Revealing the importance of identifying the linguistic skills of the target audience.	Taking the linguistic proficiency of its end-users as the present study did when developing its instruments and emphasizing its crucial role in tailoring user-friendly accessible content
"The Effects of Deaf and Hard-Of-Hearing Subtitles on the Characterisation Process: A Cognitive Stylistic Study of *The Wire*" - Dan Mclntyre & Jane Lugea (2015)	Cognitive perceptions of d/Deaf and hard of hearing viewers	Questioning how characters are received by end-users depending on subtitling strategies	The role of subtitling strategies in the reception of audio-visual content by end-users backed by empirical data received through surveys
"D'Artagnan and the Seven Musketeers: SUBSORDIG Travels to Europe" – Pablo Romero-Fresco's (2010)	Ensuring harmonisation of SDH practices in Europe	Providing a comprehensive perspective on harmonisation attempts across different countries via empirical data	Showing the challenges of standardisation in SDH
The Reception of Subtitles for the Deaf and Hard of Hearing in Europe - Pablo Romero-Fresco (2015)	A compilation on perception of d/Deaf and hard of hearing people on SDH	Investigation of end-user's opinions on SDH across European countries	Displaying the varying conventions across countries and further showing the difficulty of standardisation in SDH practices

2.1.2 Research on SDH and MA in Türkiye

Although MA research in Türkiye is not yet as diversified as in Europe, there is pioneering research that can make important contributions to the various lines of MA research in the Turkish TS community. In addition to research in the form of articles, books and projects, graduate theses have also begun to explore the possibilities of MA with a focus on Turkish context in recent years. However, as the interest in MA as a field of research in Türkiye is growing at a slower pace, the amount of research focusing specifically on SDH remains limited. For this reason, the research discussed below includes not only SDH, but also AD and more general research on MA. Those that do not focus specifically on SDH can be considered relevant to the present study as well due to their conceptual understanding of MA and emphasis on the pedagogical aspect of MA.

"Azınlığa Gönderim ve Erişim Çağında, Bir Çeviri Türü Olarak Sesli Betimleme" [Audio Description as a Kind of Translation in the Age of Narrowcasting and Media Accessibility] by Mümtaz Kaya and Ayşe Şirin Okyayuz is one of the first studies on MA in the context of AD in Türkiye. Kaya and Okyayuz (2016) examine accessibility as a concept from three perspectives. In the first part, they put special emphasis on the legislative aspect of accessibility and explain the theoretical framework of AD. In the second part of the article, they present the challenges of AD by focusing on concrete examples. What makes this second part particularly interesting is the fact that it evaluates the topic with reference to the Turkish AD scene and reveals the intrinsic challenges of AD. Most importantly, the last and third part of the article describes the lack of focus on MA in AVT classes at T&I departments in Türkiye and calls for the training of trainers in line with this objective in cooperation with associations. Kaya and Okyayuz (2016) also emphasise

that trainers can teach students the competencies for the different types of MA through classes or training modules (p. 26).

The article by Kaya and Okyayuz (2016) is relevant to the present study in that it also provides a brief introduction to the legislation of MA to contextualise AD. In particular, Kaya and Okyayuz's (2016) emphasis on the lack of MA training in Türkiye and their encouragement for trainers to collaborate with associations as part of the pedagogical aspect of the issue resonates strongly with the present study. The present study owes its focus on offering a training model to Kaya and Okyayuz's (2016) observation of such a lack in the Turkish TS community and their call to integrate MA into translation training. That is, in the initial steps of the research design, Kaya and Okyayuz's (2016) study further encouraged putting theoretical perspectives of MA and pedagogy into practice and thereby shaped the main research problem of the present study.

"Sesli Betimlemenin Çeviribilim Sınıflarında Tanıtımı için Bir Eğitim Bileşeni Önerisi" [An Example of a Training Module for the Introduction of Audio Description in the Translation Classroom] (Okyayuz, 2017) shares the results of a classroom application of AD training in line with Okyayuz and Kaya's call in their joint article (2016). In her article, Okyayuz (2017) emphasises the need to expose undergraduate translation students to new forms of AVT. In this sense, she proposes a module aimed at acquainting students with AD and conducts an AD session within the classroom for the popular Turkish series *Vatanım Sensin* [You are my homeland]. Okyayuz (2017) reveals that a short-term, one-time module cannot "teach" students how to produce sufficient AD content that can meet the needs of end-users. However, she highlights that students are at least introduced to AD and encouraged to continue their work in the future.

Okyayuz's (2017) research is a valuable contribution to MA research in Turkish TS since it is one of the first documented examples of an MA-centred classroom application in Türkiye. In particular, Okyayuz's (2017) emphasis that this application only aims to familiarise students with AD and therefore cannot help students to acquire the necessary competences to develop AD content is also one of the suggestions of the present study. The present study does not claim that students have learned everything for SDH production with the training model implemented as part of the main research question. Most importantly, the present study carefully refrains from identifying a set of skills and competences. Instead, it focuses on raising students' general awareness of MA and encouraging them to find creative ways of producing SDH in a user-friendly way.

Furthermore, in their *Görsel-işitsel Çeviri Eğitimi* [Audio-Visual Translation Training], Okyayuz and Kaya (2017) provide a holistic perspective on teaching AVT courses with real examples taken from classroom applications, although they do not focus specifically on MA applications in T&I departments in Türkiye. As the first practical guide to AVT training in Türkiye, the book demonstrates that AVT training is a must in the age of digitisation. However, it also emphasises that this training should be based on the realities of each country by taking the local needs into consideration. It also highlights the rapid changes in the industry and the constantly evolving needs. In line with this perspective, Okyayuz and Kaya (2017) acknowledge that trainers can learn new insights from students who are "digital natives" and that they should be open to novelties to improve the missing aspects of in-class applications (p. 18). This pedagogical perspective is particularly crucial for MA research. Paying attention to local expectations and evolving needs of d/Deaf and hard of hearing individuals can help us to stay informed about different

accessibility options and accordingly improve the quality and coverage of our training models.

Despite its specific focus on MA training, the present study can be positioned within a larger category of AVT training. However, this should not mean that MA training should be conducted as part of AVT courses per se. Similar to Okyayuz and Kaya's (2017) emphasis on adapting training to local needs by incorporating technology, the present study underlines the importance of identifying the needs of the Turkish d/Deaf and hard of hearing community by refraining from any generalisation attempt. Furthermore, the training model proposed as part of the main research problem of the present study is almost entirely based on the use of technology to produce user-friendly SDH content for end-users. In particular, Okyayuz and Kaya's (2017) prediction that trainers can learn from "digital native" students was proven correct during the training process, where students discovered more functional software for their purposes and introduced their potential to the trainer, the author of the present study.

In her *Ayrıntılı Altyazı Çevirisi* [Subtitles for the d/Deaf and Hard of Hearing], Okyayuz (2019) emphasises the lack of focus on SDH in Türkiye, both in academia and industry, and highlights the need to raise MA awareness. She states that in many countries, SDH is perceived as merely conveying dialogue in the form of transcription as closely as possible and informing users about non-dialogue elements such as sound effects etc (2019, p. 13). According to Okyayuz (2019), translators dealing with SDH are different from other translators because they do not share the same physiological, social and communicative characteristics with the target group (p. 12). For this reason, they need to interact with d/Deaf and hard of hearing people in order to understand their needs well enough to produce SDH (p.

12). Okyayuz (2019) highlights that her book is not a subtitling guide but rather that it presents the limitations and possibilities of SDH by grouping together possible challenges and ways to overcome them. As the first and only academic book on SDH in Türkiye, *Ayrıntılı Altyazı Çevirisi* (2019) invites future researchers and subtitlers to think about different aspects of SDH in detail. This can potentially encourage researchers to design a training module by considering different aspects of SDH and how to teach them with classroom applications.

The present study echoes Okyayuz's (2019) book in several respects. The present study also points out the lack of SDH research in Türkiye and thus attempts to contribute to the literature through a reception-oriented SDH training model. Okyayuz's (2019) criticism of SDH as subtitles that only convey the dialogue is also an issue that the present study comprehensively addresses with its audience-tailored guideline. To help students understand the social and communicative features of their target audience, the training also followed Okyayuz's (2019) call to interact with end-users by conducting End-user Survey 1 to provide students with such information. Finally, the training process showed how the students, acting as professional SDH producers, overcame the challenges of SDH as indicated by Okyayuz (2019).

Another notable study on SDH practices in Türkiye is Ali Gürkan's doctoral thesis, *Subtitling for the Deaf and the Hard-of-Hearing: A Reception Study in the Turkish Context (*2019). In his thesis, Gürkan conducts an extensive analysis of existing SDH guidelines and creates a new guideline with the aim of contributing to the production of quality SDH in Türkiye. Following a comprehensive analysis of existing SDH guidelines, questionnaires were administered to the Turkish d/Deaf and hard-of-hearing audience to ascertain their preferences. In the first part, 37 participants completed questionnaires after viewing content that included subtitles

with varying features. In the second part, four participants were interviewed to gather more detailed information about their opinions. The results informed the creation of a set of guidelines for SDH practices in Türkiye as presented within the thesis.

In Turkish MA research, Gürkan's (2019) study is the first research to gather the needs and expectations of the end-users to create a set of guidelines that can be used in the industry. However, amidst a prevailing research trend towards universalism and non-standardisation, it may potentially lead to the production of a standardised, homogeneous set of criteria that focuses on the majority rather than the individual. Nevertheless, it should be noted that in 2019, there was a limited presence of SDH research in Türkiye that uses empirical data to test its hypothesis. For this reason, Gürkan's work (2019) can indeed produce meaningful results for the production of quality SDH as an example of pioneering research on SDH in Türkiye.

Gürkan's (2019) research is similar to the present study in terms of its careful analysis of existing SDH guidelines, and the provision of an alternative guideline through the data obtained from a group of d/Deaf and hard of hearing participants. However, although the present study offers an alternative guideline as well, the guideline does not constitute the focus of its main research question. Contrary to Gürkan's (2019) research, the present study positions the guideline only as a general source of reference for the students and avoids imposing a set of rules that can also be followed by the industry. In particular, by adopting a universalist CMA approach, the present study differs significantly from Gürkan (2019). To put it more explicitly, the present study criticises any kind of standardisation attempt due to the risk of viewing the audience as a uniform group with the same viewing preferences.

In their article "SDH for Child Audiences in Türkiye: Practice of Plain Subtitling", Sancaktaroğlu, Bozkurt and Okyayuz (2020) present the results of an

SDH project that targets d/Deaf and hard of hearing children. The project in question was a part of the "Project for Accessibility to Television Programs for Blind, d/Deaf and Hard of hearing Children" carried out in collaboration with SEBEDER. The aim of the project was to provide accessible content with SDH for d/Deaf and Hard of Hearing children and to create a translation guideline that could promote further SDH research for deaf children. To this end, a group of translation scholars, sign language interpreters, SDH translators and editors produced SDH for some audio-visual content (cartoons, educational contents) and a group of d/Deaf and hard of hearing children tested the contents. The main technique used in the production of SDH was simplification, or in other words, providing simple subtitles for children. This project is of particular importance because it involves the d/Deaf and hard of hearing children as a target group and underlines the need for SDH subtitles not only for adults but also for minors.

The article by Sancaktaroğlu, Bozkurt and Okyayuz (2020) is relevant to the present study in its attempt to bring together end-users and professionals in reception-oriented research. Furthermore, the focus on the creation of an SDH guideline that could encourage the production of functional SDH for a specific target group is also similar to the present study. However, as mentioned above for Gürkan's (2019) study, the present study differs from the article by providing a flexible reference source based on CMA.

Furthermore, in their article "Disability and the Implication of Co-Accessibility: A Case Study on Accessibility to the Media in Türkiye," Okyayuz and Kaya (2020) draw attention to developments in MA in Türkiye and place particular emphasis on the potential of co-accessibility for Turkish end-users. Aiming to meet the needs of users with different disabilities in a single product, the notion of

coaccessibility can potentially encourage more researchers/producers to work on a single piece of content to jointly develop AD, SDH and SLI options. This collaborative process can help us to rethink how different modes of MA contribute to each other during the production process. Furthermore, the authors argue that a co-accessible product can allow multiple people with different disabilities to enjoy content at the same time and thus enhance their viewing experience.

The article's suggestion of collaboration between professionals working on a single task to make the content accessible to people with different disabilities also has similarities with the present study. Collaboration as a mode of production was tested as part of the training conducted in the present study and proved to produce valuable results, as verified in the findings of End-user Survey 2. Although the article by Okyayuz and Kaya (2020) focuses on multiple modes of MA and introduces a new concept of MA, the present study examines the production of SDH in a collaborative setting. Nevertheless, the co-accessibility proposed by Okyayuz and Kaya (2020) can be adapted to the training model proposed by the present study, especially in terms of applying the CMA approach to multiple modes of MA. Finally, the article's focus on "enjoyment" of the content is one of the principles on which the present study was based, i.e. producing content that both meets the needs of the end-users and enhances the viewing experience of d/Deaf and hard of hearing people.

The article that focuses on creativity in SDH for the first time in Türkiye, is "Altyazı Çevirisinde Teknoloji Destekli Yaratıcılık Açılımı" [New Venues of Creativity in Subtitling with Evolving Technologies], by Ayşe Şirin Okyayuz (2021). In her article, Okyayuz (2021) offers a compilation of creative SDH examples from around the world. For instance, Athos, a character in *The Three Musketeers*,

mumbles the words because he is drunk. This effect is recreated on the screen with blurring words. Or another example would be the use of robotic letters to indicate a character is in fact a robot equipped with artificial intelligence, and so on.

In a more recent study oriented towards creativity, "Altyazı Çevirisinde Yeni Bir Soluk: Yaratıcı Ayrıntılı Altyazı Çevirisi" [A New Venue in Subtitling: Creative SDH], Okyayuz and Çevikoğlu Yıldırım (2024) expound on the notion of creative SDH and share a compilation of research conducted on the topic. In this sense, this article can be considered as an introduction to creative SDH research. However, the final section of the article discusses an ongoing doctoral research project[2] that aims to present a set of standard and creative SDH to a group of d/Deaf and hard of hearing individuals to inquire about their thoughts and expectations regarding the creative SDH approach. Despite the absence of detailed information, as one of the first research projects on creative SDH with a reception-oriented approach in Türkiye, what this thesis mentioned may provide significant contributions.

The present study is relevant to these two articles in several ways. First, the present study also includes the CMA approach as an alternative to standard SDH, which could further improve the quality of SDH and enhance the viewing experience. Second, similar to what was said in Okyayuz and Çevikoğlu Yıldırım's (2024) article about the ongoing doctoral thesis, the present study also combines CMA with reception-oriented research with the addition of a comprehensive

[2] Çevikoğlu Yıldırım (2025) submitted her doctoral thesis entitled *A Taxonomy for Creative Subtitling for the Deaf and Hard of Hearing* in early 2025. As one of the pioneering studies on creative SDH in Türkiye—and the first dissertation to propose a comprehensive taxonomy grounded in extensive empirical data—Çevikoğlu Yıldırım's (2025) work stands out for its strong theoretical framework, methodology, and findings that demonstrate the broader potential of creative SDH and subtitling. While the present study also adopted a CMA approach, its primary focus was on the pedagogy of MA with a social-constructivist approach and the potential role of CMA in MA training. Çevikoğlu Yıldırım's (2025) research exclusively involved d/Deaf and hard of hearing participants and examined eight video sets across diverse genres. The present study, however, drew on data from two participant groups—T&I students and d/Deaf and hard of hearing individuals—and utilized a more limited set of videos due to its pedagogical orientation.

pedagogical perspective. Also, the student content produced as a result of the training in the present study has applications of creative subtitling similar to the existing examples cited by Okyayuz (2021).

In recent years, master's theses in Türkiye have approached the concept of MA from different perspectives. Still, the number of theses on SDH is still extremely limited. A master's thesis titled *A Descriptive Study on Subtitling for the Deaf and Hard of Hearing* by Alev Abacı (2018) provides a descriptive analysis of SDH methods and strategies through the interlingual SDH subtitling of *Byzantium* and the intralingual SDH subtitling of *Horrible Bosses*. It highlights the constraints faced by SDH professionals and how these difficulties can be overcome in practice. However, without a group of actual end-users, the results of the descriptive analysis of these two films are based on mere assumptions.

In addition, Selma Akseki's MA thesis, *An End User-based Study on Subtitling for the d/Deaf and Hard of Hearing in Türkiye* (2022) provides a reception-oriented analysis of SDH. By using a questionnaire to investigate end-users' opinions on various SDH practices, Akseki (2022) highlights the importance of end-users' expectations and needs in the creation of SDH. The scope of Akseki's (2022) study deserves attention due to its large group of 237 participants. However, a problematic aspect of the methodology of this study itself is that it is not possible to determine what references the participants had in mind when answering the questions in the questionnaire. As there is no controlled, selected set of audio-visual content presented to the participants, one may question the validity of their responses.

Furthermore, in his MA thesis, *SDH Translation for Hard of Hearing People and Identifying the Education Need Within the Scope of the Associate and*

Undergraduate Programmes, Yasin Özenir (2022) carries out similar end-user-oriented research. The aim of the thesis is to identify the need for SDH training in Turkish academia. To this end, Özenir (2022) analyses course syllabi and curricula of T&I departments in Türkiye. According to the results, only 4 percent of T&I departments have courses that can directly contribute to SDH training at the undergraduate level. The study by Özenir (2022) may be useful in identifying the need for SDH training. However, from a methodological point of view, it should be noted that syllabi often do not reflect the true content of the courses for various reasons.

The present study differs from the above-mentioned theses in several ways. First, since Abacı's (2018) thesis is more of a descriptive line of research, whereas the present study conducts empirical research. Akseki's thesis (2022), on the other hand, has similarities with the present study in terms of collecting and analysing data directly from a group of d/Deaf and hard of hearing people. However, the present study uses actual SDH content with video clips and asks about their preferences directly in relation to these video clips, which makes the participants' responses more reliable due to the immediacy of their responses

In addition, the present study has a much smaller group of participants, and the questions asked are much more detailed and so are the responses received from the participants. Nevertheless, Akseki's (2022) work stands out as one of the best examples of pioneering reception-oriented SDH research in Türkiye. Finally, Özenir's (2022) thesis provides concrete data to show the lack of SDH training in T&I departments in Türkiye. It can be argued that it supports the claim of the present study regarding the lack of SDH training with actual data. Table 4 below shares a summary of research conducted on MA in Türkiye:

Table 4. Research on MA in Türkiye

Study	Focus	Contribution	Relevance to the present study
"Erişim Çağında Azınlığa Gönderim ve Bir Çeviri Türü Olarak Sesli Betimleme"– Ayşe Şirin Okyayuz & Mümtaz Kaya (2016)	Expounding on the existing practices of audio description from multiple perspectives	Descriptive analysis of the challenges of AD based on the existing examples	Calling for MA training in general due to lack of focus on the issue and training of trainers
"Sesli Betimlemenin Çeviribilim Sınıflarında Tanıtımı İçin Bir Eğitim Bileşeni Önerisi"– Ayşe Şirin Okyayuz (2017)	In-class application of AD	Presentation of findings based on data acquired via practical application of AD in a classroom setting	Being one of the first documented in-class application of a form of MA training
Görsel-İşitsel Çeviri Eğitimi– Ayşe Şirin Okyayuz and Mümtaz Kaya (2017)	AVT education in Türkiye	Detailed presentation of AVT education with a focus on Turkish T&I departments serving as a guide for trainers	Emphasizing the need to adapt training to local needs via the use of technology
Ayrıntılı Altyazı Çevirisi – Ayşe Şirin Okyayuz (2019)	Existing SDH practices/conventions	A descriptive and detailed investigation of SDH	Being the first book written on SDH in Türkiye and encouraging further research on the issue with a focus on Turkish context
Subtitling for the Deaf and the Hard-of-Hearing: A Reception Study in the Turkish Context - Ali Gürkan (2019)	The analysis of SDH guidelines and a guideline proposal	Presenting a detailed analysis of SDH guidelines from multiple perspectives and a guideline proposal depending on empirical research	Analysis of the prevailing SDH guidelines and a proposal based on empirical data received from d/Deaf and hard of hearing individuals in Türkiye
"SDH for Child Audiences in Türkiye: Practice of Plain Subtitling" Sinem Sancaktaroğlu Bozkurt & Ayşe Şirin Okyayuz (2020)	SDH produced for d/Deaf and hard of hearing children	Aiming to improve the quality of SDH for child audiences by offering a guideline based on empirical data	Developing SDH by taking the needs of target audience into consideration in collaboration with professionals, end-users and scholars
"Disability and the Implication of Co-Accessibility: A Case Study on Accessibility to the Media in Türkiye"- Ayşe Şirin Okyayuz & Mümtaz Kaya (2020)	Investigation of various modes of MA as part of co-accessibility	Offering an alternative perspective to accessible audio-visual content that encourages the inclusion of various modes of MA in a single content	Offering an innovative approach to improve the viewing experience of end-users by considering their needs
"Altyazı Çevirisinde Teknoloji Destekli Yaratıcılık Açılımı"– Ayşe Şirin Okyayuz (2021)	Creative SDH	A descriptive analysis of existing creative SDH applications supported with concrete examples	Presentation of how creative SDH can be used in audio-visual content
"Altyazı Çevirisinde Yeni Bir Soluk: Yaratıcı Ayrıntılı Altyazı Çevirisi" Ayşe Şirin Okyayuz &Gevher Ebru Çevikoğlu Yıldırım (2024)	Creative SDH	A descriptive analysis of existing creative SDH applications supported with concrete examples	Presentation of how creative SDH can be used in audio-visual content
A Descriptive Study on Subtitling for the Deaf and Hard of Hearing - Alev Abacı (2018)	SDH examples	A descriptive analysis of SDH methods and strategies	Presentation of existing SDH strategies provided with concrete examples
An End User-Based Study on Subtitling for the d/Deaf and Hard of Hearing in Türkiye – Selma Akseki (2022)	Perceptions of d/Deaf and hard of hearing people regarding SDH practices in Türkiye	Offering an extensive amount of data received from more than 200 hundred end-users/being the first study providing such comprehensive information	Sharing of the findings based on the SDH preferences of end-users through reception oriented empirical research
SDH Translation for Hard of Hearing People and Identifying the Education Need Within the Scope pf the Associate and Undergraduate Programmes – Yasin Özenir (2022)	The lack of SDH training in Türkiye	Proving the lack of training on SDH at Turkish universities with empirical data	Pointing out the lack of SDH training and calling for further research on the issue to fill the gap

2.2 Theoretical framework

The theoretical framework of the present study is structured on the SDH research focusing on

i. the multi-semiotic nature of SDH,
ii. the infeasibility of standardisation attempts due to the heterogeneity of d/Deaf and hard of hearing people, and
iii. the calls for structured SDH training.

In this sense, Figure 1 below shows how these theoretical propositions inform the present study:

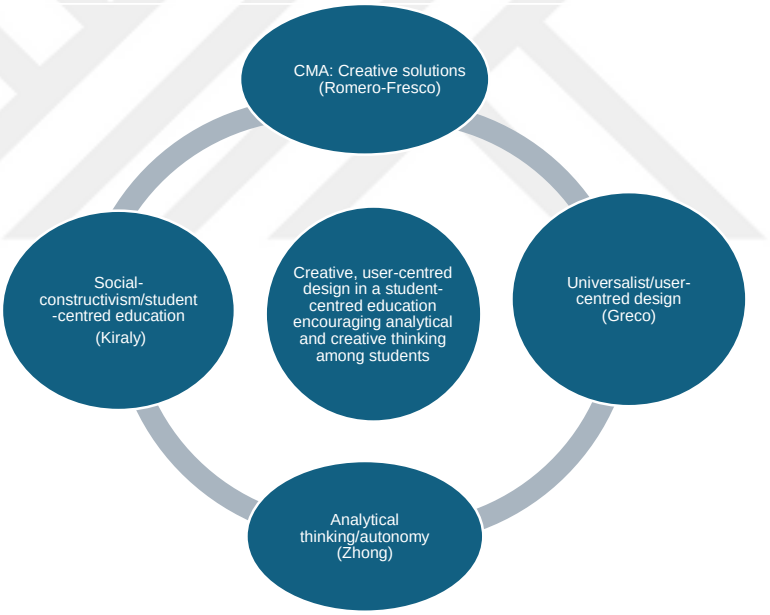

Figure 1. The connection between the theoretical propositions and the present study

The common point of these lines of research is that they are strongly reception-oriented and mainly based on empirical data similar to the present study. These studies significantly informed the main research problem of the present study. However, it should be highlighted that the theoretical framework of the present study was primarily based on the CMA approach (cf. Romero-Fresco, 2021; Romero-

Fresco & Chaume, 2022; Romero-Fresco & Brown, 2023), Gian Maria Greco's pedagogical perspective towards MA training (cf. Greco, 2018; Greco, 2019), and the social-constructivist approaches of Donald Kiraly (cf. Kiraly, 2000; Kiraly, 2003; Kiraly, 2006; Kiraly, 2012) and Yong Zhong (2002) towards translation education.

In his "The Nature of Accessibility Studies," Greco (2018) highlights that there have been three shifts in the understanding and practice of accessibility from ". . . particularist accounts to a universalist account of access. . . ", ". . . a maker-centred to a user-centred approach. . . ", and ". . . reactive to proactive approaches" (p. 209). By particularist to universalist, he means a shift from a focus on a particular group of people to all people; by maker-centred to user-centred, he implies that the maker-centred understanding was based on the development of accessible products developed in line with the maker's idea of the needs and expectations of end-users. With a change in this perspective, accessible products began to be developed in accordance with the needs of the end-users, as identified through empirical research. Finally, by reactive to proactive, he indicates that "reactive" refers to the development of accessible products without involving end-users in the design process, and that accessibility is added as an afterthought, which results in low quality. Proactive solutions, on the other hand, require the involvement of end-users in the production process and working in collaboration with them to develop accessibility solutions.

As a starting point for CMA, Romero-Fresco (2021) refers to Greco's claim (2018) that there is a shift from a particularist, reactive and maker-centred approach to MA research to a universalist, proactive and user-centred approach (p. 291). An undeniably revolutionary article in terms of introducing a perspective that challenges the prevailing trend in MA research, Romero-Fresco's "Creative Media Accessibility:

Placing the Focus back on the Individual' (2021) examines a new concept, CMA, by highlighting where it stands, what it challenges and what it offers to MA research in general. In the article, Romero-Fresco goes on to provide a comparative table showing the differences between the two lines of research:

Table 5. A Comparison Between Current Approach and New Approach

Current Approach	New Approach
Centred on impairments	Centred on dis/abilities
Focused on compensation of missing content (providing information to make for loss)	Focused on facilitating the user's experience
Takes the "able" expert as a reference	Takes the user as a reference
Concerned with comprehension	Concerned with engagement
Focused on one sense	Focused on more than one sense
Echoes of the medical model	Echoes of social model
Results in "technicians" applying guidelines	Results in a more artistic and collaborative approach
Conducive to separation between production and translation/access	Conducive to collaboration with filmmakers (accessible filmmaking), although it can be applied without it

Source: Romero-Fresco (2021, p. 292)

According to Romero-Fresco (2021), in line with this new approach, MA practices now increasingly do not adhere to the standards outlined in guidelines but rather aim to improve the end-user experience in creative ways (p. 292). He defines CMA as alternative MA, which includes "those practices that do not only attempt to provide access for the users of a film or a play but also seek to become an artistic contribution in their own right, often enhancing user experience in a creative or imaginative way" (2021, p. 292). He argues that this new alternative approach can put the focus on the individual, which is necessary to contribute to experimental research focused on the quantitative aspect of MA research (2021, p. 293). In this sense, Romero-Fresco's suggestions should not be taken as a direct criticism of the quantitative methods used in MA research (e.g., eye-tracking or scoring-based surveys) since he acknowledges the contributions of such research, particularly in terms of producing guidelines based on empirical data rather than the mere

assumptions of experts. However, he emphasises that these guidelines are based on statistics that favour a homogeneous approach that considers the needs and expectations of the majority of participants. This homogeneity tends to ignore the existing heterogeneity by overlooking the needs of individuals or those who do not fit the general patterns. Through creativity, however, it is possible to find the "I" in MA practices that is missing in standard approaches (Romero-Fresco, 2021, p. 295).

Romero-Fresco (2021) does not directly share an existing practice of creative SDH but exemplifies creativity and accessibility through the use of captions by American artist Liza Sylvestre. As a person with hearing loss, Sylvestre grew up watching films without subtitles, and as part of her artistic project she adds subtitles to an audio-visual content that have no semantic relationship to the dialogue spoken by the actors, but rather her own commentary on the scenes. Based on this project, Romero-Fresco (2021) raises questions such as whether hearing and non-hearing people have the same experience of watching the same film, or whether hearing people can produce accessible products as people who do not share the same world with d/Deaf and hard of hearing audiences. Thus, he suggests that through CMA we can expand our horizons beyond the mere understanding and technique of accessibility practices towards engagement and art and focus our research on individuals rather than the majority (2021, p. 304). Finally, he urges educators to embrace CMA as a "complement to guideline-based teaching" that can offer students "a safe shelter where human input is not too likely to be replaced by automation in the near future" and encourage them to add an "artistic dimension that may be useful to diversify their portfolio" (2021, p. 305).

CMA was further investigated by Pablo Romero-Fresco and Frederic Chaume (2022) in another research project as well. The authors explored the notion

of creativity with a focus on AVT and MA to identify it from different perspectives and attempt to map existing creative practices. In particular, they shed light on how creativity can be embedded in the filmmaking process and how a future of participatory AVT can be achieved. According to the authors, the notion of creative AVT can be understood as the conglomerate of media localisation and adaptation practices that ensure linguistic and cultural access to audiovisual content by delivering artistic, imaginative and creative interventions (2022, p. 77). With regard to creative MA, the authors offer the following definition:

> Creative MA refers to those practices that not only attempt to provide access for the users of a film or a play but also seek to become an artistic contribution in their own right and to enhance user experience in a creative or imaginative way. (2022, p. 84)

They also emphasise that this notion suggests a broader struggle for issues such as diversity and inclusion, and it also serves as a policy tool to encourage the full participation of end-users in society and all arts-related activities (2022, p. 84). The authors argue that the rapid development of technology opens up a wealth of possibilities for creative subtitling practices, which can introduce a challenging new perspective on the relationship between the original and the translation, which is an issue much debated in TS. Moreover, the article interprets the creative MA as a reaction to the prevailing standards in guidelines, which are described as "impersonal and apolitical" by their very nature (Romero-Fresco & Chaume, 2022, p. 94). Lastly, despite its artistic, political and technological potential, the authors stress that the creative perspective on MA has not yet been integrated into training programmes and call for such integration.

The two articles on creative MA examined above offer a bold challenge to prevailing practices on MA within industry and academia. The notion of creativity can be interpreted as a rather subjective term which, by its very nature, resists a

single standard definition. For this reason, reflecting on previous research shared in this part of the present study, this call for creativity in MA, can be seen as an incentive for researchers to approach the topic from a rather unconventional perspective, not based on the empirical and objective methodology. However, balancing these creative approaches with empirical, data-based research can pave the way for the conglomeration of both artistic and scientific perspectives in creative MA research and practice. These perspectives could put the focus on the aesthetic aspect of the content by not merely focusing on the transfer of information.

Such integration is already suggested in Romero-Fresco and Brown's (2023) article, "Reconsidering the balance between standardisation and creativity in media accessibility: Notes on training." The authors emphasise that research based on empirical data has led to the standardisation of SDH criteria, which is reflected in guidelines. However, they argue that there is now a growing trend towards a collaborative production process between experts and end-users, and also towards alternative and creative practices. Driven by this shift, Romero-Fresco and Brown (2023) encourage the reconciliation of creativity and standardisation in MA education so that it can be supported by both empirical research data and an artistic perspective on accessibility. To this end, they refer to the Machine Translation Manifesto published by the European Association of Audiovisual Translators (AVTE), which emphasises the need to focus on quality rather than quantity, and on creative solutions rather than a one-size-fits-all approach in an increasingly automated translation industry (2023, p. 141). By agreeing with this call from AVT, they suggest that this approach can be used to promote creativity in MA training, or as they put it, the article "makes a case for rebalancing the role played by standardisation and creativity" in MA training (2023, p. 142). As a reason for such a

reconciliation, the authors express that standardisation and prescriptive norms may not fit with the new changes in MA.

Although creativity as a concept is approached in the present study from the perspective of SDH and, more generally, MA, it should be noted that studies on creativity in TS without a specific focus on SDH can also contribute theoretically to the present study. For example, Kirsten Malmkjaer (2020) in her *Translation and Creativity* draws attention to the relationship between aesthetics and translation. Malmkjaer (2020) stresses that one can adopt an aesthetic attitude towards "any kind of phenomenon, including a text to be translated, which can potentially promote creativity in the translation process" (pp. 69-70). Using examples from poetry translation, she explains what she means by the "aesthetic attitude" in translation. According to Malmkjaer (2020), the term "aesthetic attitude" denotes the translator's effort to pay close attention to creating an aesthetically equivalent translation of the source text, which would produce a similar artistic effect in the translation. Although Malmkjaer's (2020) focus may appear to be a more literary and verbal approach, the same can be said for the SDH in more ways than one. That is, the CMA does not present a set of "creative" strategies but rather puts the focus on all kinds of artistic interventions by MA professionals. In particular, the above shared remarks by Romero-Fresco and Chaume (2022), which position accessible content as works of art in their own right that can contribute to the user experience in creative and imaginative ways (p. 84), bear significant similarities to Malmkjaer's (2020) aesthetic stance on translation.

From the perspective of CMA, SDH can adopt an aesthetic attitude that would pave the way for creative solutions. However, as a space of multimodality, as discussed in detail in the literature review section of the present study, SDH may

require an additional intensive creative process due to the inherent nature of multimodality. Yetkiner and Şahin (2021) demonstrate the potential of multimodality but also draw attention to its challenges. They note that verbal, visual and auditory modes in texts of multimodal nature would pose additional challenges to translators and thus they invite them to consider non-linguistic elements and broaden their perspectives when approaching such a text (p. 368).

The present study acknowledges that the consideration of multiple sign systems in the production of both intralingual and interlingual SDH is already a challenge and that this challenge is multiplied by the necessity to offer creative solutions in line with the CMA approach. According to Malmkjaer (2020), creativity is "an attribute of individuals" and there are no fixed rules for creativity, so it is not possible to teach it (p. 7). While these characteristics may be partially true in the sense that creativity is about individuals and it is indeed impossible to list a set of instructions for creativity, pedagogical perspectives on MA and social-constructivist perspectives on education, and more specifically translation education as discussed below, can promote creativity as a general principle by refraining from prescriptive rules and focusing on the individuality of students.

Although it is not directly focused on SDH, in his "Towards a Pedagogy of Accessibility: The Need for Critical Learning Spaces in Accessibility Education and Training," Greco (2019) calls for a pedagogical approach towards MA. This call is in line with his suggestions regarding the shifts in lines of research in MA (see. Greco, 2018). In this article, Greco (2019) notes that discussion around accessibility training ignored the fundamental skills of an accessibility expert. He invites researchers to develop a theoretical consideration of accessibility education, with the aim of examining the exact competences of accessibility researchers and professionals, as

well as those who work on accessibility policies. As part of this invitation to embrace a theoretical perspective of the issue, he emphasises the importance of redesigning education in line with a user-centred, universalist and proactive approach.

Greco (2019) emphasises the necessity for opening critical learning spaces in which "students can acquire and hone a critical attitude required by the theoretical and social implications of accessibility" (p. 25). He asserts that to facilitate these critical spaces, accessibility should not be marginalised as a standalone element within a module or distributed across multiple modules in a diluted manner. Instead, it should be allocated a dedicated module (Greco, 2019, p. 33). In designing such a module, Greco (2019) puts forward a training model that encourages a shift in perspective. Rather than having students simply assume what end-users might need or expect, the model highlights the importance of considering the end-user's experience as a central part of creating accessible content. It also stresses the value of giving students the tools and skills they need to approach accessibility as a key part of the creative process. It extends beyond the focus on quantity and instead highlights the importance of the quality of the end-users' experience. As stressed by Greco (2019), "access is functional to the very possibility for each human to fully enjoy life" and serves as a crucial tool in exalting the dignity of humanity (p. 40).

Greco's (2019) call to open up critical spaces for students and Romero-Fresco's (2021) emphasis on CMA in general sound theoretically feasible and reasonable. Furthermore, Romero-Fresco and Brown's (2023) suggestions to incorporate CMA into MA training by ensuring a balance between standardisation and creativity may encourage trainers to adopt such a perspective in their teaching. However, these theoretical suggestions need to be complemented by a pedagogical approach. A pedagogical approach can put these theoretical ideas into practice in the

classroom by showing their potentials and limitations. In this sense, a social-constructivist approach can serve as a bridge between theory and practice.

But, to really make these ideas work in the classroom, we need more than just theory—we need a teaching approach that brings them to life and shows both their strengths and their limits. That's where a social-constructivist approach comes in: it can help connect the dots between theory and what actually happens in practice.

The social-constructivist approach first emerged with the introduction of Lev Vygotsky's (1980) sociocultural theory, which emphasized the importance of social interaction, language, and culture in the learning process. Vygotsky (1980) argued that knowledge is constructed through collaboration and guided support, where students develop independence within the space (Zone of Proximal Development - ZPD) between what they can do on their own and what they can achieve with support. In order to help students progress, he introduced the concept of "scaffolding," a method in which a more knowledgeable person (i.e. the teacher) provides temporary support to the student, and this support is gradually removed as the student gains confidence and mastery. Vygotsky's (1980) educational perspective has been widely adopted and refined by modern theories and has influenced student-centred approaches that promote interactive and collaborative learning environments.

For instance, in their "Social Constructivist Perspective on Learning Environments," Campbell McRobbie and Kenneth Tobin (1997) state that social constructivism emphasises the influence of both social and personal facets of the learning process (p. 194). They highlight that meaning is not something fixed but constructed. Individuals construct meaning when new information comes into interaction with their existing knowledge and when this knowledge is socially mediated through interaction with other individuals (1997, p. 194). In other words,

according to the social constructivist perspective, learning environments are social spaces where learning occurs as a result of the construction of meaning at the personal level and the interaction of this constructed meaning with others in that environment. As a practical reflection of this perspective, the active involvement of students in tasks by articulating their ideas and testing them with their peers, while listening to their ideas, is strongly encouraged (McRobbie & Tobin, 1997, p. 197). This collaboration requires that students are allowed to be autonomous and "have control over their own learning and construct meaning for their experiences in terms of what they know at the time of learning" (McRobbie & Tobin, 1997, p. 199).

In his “Exploring Social Constructivism: Theories and Practicalities,” Paul Adams (2006) presents the key principles of social constructivist pedagogy in a way that enables trainers to put its theoretical proposition into practice. Adams (2006) emphasises that in social constructivist pedagogy the focus should not be on student performance, but rather on the learning process in which students actively co-construct knowledge and meaning (p. 47). In this process, the teacher's attitude should be one of guidance rather than instruction, and he/she should seek to engage students in tasks and encourage their own assessment of these tasks "as an active process of uncovering and acknowledging shared understanding" (Adams, 2006, p. 47). This perspective, according to Hyslop-Margison and Strobel (2007), is in line with the constructivist interpretation of John Dewey in that the teacher is positioned as a facilitator who empowers and helps students to shape their learning process with autonomy by creating conditions that enable this (pp. 82-83). To this end, teachers should present students with complex problems that force them to find solutions to different situations (Hyslop-Margison & Strobel, 2007, p. 84).

What these statements have in common with the social constructivist approach is that they focus on interaction between students, learning as a process of autonomous self-discovery of students, and collaboration in the sense that students exchange ideas to find solutions to the tasks assigned to them. They also emphasize assessment not based on performance but on the learning process, and finally, the role of the trainer as a facilitator to create this learning environment. These ideas were applied to translation education by Donald Kiraly, who adopted social constructivism as a new pedagogical approach to translation education. Kiraly's (2003) approach departs significantly from a pedagogical perspective that places the trainers at the centre, giving them absolute authority to determine the syllabus, assign the texts to be translated and organise all in- and out-of-class activities (p. 27). Kiraly (2003) stresses that such a pedagogical approach is fundamentally based on a positivist epistemology that assumes a "universal reality that we can know objectively" and that this objective reality is transferred from the centre (the teacher) to the student. In this model, students' active participation in the course is seen as something "disruptive or even counterproductive" (Kiraly, 2003, p. 28). As a counter-perspective, by drawing on the principles of the constructivist theories of Vygotsky, Dewey and Bruffee, Kiraly (2003) proposes a learner-centred, collaborative, interactive and real-life scenario-based pedagogical approach, which he describes as based on a social constructivist epistemology rather than an objectivist one. In this approach, he sees the main objective as "empowerment" of students to become confident and responsible professionals in an increasingly demanding industry (2003, p. 31).

As part of this pedagogical approach towards translation education, Kiraly (2000) puts the emphasis on “the joint accomplishment of a task” through which

students have the opportunity to engage with the complexity of real-life scenarios (p. 36). The importance of allowing students to engage with their tasks in a dynamic and interactive process should, according to Kiraly (2000), be the way translation is taught to undergraduate students (p. 17). He explains that "learning to be a professional translator means learning to act like one" and this can only be achieved if students are given the opportunity to assume their own responsibilities and rights as professionals by experiencing and "collaboratively participating in the authentic activities of professional translators" (2003, p. 29). This, according to Kiraly (2003), would require the teacher to be removed from the position of source of knowledge and instead compel him/her to act as a consultant within the classroom (2003, p. 29). This approach would not only encourage student involvement throughout the learning process but also invite them to contribute to the design of the syllabus, curriculum, select parts of the assignments and self-evaluate their performance, which can enable students to be competent in what they do in a flexible way, "working individually and collaboratively" (Kiraly, 2003, p. 30).

However, the role of the trainer as a “consultant” should not be taken for granted, as trainers do not, and should not, intervene in the learning process. On the contrary, Kiraly (2000) refers to the method of scaffolding as "a flexible structure that emerges within the ZPD as a function of ongoing negotiations between teachers and learners," (p. 46) a method derived from Vygotsky (1980), as emphasised above. In his later work, Kiraly (2012) continues to emphasise the crucial importance of "scaffolding" in the learning process, as it helps to avoid “classroom chaos” (p. 92). For him, scaffolding serves as "assisted bootstrapping" and facilitates gradual re-empowerment of students in the classroom to take responsibility for their own learning process. In other words, Kiraly's suggestion of the teacher's role as

facilitator/consultant/guide requires occasional intervention to encourage students' independent learning when needed.

Furthermore, it should be noted that Kiraly does not merely make theoretical suggestions but also puts them into practice. He expresses that he has conducted several workshops with a collaborative approach so far with advanced translation students and found that both students and teachers agreed on the importance of "helping students develop translation-specific as well as non-translation-specific dispositions and capabilities" (2006, p. 71). All these attempts, according to Kiraly (2006), reveal the role of translation educators as actors who develop a variety of pedagogical opportunities, thereby "opening the door to [students] for [their] involvement in authentic projects as real-world laboratories" (p. 83).

Kiraly's approach to translation education is an invitation to the student to emerge as an individual who can responsibly reshape his or her own learning process through the power of active participation and collaborative action, rather than as an individual who passively listens to what is transmitted from a source and accepts it as absolute truth. This perspective is in line with Yong Zhong's call for a new mindset in translation education. Zhong (2002) points to the pitfalls of isolated learning, education as knowledge transfer, and "intellectually oppressive teaching structure" as obstacles to creative learning that may have caused students to lose interest in translation courses (p. 577). He claims that instead of helping students to develop their creative potential, teachers train students to be "mindless, unthinking and mechanical language facilitators" (2002, p. 577). As the originator of this mechanical and uncreative style of translation education, Zhong (2002) draws attention to the prevailing conceptions of "objectivity, impartiality, neutrality, faithfulness and loyalty" which, in his view, are in fact "synonymous to each other and to accuracy."

He emphasises that a discourse of education based on these fixed conceptions "reduces the teaching to a mechanical process of indoctrinating standards and techniques" which potentially does not involve any critical thinking (2002, p. 576). Zhong (2002) describes this as "an accurate impasse" that many translation educators experience (p. 578).

By rejecting such a discourse, he embraces a new discourse of education that puts the emphasis back on stimulating active thinking, autonomous decision making and interactive learning (2002, p. 579). According to Zhong (2002), translation education should prioritise the development of sound social, cultural and political awareness and "create a student-centred, interactive learning environment in which teachers play the role of a facilitator of learning" where students can "share and exchange different perspectives on a competitive but equal footing" (p. 580). With this understanding, translation education can encourage students to use their intellectual abilities and become translators who can think, rather than language mediators who are blind followers in their profession (Zhong, 2002, pp. 579-580). Zhong adds to Kiraly's pedagogical approach the perspective of creativity, the importance of feeding students' intellect and raising their social and political awareness. Apart from that, Kiraly's and Zhong's perspectives are significantly related in the sense that both prioritise student-centred translation education that empowers students.

Romero-Fresco's, Greco's, Kiraly's and Zhong's conceptions are reflected in the present study's main research problem which investigates whether and how we can train T&I students to produce interlingual and intralingual SDH that would both meet the needs of d/Deaf and hard of hearing people and improve their viewing experience, while at the same time raising awareness of MA among students. It

proposes a training model that uses an alternative, audience-tailored guideline that enhances standard SDH guidelines by encouraging creative interventions by students.

In line with a new line of research that is universalist, user-centred and proactive, the present study is primarily reception-oriented one, in which the views of d/Deaf and hard of hearing participants are received both before and after the proposed training. Romero-Fresco's (2021) CMA approach played a crucial role in the implementation of the training. His emphasis on creative MA solutions to improve the end-user experience, and his criticism of standards that produce homogeneous results and fail to meet the needs of those who do not fit into this "homogeneous" category, encouraged the present study to adopt a similar non-standardised approach to training. Romero-Fresco's (2021) emphasis on how CMA can provide a safe haven for human input in the face of increasing automation resonated strongly with the present study as well. Still, it should be noted that Romero-Fresco (2021) does not suggest replacing MA training entirely with CMA but rather sees it as complementary to guideline-based training. Thus, as a reconciliation between standardisation and CMA, as suggested by Romero-Fresco and Brown (2023), the training proposed by the present study is conducted with an audience-tailored guideline that stimulates creativity and flexibility.

In addition, Greco's (2019) emphasis that students should not assume the needs of end-users but rather prioritise their experience as a crucial element in the production of accessible content, is reflected in the use of surveys in the present study aimed at directly gathering the needs of the group, and informing students of these needs during the training serves precisely this call. Also, Greco's (2019) call to open a critical learning space where students are equipped with skills to manage

accessibility as an integral part of the creative process is applied in the way the training is conducted in a collaborative manner, where groups present their tasks to their peers for brainstorming and work together on the final content. In addition, even though they do not serve as a definitive assessment tool, surveys administered to students, in addition to end-user surveys, can potentially reveal whether their MA awareness has changed positively during the training process.

With these perspectives in mind, in the present study, the implementation of the training was informed by Kiraly's (2000, 2003) social-constructivist pedagogical approach to translation education and Zhong's (2002) emphasis on raising students to be thinking translators who are socially and politically aware via a student-centred translation education. These approaches were utilised to operationalise Romero-Fresco's and Greco's conceptualisations of CMA and MA training within a classroom setting. The rationale for integrating these two strands of research was that they share an essentially similar perspective on translation education, such as being student-centred, emphasising creativity and the importance of educating socially and politically aware students, albeit with different foci: one on translation education in general and the other on CMA research and MA education in particular. With these analogous approaches in mind, the training methodology incorporated the following principles throughout the training process:

i. The trainer, i.e. the author of the present study, acted as a facilitator (see. scaffolding) rather than a source of knowledge.
ii. The students worked in groups collaboratively and shared their creative ideas with their peers and received feedback to further improve their task together.
iii. The students had complete autonomy throughout the training process. They were in no way dictated to by the trainer. They were only provided with a

guideline tailored to the target group and the feedback from the end-users obtained through End-user Survey 1. Both sources served as a reference and general framework.

iv. The task given to the students was a real-life scenario where the students acted as professional SDH producers with a real end-user group of d/Deaf and hard of hearing people who tested both intralingual and interlingual SDH produced by the students.

v. The main aim of the training was to see the possibility of integrating CMA in a way that would both improve the viewing experience of the end-users and raise general awareness of MA among the students. In other words, it aimed to empower both the students and the end-users at the same time.

The subsequent details pertaining to the training are elucidated in the methodology section of the present study via a syllabus that reveals weekly assignments for the training. The practical details of the training process are shared in the discussion section, supported by examples from student assignments and a presentation of the challenges and opportunities encountered during the process. These two further sections on the training will demonstrate how the theoretical framework of the present study is applied in practice.

CHAPTER 3

SDH GUIDELINES

SDH Guidelines aim to provide a set of standards for the production of subtitles distributed for multiple platforms such as television, cinemas, streaming services, etc. These standards are subject to change depending on various factors such as the purpose of the subtitles, the platform they are displayed on, and their target audience. Especially in the last ten to fifteen years, most of the SDH practices have been developed based on empirical data gathered through the collaboration between academia and industry. However, in attempting to develop standard SDH guidelines to ensure harmonisation within and/or between different countries, several challenges have arisen. It has been observed that even within a given country, let alone internationally, the standards do not adequately address the needs and expectations of the d/Deaf and hard of hearing community, as the community itself is not a homogeneous entity, but rather a mixture of individuals with different characteristics such as education, reading comprehension, age level, ect.

Academic research on SDH confirms the challenges of standardisation by highlighting the multiple aspects of the issue. Remael (2007) emphasises that countries have their own preferences and conventions when it comes to SDH for a number of reasons, such as political organisation within the Deaf and hard of hearing community, national legislation surrounding SDH, and different demographics. Similarly, Neves (2008a) questions whether "standardisation" of SDH practices is relevant or useful in addressing the diverse needs of end-users. In addition, Romero-Fresco (2016) shares that although an extensive collaborative project with multiple stakeholders in different countries, Digital TV for All, has produced unexpected

results in the sense that the initial objective of the project was to ensure harmonisation between SDH guidelines and practices within Europe, it has become clear that the heterogeneity of conventions in different countries poses massive challenges to the standardisation attempt. In other words, standardised guidelines can be seen as the birthchild of statistics that meet the needs of a majority in a controversial way while ignoring those who do not fit into that majority.

This part of the present study examines the existing and widely used SDH guidelines within the industry. To this end, four widely used SDH guidelines (SEBEDER, BBC, Netflix, DCMP) are analysed and discussed along with their strengths and limitations. Then, after a thorough analysis, an audience-tailored guideline is proposed in the last part of the chapter by improving upon the analysed SDH guidelines.

3.1 SEBEDER's project for research and improvement of Turkish intralingual SDH practises

"Türkçe Dil İçi Ayrıntılı Altyazı Çevirisi Uygulamalarını Araştırma ve İyileştirme Projesi" [Project for Research and Improvement of Turkish Intralingual SDH Practises] by SEBEDER aims to improve the practices of intralingual SDH and prepare an up-to-date intralingual SDH guideline that would standardise SEBEDER's intralingual SDH practices and meet the needs of d/Deaf and hard of hearing (2019, p. 2). The project endeavours to "build a professional bridge between scholars, intralingual and interlingual SDH translators, and sign language interpreters" (2019, p. 2) and develop a guideline (hereafter SEBEDER guideline) that would ensure a certain level of standardisation. In the following section, a

detailed examination of the guideline is provided to highlight its aspects open to improvement.

In the introduction to the guideline, SEBEDER briefly lists the main principles of the guideline briefly before moving on to other detailed parts. These main principles reveal SEBEDER's general approach to SDH and thus their guideline. The first main principle centres around the necessity of subtitling "everything" on a scene: "All dialogue and sound are converted into subtitles in compliance with TDK rules by using a clear and understandable technique that is accessible to the d/Deaf and hard of hearing[3]" (2019, p. 12).

At first, this rule may seem reasonable in terms of inviting SDH professionals to pay attention to everything in the content they are subtitling. Still, even though it is important to note that subtitles are designed to convey information, they do not and should not aim to convey all dialogue and sound. As previously stated, converting every piece of dialogue into a subtitle often results in an overabundance of information, which can be overwhelming for the viewers. It is crucial to recognise that an SDH professional may need to significantly reduce dialogue to convey non-verbal signifiers in a scene and make it more engaging for the audience. Similarly, the following rule calls for the inclusion of "any type of sound" within time limits: "Information and any type of sound other than dialogues are added to the subtitles within the timecode limits in line with the rules" (2019, p. 12)[4].

This rule may potentially confine non-dialogue items to timecodes and thus prevent the creative intervention of SDH professionals to a significant degree. It

[3] Turkish translation: "Film, video ve görsellerdeki her türlü diyalog ve ses Sağır ve işitme engellilerin erişimine uygun olarak anlaşılır bir teknikle TDK kuralları çerçevesinde altyazıya çevrilmektedir." All translations from English into Turkish belong to the author of this thesis unless stated otherwise.

[4] Turkish translation: "Diyaloglar harici her türlü ses ile iletilen bilgi kurallar çerçevesinde sesin olduğu timecode içine yazılarak altyazıya ilave edilir"

should be noted that the violation or manipulation of timecodes can allow sound elements to resonate in the background without compromising the transfer of meaning and enhance the desired effect during a scene. Another main principle stresses the objective of SDH in a rather problematic manner: "Our association does not impose any restrictions or censorship since SDH subtitles serve the purpose of providing information and education to the d/Deaf and hard of hearing"[5] (2019, p. 12).

In this rule, SDH is regarded as merely informative and educational. However, an important aspect of SDH is the possibility that it may facilitate access to products of entertainment for d/Deaf and hard of hearing people. One of the objectives of the present study is to make audio-visual content more stimulating and creative for end-users by potentially creating an equivalent effect of enjoyment.

After outlining the main principles, the guidelines detail the more specific rules of SDH. One of the first rules identified in the guideline is related to character and line limits. The guideline stipulates that: "Each line must have a maximum of 42 characters (including spaces). However, during the quality check step, additional punctuation may be required. Thus, it is more appropriate to set a 39–40-character limit on the software[6]" (2019, p. 13).

It should be noted that the 42 characters per line rule is an industry standard that is also set out in other SDH guidelines. However, in order to provide a more stimulating experience for the audience, it can, and should, be breached depending on the requirements of the scene. Without considering a specific scene, such a strict

[5]Turkish original: "Ayrıntılı altyazı Sağırlar ve işitme engelliler için bilgi ve eğitim amacı taşıdığından konuşmalara sansür uygulanmadığı sürece, derneğimiz tarafından kısıtlama ve sansür uygulanmaz".
[6] Turkish original: "Her satır en fazla -boşluk dahil- 42 karakter olmalıdır. Ne var ki kontrol sırasında ilave edilmesi muhtemel noktalama işaretleri dikkate alınarak program üstünde ayarlamada 39-40 karakter olarak ayarlama yapılması daha uygundur."

limitation would reduce the crucial role of context in SDH and reduce it to a mere transcription of words. The guidelines' proposal to set this limit at 39-40 characters per line would be extremely challenging, even for regular intralingual and interlingual subtitles. Considering the multi-semiotic nature of SDH, it would be almost impossible to describe sound effects and include dialogue on the screen at the same time. In a similar manner, the following rule imposes another time related restriction for the display of SDH on the screen: "Regardless of the number of characters, the text should remain on the screen for at least 1 second and at most 7 seconds. One should ensure that the text can be read by the hearing impaired in a reasonable time"[7] (2019, p. 14).

As an objection to this rule, it should be taken into consideration that SDH professionals may need to use flashing subtitles, which would take more than seven seconds or less than one second. It may also be necessary to break the seven-second rule to create a lingering effect on a scene to allow it to be better interpreted or understood by the end-users. Furthermore, the reading habits of the target audience may differ significantly. Accordingly, the rule that the text can be read in a "reasonable time" may differ as well. Thus, it may be necessary to break the "minimum one second and maximum seven seconds" rule depending on the audience. The following rule puts the emphasis on the use of standard punctuation in SDH: "When translating from oral to written, units of meaning should be translated without separating them from each other. Unnecessary commas should be avoided as far as possible and sentences should end with a full stop…"[8] (2019, p. 15).

[7] Turkish translation: "Karakter sayısı ne olursa olsun yazı, ekranda en az 1 saniye, en fazla 7 saniye kalmalıdır. Yazıların işitme engelliler tarafından makul sürede okunacağını varsayılmalıdır".
[8] Turkish original: "Sözlü dilden yazılı dile çevirilerde, anlam birimleri bölünmeden çevrilir. Mümkün olduğunca gereksiz virgülden kaçınılıp nokta koyarak bitirilir".

Although this rule may sound reasonable in the context of regular subtitles, in the case of SDH, strict punctuation rules may stifle creative intervention. Punctuation can be used more effectively for intonation and mood changes. Multiple exclamation marks and lots of commas can be used to give the impression that a character is speaking extremely fast, or with pauses to emphasise each word. Also, relying solely on punctuation can limit an SDH professional's potential for creativity and reader engagement. A variety of techniques can be used by SDH professionals to convey emotion and emphasis. For example, alternative methods such as emoticons, colour coding, strategic capitalisation, variations in subtitle placement and even font size adjustments can offer a wider range of emphasis options. The following rule gives a very specific instruction about the sentence structure in SDH: "Writing the subject in the sentence clearly facilitates comprehension. Since Turkish is an agglutinative language, a clear use of subject in the sentence makes access easier. For this reason, the subject should not be omitted…"[9] (2019, p. 15).

It should be noted that the assertion in this rule that the omission of the subject in the sentence makes it difficult for d/Deaf and hard of hearing people to understand the meaning is far from being evidence based. In terms of comprehension, there is no scientific reason to believe that d/Deaf people would have difficulty understanding the sentence. On the contrary, from a pragmatic point of view, omitting subjects can potentially give SDH professionals more space and therefore flexibility to add non-dialogue elements. The fact that Turkish is an agglutinative language makes it possible to infer the subject even though it is not visible in the sentence. For example, "onlar" and "bizler" can be extremely long and unnecessary as suffixes

[9] Turkish original: "Cümle içindeki öznenin açıkça yazılması Sağır bireyin anlama odaklı okumasını kolaylaştırır. Türkçe'nin sondan eklemeli bir dil olması sebebiyle […] cümle içindeki öznenin görülmesi erişimi daha kolay hale getirmektedir […] özne çıkartılmamalıdır".

already indicate the meaning. However, it should be noted that SEBEDER also recommends improving the clarity of sentences by paraphrasing, rather than insisting on one hundred percent fidelity to the sound. The following rule stipulates the course of action if a non-standard Turkish dialect is spoken in a content: "Characters who speak proper Turkish should be asterisked at the beginning of the line in the scenes where they start to speak in dialect, and the rest of their speech should be written according to TDK rules"[10] (2019, p.16).

While this may seem like a reasonable assumption, it is important to consider how d/Deaf or hard of hearing people can accurately determine the extent to which a dialect differs from standard language when the dialect is not explicitly written on the screen. It is important to note that dialects often have minimal differences in the use and pronunciation of words and phrases compared to the standard use of language. Thus, the differences between standard use and dialect can be subtle. Discerning these subtleties is crucial for effective communication. Furthermore, providing dialect information through asterisks at the beginning can be challenging for d/Deaf and hard of hearing people, especially in films or TV series with multiple characters speaking different dialects, as it would require deaf viewers to memorise each dialect for each character in the plot. The rule below gives very specific instructions on what to do when there are multiple conversations in a scene: "If the multiple conversations are not intelligible […] identifiers such as 'overlapping conversations' or 'unintelligible conversations' should be added. If some parts of

[10] Turkish translation: "Düzgün Türkçe konuşan karakterler, dizi, film veya program icabı şiveli konuşmaya başladığı sahnelerde satır başına yıldız konulup geri kalan konuşması TDK kurallarına göre yazılmalıdır".

these conversations/dialogues are plot-pertinent, they should be explicitly transcribed"[11] (2019, p. 24).

While this rule may sound relatively reasonable, it should be applied in context. For example, in some cases it may be more effective to include all the spoken dialogue in a scene to create a chaotic effect, rather than summarising and adding identifiers which may reduce the impact. With this in mind, adding a speaker icon or several human emoticons to convey the message might be considered. It is important to note that while hearing audiences may experience chaotic and overlapping conversational effects, the use of simple identifiers in parentheses can significantly reduce this effect for d/Deaf and hard of hearing viewers. Finally, the following rule focuses on the use of SDH when describing musical elements in a content: "For music on the scene, identifiers such as (Music), (Emotional music), (Tense music) should be used. These identifiers should remain on the screen min. 2 and max. 4 minutes"[12] (2019, p. 25).

The rule in the SEBEDER guideline regarding the use of music descriptors can be interpreted as too simplistic and lacking creativity. Given that music is undoubtedly an important aspect of cinematography, it is important to find innovative ways to describe it in SDH. One possible approach is to describe the music by highlighting the instruments used in the composition of that music, such as adding an identifier to indicate the entry of drums, the crescendo of strings, and the repetition of certain notes. In addition, icons, emoticons, colours and adjusting font size can be used to describe the level and tone of the music.

[11] Turkish translation: "Eğer çoklu konuşmalar anlaşılır biçimde değilse […] (Üst üste konuşmalar) ya da (Anlaşılmayan konuşmalar) yazılmalıdır. Bu konuşmaların içinde konu bütünlüğüyle ilgili önem taşıyan anlaşılan cümleler varsa bu cümleler muhakkak yazılmalıdır".
[12] Turkish translation: "[Müzik teması (Müzik), (Duygusal müzik), (Gerilim müziği), (Hareketli müzik) biçiminde yazılır... Müzik altyazısının ekranda kalma süresi en az 2, en fazla 4 saniye olmalıdır".

3.2 BBC subtitle guidelines

The subtitling guideline published by the BBC on its official website (hereafter referred to as the BBC guideline) provide up-to-date instructions for those who produce closed captions (CC) for the BBC, content producers, technical staff who develop subtitling software, and anyone who takes on the role of subtitle quality checker. The introduction to the guideline includes a small section on how to use the guideline efficiently, as well as the latest changes to the document, such as the increase in word rate from 130-150 wpm to 160-180 wpm, the use of numbers, capitalisation rules, the wording for reaction shots, etc. The introduction states that the guideline is open for contributions, and communication via the GitHub project page or by email and those who wish to contribute to the guideline are encouraged to do so. This openness may indicate that the guideline is not a prescriptive manual to be followed closely by SDH professionals, an attitude that is evident throughout the guideline. According to the BBC guidelines, "good subtitling is an art that requires the negotiation of conflicting demands" and although fidelity to the original sound should be the goal, the SDH professional should strike a balance by taking into account various factors such as "the action on the screen, the speed of the speech or editing, and the visual content" (BBC Subtitle Guidelines, 2024, Presentation section, para. 1).

First and foremost, with regard to the speed of speech, which can be the most challenging limitation in subtitling, especially in SDH, the guideline invites professionals to consider the following common questions and to make a decision, taking the initiative and breaking the rules if necessary: “Can viewers read the subtitles at the rate of speech?”, “Should you edit out some words to allow more time?”, “Can subtitles carry over to the next scene so they ‘catch up’ with the

speaker?", "Should you use cumulative subtitles to convey the rhythm of speech (for example, if rapping)?", "If there are shot changes within the sequence, should the subtitles be synchronised with those?", "Should you use one, two or three lines of subtitles?", and "Should you change the position of the subtitle to avoid obscuring important visual information or to indicate the speaker?" (BBC Subtitle Guidelines, 2024). Furthermore, the guide emphasises that it may not be possible to anticipate and produce a productive solution to every challenge that may arise during subtitling. It therefore emphasises that it is not feasible to "provide a set of hard rules that cover all situations. "Rather, the aim is to help SDH professionals by offering "some guidelines and practical advice" (BBC Subtitle Guidelines, 2024, Presentation section, para. 2).

These questions and statements reveal the approach of the guideline to SDH in several ways. Some questions invite SDH professionals to think about possible solutions rather than follow a particular rule in the guidance, which indicates the flexibility of the guideline on certain aspects. The difference between the "editing out" option in the second question deserves attention compared to Netflix's approach, which requires complete fidelity to the audio and prevents paraphrasing, as will be explained in the following sections. Furthermore, particularly noteworthy is the suggestion to edit certain sentences to allow more time, which is crucial in SDH. In addition, the Netflix guideline and SEBEDER prohibit the use of more than two lines or cumulative subtitles to match the rhythm of speech. Also, the BBC guideline allows the position of subtitles on the screen to be adjusted to give the viewer more visual space. The BBC's approach should also be interpreted as a progressive approach towards SDH.

In addition, some of the more detailed instructions in the guideline should be carefully evaluated. The statement, "You should never deprive the viewer of words/sounds when there is time to include them and where there is no conflict with the visual information." (BBC Subtitle Guidelines, 2024, Editing text section, para. 1) seems at first to be a rule that is found in almost all industry guidelines. However, the subtle difference lies in the emphasis on the call to avoid depriving the audience of both "words" and "sounds." In standard guidelines, the focus is almost always on the inclusion of "words" rather than sounds, but the attention to the preservation of "sound" in the guideline may potentially indicate that in the multi-semiotic nature of SDH, the guideline does not see a strict hierarchy between multiple sign systems, i.e. verbal over visual.

Furthermore, the rule: "Your editing should be faithful to the speaker's style of speech, taking into account register, nationality, period, etc. This will affect your choice of vocabulary." (BBC Subtitle Guidelines, 2024, Preserve the style section, para 1) shows the importance that the guideline attaches to characterisation in SDH. This rule makes it clear that intralingual SDH is not seen as a mere transcription, but rather as a form of rewriting. The emphasis on vocabulary choice reinforces this interpretation. In addition, the rule: "Similarly, conversational phrases such as “you know,” “well,” “actually,” often “add flavour to the text." ((BBC Subtitle Guidelines, 2024, Prefer verbatim, para 4) shows that the guideline also considers the aesthetic experience of the d/Deaf and hard of hearing audience, as demonstrated by the use of the phrase "add flavour to the text." Conversational phrases make lines sound more natural and human in many ways, freeing subtitles from written statements to lines that represent the richness of verbal statements. This rule also suggests that the focus should be on the phrasing of the lines, not just the delivery of critical information.

Additionally, the rules: “Do not edit out strong language unless it is absolutely impossible to edit elsewhere in the sentence - deaf or hard of hearing viewers find this extremely irritating and condescending.” (BBC Subtitle Guidelines, 2024, Strong language section, para 1) and “A subtitle (or an explanatory label) should always be on the screen if someone’s lips are moving. If a speaker speaks very slowly, then the subtitles will have to be slow too - even if this means breaking the timing conventions.” (BBC Subtitle Guideline, 2024, Display subtitles section) may potentially reveal that the BBC guideline takes into consideration the psychology of the d/Deaf and hard of hearing individuals. Indeed, removing strong language can strip the individuality of the d/Deaf community and reduce them to people in need of protection. It is important to remember that this guideline is based on past and present practices. Therefore, it can be concluded that the act of censoring strong language is a common practice in SDH guidelines. Furthermore, the significant focus on maintaining lip-sync accuracy at the expense of adhering to timing conventions can be considered as a departure from other SDH guidelines in the industry since many put the emphasis on following the timing closely.

In terms of line limits, the guideline states that "a maximum subtitle length of two lines is recommended. Three lines may be used if you are confident that no important picture information will be obscured." (BBC Subtitle Guidelines, 2024, Number of lines section, para. 3). It should be noted that many industry guidelines strictly prohibit the use of three-line rules. Netflix, in particular, strongly discourages the use of more than two lines. Realistically, however, the use of more than two lines can help SDH professionals add non-dialogue elements more effectively, both to convey plot-related messages in the content and to enhance audience enjoyment. The

following rule for identifying characters in a scene can also be seen as a departure from existing SDH industry guidelines:

> Use colours to distinguish speakers from each other. This is the preferred method for identifying speakers. Where the speech for two or more speakers of different colours is combined in one subtitle, their speech runs on: i.e. you do not start a new line for each new speaker. Colours that can be used: White, yellow, cyan, green on the black background! (BBC Subtitle Guidelines, 2024, Use colours section)

Using colours to identify speakers can create space for SDH professionals to describe other sound effects in a more flexible manner. In addition, colours can be used to evoke emotions in the audience. SDH professionals can use various techniques to indicate different moods, such as anger, happiness, frustration, sadness, and excitement. Changing the colour can signal a transition from one emotion to another. Another relatively non-standard rule regarding SDH production, the following statement from the guideline shows the potential use of arrow symbols in SDH:

> If the out-of-shot speaker is on the left or right, type a left or right arrow (<or>) next to their speech and place the speech to the appropriate side. Left arrows go immediately before the speech, followed by one space: right arrows immediately after the speech, preceded by one space. (BBC Subtitle Guideline, 2024, Use arrows section, para. 2)

As shown here, through the use of arrows, the location of the speaker or the source of the sound effect can be described in a non-verbal manner. Although when used alone, it may fail to produce the intended result. However, it can be improved by using colours and possibly emoticons to enhance the effect. Also, it is worth noting that using colours, emoticons, and pointers instead of character names in brackets can add more flavour to the text and improve timing.

Finally, Figure 2 shows a number of suggestions in the guide on how to place SDH effectively on the screen:

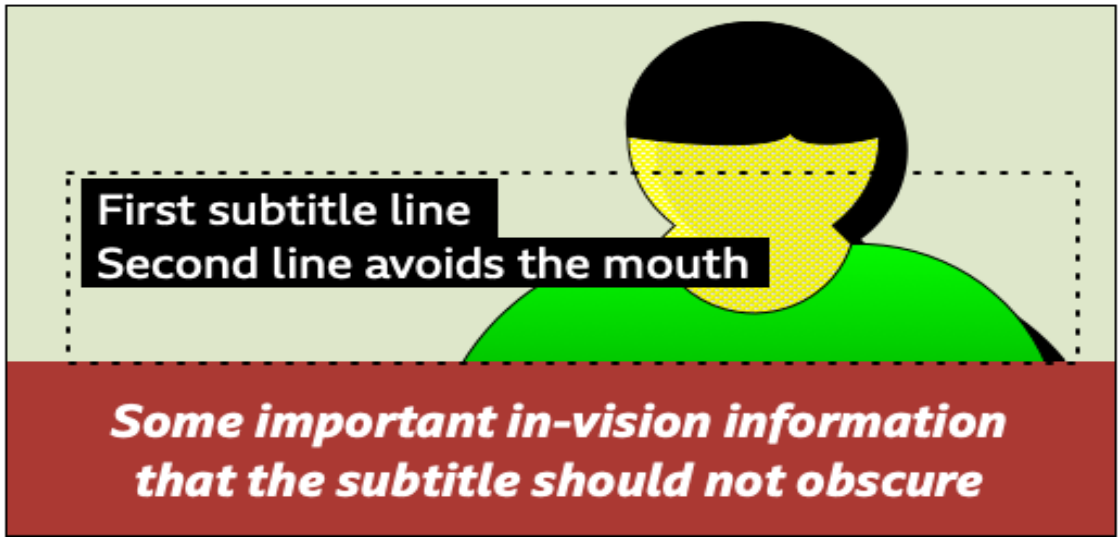

Figure 2. Proper SDH placement on the screen as suggested by the BBC guideline
Source: BBC Subtitle Guidelines, 2024, Authoring font size section, para. 6.

The guideline provides several examples of appropriate subtitle placement on the screen based on font size. The use of pointers, colours and font size can provide SDH professionals with more flexible options to enhance the viewing experience for the audience. When it comes to sound effects, it is worth noting that the BBC places more emphasis on subtitling sound effects than the Netflix and SEBEDER guidelines. This difference is because sound effects not only help the viewer understand what is happening on screen, but also contribute to the overall atmosphere and tone, as stated explicitly in the guideline.

3.3 Netflix Turkish timed text style guide

Netflix Turkish Timed Text Style Guide (hereafter the Netflix guideline) is intended for use by translators, quality checkers, and technical staff who prepare content for Netflix. Netflix publishes style guides in multiple languages depending on the country of distribution. These style guides must be strictly adhered to; otherwise, vendors providing audio-visual translations to the company, or Netflix itself, have

the right to reject the work, which may result in the termination of contracts. Netflix is one of the largest streaming platforms in the world and has undoubtedly helped to raise the profile of subtitling, dubbing and translation in general. The company claims to offer comprehensive accessibility services for d/Deaf and hard of hearing people. It has a dedicated accessibility page that outlines the features that can be used in the platform.

However, a closer look reveals that Netflix's accessibility services can be seen as an act of tokenism, in many cases failing to meet even basic standards. The amount of audio-visual content using SDH is extremely limited. Interlingual SDH is almost non-existent, while only popular Turkish TV series/movies offer intralingual SDH, with a number of problematic aspects. All of this content is prepared based on a one-paragraph SDH instruction section in the Netflix Turkish Timed Text Style Guide, which contains 25 separate sections (Netflix Turkish Timed Text Style Guide, 2024, SDH section). As demonstrated in the revision history at the conclusion of the Netflix guideline, the list of updates made to the guideline is available for reference. The most recent update to the SDH section was made three years ago, and the update log shows that the most recent update was undertaken in 2022. An examination of the details of this update reveals that it merely concerned the wording of specific lines, such as "reading speed limits," which was updated to "up to...". Given the limited scope of the SDH section in the guideline, the analysis of the rules stipulated in the guideline below is necessarily constrained as well. The first rule indicated in the SDH section is as follows: If content has been dubbed into Turkish, please refer to the dubbing script or dubbed audio as the basis for the SDH file and ensure that the two match as much as reading speed and timings allow (Netflix Turkish Timed Text Style Guide, 2024, SDH section, para. 3).

This rule has multiple problematic aspects which could result in an utterly dysfunctional SDH as used in the content. Despite the fact that the SDH section does not explicitly refer to any use of interlingual SDH, this rule may be interpreted as an acknowledgment of possible uses of interlingual SDH in the content due to its call to follow the dubbing script closely. However, this may lead to some serious challenges for SDH professionals. Firstly, using the dubbing script as the primary reference source during the production of SDH may introduce challenges intrinsic to dubbing itself, such as lip-syncing and the compromising of dialogue to align with the timecode. Moreover, this approach would effectively reduce interlingual SDH to a mere transcription of dubbed Turkish audio by deviating from its distinct mode of subtitling with its own set of conventions. Furthermore, interlingual SDH must consider the original audio/text since it can significantly influence the choices of SDH professionals in terms of omissions, additions and other translation strategies to be applied to the text.

Additionally, the following rules of, "All audible lines should be described. If the audio interferes with dialogue, give precedence to most plot-pertinent content." and "Plot pertinent sound effects should always be included unless inferred by the visuals." pose further problems for SDH professionals (Netflix Turkish Timed Text Style Guide, 2024, SDH section, para. 18). Considering the space constraints on the screen and timing related restrictions, it is almost impossible to describe "all audible lines." It places the sign system of verbal communication in a hierarchical position above that of visual and audio elements, which completely violates the multi-semiotic nature of SDH. However, SDH professionals can, and should, condense dialogue by both preserving meaning and opening up space for non-dialogue elements such as sound effects and music. With regard to the latter rule in the

guideline, the matter of whether a plot is pertinent or not is often subject to interpretation. In terms of filmography, sound effects can sometimes be more relevant to the plot than dialogue, depending on the genre or the effect the director wants to have on the audience.

The rule "Do not simplify or water down the original dialogue." (Netflix Turkish Timed Text Style Guide, 2024, SDH section, para. 2) can also lead to similar problems. Reading speed, character limits, etc. are also significant challenges for regular subtitles. Given the need to include dialogue, sound effects, character identification and more in SDH, it would be virtually impossible for SDH professionals not to "simplify" or "water down" the dialogue. Translation, and subtitling in particular, requires a high degree of compromise, as the translator must take into account the varying needs of the target audience depending on the context. Thus, Netflix's insistence on remaining almost entirely faithful to the audio is contrary to the very nature of translation and subtitling.

In addition, the rules: "Use generic ID to indicate and describe ambient music," and "All sound effects/identifiers should be in lowercase," (Netflix Turkish Timed Text Style Guide, 2024, SDH Section, para. 17) present challenges for the inclusion of sound-related elements in content. As noted in the critique of SEBEDER's guideline, the use of generic identifiers for music reduces the effect to a mere description with a single word. However, when watching films, audiences without hearing impairments can enjoy the fact that music complements and intensifies the emotions in the film. Therefore, taking this into account, alternative methods of describing music can be used, such as using colours to indicate climaxes, emoticons for different instruments, flashing and slowly disappearing subtitles, etc.

These methods can be helpful in creating an equivalent effect for the d/Deaf and hard of hearing audience.

Finally, the rule for foreign dialogue: “If foreign dialogue is not meant to be understood, use [speaking language], for example [İspanyolca konuşur]” (Netflix Turkish Timed Text Style Guide, 2024, SDH section, para. 25), has its own problematic aspects. As mentioned above, the omission of transcriptions of foreign dialogue can be seen as condescending to the audience with hearing impairments. According to this rule, while the non-hearing audience can experience the foreign-ness of the dialogue, those who are d/Deaf or hard of hearing are only informed that a foreign language is being spoken. This raises the question of why hearing-impaired audiences are not given the opportunity to experience the foreign-ness of a language heard on screen. In terms of cinematography, foreign language dialogue can increase curiosity and, depending on the genre, add mystery to the film. Furthermore, if the non-hearing audience can understand the foreign language dialogue, it would be presumptuous to assume that d/Deaf and hard of hearing people do not have a good command of the language spoken in the film.

3.4 Captioning guidelines for the DCMP

First published in 1994, Captioning Guidelines for the DCMP (hereafter DCMP guideline) are used for entertainment and accessible educational audio-visual materials for d/Deaf and hard of hearing people. The DCMP guideline is regularly updated on the basis of audience feedback, captioning research and industry reports. The website notes that the examples provided in the guideline may not be applicable to every situation that professionals may encounter. The DCMP guideline sets out its quality criteria in detail. It states that subtitles should be accurate, consistent, clear,

legible and equal. Clarity and equality may need further explanation here. By clarity, the guideline defines a complete representation of the audio in the form of text, including the identification of speakers and other non-dialogue elements. Equality refers to the need to preserve the meaning and intent of the audiovisual material without omission on the basis of the principle of equal access. Some critical rules indicated in the guideline are examined in close detail below.

The rule about the use of different characters: "Mixed case is preferred for readability. However, capital letters are used for screaming or shouting" (DCMP, 2024, Case section) deserves praise for its rather flexible approach. Its call for the use of upper case to indicate screaming and/or shouting in a scene and its preference for mixed case is very different from that of SEBEDER, Netflix and the BBC. While SEBEDER and Netflix do not recommend the use of capitalisation for emphasis, the BBC guideline is relatively open to such practices, albeit in the form of colouring and varying font sizes. The DCMP guideline's encouragement of the use of mixed case may pave the way for a more accurate description of emotion in content. In addition, the rule "The use of a translucent box is preferred so that the text will be clearer, especially on light backgrounds" (DCMP, 2024, Font section, para. 2) places emphasis on the use of different methods to improve readability for the end-users. By way of comparison, the BBC guideline recommends a black background with alternating colour subtitles. The Netflix guideline, on the other hand, has no such background option. The use of backgrounds can make the borders of subtitles more visible and make them more prominent in some scenes. However, it can also limit the options available outside the translucent/black boxes, which can make it difficult to position subtitles creatively on the screen to achieve the desired effect.

The following rule on the line limits has potential to show the DCMP guideline's approach towards SDH:

> When a sentence is broken into two or more lines of captions, it should be broken at a logical point (…) Three or four-line captions are occasionally acceptable if a one- or two-line caption would interfere with pre-existing graphics or be confusing with regard to speaker identification. (DCMP, 2024, Caption placement section, para. 6)

The DCMP guideline's emphasis on the ability to use more than two lines if necessary is a significant departure from other SDH guidelines in the industry. This rule may encourage SDH professionals to find solutions in a much more flexible and creative way, without forcing them to fit the subtitles into a small box of two lines. A similar flexibility is observed in the use of character identifiers, as explained in the following rule of the guideline:

> When people onscreen speak simultaneously, place the captions underneath the speakers. If this is not possible due to the length of the caption or interference with onscreen graphics, caption each speaker at different timecodes. Do not use other speaker identification techniques, such as hyphens. (DCMP, 2024, Caption placement section, para. 7)

Rather than using colour, bracketed characters or pointers to indicate where the characters are, the DCMP guideline allows subtitles to be placed below the characters. This subtitle placement can lead to more creative and productive outcomes for the viewing experience of d/Deaf and hard of hearing people. However, it should be remembered that any decision to be made depends on the context, i.e. the scene in the content.

> Sound effects are sounds other than music, narration, or dialogue. They are captioned if it is necessary for the understanding and/or enjoyment of the media (…) Sound effects may be combined with onomatopoeia: [rain falling] pitter-patter, pitter-patter. Use punctuation to indicate speed or pace of sound. Slow [clock chiming] dong…dong…dong. Rapid [gun firing] bang, bang, bang (…). When describing a sustained sound, use the present participle form of the verb. When describing an abrupt sound, use the third person verb from. e.g. [dog barking] woof, woof…woof. (DCMP, 2024, Sound Effects section, para. 2)

With regard to the description of sound effects, the proposals in the DCMP guideline differ significantly from its counterparts in terms of the flexibility and freedom, and the degree of creative description, that it allows SDH professionals. In particular, the suggestion that sound effects should be subtitled not only for the sake of understanding but also for the sake of "media enjoyment" deserves praise, as it highlights the viewing experience of d/Deaf and hard of hearing people. In this sense, the simultaneous use of identifiers and onomatopoeia can be seen as a step towards increasing audience enjoyment by attempting to create an equivalent effect on screen through the translation of visual signifiers into textual ones. In addition, the DCMP guideline not only suggests the use of identifiers and onomatopoeia but also combines punctuation to indicate the speed/pacing of sound effects. It is even so detailed that it considers the timing of sound effects, suggesting the use of the present participle for sustained sounds and the third person when describing a sudden sound heard on screen.

> If possible, caption the actual foreign words. If it is not possible to caption the words, only then use a description. Never translate into English (…) Keep the flavour of dialect and caption profanity and slang if in the audio. (DCMP, 2024, Foreign Language section, para. 1)

In contrast to the SEBEDER and Netflix guidelines, the DCMP guideline suggests transcribing the foreign dialogue without translating it. This approach may support the criticism of the standard guidelines discussed above for their condensed and irritating reduction of foreign dialogue to one-word descriptions. This rule can be interpreted as an attempt to create an equivalent effect of foreign-ness for d/Deaf and hard of hearing people as is experienced by hearing viewers of the content. The guide also suggests leaving the different dialects as they are, as opposed to SEBEDER's solution of putting asterisks at the beginning. Considering the dialect as a flavour deserves attention, as it implies that the dialogues are not just for the sake

of providing information. Furthermore, the principle of retaining profanity and slang is similar to the approach of the BBC guidelines, which prohibit any form of censorship since it is seen as patronising by and to d/Deaf and hard of hearing people.

> A reoccurring question about captioning is whether captions should be verbatim or edited (…) DCMP supports editing based on research results and the DCMP's half-century of captioning experience. Editing is often essential to ensure that students have time to read the captions, integrate the captions and picture, and internalize and comprehend the message … DCMP media users, who are the families and teachers of students who are deaf and hard of hearing, have enthusiastically praised the quality of the DCMP educational media and the captioning that provides equal access. (DCMP, 2024, Presentation Rate section, para. 1)

This statement in the DCMP guideline is particularly noteworthy because it directly contradicts the standard SDH guidelines in the industry such as the Netflix guideline. As noted above, Netflix views SDH as requiring complete fidelity to the audio, essentially reducing SDH to a simple transcription. However, the emphasis on the need for editing, as highlighted in the statement above, positions SDH as a form of rewriting and even intralingual translation.

This approach takes into account the needs and expectations of end-users by prioritising comprehension over the almost sacred status that audio occupies in audio-visual content. Most importantly, as the statement suggests, the decision to edit audio rather than follow a strict verbatim approach is based on research and the DCMP's experience over the years.

Table 6 below offers a brief summarisation of the four SDH guidelines analysed within this section of the present study. It brings together key features of the guidelines discussed in this section in detail. A comparative table ensures instant comparison of similar features approached from different perspectives from each SDH guideline. Also, it facilitates the comparison of all four guidelines with the

audience-tailored guideline presented in the next section. Still, it should be noted that not all features align in a perfect manner since some aspects were not emphasized equally across all the guidelines[13]:

Table 6. A Summary of SDH Guidelines

SEBEDER	DCMP	BBC	NETFLIX
End-user oriented	User-friendly	End-user oriented/user-friendly	Claim to be end-user oriented/problematic
All dialogue/sound included	Editing is strongly encouraged to facilitate comprehension	Translator should find a balance/ "editing out" is an option	No simplification/watering down except for overspeed/include original content as much as possible
Adherence to timecodes	Can be broken in overlapping character identification	Max. 160-180 wpm (increased from 130-150)	20 cps for adult programs/17 cps for children's programs
Provision of information and education	Provision of information and education/form of entertainment	Focused on viewing experience ("adding flavour to the text")	Form of entertainment/insistence of plot-pertinent information
No censorship	No censorship/profanity and slang permitted	No censorship/seen as condescending	No censorship
Max 42 characters per line/ideally 34-40 characters/max two lines	Three or four-line captions are acceptable if not blocking the visual	Use of common sense, translators taking the initiative (two or three if necessary)	Max 42 characters per line/max two lines
Max 7 seconds, min 1 second display	Max 6 seconds (except music notation)/min 1 second	Rate can be adjusted	Synchronicity to the audio
Standard punctuation	Flexible/creative use of punctuation to indicate sound effects etc.	Simple/standard punctuation	Standard punctuation
Unity of meaning in line separation	At a logical point	Should contain single sentences/there are exceptions	Before conjunctions/after gerund/separation by paying attention to grammar
Clear use of subject encouraged/no omission	Sentences should follow the rules of grammar	Sentences should follow the rules of grammar	Sentences should follow the rules of grammar (E.g. TDK)
Use of asterisk to indicate dialects via explanation at the start/standard Turkish must be used in dialects	Foreign words should be subtitled/keep the flavour of the dialect	Use of register and preservation of speaker's style of speech encouraged	In case of foreign dialogue, identify the language spoken
Identification of music (e.g. emotional, tense music)/characters by using their names	Placing identifiers underneath the speakers	Use of different colours to distinguish speakers/arrows to indicate the direction of speech	Use of generic identification to describe the mood of music
Umbrella terms to indicate chaos (e.g. overlapping dialogues)/no creative intervention	Flexible use of sound effects (e.g. punctuation to indicate sound)	Open to contributions from translators in general/flexible	Plot-pertinent sound effects should be added/no creative intervention
No suggestion	Use of translucent box to improve readability/use of mixed cases to indicate sound effects	Use of black background for readability	No suggestion for background/identifiers & sound effects should be lowercase

[13] The rules analysed in this chapter and summarised in the accompanying table are those considered to restrict subtitlers' freedom to apply creative solutions. Constraints such as maximum line limit, standard punctuation, and uniform font sizes can significantly limit subtitlers, particularly when they aim to create a specific effect within a given scene. For example, exceeding two lines might be necessary to convey that a character is lost in thought or speaking so rapidly that the audience struggles to understand them.

By taking the above-shared aspects of these guidelines into consideration, the following section offers the instructions of the audience-tailored guideline improving upon these critically analysed points.

3.5 Audience-tailored guideline

The analysis of four SDH guidelines, which have been referenced and utilised extensively within the industry, has formed the foundation for the creation of a customised, SDH guideline that has been tailored to its intended audience, d/Deaf and hard of hearing people. The objective of this guideline is to build upon the strengths of existing guidelines and to address and eliminate any identified deficiencies in the analysis. It is important to note that this guideline does not claim to be superior to others in terms of quality or user-friendliness. Its primary function is to serve as a reference for the training and encourage creative interventions in intralingual and interlingual SDH produced by the students. The theoretical foundation of the guideline benefits from the CMA approach proposed by Romero-Fresco (2021) and Greco's (2018) universalist, user-centred approach towards MA. The guideline invites the students participating in the training to adopt the guideline as a general framework, with the option to deviate and come up with their own creative solutions. As it is intended as a reference for students, the register of English used in some places is deliberately colloquial to make it easier to understand and to indicate that it is not a strict rule to be followed exactly. However, for a professional environment, the language can be adapted to a more formal tone. Finally, the rationale behind the designation of the guideline as the "audience-tailored guideline" is twofold. Firstly, it aims to address the needs and expectations of the end-users with a creativity approach. Secondly, it is intended to demonstrate that SDH guidelines

are not exclusively for SDH professionals but rather are intended to enhance the viewing experience of the end-users. Accordingly, the instructions stipulated in the audience-tailored guideline are as follows:

i. We don't need to put all the dialogue and sound into subtitles. In other words, we shouldn't try to put all the information into subtitles. We need to make sure that we give the audience the information they need, while creating an aesthetic experience that doesn't detract from the filmography of the content. We should remember that good subtitling is actually a negotiation between various challenges and opportunities. For this reason, it is better if we try to strike a balance between these!

ii. The reason for subtitling varies depending on what we're translating. Is it educational? Or is it something like legal or medical content that's trying to inform the target audience? Or is it something like a film, TV series, video clip or cartoon? We know that different types of content can be combined in different ways, but our main focus is on subtitling films and/or TV series. For this reason, although providing information and conveying meaning is part of our job, we also aim to create an enjoyable experience for the audience, as opposed to a legal or medical content.

iii. The idea of an SDH professional as an expert in content, not just language, is linked to the idea of "intended effect." Similarly, SDH professionals should be able to interpret the content and understand the artistic intentions of the director/creator. It's important that they have a certain level of filmographic knowledge so that they can interpret what's going on in the scene in terms of visuals, acoustics, language and artistic style in general. Only then can they decide how to combine different sign systems in the act of subtitling and come

up with a creative and artistic solution to reproduce this on screen in a written sign system. As you can see from the traditional guidelines, too much technical information hinders SDH professionals' creativity and prevents them from thinking for themselves.

iv. When producing SDH, it's important to make sure that the grammar is clear and easy to understand. We should avoid using long and complex sentences that are difficult to read and comprehend. Instead, we should use short, simple and clear sentences.

v. We should not remove strong language (swearing, etc.) unless the content is for children. Removing strong language in subtitles can feel condescending to d/Deaf and hard of hearing people.

vi. Modern words should be used more extensively than old words, unless the latter indicate a particular style of some characters.

vii. When making intralingual subtitles, you may be wondering whether you should stick to the audio as closely as possible or take a more flexible approach. Although the industry tends to stress the importance of sticking closely to the audio, it's not always realistic or sensible to do so. There are a number of reasons for this, including the comprehension and literacy levels of the target audience and the limited space available on the screen. Simply put, reading speed reaches a point where it's almost impossible for the target audience to read and understand the subtitles. So, it's really important to paraphrase what's being said in the audio. You can leave out certain parts and rewrite them in a way that doesn't lose meaning or, worse, cause confusion. It's fine to go into more detail if you have the time, but don't go overboard and leave the audience in the dark.

viii. Filler expressions such as "well", "actually", or "şey...", "yani..." and "ya..." can make the text more interesting. So, if you have time, don't try to get rid of them by thinking that they are not essential for meaning. Please remember that meaning is not everything. The way the text sounds makes it more enjoyable and linguistically interesting.

ix. When it comes to space, you don't have to stick to placing subtitles in the bottom centre or top centre. You can place boxes in different parts of the screen. For example, you could place them next to the speakers, above or below them. Using different transition effects helps to integrate the subtitles into the scene. This makes them seem more natural and part of the screen, rather than appearing to pop up and disappear as in traditional use. However, they should not block the critical visuals.

x. Traditionally, sound effects and dialogue are seen as separate entities. This does not have to be the case. They can be brought together in an area of meaning where two different modes of communication can coexist and work together in a way that helps the audience to understand them better. So, you don't have to prioritise dialogue over sound effects, music etc. It all depends on the scene. They can coexist harmoniously on the screen, or they can take precedence over each other. It's up to SDH professionals to decide, using his or her creativity. Most guidelines say that sound effects should only be added when they can't be identified visually. This approach makes intralingual and interlingual SDH basically just a way of transmitting information, which is similar to Netflix's approach. In other words, the whole scene is reduced to meaning. For example, two characters are shouting angrily at each other. It is clearly visible on the screen. Normally, the standard guidelines emphasise that

you do not need to describe the anger because it is visible on the characters' faces. In our approach, however, we can add some spice to the subtitles. We can use different colours to indicate anger, or we can subtitle the dialogue and at the same time add a sound descriptor such as [ANGRILY SHOUTING!!].

xi. Most of the time we come up against character and line limits in traditional guidelines. 42 characters including spaces (or in some cases 39-40 characters for QC purposes) and the use of a maximum of two lines (the top line shorter than the bottom line) are almost universally accepted as two of the main rules of subtitling, although there are some exceptions. We've already discussed alternative placement of subtitles on the screen with more than two lines and character limits. But it is worth remembering them again. It is OK to use three or more lines if it does not distract the audience or block an image that is relevant to the filmography.

xii. In most cases, traditional guidelines set a minimum and maximum time for subtitles to appear on screen (at least 1 second and up to 6-7 seconds). You can adjust these in different ways. You might want to use subtitles that flash constantly to create a similar effect of fear and panic on the screen, which would obviously break the one second minimum rule. Or to create a shock/freeze effect that's part of the scene, SDH professionals could leave the subtitle on the screen for more than 7 seconds. Another example is the use of multiple subtitles with different fonts, positioned in different ways on the screen, to create a sense of chaos and confusion in the scene. Note: You may need to adjust the subtitle speed to match the speaking speed. Subtitles should always be on the screen when someone is speaking. If a speaker is speaking

slowly, the subtitles should be slow too. Or, if a speaker is speaking fast, the subtitles should be fast.

xiii. One of the most inflexible rules in the traditional guidelines is the use of punctuation. Starting with TDK is a good way to get started. However, just like writers who create literary and artistic works, punctuation can be used in creative ways to achieve a certain effect on the screen. For example, punctuation can be used to convey intonation and mood changes. Multiple exclamation points and lots of commas can be used to give the impression that a character is speaking quickly or with pauses that emphasise each word.

xiv. You can use punctuation to show how fast or slow a sound is. For example, if the phone is ringing intermittently, "[phone ringing] ring...ring...ring", or a car is honking rapidly, "[car honking] beep, beep, beep. The same logic can be used when subtitling Turkish content as well such as "[telefon çalar] zırrr… zırrr… zırrr."

xv. There are other ways of expressing emotion. Alternative methods such as emoticons, colour coding, strategic capitalisation, variations in subtitle placement and even font size adjustments (larger or smaller fonts) can provide a wider range of emphasis options. A more nuanced approach to emphasis, beyond punctuation and mere description of sound, is therefore both possible and desirable.

xvi. You can use mixed font sizes variably, depending on the sound effect. For example, you could use larger sizes or capital letters for shouting. Or if a character starts speaking loudly but then lowers his voice. It would be useful to have mixed characters, like in the first film of the LOTR trilogy, where

Gandalf speaks angrily to Bilbo Baggins, and then suddenly continues in a mild and friendly voice.

xvii. If a character speaks in a non-standard language, such as a dialect, or has other stylistic preferences, such as an elderly person using Ottoman Turkish words or references from historical programmes, we need to keep this in the subtitles. When it comes to intralingual translation, it's best to stick to how the words are pronounced in the scene. If a character has a particular dialect in an interlingual translation, this should be reflected in the translation. We can also use different colours or other creative options to show that a language is not standard.

xviii. If a foreign language is spoken in the scene and the Turkish non-SDH version does not include a translation, we should not provide a translation in SDH. In such cases, we should provide a full transcription of the foreign dialogue spoken in the scene to create a similar foreignisation effect for the d/Deaf and hard of hearing audience.

xix. If there are a lot of conversations going on at the same time, don't just add the word "overlapping conversations" as the standard guidelines say. The thing is, it may be more effective to include all the spoken dialogue in a scene to create a chaotic effect, rather than grouping it together and adding identifiers which may reduce the effect. So, you might think about adding a speaker icon or even several human emoticons to get your message across. It's worth noting that while hearing audiences may find overlapping and chaotic conversations overwhelming, the use of identifiers can significantly reduce this effect for those who are d/Deaf or hard of hearing.

xx. If there is music in the scene, we shouldn't just say things like "emotional music" or "suspenseful music." This approach is too simple and lacks creativity. Music is an important part of film, but we need to find new ways to describe its effect on the scene. One idea is to describe the music in terms of the instruments used, such as drums, strings and the repetition of notes. We can also use icons, emoticons, colours and font size to make the text more interesting.

xxi. Some guidelines also suggest using arrows to indicate direction. Combined with colours and emotions to identify speakers, this can be useful for comprehension and also for adding sound effects. For example, a green subtitle with a monster emoji and a narrow can indicate that Shrek is speaking from the left of the screen, even though he's not visible.

In the following chapter, the methodology of the research and the training are presented in detail. The implementation of the training according to the audience-tailored guideline is presented in Chapter 5, together with the presentation and discussion of the results of the training model. The subsequent step-by-step description of the training process, with actual examples from the students' assignments, will show how the audience-tailored guidelines were referred to by the students in their creative production process of both intralingual and interlingual SDH.

CHAPTER 4

METHODOLOGY

This chapter examines the methodology of the present study. It is divided into two main categories with several subcategories. The first main category explains the methodology of the research. It reveals the main research method applied in the present study, the characteristics of the participant groups, the instruments used in the collection of data from these participant groups and, finally, the method used in the analysis of the data elicited via surveys. The second main category examines the methodology of the training from a practical perspective. It describes the characteristics of the video content selected for the training, the software used by the students in their assignments, and the pre-designed syllabus (see. Appendix A) implemented as part of the training.

4.1 Methodology of the research

4.1.1 Case study and ethnographic research

In the present study, case study[14] is used as a broader methodological approach to answer the main research question. As defined by Robert K. Yin (2018), case study is an empirical method that examines in detail a contemporary case in a real-world context. It benefits from a set of theoretical propositions that inform the design, data elucidation and analysis through multiple sources of evidence. According to Yin (2018), this comprehensive definition positions the case study as an "all-encompassing mode of inquiry" (p. 16). In terms of modes of inquiry, Yin (2018)

[14] Action research may come to mind as an alternative methodology for the present study. However, it is typically employed when the goal is to improve or refine an existing course through a process of planning, acting, observing, and reflecting. It involves actively engaging with an ongoing course or setting to identify challenges, implement interventions, and observe outcomes in real time.

highlights that a case study can be exploratory, descriptive and explanatory, but these elements can often overlap as there are no sharp boundaries between these modes (p. 8). However, if a researcher wishes to explore a research topic with a focus on the “how' and “why” types of questions, a case study may serve as the optimal research method (Yin, 2018, p. 11). Specifically, if the research question “requires an extensive and in-depth description of a social phenomenon,” Yin (2018) encourages case studies as the research method (p. 4). Regarding the description of such phenomenon, Saldanha and O'Brien (2013) note that anything can be defined as "case," such as an individual translator, a form of text, an institution, a whole literary system or a "process of training," in whichever way you [researcher] want to delimit that process," but it necessitates a certain theoretical structure (pp. 207-208).

In addition to the use of case study as a broad methodological approach, the present study significantly benefited from ethnographic research as well. It can be claimed that the present study was based on a case study that embraced an ethnographic research approach. Saldanha and O'Brien (2013) emphasise that although case study and ethnography are different methods, case study can be defined “as a method in which novel ethnographic approaches can be applied” (p. 208). They add that since both case study and ethnography share the assumption that "human behaviour is best understood as lived experience in social context, and both involve the collection of rich, detailed data in an authentic setting" (2013, p. 209), the boundaries between the two tend to blur, as seen in Koskinen's research focusing on Finnish translations in the EU Commission where case study and ethnographic approach are employed together.

As for the description of ethnography, Edmund Asare (2016) states that “a social situation is [...] a particular convergence of activities, actors and place, and

ethnography is the work of describing this convergence" (p. 212). He argues that ethnography comes to the fore as a research method in TS with its detailed description of individuals and activities in a process, in some cases in cross-cultural and cross-linguistic settings (2016, p. 212). In addition to Asare's description, Koskinen's definition of ethnography further illustrates how it might be relevant to TS as a research method. Koskinen (2008) puts the focus directly on the process of text production with her remark that "the aim [of ethnography] is to attend to everyday details and routine text production as well as to the wider social context" (p. 37). Similarly, Saldanha and O'Brien (2013) describes the main principle of ethnographic approach as a method of inquiry that involves intense personal involvement of the researcher in the form of participant observation (p. 209). Taking these conceptualisations by Asare, Koskinen and Saldanha and O'Brien into consideration, it can be suggested that ethnography places the focus on the actors and their activities in a given place during a production process.

Furthermore, in terms of the tools to be used in an ethnographic approach, Asare (2016) points to the highly flexible structure of ethnography as it allows the use of multiple data collection methods such as interviews, surveys and content analysis with its primary method of participant observation (p. 212). Saldanha and O'Brien (2013) also draw attention to the eclecticism of the tools used in ethnographic research (p. 209). Additionally, in terms of types of ethnographic research, Asare (2016) distinguishes two types: macro-ethnography, which studies a broad social phenomenon with multiple aspects in focus, and micro-ethnography, which examines a smaller phenomenon with a more limited focus and for a shorter period of time (p. 213).

In line with the suggestions of Yin (2018) and Saldanha and O'Brien (2013), the present study focused on exploring a training process to answer the question of "whether and how" we can train T&I students to produce user-friendly SDH within the framework of CMA and a social- constructivist pedagogical perspective. The case study as the main methodological approach was relevant to the present study in many ways. With a theoretical framework, the present study conducted exploratory, process-oriented research by drawing on multiple data sources. Additionally, the research involved close personal involvement of the researcher, who closely observed the students weekly in the classroom for 12 weeks during the training. Without any intervention, except for the method of scaffolding discussed in Chapter 2 and Chapter 5, the researcher was able to observe the gradual development of the students' content in real time to be tested by the end-users. This in-depth observation and the subsequent analysis of the data obtained are sufficient to classify the present study as embracing a micro-ethnographic approach with the case study as the broader research method.

Furthermore, the present study drew on multiple sources in the collection and analysis of data, which is usual for the case study as a broad method involving multiple methodologies, both qualitative and quantitative (Saldanha & O'Brien, 2013, p. 217). The instruments used in the present study, four surveys, two for students and two for end-users, are also among the data collection tools commonly used in ethnographic research. The following section describes the characteristics of the participant group, the instruments used to collect the data, and the method used to analyse the data collected by these instruments.

4.1.2 Participants

The very role of "participants" in the present study involved a tight collaboration with the researcher. Both students and end-users were considered as crucial and active parts of this collaboration, which was consistent with the main research problem of the present study: Training students to meet the needs of end-users in a creative, non-standardising manner via an audience-tailored SDH guideline was the goal. Saldanha and O'Brien (2013) describe the research as "a collaborative process between the researcher and the participants" (p. 150). According to this definition, the knowledge is considered as being created by the participants during the research process rather than as something that had already existed in the minds of participants before the research began (Saldanha & O'Brien, 2013, p. 150). In other words, participants are not merely passive actors in a study who respond to a predetermined set of questions. Instead, they are active contributors of knowledge, which the researcher processes as the output of the research.

4.1.2.1 T&I students

This group consisted of 14 undergraduate students majoring in T&I studies who were in their third and fourth years of study. The age range of the participants was from 18 to 22 years with no specific gender balance. To ensure pair work during the training, an even number of 14 students was randomly selected from a pool of volunteers who showed interest in the training upon the announcement made online at the T&I department where the author of this thesis was employed as a research assistant. Prior to the training, students were provided with written consent forms upon the approval of Ethics Committee (see. Appendix B) and informed verbally that they were at liberty to withdraw from the training whenever they wished. Furthermore,

the students were explicitly made aware that their participation or performance during the training would not be paid.

As part of the present study, more students might have been selected to participate in the training. However, this could have had a negative effect on the training process due to the amount of time required for holding in-class discussions with a larger group. Third- and fourth-year students were deliberately selected since they had already received introductory and advanced courses as part of their curriculum. This was particularly important because the students were expected to have an overall understanding of and competence in translation. Another condition for participation was that the students had not previously received an AVT class as part of the curriculum because prior exposure to an AVT course might have hindered measuring the level of change in their general awareness and knowledge of MA.

4.1.2.2 End-user group: d/Deaf and hard-of-hearing individuals

This participant group was comprised of 29 (End-user Survey 1) and 26 (End-user Survey 2) d/Deaf and hard- of-hearing individuals over the age of 18. All members of the group were literate and had no difficulty comprehending written Turkish texts and/or subtitles. Their proficiency in terms of using smartphones and computers was sufficient for participation. It is important to note that all the participants in this group stressed that they regularly watched audio-visual content with subtitles and/or sign language interpreting. Additionally, during the administration of the surveys, none of the participants used hearing aids to support their audial experience. An overwhelming majority of the group did not use a hearing aid in their everyday life as well. The participants' educational levels varied from primary school to university degree with almost half of them holding a high school diploma.

Despite the fact that the participants had a good level of reading proficiency, all the meetings were conducted via a professional sign language interpreter to ensure clear communication between the researcher and the participants to avoid any potential misunderstandings. All ethical information was provided in the form of written consent forms and also explained via sign language interpreting. Additionally, the participants were informed that they would receive a financial incentive for each completed survey.

4.1.3 Instruments

Survey can be defined as "a list of questions, each with a range of answers," created in "a format that enables standardised, relatively structured data to be gathered," (Matthews and Ross, 2010, p. 201) and it is considered as the most widespread method of empirical research in the social sciences (Sun, 2016, p. 269). A survey can help collect data on a large scale while saving time compared to interviewing each participant, which also considerably facilitates the analysis of the data (Saldanha & O'Brien, 2013, p. 152).

In surveys, there are mainly two types of questions: open-ended and closed-ended. Open-ended questions can help the researcher to gather in-depth qualitative information on the topic being asked, but it can be difficult to interpret the results, and it may be more time-consuming since the amount of time required to complete the survey will be longer (Saldanha and O'Brien, 2013, p. 157). Closed-ended questions, especially scales, can help the researcher to elicit structured responses that would contribute to the measurement of quantitative data in large scales (Sun, 2016, p. 270). Closed-ended questions run the risk of not eliciting detailed information due to the limited choices given to the respondents since such questions "do not allow for

nuanced thoughts to be expressed" (Saldanha and O'Brien, 2013, p. 157). Thus, to balance the risks of open-ended and closed-ended questions in surveys, a mixed-methods approach using both forms may be the optimal way as this combination can potentially help the researcher to benefit from the positive sides of both qualitative and quantitative research (Corrigan and Onwuegbuzie, 2023, pp. 135-136).

Surveys were the primary method of measurement in the present study for a number of reasons. Surveys are less time consuming than individual interviews or focus groups. Additionally, surveys facilitate gathering both qualitative and quantitative data in large quantities and the analysis of the received data is relatively more efficient since they are uniform. Given that the present study had two groups of participants, as explained in the previous section, these reasons may be more understandable.

Defined as the type of research "…in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods…" (Tashakkori & Creswell, 2007, p. 4), the use of mixed methods in the surveys was considered to be potentially due to a number of reasons that can be explained by the nature of the research questions of the present study. The aims of Student Survey 1 and Student Survey 2 were to find out whether there was a change in the general level of MA awareness of the participating students as a result of the training. Gaining this information required the use of both open-ended and closed-ended questions since the concept of "awareness" itself is an abstract notion that the author of the thesis felt should not be reduced to mere quantification. More in-depth responses that revealed the subtleties of being aware or knowing something were required. However, there was some information that required quantitative analysis, such as the percentage of students who were

aware of the SDH guidelines, their viewing habits, the frequency of their use of accessible audio-visual content, and their assessment of the sufficiency of MA services. For this purpose, it was necessary to use closed-ended questions as well.

Similarly to the Student Surveys, the aim of the End-user Survey 1 was to explore the experiences, needs and general expectations of the end-users in relation to MA with a particular focus on SDH. Ascertaining this information required the collection of qualitative and quantitative data. For example, the participants' detailed opinions on what could be done to improve MA services in Türkiye could be elicited through open-ended questions. However, their thoughts on the sufficiency or insufficiency of SDH in audiovisual content on streaming platforms required scores, which was presented in the form Likert scales. In addition, End-user Survey 2 wanted to measure the participants' satisfaction with videos presented to them prior to completing the survey, which required a comparison in a quantitative way. However, to find out why the viewers had chosen one video over the other, it was necessary to elicit their explanation, their rationale, and elucidating that information required open-ended questions. Nevertheless, the use of open-ended questions was limited in number due to an anticipated methodological problem. Although the participants had a satisfactory level of reading proficiency, during the preliminary interviews it was observed that they had difficulty expressing themselves in writing. With this in mind, open-ended questions were used sparingly.

4.1.3.1 Student surveys

The Student Survey 1 (n=14) had 43 questions. The first five questions focused on the concept of accessibility and MA with participants being asked to provide general responses on this topic. In order to ascertain whether their knowledge was derived

from personal experience, some students were asked whether they had individuals with disabilities within their close circle of family and/or friends. The next set of questions aimed to measure the participant's awareness regarding d/Deaf and hard of hearing people and their presence within public life. The subsequent section of the survey focused on measuring the students' awareness of MA and the accessibility services available on Turkish TV and streaming platforms. The final part of the Survey 1nvestigated the students' awareness and knowledge of SDH with multiple Likert scale questions to assess their opinions regarding the adequacy and requirements of SDH. Finally, the students' opinions on the introduction of a MA course within their respective departments were gathered.

The survey was conducted in Turkish to facilitate a better comprehension and help the students to respond accurately without any potential for misunderstanding due to language barrier. Nevertheless, both the questions and the responses were subsequently translated into English and incorporated into the present study by the author (see. Appendix C for the English surveys and Appendix D for the Turkish surveys). The survey was distributed to the students via Google Forms.

Student Survey 2 (n=14) contained a total of 31 questions. It is important to note that the questions in this survey were very similar to those in the first survey, with some of them being identical. Since the primary objective of the student surveys was to measure a possible increase in MA awareness of the students, a comparison could only be made if the questions were either thematically close or identical. However, it should be underlined that not all the questions were identical. This was done to encourage students to answer from a broader perspective, linking the question to other aspects of accessibility, and also to avoid an obvious result, as students would be doing research after the first survey and would therefore naturally

be more informed when answering the same question again. Still, a comparison between the responses in Student Survey 1 and Student Survey 2 was still possible, due to the overlapping themes of the questions, which will be shared in the discussion and analysis part of the present study (see. Chapter 5).

With regard to its structure, with the exception of the first set of general questions in the first survey, the aim of which was to measure the respondents' familiarity or non-familiarity with the notion of accessibility, the initial questions were of a similar nature to those in the first survey. However, some questions demanded more detailed and analytical responses, such as "What kind of accessibility projects can be developed at your institution?" and "What kind of improvements should be made when designing accessible products?" Subsequent sections investigated the frequency of students' viewing habits of content featuring MA solutions. This was to ascertain whether there had been any change in their viewing habits as a result of the training. There were also questions regarding the role of standardisation and creativity in SDH production which necessitated detailed responses. Furthermore, Likert scales were employed to assess the students' perception of SDH features (a question that was also included in the initial survey). Towards the end of the survey, students were asked to indicate their expectations from an MA course and evaluate their training experience by providing a detailed commentary and awarding a score out of 10 for their experience. Similar to the first survey, Student Survey 2 was also administered to the students in Turkish via Google Forms. The questions and responses were translated into English and incorporated into the thesis by the author (see. Appendix C and Appendix D).

4.1.3.2 End-user surveys

The End-user Survey 1 (n=29) contained 30 questions. The initial set of questions in End-user Survey 1 was designed to gather personal information such as name, surname, year of birth and level of education with the aim of identifying possible differences in responses according to demographic variations. The subsequent set of questions aimed to ascertain the general knowledge of the end-users regarding MA and their viewing habits. The following questions aimed to identify which modes of communication (e. g. SDH, lip reading, sign language interpreting) were favoured by the end-users and to what extent. In the final part, the end-users were asked whether they had any suggestions for improving the quality of accessible content, and more specifically, SDH.

This survey was administered to a group of d/Deaf and hard of hearing individuals via Google Forms. The survey was written in Turkish and translated into English by the author of this thesis (see. Appendix C and Appendix D). During the employment of the survey, the majority of the participants (n=24) were physically present, but five participants completed the survey online. In case any of the questions in the surveys were challenging to understand, sign language interpreting service was made available in real time with a professional sign language interpreter present at the meeting.

End-user Survey 2 (n=26) consisted of a total of 90 questions. After a brief section on personal information, including first name, surname, date of birth and level of education, the first half of the survey focused on eliciting the participants' opinions of intralingual SDH clips of *Börü.* Each category of questions was repeated for each set of videos provided, i. e. the question to rate the overall comprehensibility

of the intralingual SDH on a scale of 1-5 was asked for both *Börü A* (standard SDH streamed on Netflix) and *Börü B* (creative SDH produced by the students).

Following the presentation of detailed questions on various SDH features in the clips, two general questions were presented at the end of the *Börü* section. These questions asked the participants to rate which video they found the most appealing and which they found the most creative. This approach allowed for a cross-validation between scores assigned to detailed SDH features and the overall score calculated for the clips. The exact same structure was used for the second half of the survey, which investigated the participants' opinions of interlingual SDH clips of *Rebel Moon 2.*

End-user Survey 2 was administered to the end-users via Google Forms. The survey was written in Turkish and translated into English by the author of this thesis (see. Appendix C and Appendix D). The majority of participants (n=21) were present within the meeting hall when filling out the survey, but five participants completed the survey online as they did in the End-user Survey 1. During this time, sign language interpretation was provided to avoid any misunderstandings regarding the survey and the clips. For the online group, a video-recorded sign language interpretation with explanations was planned, but there was no need to implement this idea as no participants in the online group asked for further explanations.

4.1.4 Data analysis

In the analysis of the open-ended questions in the student surveys, coding was the preferred method within the confines of the present study. In the context of qualitative data analysis, the term “code” refers to a word or phrase that encapsulates the essence of the provided information (Saldaña, 2009, p. 3). It can also be defined as a construct created by the researcher of a particular study to give meaning to the

data being analysed (Saldaña, 2009, p. 4). In the present study, coding was used to categorise the large number of responses obtained from the surveys, which was considered crucial to finding similar patterns in the participants' responses. These categories were then quantified and presented in tables. For the End-user surveys, coding was not a viable option due to the low quality of responses from the d/Deaf and hard of hearing individuals. Instead, quantitative analysis was the main method used to analyse the data obtained from the End-user surveys. However, whenever the qualitative data received through open-ended questions were informative and suitable for analysis, actual examples from the participants' responses were used to support the analysis of the quantitative data as well.

Furthermore, as suggested by Saldaña (2009), categorisation in the form of coding can also show differences in similar responses (p. 6). For example, the majority of participants may consider MA to be an important concept. This consensus that MA is important can be categorised as a similarity. However, the participants' reasons for its importance may vary considerably. Some may consider it important for an inclusive society and others may consider it important because of the commercial benefits of accessible products in terms of reaching more subscribers. In the context of the present study, such a difference is crucial and should be preserved in the qualitative analysis of the responses because coding as a method of analysis may be useful in finding such differences in similarities. However, simply quantifying the data runs the risk of losing the richness of participants' detailed responses. In order to avoid this problem, in the present study the qualitative data quantified through coding was presented with actual examples of the students' responses. This demonstrated why some responses were coded as such

and also gave voice to the participants as active agents in the research process rather than passive research objects.

In the analysis of quantitative data in both Student Surveys and End-user Surveys, the summarisation feature of the Google Forms offered significant advantages. This feature automatically presented a summary of the results in the form of charts and graphs. In addition, the Google Forms interface allowed the researcher to jump between responses for individual questions and participants. Thus, for the analysis of quantitative data, both the summary of the automatically generated graphs and charts and the individual rating responses were downloaded and interpreted comparatively within the relevant survey categories, i. e., the relational analysis of Student Survey 1 with Student Survey 2. According to Saldanha and O'Brien (2013), statistical information presented in case studies tends to be inferential rather than descriptive (p. 224). In line with this assertion, the quantitative data in the present study was subjected to inferential analysis since this allowed the researcher to “draw conclusions from the data” (p. 224).

In other words, through inferential analysis, the present study aimed to reflect on wider implications of the data acquired via surveys. However, it should be noted that inferential analysis carries the inherent risk of over-generalising an observed finding in a research study. To overcome this risk, the present study combines "inferential statistical analysis with narrative description of [...open-ended responses in both Student and End-user Surveys...] based on participant observation and interviews" (Denzin et al., p. 54). Through the use of such a mixed-methods approach to the analysis of quantitative data, the present study aimed to provide perspectives on which further research can build, such as the different levels of comprehension of d/Deaf and hard of hearing people depending on their level of

education. However, it is important to note that the present study refrains from taking the results of the research as an absolute representation of larger groups of people.

Finally, to ensure that the differences between the quantitative data were statistically significant, the t-Test was used on the data sets for both intralingual and interlingual SDH clips. The t-Test can be described as a statistical tool used to analyse quantitative data to identify whether there is a statistically significant difference between the results for two groups/data sets. In the test, a low p-value calculated for the data indicates that the difference is statistically significant when the p-value is typically less than 0.05. In other words, the t-Test can make a valuable contribution to statistically validate conclusions drawn from numerical data.

Within the limitations of the present study, the t-Test was used for the End-user Survey 2 as it contained large amounts of quantitative data for clips A and clips B of both *Börü* and *Rebel Moon 2*. As exactly the same categories were used for both clips A and clips B, a clear comparison was possible to calculate the differences in scores for each category. For the Student Surveys, however, it was not possible or practical to conduct a t-Test for several reasons. Firstly, the questions in Student Survey 1 and Student Survey 2 were not exactly the same, except for a few questions. This thematic resemblance made it possible to draw a general comparison between the two surveys. However, for t-Test all the questions and categorisation of all the responses should be the same. In other words, the existence of slightly different questions and codes did not allow the clear comparison required for the t-Test. Still, the Wilcoxon signed-rank test was a viable option on a limited number of identical questions and codes. Offering a method to compare the scores given "before" and "after" of a specific case, the Wilcoxon signed-rank test had potential to verify the statistical significance of the acquired results. Thus, the Wilcoxon test was

performed on the results of Student Survey 1 and Student Survey 2 to measure whether there was a statistically significant difference between the results of two surveys.

4.2 Training

4.2.1 Video content

For the intralingual SDH production, the Turkish TV series *Börü was* chosen to be used during the training. Created by Alper Çağlar, *Börü follo*ws the operations of a special police unit across Türkiye. The series was well received by Turkish audiences when it first aired on Star TV. The reasons for selecting *Börü for* the present study were quite practical. The chosen video had to contain a variety of audio-visual elements that could be discussed and improved upon during the training. This would encourage the students to develop creative and innovative uses of SDH to improve the viewing experience for d/Deaf and hard of hearing audiences. For this reason, *Börü,* which includes many audio effects such as explosions, emotionally charged scenes and fast paced music, was an ideal choice. More importantly, the content had to be actively streamed on Netflix so that the end-users could be presented with a standard SDH version of the TV series to compare with the creative SDH produced by the students. As of September 2024, *Börü* was actively streamed on Netflix Türkiye.

For the interlingual SDH production during the training, the American film *Rebel Moon - Part Two: The Scargiver*, directed by Zack Snyder, was selected. The action movie, which was first aired on Netflix Türkiye in 2024, contained a rich variety of audio-visual elements that invited the students to find creative solutions for interlingual SDH. The film was actively streamed on Netflix Türkiye as of

September 2024. A standard interlingual SDH was present in the video, which was a key factor in the selection process since it would allow a comparison with the creative SDH content.

For the training and evaluation step, the duration of the videos was a key factor. One episode of *Börü last*ed approximately one hour, while *Rebel Moon - Part Two: The Scargiver* had a duration of almost two hours. At the outset of the present study, the option of providing subtitles for the whole episode and movie, or of selecting long clips from each, was considered. However, this option was decided against for a number of reasons. Firstly, a full-length episode or a film would be too time-consuming for the students to manage. Students participated voluntarily in the workshop, and they had multiple courses that they had to participate in. Thus, longer videos would require an excessive workload, which could result in the possibility of students withdrawing from the study. The training sessions involved the presentations by each group on a weekly basis and regular feedback from the other groups. Working on and presenting longer videos would be extremely time-consuming and exhausting for the students. Furthermore, the training was based on a creative approach towards SDH. It would be both methodologically and ethically wrong to push the students to their limits. In this sense, a relaxed, entertaining and stimulating training process was essential. Secondly, it was important to ensure that the videos were not overly long, as the end-users were expected to watch four videos in total (one standard SDH and one creative SDH for each audio-visual content) and respond to approximately 90 questions. For this reason, the duration of the videos was carefully calculated to avoid overwhelming the end-users and ensure their engagement in the study.

After careful consideration, the videos selected for the training and subsequent evaluation by the end-users were set to 5:26 (*Börü)* and 5:41 (*Rebel Moon - Part Two: The Scargiver*). Even with these shorter videos, the time required for training and evaluation was considerable, with the total viewing time for the videos being approximately 23-24 minutes. This was further compounded by the required time to respond to 90 questions in the End-user Survey 2. Additionally, 6 minutes of video presentations by seven groups in a detailed manner at each training session added up to around 180 minutes of sessions each week.

Moreover, the selection of these specific durations, 05.26 and 05.41, was based on careful analysis of the entire episode and the movie. These sections were selected because they encompassed a wide range of audio-visual elements including sound effects, music, intensive dialogue etc.

4.2.2 Software

Similar to the audience-tailored SDH guideline, it should be noted that the software used during the training process also acted as a starting point for the students during the training. Students were encouraged to use additional software if they found it more effective. The initial software selected for the training were Veed, AegiSub and Adobe Creative Cloud. However, during the training process, students also suggested alternative software and websites such as CapCut, VN Video Editor, Canva, Procreate, Emoji Combos, PNGwing, and so other software. This section briefly introduces the software used during the training process. However, the opportunities and challenges during their use are discussed in Chapter 5.

Veed is a browser-based AI tool that facilitates collaboration among the users and the creation of automated and non-automated subtitles for videos via AI-assisted

translations. Its cloud-based video editor allows the removal of background noise and the addition of images and subtitles with a high degree of flexibility. It offers the ability to place subtitles anywhere on the screen and manipulate the subtitles by adjusting in- and out-animation, colours, and fonts. The software also allows the addition of images and emojis within the video, which contradicts the industry standard guidelines since such manipulations can be considered as being more in line with the creative aspect of SDH production.

AegiSub is a well-known and frequently used subtitle editing program that runs exclusively on a computer and necessitates installation to the computer. It does not offer a cloud-based, user-friendly environment, but it is practical in terms of creating subtitles from scratch and synchronising them with the video. Thus, it serves as an initial tool to create subtitles by manually transcribing the dialogue in the videos. The resulting. srt files of these transcribed and synchronised subtitles can then be uploaded to other software for further manipulation.

Adobe Creative Cloud was found to be ineffective due to the requirements of premium features, which were not feasible within the budgetary limits of the present study. Free features were not able to meet the needs of the students during the training. For this reason, it was not used during the training, despite initially being considered effective and useful as part of the study.

In terms of the proposed alternatives by the students, CapCut is a user-friendly software that offers advanced video editing features. These include the ability to trim, transition, apply filters, overlay text, and more. It also enables rendering of the video without placing a significant technical load on the computer and ensures a smooth and unproblematic use. Furthermore, VN Video Editor provides a user-friendly interface

by offering a versatile set of options for beginners and intermediate users such as a multi-layering timeline option, keyframe animations and high-resolution rendering.

As arguably one of the most well-known graphic design tools, Canva provides pre-designed and ready-made templates via its practical and non-time-consuming drag-and-drop option. It has an extensive library of stock images, fonts, emojis and other visual elements, as well as allowing collaboration and creative manipulations, similar to Veed. Procreate, on the other hand, is better suited to the development of original and creative designs since it offers features that would help users produce decorative text designs via more personalized preferences. It can be considered more as an artist-tool than a video editing tool such as CapCut and VN Video Editor.

The students extensively used the above-mentioned software during the training. However, they also suggested alternative software and used them in their assignments, which is discussed in Chapter 5. Finally, it should be noted that using non-licensed free software in training can pose a significant risk of copyright infringement. It is well known in the industry that the vendors work on their content in utmost secrecy, and they require translators and other professionals to sign non-disclosure agreements that strictly prohibit the sharing of content with third parties. To prevent leaks, they prefer to use licensed software. However, despite strict confidentiality, data leakage is a common problem encountered in the industry. Therefore, in a professional environment, software should be used with their original licence and regularly monitored by cybersecurity teams. This may not be feasible and realistic for educational and academic purposes. Therefore, researchers and/or trainers should use content with open copyrights to prevent such leaks and inform students in detail about possible risks of using unlicensed software and data leaks.

4.2.3 Training of the students

As part of the present study, training students in line with an audience-tailored SDH guideline involved two phases. The first was the preparation of the guideline and the selection of software and audio-visual materials for the training. This phase is already described in detail in Chapter 3. The second phase was the implementation of the training itself based on a pre-designed syllabus.

After the preparation phase, the training started according to a pre-designed syllabus covering 12 weeks of training (see. Appendix A). According to David Nunan (1988), the syllabus can serve as a foundation for planning various courses, where the designer chooses and grades accordingly (p. 6). It outlines expectations, rules, and required steps to be taken alongside assignments. However, in the design stage, it is essential to take the needs of the target group into consideration, which requires analysis of the situation by the designer or the instructor (Robinson, 1991, pp. 9-10). Thus, as part of the present study, the syllabus was designed to be concise and time-efficient, both for the needs and limitations of the research and also because the students already had their own tight schedules at the department. However, the syllabus designed for the training functioned as a flexible framework for the training, rather than a rigid schedule, taking the challenges that might have come up during the semester into consideration. Furthermore, as for the evaluation of the student's performance, no particular assessment method was identified since there was no success criterion except the very research problem of the present study.

In terms of the delivery of the training itself, a social constructivist (see Chapter 2), collaborative approach was deliberately chosen as the main methodological framework of the training to encourage creativity among the students. Paulus and Nijstad (2019) highlight that collaborative team practice can

pave the way for the development of creative perspectives and skills among the group. With a perspective of collaboration rather than the division of a task among multiple individuals, students may have an opportunity to engage with tasks that mirror the intricacies of real-life scenarios. By doing this, they can identify tasks that fall within their areas of responsibility and, through their endeavours, develop the capacity to construct their own meanings out of it (Kiraly, 2003). Thus, a learning setting based on collaboration may potentially make profound contributions to the interaction between the students and promote a more active engagement with the learning process (Kiraly, 2003, p. 51). By removing the focus on accuracy, fidelity, and objectivity in translation education, students can develop their active thinking skills and autonomous decision-making process (Zhong, 2002).

To support a collaborative and engaging learning process, there may be a number of concrete steps that can be taken in the classroom. In this sense, inspired by Caroline S. Parson's "Reforming the Environment: The Influence of the Roundtable Classroom Design on Interactive Learning" (2017), a roundtable classroom design comes to the fore. Based on actual observations with students present around the roundtable, Parson (2017) points out the benefits of roundtable settings as they encourage "consistent face-to-face communication" that allows students to communicate not only verbally but also through the form of non-verbal communication such as hand gestures and eye contact (p. 26). Parson's (2017) research includes positive feedback from students about the benefits of receiving immediate feedback, communicating more confidently with others, and being able to openly discuss their work in such a learning space (p. 26).

The entire training process in the present study was conducted in a real roundtable setting as well with seven groups of paired students. The groups

brainstormed their creative ideas collaboratively and improved their work based on immediate feedback from their peers. As for the practicalities of the training, the initial stage was to establish fixed start and end dates, and the specific days and hours for each training session. This was to encourage a consistent training process for both the participants and the trainer. The weekly plan also had to consider the approximate dates of the surveys. For instance, Student Survey 1 was to be conducted prior to the beginning of the training since it aimed to ascertain the students' initial MA awareness and knowledge. Similarly, Student Survey 2 was scheduled for completion immediately after the final session because its objective was to assess any changes in the students' level of knowledge and general awareness of MA.

The syllabus shared in Appendix A can be used in a stand-alone course with a number of adaptations in terms of assessment criteria and the weekly schedule of the academic term. However, it should be reiterated that it is not a prescriptive roadmap to be strictly applied in a course on MA and/or SDH. The syllabus merely shows the weekly design of the training carried out as part of the present study. It aims to provide a general point of reference for further research and in-class application.

CHAPTER 5

FINDINGS AND DISCUSSION

In this section, the results of the surveys included in the present study are presented and then discussed in detail. First, a rigorous analysis is conducted on the first sets of instruments employed in the present study, the Student Survey 1 and the End-user Survey 1. Then, the training process is explored in such a way as to highlight the challenges and potential of the process, alongside examples of student work. Following this, the analysis of the Student Survey 2 and the End-user Survey 2 is presented. In this regard, the structure of this segment mirrors the actual linear progression of the present study in chronological order. In the analysis of both instrument sets, the results are presented in a descriptive manner without interpretation of the data. Subsequently, a discussion is conducted at the conclusion of each section by reflecting on the implications of the results.

5.1 The analysis of the first set of instruments

5.1.1 Student survey 1

This section presents the results of Student Survey 1 in detail, based on the responses of 14 T&I students. The survey aimed to measure students' initial perceptions of accessibility and the MA. Open-ended questions deemed useful for analysis were subjected to manual coding, where student responses were categorised and quantified using manual coding. These categorisations were reinforced by the inclusion of actual student responses relevant to each category and supported by closed-ended questions containing statistical information. To improve readability and to present

the data in a coherent manner, the questions in Student Survey 1 and their categorised responses were presented thematically as shown in Table 7 below:

Table 7. Codes Generated for Open-Ended Questions in Student Survey *1*

Themes	Codes
General Questions on Accessibility and MA	
The notion of accessibility	Access to digital services: 21.43% (n=3) Access to physical services: 21.43% (n=3) Access to both: 7.14% (n=1) Fuzzy information: 50% (n=7)
The notion of MA	Informed: 35.71% (n=5) Partially informed: 42.86% (n=6) Not informed: 21.43% (n=3)
Distinctions between "deaf", "Deaf", and "hard of hearing"	Clear distinction (being deaf and hard of hearing): 64.29% (n=9) Fuzzy distinction (being deaf and hard of hearing): 28.57% (n=4) No distinction: 7.14% (n=1)
Legislation concerning people with disabilities	Not informed: 71.43% (n=10) Informed: 4.29% (n=2) Partially informed 14.29% (n=2)
Specific Questions on Accessibility and MA	
Accessibility options provided by the Turkish TV broadcasters	SDH: 14.29% (n=2) SLI: 57.14% (n=8) SDH and SLI: 14.29% (n=2) Not informed: 14.29% (n=2)
Accessibility options provided by the streaming services in Türkiye	SDH: 14.29% (n=2) Regular subtitles: 14.29% (n=2) AD: 7.14% (n=1) AD and regular subtitles: 14.29% (n=2) AD and SDH: 14.29% (n=2) AD, SDH, SLI: 7.14% (n=1) Not informed: 28.57% (n=4)
The way SDH is used in accessible content	Informed: 28.57% (n=4) Not informed: 71.43% (n=10)
The importance of standards in SDH	Informed: 7.14% (n=1) Partially informed: 7.14% (n=1) Not informed: 85.71% (n=12)
The important rules in subtitling guidelines	Informed: 28.57% (n=4) Partially informed: 14.29% (n=2) Not informed: 57.14% (n=8)
The link between creativity, standards, and SDH guidelines	Standards limiting creativity: 14.29% (n=2) Creativity as enhancement: 14.29% (n=2) Standards meeting the needs: 7.14% (n=1) Not informed: 64.29% (n=9)
Expectations from a course on MA	Inclusivity and awareness: 42.86% (n=6) Demands in the industry: 42.86% (n=6) Not informed: 14.29% (n=2)

Following the descriptive presentation of the survey results, these findings were discussed in detail in a separate subsection in order to draw a more systematic link between the thematic concentrations. In the discussion, the results were discussed

inferentially by interpreting them both for the present study and for their possible implications for MA education in Türkiye in general.

5.1.1.1 General questions on accessibility and MA

The first thematic category of Student Survey 1 included general questions to measure the students' general awareness of the notions of accessibility and MA, the differences between deaf, Deaf and hard of hearing, and the legislative aspect of accessibility. In this category, students were first asked what they understood by the term accessibility. Some responses were interpreted as indicating insufficient knowledge (coded as “fuzzy information”) or awareness of the term accessibility, exemplified by statements such as “it is quite a broad term” (Respondent 4) and “it is used when someone has access to something” (Respondent 5). There were also responses that understood accessibility as either access to digital services or access to physical services. These responses showed that for the students, accessibility meant access to digital services in the sense that "a visually or hearing-impaired person can consume a digital content" (Respondent 1) and "a blind person can increase the font size on his smartphone using the accessibility option" (Respondent 8). Similarly, some students interpreted accessibility as the ability to access physical services as indicated in comments such as "accessibility means marking certain places such as ramps for people with disabilities" (Respondent 6) and "yellow markings on the pavement for blind people" (Respondent 7). Lastly, a small proportion of the responses showed that accessibility was understood to cover access to both digital and physical services, as highlighted by Respondent 11's comment that accessibility included “the use of sign language interpretation on TV channels” and “access to physical services using ramps and so on.”

Following the question on the notion of accessibility, the students were invited to provide their responses on the notion of MA. Almost a third of the students approached the notion of MA from a broader perspective and shared general information. Comments such as "MA means ensuring access to content such as TV series, films, news and documentaries for people with disabilities" (Respondent 8) and "ensuring access to content in the media in the easiest way for those who need it" (Respondent 1) were indicative of such responses. These responses were considered to be informed. Furthermore, some students highlighted the varying practices of AD, SLI and SDH to explain the notion, as illustrated by Respondent 6's experience of watching "some videos on YouTube with AD provided for blind people" and Respondent 3's explanation of how SLI is provided on some "TV channels for hearing impaired people." These were categorised as partially informed. However, some responses did not provide any information about MA at all.

In the final question of this thematic category, the aim was to ascertain if the students knew the difference between "deaf," "Deaf and "hard of hearing." The codes created for this category were "clear distinction" (being deaf and hard of hearing), "fuzzy distinction" (being deaf and hard of hearing) and "no distinction." However, it should be noted that none of the students knew the difference between "deaf"' and "hard of hearing." Thus, these categories merely indicated their awareness of the distinction between being deaf and being hard of hearing.

A significant number of responses demonstrated a clear understanding of the distinction between being deaf and being hard of hearing, as exemplified by statements such as "deaf people do not hear anything at all and hard of hearing people tend to have variations of hearing levels" (Respondent 1) and "deaf people do not hear at all, whereas hard of hearing people can have different levels of hearing

and can also use technological devices for this purpose" (Respondent 13). Still, approximately a third of the responses revealed that the students had a vague understanding of both terms, even though they were not completely incorrect, which could be seen in Respondent 2's explanation as "deaf people are born that way, whereas hard of hearing people lose their hearing later in life." Finally, a small proportion of the students expressed that they did not know the difference between these terms at all.

At the conclusion of the conceptual questions, which were designed to assess the students' general awareness, two additional questions were posed to ascertain the percentages of students who had a disabled friend, relative or acquaintance. The objective of these questions was to determine whether their general awareness aligned with their familiarity with people with disabilities in real life. According to the results of these questions, half of the students had a friend or relative with a disability, while the other half had no such person in their immediate environment. To further refine this question, students were asked if they had a d/Deaf or hard of hearing person in their immediate environment. In a similar distribution, half of the students reported that they also knew a d/Deaf and/or hard of hearing person. The rest stated that they did not know anyone with a hearing impairment.

Following this question, students were asked to report on their knowledge of disability rights legislation. For this theme, the categories were given three codes as "not informed," "informed" and "partially informed." The first code indicated that the students had clearly expressed that they had no such knowledge. The second code meant that students were relatively knowledgeable about such legislation and have given at least two examples to demonstrate their knowledge. It should be noted, however, that responses in this category were by no means indicative of extensive

knowledge. The third code was reserved for answers that gave at least one example of such legislation.

A majority of the responses showed that the students were not informed at all about any kind of legal aspect of accessibility. However, a small percent of the students was found to be aware of the legislation, as could be seen from the explanation of Respondent 7: "People with disabilities have the right to take the exam in a classroom reserved for one person only. YÖK and MEB provide these facilities. There is also a special quota for people with disabilities in public employment." Although not as detailed as this group, some responses also showed evidence of partial knowledge with remarks such as "I know that in car parks people can get a ticket if they use a parking space reserved for people with disabilities" (Respondent 10). This question was cross validated by the use of a question aimed at gathering statistics on the students' awareness of the accessibility services provided by their university, as the closest environment to a public institution. The results showed that the vast majority of students were unaware of the provision of accessibility services at their university. However, a few students responded positively.

5.1.1.2 Specific questions on accessibility and MA

The second thematic category of Student Survey 1 included more specific questions about accessibility such as the accessibility options provided on TV and streaming platforms, features of SDH and SDH guidelines, and MA education. In this category, the students were asked if they were familiar with the accessibility options available on Turkish TV channels. More than half of the group pointed out that TV channels offered SLI as a service to their viewers, as indicated by Respondent 3's explanation

that "there are SLI options on some TV series and movies, and also in news channels. There are also cartoons with SLI for children." A small proportion of the responses included SDH as an option available on TV channels, without mentioning SLI, the most common form of MA mode on TV. Regarding the use of SDH, Respondent 9 noted that there were some "SDH options on some TV series on NOW. Especially the first episodes of the Turkish TV series are rebroadcast with SDH the day after the premiere." Furthermore, some students noted that both SDH and SLI were offered as part of accessible content on Turkish TV, as illustrated by the following comment from Respondent 12: "Some TV channels offer SLI in news programmes in the bottom right corner of the TV, while some TV series have SDH instead of SLI." Despite the majority of students showing relative knowledge of these accessibility options on TV, some students explicitly stated that they were not informed about such options as presented by TV channels.

Students were then asked if they were familiar with the accessibility options in streaming services in Türkiye. All those who explicitly mentioned a streaming service referred to Netflix, without mentioning other streaming services active in Türkiye such as Amazon Prime, Disney, BluTV, etc. Some stressed that Netflix offered SDH to meet the needs of users with hearing disabilities. Respondent 3 explained that "Netflix has subtitles on almost all their content and some of them include SDH." A small percent of the responses focused on the provision of regular subtitles rather than SDH. This can also be interpreted as meaning that these responses were actually referring to SDH but did not explicitly state so. For example, Respondent 14 emphasised that he/she "could not understand the question, but subtitles could be an option." A few students included a brief comment on the presence of AD. For instance, Respondent 4 emphasised that "AD can be an option

for accessibility as provided by captioning." This comment showed that although the student demonstrated knowledge of AD, he/she was not sure what AD was and pointed out the use of both AD and regular subtitles as accessible content, but with the same conceptual problem of not distinguishing between AD and regular subtitles. Respondent 10 noted that "AD is provided as an option for those who have a visual impairment; this option is provided in the subtitling tab within the platform." Addition ally, some responses included both AD and SDH as an option provided on Netflix. Respondent 11 emphasised that he/she knew that "AD and SDH are provided on Netflix and sometimes I use SDH when I watch a Turkish TV series or films." Also, a small percent of the students stated that AD, SDH and SLI were provided as accessibility options on Netflix, which was not correct as SLI is not an option provided on any streaming service in Türkiye. Finally, almost a third of the students expressed that they were not informed at all about such options on Netflix, even though they are subscribers to the platform.

As a follow up question to collect statistical data on students' knowledge of SDH, students were asked if they had heard the term SDH before. According to the distribution of responses, more than two thirds of the students stated that they had never heard of SDH, while only a few students stressed that they were familiar with the term. These data showed that a third of the student group did not know what they would be dealing with as part of the training. This statistic was supported by an open-ended question asking the students what kind of content SDH is used for. The responses collected revealed a potentially contradictory result. That is, almost two thirds of the students made explicit statements such as, "I do not know" or "no" when they were asked what and when SDH was used for, although a majority shared that they had heard the term SDH before. This showed that having heard it before did not

mean that they had sufficient knowledge of the notion. Additionally, some responses were categorised as informed, which included a detailed explanation of the term. For example, Respondent 7 highlighted that SDH "helps the audience understand what's going on in a scene by providing sound descriptions in parentheses. For example, when a window shatters, it explains that by adding that information." Furthermore, a few responses were categorised as partially informed because they showed a limited understanding of the term, as exemplified by Respondent 5's comment that "it's used to explain what's going on in a scene in a TV series or film." As regular subtitles also essentially aim to explain "what is going on" in a scene, Respondent 5's explanation did not make a distinction between SDH and regular subtitles and was therefore categorised as partially informed.

To ensure reliability of the data, this time the students were asked a more specific question about how SDH might be used in audiovisual content. The rationale behind this question, which may seem repetitive, was that students might think about regular subtitles and make an informed guess about SDH based on its name as "subtitles for the d/Deaf and hard of hearing." In other words, it was intended as a double check. This time some students gave a more informed answer, possibly because they had thought about possible examples by making an informed guess. Two thirds of the students admitted that they had no idea how SDH could be used, whereas a third gave informed answers such as "in addition to dialogue in a scene, sound effects are described in the form of [explosion sound]" (Respondent 8) and "when watching a horror film where a character is alone at home, sound descriptions are important" (Respondent 6).

After this question, students were asked to explain the importance of standards in SDH. It should be noted that the students were verbally informed what

“standards” meant in this question to avoid any confusion. Nevertheless, an overwhelming majority of the students stressed that they had no idea about standards and their use in SDH. Only one student showed partial information about the use of standards in SDH. Respondent 13 shared that "Netflix provides some rules to follow in SDH," but did not explain what they are and why they are important. Still, one response was flagged as informed, as indicated by Respondent 14's detailed explanation, as standards govern "when and what sound descriptions should be added to subtitles - to create atmosphere or explain the plot - or whether a note symbol should be added to a lyric and a name descriptor to identify characters.”

Following the question about standards in SDH, the students were asked to share their opinions about what might be important in subtitling guidelines. More than half of the group said that they were not informed at all about subtitling guidelines, while a third thought that there might be several rules (more than three) in the guidelines. For example, Respondent 10 pointed out that "character and line limits may be important in the Netflix guidelines, as well as a standard for fonts. Also, readability of subtitles and font sizes are other examples of such rules." These responses were categorised as “informed.” Lastly, a small percent of the responses showed partial knowledge of the guidelines by only considering the most common subtitle features, such as subtitle duration and character limits. Respondent 6 referred to these features in his/her comment as "the duration of subtitles on the screen and the number of characters per line."

In addition to these four questions about the type of content SDH is used for, the way it is used, and the standards that govern SDH practices, students were asked to answer the following two closed questions, which provided valuable statistical

data. First, they were asked if they had ever viewed content using SDH as seen in Figure 3:

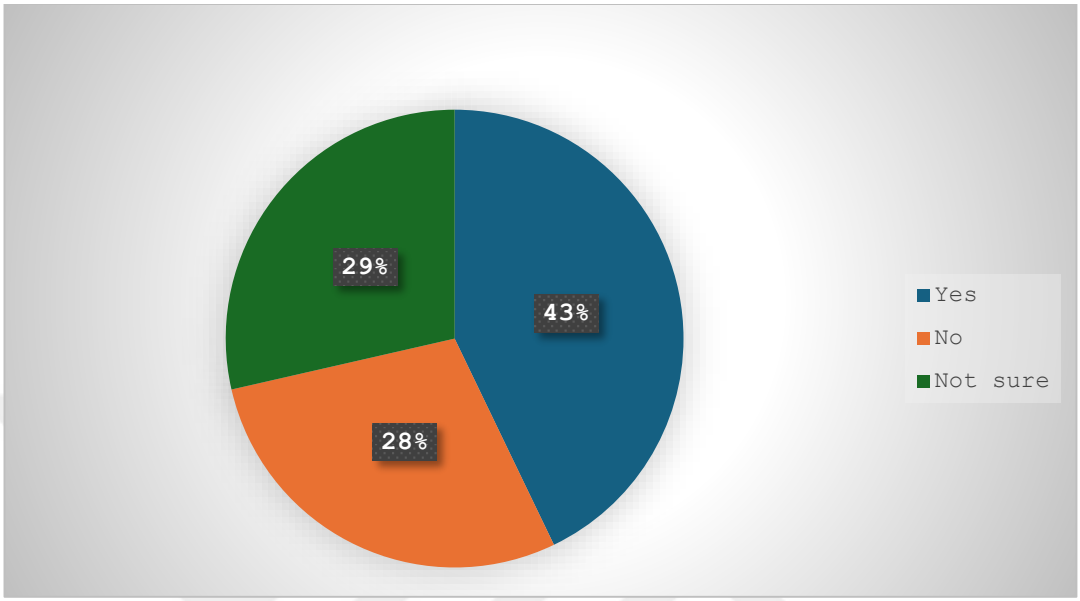

Figure 3. Percentage of students who have watched SDH content

The results showed that almost two thirds of the students never watched an SDH content, or they did not know whether they had watched it before, while a third confirmed that they had seen SDH content before. To support this question, students were then asked to rate the frequency of their SDH viewing habit, as shown in Figure 4:

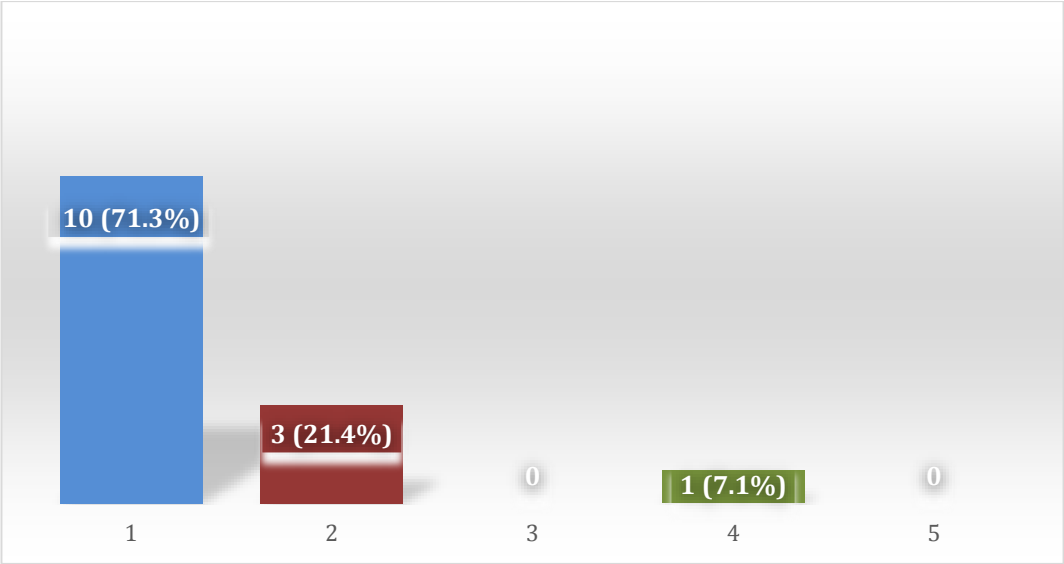

Figure 4. The percentage of frequency of SDH viewing habit

The numbers indicated that the majority of the students, with some minor exceptions, almost never watched SDH content. The statistical information in Figures 3 and 4 supported the data from the questions above about the students' lack of knowledge about the type and use of SDH content, subtitling guidelines and SDH standards, in that it showed that students were not used to viewing SDH content and so it may be natural that they do not have much information about SDH and standards. The questions on SDH continued with the presentation of more detailed questions on the link between SDH and creativity. In order to obtain statistical data on the students' opinions, they were asked whether creativity played a role in SDH. Figure 5, shared below, demonstrates the percentage of students' opinion regarding the role of creativity in SDH:

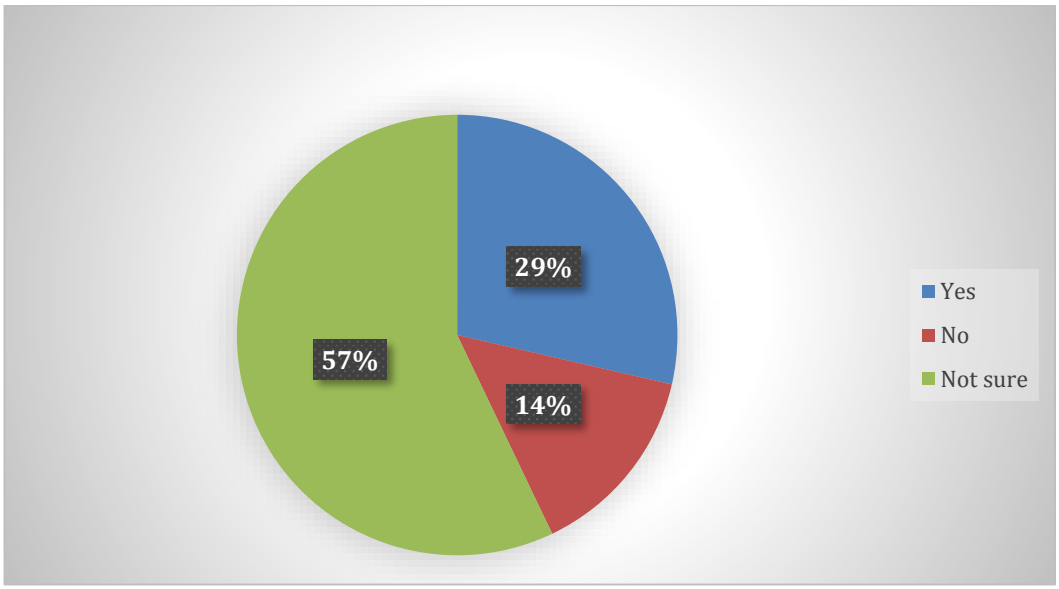

Figure 5. Percentage of students' opinion regarding the role of creativity in SDH

As shown in Figure 5, more than half of the students responded that they had no knowledge of the role of creativity in SDH or that creativity had no role in SDH at all. However, a third of the group gave a positive answer. Immediately after this question, the students were asked to answer whether there was a possible link between creativity and standards/guidelines. A majority of the responses to this question did not provide any information about such a link. However, some students explained that standards could hinder creativity, as exemplified by the answer of Respondent 6: "The translator has the freedom to translate the text according to his/her knowledge, but guidelines can tell the translator to 'stop' right there, which can potentially limit his/her creativity," Similarly, some students saw the concept of creativity as improving subtitles. Respondent 14, for example, showed the potential of creativity: "Creativity can improve the viewing experience for people with disabilities." Some included a comment focusing solely on standards, without mentioning creativity, as "Hard of hearing people may have different needs [from people without hearing impairments], so a specific guideline for SDH may be

needed" (Respondent 13). The final question in this detailed category presented students with a number of features that might be important in SDH and asked them to rate them as "not at all important" or "very important" as shown in Figure 6 and Figure 7:

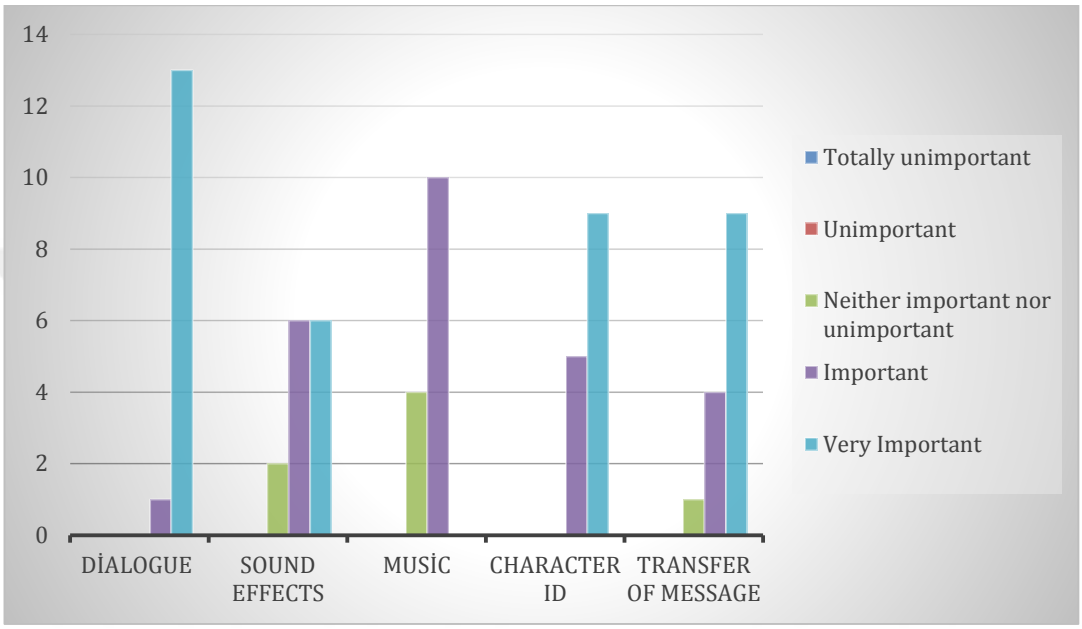

Figure 6. The distribution of students' opinions regarding standard SDH features

As demonstrated above, standard features such as comprehensibility of dialogue, description of sound effects and music, and identification of character names were rated by students as "important" or "very important". Figure 7 below reveals further information:

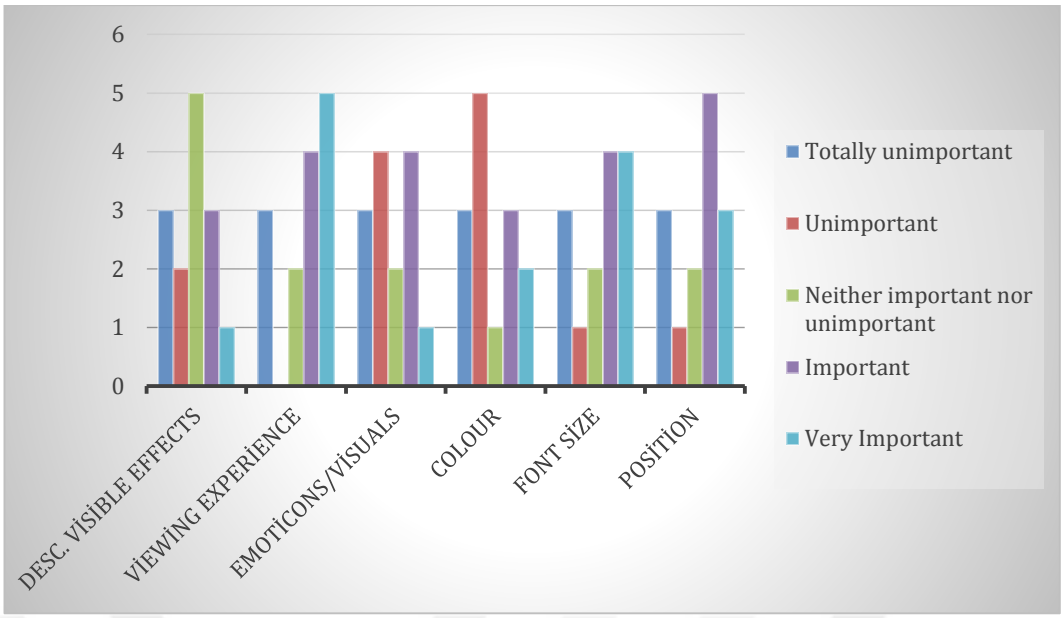

Figure 7. The distribution of students' opinions regarding non-standard/creative SDH features

However, according to the result indicated above, non-standard or creative features such as the description of what's already seen in the scene through subtitles, the use of emoticons, the colour and font size of subtitles, changes in the position of subtitles on the screen, and the viewing experience of the audience were mostly rated as "not important at all" or "not important," with some rare markings as 'important' or 'very important.' These data show that students were most concerned with standard uses of SDH rather than creative interventions, which was consistent with previous responses about the role of creativity in SDH.

The final question in this thematic category was designed to inquire about students' expectations of a possible MA course within the curriculum. It should be emphasised that at the time of 2025, the curriculum did not have such a focused course on MA or other forms of MA. On the positive side, most students gave an explanatory answer to this question, with some thematic differences. Almost half of the students emphasised that such an MA course was necessary to ensure inclusivity

in society as well as to raise their awareness as students. Respondent 5 commented on this question by emphasising that "everyone is a candidate for disability. We should not exclude anyone from society." The rest also gave similarly positive responses, but with a focus on meeting the demands of the industry to produce accessible content, as highlighted in the response of Respondent 7: "There is now and will continue to be an increasing demand for accessibility. We need quality content." However, a small proportion of the students said that they did not have an answer to this question or gave an inconclusive answer such as, "I have similar expectations for the above questions." (Respondent 1)

5.1.1.3 Discussion of the findings

The findings of Student Survey 1 have the potential to demonstrate the initial level of students' general awareness of MA, and more specifically, SDH. The results in the first thematic category showed a clear lack of awareness of accessibility and MA in general among students prior to the training process. The majority of the responses indicated a total lack of information about the notions of accessibility and MA. The responses categorised as partial tended to be limited in the sense that they focused on a few practical examples to explain these concepts without going into detail, although the students were invited to provide a detailed explanation. While these practical examples might be illustrative in some cases, they fell short of providing a conceptual understanding of these concepts and did not reflect the diversity of accessibility practices within society. Compared to the responses to the question on “accessibility” alone, the responses on the notion of “MA” could be considered slightly more informative. This might be due to the fact that the participating students were between 18 and 21 in age and can therefore be considered as “natives”

of the Internet and digital media. As such, they were more accustomed to the digital environment than to the physical reflections of accessibility in public life. The digital aspects of accessibility were therefore better known to the students, which was only natural given their digital consumption habits.

Furthermore, regarding the question about the differences between deaf, Deaf and hard of hearing, the fact that none of the students were familiar with the distinction between deaf and Deaf could be seen as a natural result, as it is likely that people who are involved with the Deaf community or MA would be more likely to recognise the distinction. However, the fact that more than a third of the students were not sure about the distinction between deaf and hard of hearing deserves attention, as this was not expert information, but rather common knowledge. Furthermore, the students' extreme lack of awareness of the legal aspect of accessibility should be carefully evaluated. It is a sensitive issue that needs to be emphasised more to encourage students' active and knowledgeable participation in society as developers and promoters of accessibility solutions.

In addition, the presence of people with disabilities in the students' immediate environment, or the limited provision of accessibility services at the university where they study, did not seem to have a positive impact on their awareness levels, as suggested by the statistical information. In other words, their exposure to accessibility services in life or having disabled friends/relatives might not be sufficient to ensure that students are relatively informed about the conceptual, legal and practical implications of accessibility in society, as discussed in the findings section. This might be due to a lack of systematic information in society, but more importantly, it might be an indication of a lack of formal and/or informal education. In any case, education seems to be a must in order to raise awareness of accessibility

and MA, a need that the data of the present study indicates.

From the perspective of the present study, a starting point may be adding accessibility and/or MA courses into the curricula of T&I departments as the places where the future of accessibility professionals can be trained. These courses can create a learning atmosphere that can encourage students to discover the wide range of accessibility and the MA within public life and produce solutions accordingly. This is in line with Greco's (2019) call for the need to create critical learning spaces for students to have a solid understanding of the "theoretical and social implications of accessibility" (p. 25). Thus, by raising such awareness among students through an accessibility course, educators can help "each human to enjoy life to the fullest," as access is functional to ensure such a possibility (Greco, 2019, p. 40).

Also, it is essential that these courses prepare students to recognise the importance of putting the needs and expectations of those with disabilities first when developing accessibility solutions as professionals, which is one of the main objectives of the present study. This goal is in line with the universalist view of MA services, which aim to focus not on a specific group, but on all people (Greco, 2018). During this educational process, involving end-users in the process, whether in terms of physical presence in the learning environment or in terms of receiving their thoughts and expectations, can help students to adopt proactive solutions rather than reactive ones (Greco, 2018). Most importantly, this information would place them in a simulated real-life context (Kiraly, 2003; Mazur & Vercauteren, 2020) and contribute to the cultivation of social, cultural and political awareness (Zhong, 2002).

The results of the second thematic category also indicated a similar lack of awareness among students at a more specific level. That is, they showed that students were not merely unaware of the social aspects of accessibility in general, but also,

they did not have much information about the modes of MA, particularly SDH. As indicated earlier, students showed a higher level of awareness of digital accessibility services, MA, than of the social, legal and physical implications of accessibility. In the second thematic category, this observation was particularly evident in the responses regarding accessibility services on Turkish TV and streaming platforms in Türkiye. However, it was interesting to see that more than half of the students identified SLI as the only common form of accessibility service on Turkish TV, while only about a third also identified the use of SDH. As discussed in Chapter 3, Turkish TV channels are obliged to provide both almost equally, and they do so both on TV and on their websites. Therefore, this response can be interpreted as a lack of awareness of the use of SDH, as could be seen from the responses to the question about the use of SDH. The fact that more than half of the students were not informed about how SDH is used was consistent with their response about SLI being the only and most common form of accessibility service on Turkish TV. It should also be noted that when asked about accessibility options in streaming platforms in Türkiye, almost a third of the students were unable to provide any information, with only a third of them explicitly referring to SDH as a service provided by Netflix Türkiye. These results were further supported by the fact that the vast majority of students had no idea about the importance of standards and guidelines in SDH, and statistical information about their viewing preferences showed that more than half of the students never watched SDH content.

The data presented here indicated that students were not knowledgeable about SDH. At the risk of generalisation, this could also apply to the majority of T&I students. However, in the age of inclusivity and increasing demand, as also pointed out by the students in the question about their expectations from an MA course, there

is an urgent need to train students, not only as aware citizens, but also as professionals who can produce accessibility options, or more specifically, SDH, the main focus of this study. Moreover, it is fair to say that SDH is the most common form of accessibility solution provided by streaming platforms not only in Türkiye but also worldwide. Therefore, a training model may be necessary to fill the gap in translation training for SDH and MA training in general. The students' lack of awareness of the relationship between creativity, standards, and SDH showed that subtitling creativity is not a topic that is covered in the curricula of T&I departments.

The training model proposed by the present study aims to address all the problematic aspects revealed by the data of this survey. Building on Romero-Fresco and Brown's (2023) call to reconcile creativity and standardisation, training centred around an audience-centred guideline that encourages creative interventions in SDH can invite students to produce user-centred SDH and enhance their viewing experience "in a creative or imaginative way," (Romero-Fresco & Chaume, 2022, p. 84). Students' responses to the question of what they might expect from an MA course showed that they were very enthusiastic about such a course and were able to justify their expectations. The fact that 40% pointed to inclusivity and awareness raising and 40% to industry demand is promising in terms of showing that their enthusiasm is realistic and well-founded. To foster creativity and create an optimal learning environment that would meet these expectations, a collaborative workshop that puts students at the centre of authentic projects as professionals of SDH solutions (Kiraly, 2006) could empower students (Hyslop-Margison & Strobel, 2007) to reach and discover a shared understanding (Adams, 2006) of MA.

The implementation of such training in a collaborative and creative manner, based on guidelines tailored to the target audience, to raise awareness of MA and to

produce user-friendly accessibility solutions, the very objective of the present study, can be considered as justified by the data provided in Student Survey 1. The results of End-user Survey 1 can also contribute to this justification by showing that d/Deaf and hard of hearing end-users need the development of such solutions, which can only be realised by training translation and interpreting students as accessibility professionals aware of their needs.

5.1.2 End-user survey 1

This section conducts a detailed examination of the results of End-user Survey 1 by drawing upon the responses provided by 29 d/Deaf or hard of hearing individuals. The survey predominantly comprised closed-ended questions, with a limited number of open-ended inquiries. The rationale behind the limited use of open-ended questions in End-user Surveys was explained in the methodology section. However, as a reminder, the rationale was twofold. Firstly, it was deemed impractical to analyse detailed explanations from 29 participants individually. Secondly, it was anticipated that requesting participants to reflect on each question in the presence of a sign language interpreter would require a considerable investment of time. Thirdly, following preliminary discussions with the participants prior to their involvement in the study, it was determined that a majority of them experienced difficulties in articulating their thoughts through written expression, particularly on subjects that were abstract and academic in nature. Consequently, the decision was made to employ closed-ended and clear questions, with a limited number of open-ended inquiries. The survey's primary objective was to ascertain the needs and expectations of d/Deaf or hard of hearing individuals, thereby contributing to the development of training in addition to the audience-tailored SDH guideline.

First, the survey gathered data on the demographical information of the participants. Figure 8 illustrates the demographic characteristics of the group by displaying the distribution of participants by age:

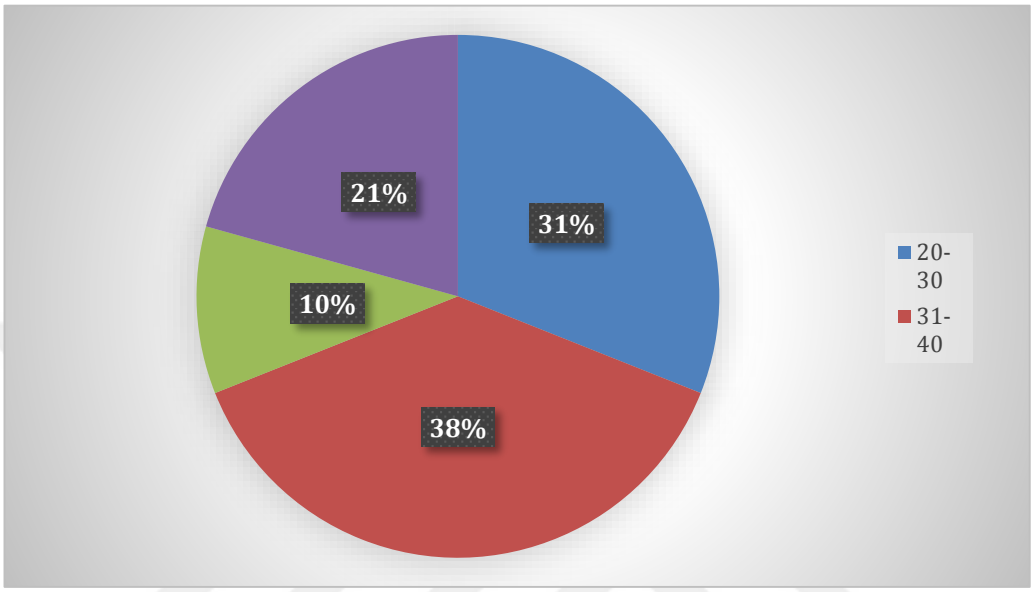

Figure 8. Age distribution of the participants

In terms of distribution, almost two thirds of the group can be regarded as relatively young. The remaining participants can be described as middle-aged or above. As further demographic information, Figure 9 below shows the distribution of participants by level of education:

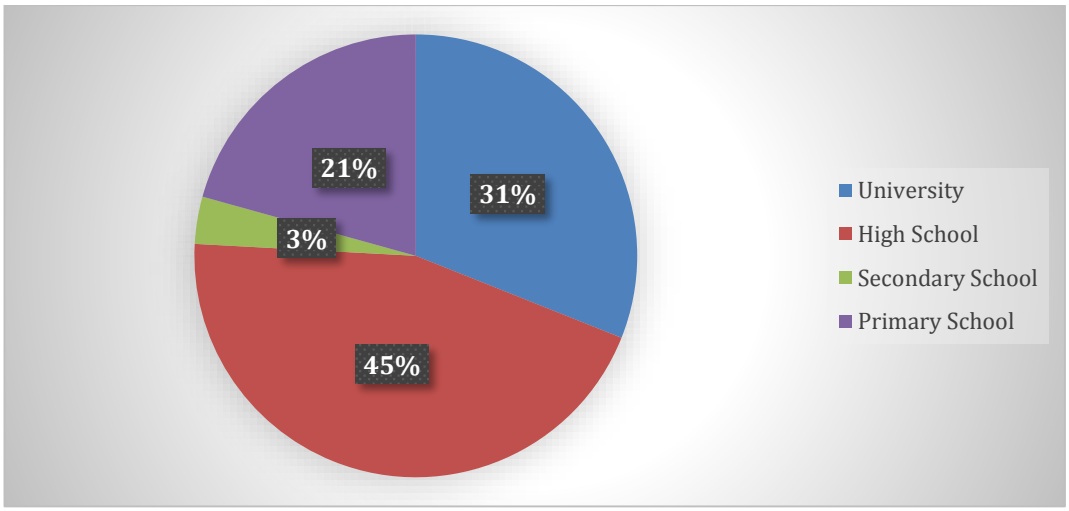

Figure 9. Distribution of the participants according to their educational level

The data show that almost half of the group had a high school diploma, while a third had a university degree. However, the rest of the group had secondary and primary education. After these two demographical questions, the participant group was first asked to share the frequency of their consumption of audio-visual content, as shown in Figure 10 below: .

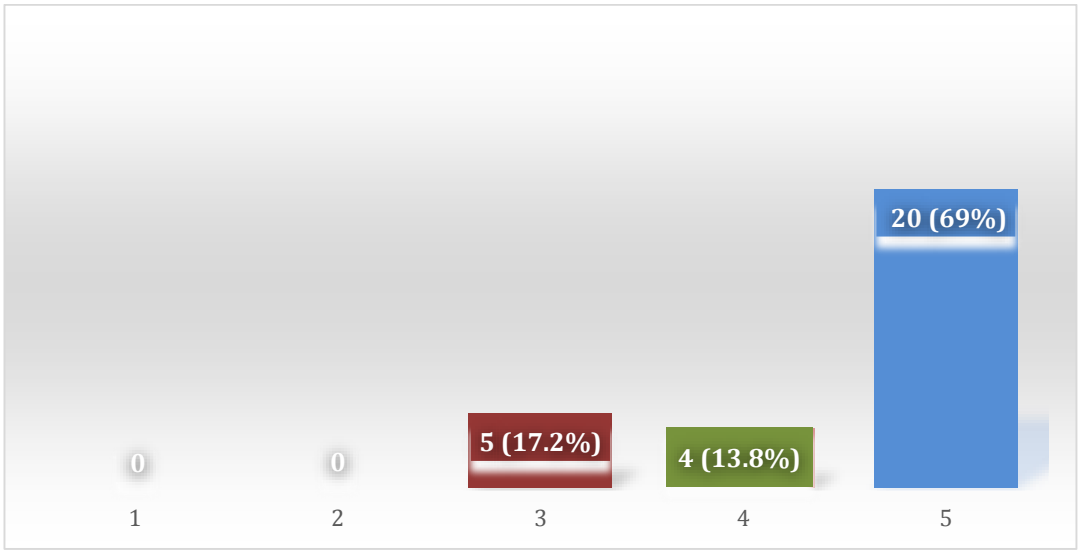

Figure 10. The frequency of the watching habits observed among the participant group

The data show that almost two thirds of participants gave full marks for the frequency of their consumption of audiovisual content, while a third of the responses gave three or four marks for their viewing frequency. Participants were then asked to list the Turkish TV channels and streaming platforms they regularly watched or subscribed to. This question was designed to elicit information about the channels/platforms in order to make an educated guess about what kind of MA services they might be exposed to. The majority of participants identified mainstream channels such as Now TV, Star TV, Show TV, TRT 1 and Kanal D, along with a number of lesser-known channels, as their preferred channels.

In terms of subscriptions to streaming platforms in Türkiye, an overwhelming majority shared that they had Netflix subscriptions. A few reported that they also had Amazon Prime Video, Disney +, and some local streaming platforms such as BluTV and Exxen. This was followed by a question asking participants whether they watched foreign or local content or both on TV and streaming platforms. The aim of this question was to identify their approximate level of exposure to intralingual and/or interlingual SDH as demonstrated in Figure 11:

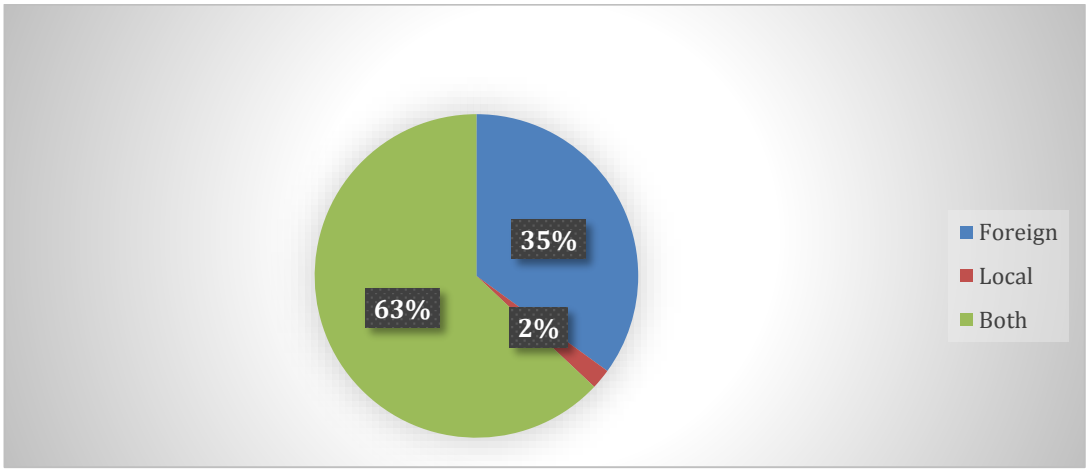

Figure 11. Percentage of participants watching foreign, local or both

According to the results in Figure 11, more than half of the group expressed a preference for watching both foreign and local audiovisual content, while a third said they only watched foreign content, with only a small percentage opting for local content only. Subsequently, a follow up question invited participants to elaborate on any perceived disparities in quality between intralingual and interlingual SDH, if applicable. While some respondents asserted that they did not perceive a distinction between intra- and interlingual SDH, a slightly higher proportion of respondents noted that interlingual SDH exhibited superior quality, as illustrated by Respondent 23's comprehensive remarks: "The quality of subtitling options in foreign content is superior to subtitles in local content in terms of both accessibility and quality, which significantly impacts the MA of people with hearing impairments," Additionally, Respondent 11 emphasised that "Subtitling quality is higher in foreign content. It is insufficient in Turkish movies and TV series. Swearing, for example, is allowed in foreign content, but forbidden in Turkish content. Plus, sound description is better in foreign content." As previously emphasised, the utilisation of open-ended questions was restricted in this survey. These shared responses might lead to a certain degree of confusion regarding their precise referent. That is to say, it was not entirely clear whether these respondents are referring to English SDH in English content when praising its quality, or the translation of this content into Turkish subtitles. Therefore, it is a possibility that they were in fact praising the translation. However, the manner of expression used by respondents suggested that they were, in fact, praising the English SDH in English content, which was also available on streaming platforms in Türkiye.

Following this question asking for their opinion on the quality of SDH for foreign and local content, respondents were asked to rate their satisfaction with SDH

services in general, both on TV and streaming platforms. Figure 12 shows the scores they assigned to indicate their level of satisfaction with SDH:

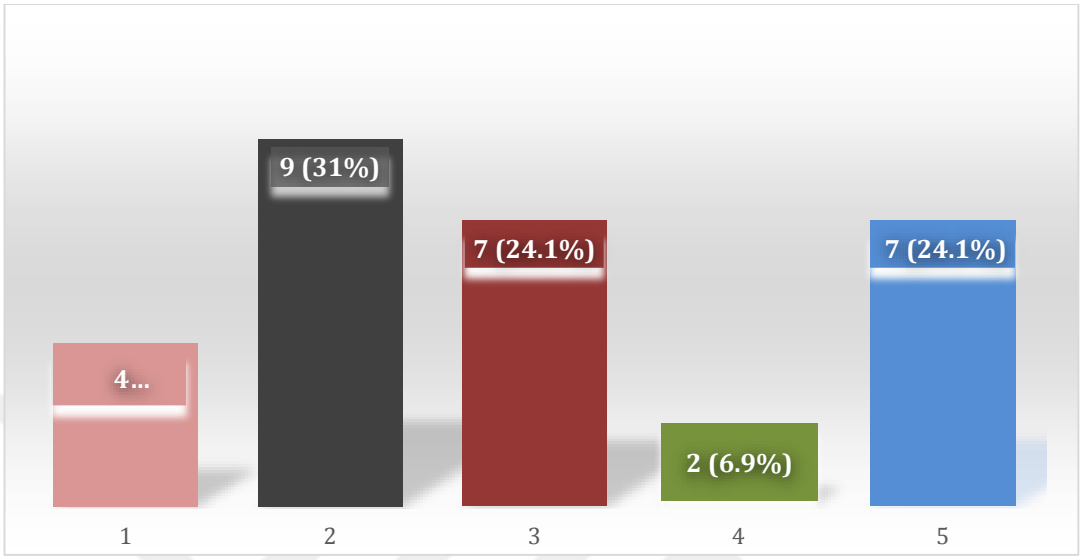

Figure 12. Percentage of respondents satisfied with SDH

The data suggest that almost half of the respondents were not satisfied with the quality of SDH. There was also a significant percentage of respondents who felt that the quality of SDH was neither adequate nor inadequate. However, there were also some participants who found the quality of SDH to be sufficient. This question was immediately followed by a question asking whether there was a need to improve SDH quality on TV and streaming platforms. In response, almost all but one participant saw a need to further improve the SDH quality of Turkish TV channels and streaming platforms broadcasting in Türkiye. This question was further detailed with another enquiring as to the participants' opinion on the possibility of SDH being developed more creatively, as can be seen in Figure 13:

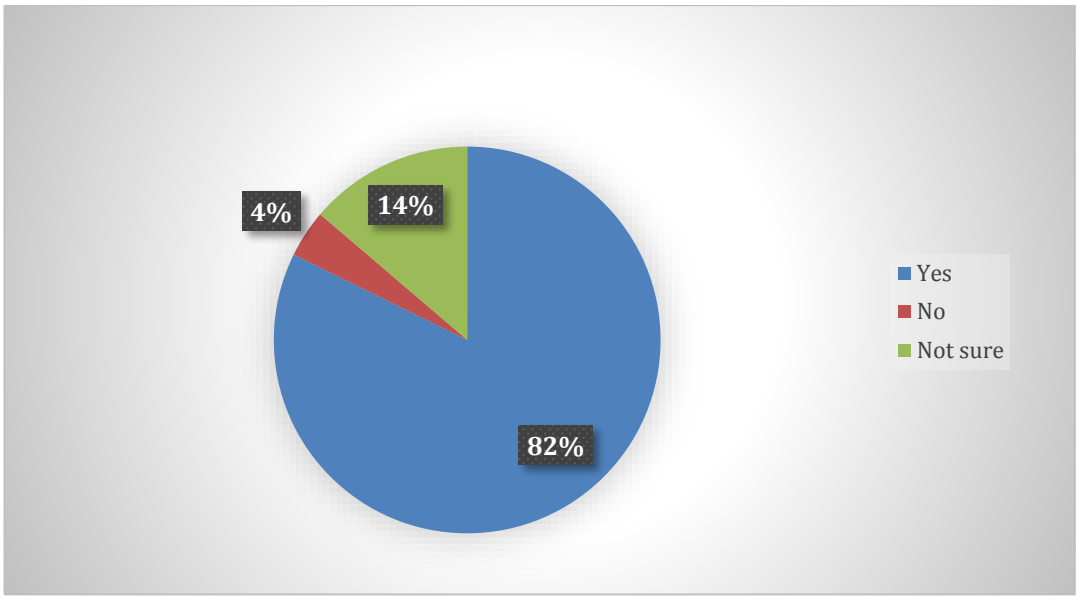

Figure 13. Participants' opinion on the development of more creativity in SDH

The data indicate that an overwhelming majority of the participants expressed a preference for increased creativity in the delivery of SDH content on TV channels and streaming platforms. However, a small proportion of the participants expressed uncertainty regarding the necessity of such an intervention, while only one participant asserted that such an attempt was not required.

The aforementioned questions, the purpose of which was to provide statistical data on the quality of SDH in general, were followed up by two open-ended questions. The purpose of these questions was to elicit the participants' opinion on what should be done to improve SDH quality and MA solutions in general. When asked what suggestions they would make to improve SDH quality, almost all participants came up with solutions. Although the majority of these were point-by-point suggestions rather than structured texts, with a few exceptions, they proved useful in expressing improvements to SDH. For instance, Respondent 1 highlighted that SDH should be “slower, bigger, and colourful,” a request repeated by Respondent 5 as “there might be colour in music. E.g. refrain parts in music may be

coloured.” Similar requests were repeated in other responses, such as "they [subtitles] should be bigger, shorter and include sound [descriptions]" (Respondent 6), and "if there is something bad, like if the character is angry, you can use colours. Sound should also be described better." (Respondent 11). Regarding the language of subtitles, some respondents expressed that "they [subtitles] should be simpler." (Respondent 21) , and "they should use proper and correct sentences." (Respondent 24). There were also structured, clearly articulated responses, as exemplified by Respondent 23's response: "In addition to the dialogue, there are background noises, music and sound effects such as a doorbell, a phone ringing or a song playing in the background. The mood and tone of the characters' dialogue should also be emphasised." Finally, Respondent 19 highlighted, "I want them [SDH professionals] to develop subtitles in a way that they would want to see on the screen by putting themselves in our shoes.

Following the SDH question, participants were asked what improvements they would like to see in MA solutions in general. Respondent 6 highlighted the need to increase the amount of SDH in general, as "sometimes SLI is distracting to the audience." However, Respondent 15 took the opposite view, stating, "SLI should be placed on a larger part of the screen and be much more popular. These should be [developed, practiced] by people who are familiar with d/Deaf culture. We should not be left alone. We want every platform to have SLI.” Respondent 20 noted that "subtitles should have a simpler and easier to understand language. Especially for my mum and dad," A more structured response came from Respondent 24, who specialises in the computerisation of SLI via AI: "First of all, all TV channels and streaming platforms should take accessibility more seriously. During the preparation phase of SDH, professionals should work with d/Deaf consultants to develop tailored

solutions to meet the real needs [of d/Deaf and hard of hearing people]. In this way the quality of SDH can be improved. There should be an SDH and SLI option in every content. There should be investment in new technologies such as the use of AI in subtitling systems and simultaneous translation/interpreting [for the d/Deaf and hard of hearing]."

5.1.2.1 The discussion of the findings

Firstly, it is important to note that the group of d/Deaf and hard of hearing people who participated in the present study showed a balanced demographic distribution with regard to age and education level. This balanced distribution in terms of age suggests that the responses did not necessarily represent the needs and expectations of a specific generation or age group; rather, they appeared to reflect the common needs and expectations of deaf and hard of hearing individuals as a whole. This is a particularly significant finding, given that the training process was informed by both audience-tailored guideline and the findings of End- User Survey 1, meaning that the training was based on data covering all age ranges. It is acknowledged that this balanced distribution did not guarantee that all age groups responded to a question in a uniform manner. To ascertain whether there was a statistically significant difference in the responses of the age ranges of the participants, a thorough analysis of the responses was conducted. This analysis revealed that there was indeed no statistically significant difference in the responses of certain age ranges. For instance, X percent of people between the ages of 20 and 30 replied to question X in a statistically similar manner to people aged 51 and over.

The participants were further characterised by a balanced distribution of educational level. A similar pattern to the age distribution was observed in the

responses of participants from different educational levels by revealing no statistically significant differences. In other words, the responses of participants with different educational qualifications were evenly distributed.

Based on these findings, it can be inferred that the responses to the questions in this survey represented a common issue among d/Deaf and hard of hearing individuals of all ages and educational levels. At first glance, one might expect a certain variance among the responses of the participants, particularly depending on their age and education. However, the questions in End-user Survey 1 were developed in a manner that would elicit generalised information about the needs and expectations concerning MA and SDH. For instance, the question measuring the frequency of viewing habits revealed a similar statistical result, with two thirds of the participants consuming audio-visual content very frequently. This suggests that, regardless of age and education, individuals frequently consumed TV or content on streaming platforms. Also, when asked to which streaming platforms the participants had a subscription to, the finding that almost 90% of the participants held Netflix subscriptions further underscores the claim that the consumption of audio-visual content was not influenced by age and education level. These survey questions aimed to ascertain the extent to which the participants consume audio-visual content. The responses rendered them eligible to offer opinions on the other survey questions, that focused on the type of content they watch, their perception of the quality of SDH and MA services, and their suggestions to improve these services.

By keeping in mind that there was no statistical difference in terms of age and education level, the discussion of the further questions highlighted intriguing results. When queried about their viewing habits, a significant proportion of the participants indicated that they consumed both foreign and local content, while approximately a

third of the participants expressed a preference for foreign content. However, it is vital to note that these data should not be interpreted as a definitive indication of the participants' viewing habits. Instead, it should be regarded as an indication of their general viewing habits. That is, while a third of the participants indicated a preference for foreign content, this does not imply a complete absence of local content in their viewing habits. Nevertheless, drawing conclusions based on these data, it can be inferred that audiences watched foreign content and were most likely exposed to interlingual subtitles and/or SDH frequently. This conclusion was further supported by the data from the open-ended question in which participants were asked to compare the quality of interlingual and intralingual SDH. As noted above, a slightly higher proportion of responses indicated that participants considered interlingual SDH to be of higher quality than intralingual SDH. Although it was not entirely clear whether these respondents were referring to interlingual SDH in Turkish or interlingual SDH in English, the fact that they considered its quality to be higher than intralingual SDH proved that the participants watched foreign content with subtitles. However, interlingual SDH is not a commonly available feature on streaming platforms with the majority of SDH on these platforms being intralingual. Given the significant proportion of participants who viewed foreign content, the enhancement of interlingual SDH, in terms of both quantity and quality, could be deemed a crucial development. The present study's insistence on the inclusion of interlingual SDH in the training process was supported by the data. The students' efforts to produce both intralingual and interlingual SDH demonstrated an attempt to pay attention to the development of interlingual SDH, which is often ignored by the industry, as emphasised by Neves (2008a) and Szarkowska (2013), whose research was discussed in detail in Chapter 2.

Furthermore, when asked how satisfied they were with the quality of SDH in general, it was seen that the majority of respondents, as end-users of SDH content on TV and streaming platforms, were not satisfied with the quality of SDH. And when asked if they would like to see an improvement in the quality of SDH, the group was almost unanimous in believing that the quality definitely needed to be improved. These results show that the aim of the present study, to train students to produce SDH in a way that meets the needs and expectations of end-users, was scientifically supported and not based on the mere assumption of the author of the present study or on previous research on the subject.

In terms of the creative aspect of the training, the data showing that a majority of the participants felt that SDH should be improved in a more creative way was further evidence that the training focused on creative SDH to meet the needs of the end-user. This statistic was further supported by the open-ended question asking for suggestions from participants on how to improve SDH. As mentioned earlier, some participants specifically mentioned the use of colour and other tools to emphasise the mood and tone of the characters, while others pointed out the need for these subtitles to also have larger fonts and slower pacing. In addition, the data from the question asking for suggestions from the participants about MA services in general showed that the d/Deaf and hard of hearing community wants to be understood and consulted in the development of such services (see. Respondent 24 and Respondent 15).

Combined with the audience-tailored guideline as discussed in Chapter 3, statistical information and explicit comments from end-users served as the basis of the training, making it based on actual empirical data from end-users. From the perspective of the theoretical framework of this study, this data-based approach is in

line with Romero-Fresco's (2021) "new approach," which puts the user at the centre as a reference, with the aim of "facilitating the user experience" and leading to "a more artistic and collaborative approach." (p. 292) Indeed, the present study represents a reconciliation of creativity and standardisation, supported by empirical research data (Romero-Fresco & Brown, 2023).

5.2 The training based on audience-tailored guideline

5.2.1 The description of the training process

The training process was conducted by the trainer, who is also the author of this thesis. The trainer, who worked as a research assistant in a T&I department, designed and delivered the entire training himself, with the participation of students selected as participants in the training. The first stage was to establish fixed start and end dates and the specific days and hours for each training session. This was to encourage a consistent training process for both the participants and the trainer. The weekly schedule had to consider the approximate dates of the surveys to be administered as part of this study. Student Survey 1 was to be administered at the beginning of the training as it aimed to assess the students' initial awareness and knowledge of accessibility. For this reason, the opening session of the training only provided a general overview of the training process, as well as presenting the consent form to the students. Apart from explicitly informing them about the general course and purpose of the training, no additional information about MA and SDH was disclosed. After signing the consent forms, the students proceeded with Student Survey 1. They were given unlimited time and encouraged to complete it in one session without any breaks. The first session ended when all surveys were completed.

In the second session the students were introduced to the software that would be used during the training. For this purpose, the students registered in Veed and AegiSub. Veed, a browser-based AI tool, was chosen because of its flexible features that would allow the students to apply visual effects if needed. AegiSub was chosen as the initial software to help students create subtitle templates from scratch and ensure synchronisation with the clips. After a brief introduction to the basics and registration with both software, the students were given audience-specific guidelines that improved upon existing SDH guidelines from SEBEDER, BBC, Netflix and DCMP. They were informed that this guideline would only serve as a general framework during the training sessions and the students were encouraged to research other SDH guidelines, existing SDH examples and all forms of creative subtitling use on the internet. The trainer reminded them of the benefits of taking personal notes during their research process, as the information they would find could be useful in their assignments. At the end of the session, the students were invited to team up with a peer of their choice and were informed that they would be working as a team rather than individually on their assignments. As a result, seven groups of two students each were formed to work together throughout the training.

At the beginning of the third session, the first results of End-user Survey 1 were shared with the students to give them an understanding of the end-users' perceptions of SDH. Students were asked to consider these results in their assignments, in combination with the target audience guide and their own research into SDH and creative subtitling examples. The students also had time to read and research extensively on SDH and creativity. They were surprised to find that SDH is a common and established practice that is taken very seriously by the industry and end-users. In particular, the creative interventions suggested by the audience-tailored

guide and the examples they found during their research process made them excited about the possibility of finding such creative ways to produce SDH in their own assignments. In the second half of the session, the first video material, *Börü* [The Wolf], was shown to the students. The six-minute video did not contain any kind of pre-produced intralingual SDH. After watching the video, they were encouraged to brainstorm with other groups around a round table in the classroom. The main focus of this brainstorming session was twofold: First, they were asked to reflect on the video to evaluate its aesthetic aspects, such as the use of sound effects, dialogue and shot changes. Secondly, they were asked what kind of creative interventions could be made to create an equivalent or similar effect in their intralingual SDH. During the brainstorming session, students were encouraged to make notes of possible solutions suggested by other groups and compare them with the audience-tailored guide. Students referred to the audience-tailored guideline during their discussion, highlighting, in particular, its emphasis on the harmonious coexistence of sound effects and dialogue on screen and their freedom as translators to "spice up the subtitles" by "using different colours to indicate certain effects" (see audience-tailored guideline in Chapter 3). Based on this premise, the students were encouraged to start working on the *Börü* clip provided to them and to present their initial work to the other groups in the next session.

In the fourth session, some groups shared the technical difficulties and obstacles they encountered with the Veed software. In some cases, their videos could not be exported at all, and they could not apply the visual effects without the subtitles being out of sync with the audio. They therefore preferred to look for alternatives such as CapCut to apply visual effects. These groups shared the benefits of CapCut with other groups and encouraged them to use it as an alternative to Veed if they

wished. In CapCut, they could also add subtitles to the programme and synchronise them with the audio, without having to use AegiSub. The trainer encouraged them to be free to use CapCut instead of Veed or to look for other alternatives, without imposing any restriction on the use of Veed or AegiSub. Referring to the audience-tailored guide and the brainstorming they had done in the previous session, some groups expressed that they would prefer to use subtitles "that flash constantly [...] to create a similar effect of fear and panic on the screen" (see Chapter 3), as shown in Figure 14 below:

Figure 14. Flashing lights to indicate ambulance siren

This solution was favoured by other groups. There was also the use of emoticons to indicate the sound of heartbeats on the scene. According to the students, this heartbeat effect was purposefully used in this scene to create tension for the hearing audience, which can be potentially described with a dynamic emoticon getting bigger and smaller at the same rhythm of the sound (see Chapter 3), as shown in Figure 15:

Figure 15. The use of a dynamic heart emoticon to indicate the sound of heart beats

Some groups, on the other hand, preferred to use “colour coding, strategic capitalisation, variations in subtitle placement and even adjustments in font size" (see. Chapter 3) to describe the scream of a character mourning for her sister in the scene, as illustrated in Figure 16:

Figure 16. The use of capitalisation and colour-coding to describe the scream of a character

In order to consult other groups on how to place the subtitles on the screen, this group prepared a video with a split screen showing both options, as illustrated above. Following the exchange of various ideas by other groups, the session ended after the groups were encouraged to continue working on their assignments based on feedback from their peers.

In the fifth session, the groups presented their work again. The discussion centred on the use of narratives, i.e. descriptive writing about a scene or between scenes, and ways of making them easier to read and understand for the end-user. As emphasised earlier, the students had been informed about end-user expectations by the data collected in End-user Survey 1. Based on this information, the students were aware of the difficulties that some participants in the end-user group had in reading subtitles. They were also made aware of their freedom to paraphrase the dialogue, contrary to what is suggested by conventional guidelines such as Netflix, as discussed in detail in Chapter 3. Therefore, the students discussed how to shorten the informative paragraph used in the opening credits of the clip, as shown in Figure 17:

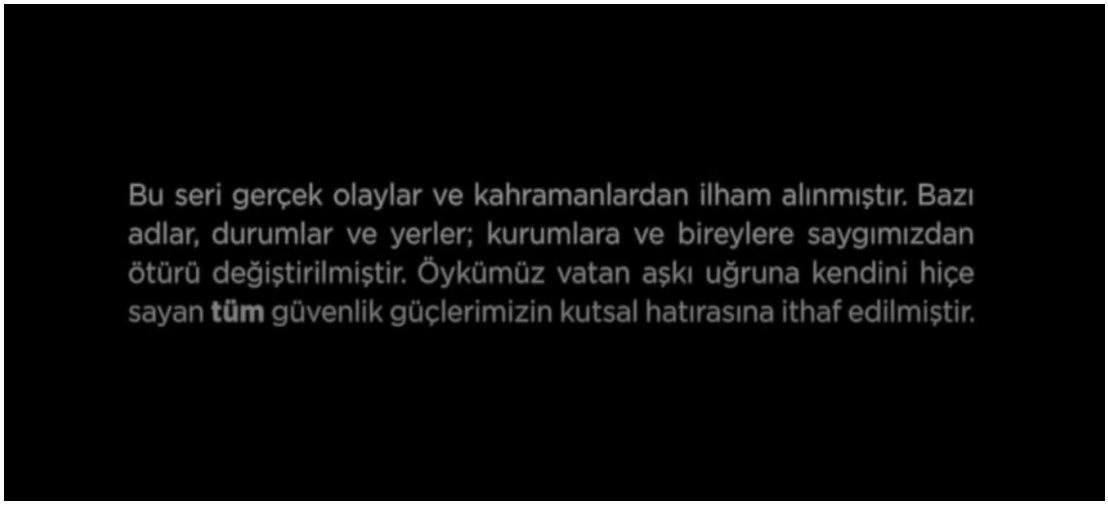

Figure 17. Informative narrative shown in the opening credits

During their discussion, the students were reminded that what they were about to do was in fact an intralingual translation, which is one of the key principles of intralingual SDH and what distinguishes it from a mere transcription of the dialogue. After much discussion, all groups decided to carry out an intralingual translation of the shared paragraph above and produced the following narrative to be added to the clip, as shown in Figure 18.

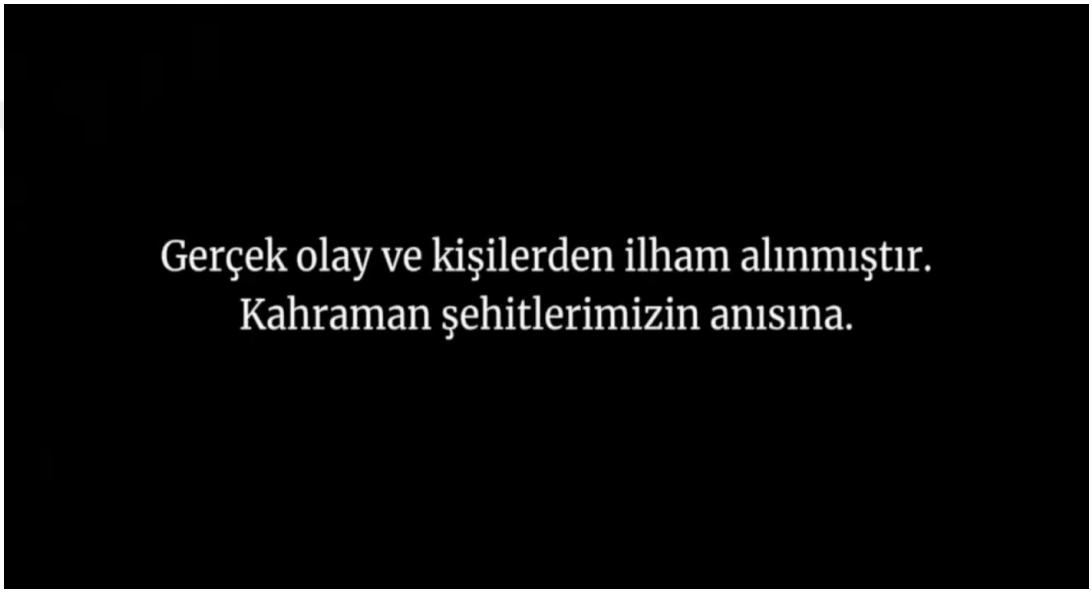

Figure 18. Narrative used in the student content

The main concern expressed by some groups was the need to preserve the patriotic message in the source text, but to do this by significantly shortening the text was a challenge for them. As a result, they concluded that there were essentially two messages in the source text. One indicating that it was inspired by real events, and two emphasising that the TV series was dedicated to those who sacrificed their lives for their country. The students also agreed that some adjectives and nouns should be kept in the target text. "Kahraman" [hero] and "şehit" [martyr] were chosen as the

most important descriptions. Also, the target text should have indicated that it was "gerçek" [real] and based on both "olay" [incident] and "kişiler" [people].

Towards the end of the session, there was a brief discussion about the need to include the lyrics of a song in the clip. It was unanimously agreed that the lyrics should be given in a dynamic way that tried to create the original effect of "flowing rhythm" at a slow tempo. Although there was no guarantee that it would reproduce the same effect, they concluded that it would look aesthetically pleasing on screen, as shown in Figure 19:

Figure 19. The lyrics described with a moving subtitling and vinyl emoticon

At the end of the session there was a vote between the groups. The most successful video was chosen by a landslide. Following the vote, two groups of seven students were formed. The first group was tasked with refining the most successful video, while the second group was tasked with quality control of the video, acting as a second controller until the next and final session on intralingual SDH of *Börü*.

At the last session of the intralingual SDH, the final video was shown with all the groups present at the session. Among the changes, the students decided to add an informative slide as indicated in Figure 20 below at the very beginning of the clip, explaining the meaning of the different emoticons and colours used. It was considered that such an introduction would serve as a helpful guide to avoid any confusion when the clip was watched by the end-users:

Figure 20. Informative slide used at the beginning of intralingual SDH clip

As shown in Figure 23, the informative slide explained the different uses of emoticons and colours in the clip. A blue record with a sad face was used to indicate that the music was sentimental, while a yellow record with a happy face emoji was used to imply that the music was upbeat. A gun emoji was also shared to indicate that there was an armed conflict between police and terrorists in the scene. A colour code was also added to describe that a narrator was speaking, rather than an ongoing dialogue between characters. Finally, a dynamic heart that grew and shrank according to the sound in the scene was used to describe the tense atmosphere.

After the completion of the intra-lingual SDH step of the training, in the seventh session, the students were invited to discuss what had been particularly challenging about working together. One of the most common issues raised was technical difficulties in implementing their ideas through the software they were using, and the extent to which they should use creative interventions. They expressed that technical difficulties were overcome when they started to discover the software through trial and error and with feedback from their peers. However, it was also noted that putting their ideas into practice was a more challenging aspect as they had to decide on the function of these creative interventions and reflect on how they would be perceived by the end-user group. It was also pointed out that the linguistic aspect of the topic was not challenging for them, except for a few lines that required extensive thinking to paraphrase, as illustrated in Figures 22 and 23. At the end of this session, which focused on the collaborative self-reflection of the group, they expressed that the technical issues were not as challenging as they had been during the production of the intralingual SDH, but that they expected translation-related problems for *Rebel Moon 2*. They were aware that the most important aspect of the interlingual SDH would be to translate it in a way that would potentially make it easier for end-users to understand.

In session eight, the students came to the session prepared in the sense that they had already tried to apply some effects to the video, but they had reservations about their translations. For this reason, the way in which they used their creative interventions was discussed first. Each group presented their work and received feedback from their peers. Most of the groups this time had a similar approach to their tasks, in contrast to the first sessions on intralingual SDH. Thus, instead of making original proposals, the groups tended to replicate their approach to

intralingual SDH content. For example, all groups agreed to put an informative slide back at the beginning of the video, as shown in Figure 21:

Figure 21. Informative slide used at the beginning of interlingual SDH clip

The groups unanimously decided to adopt as their own a creative template that would serve as a standard for both intralingual and interlingual SDH. The reason for this choice was to ensure that end-users would not have difficulty adapting to a completely different clip produced with a completely different creative design. However, despite the attempt to create a 'standard' creative template, there were some variations in the interlingual SDH, as shown in Figure 22:

Figure 22. Overlapping sound descriptors in interlingual SDH

Whereas they had previously hesitated and avoided using "too much" on-screen effect, this time they referred to the audience-tailored guideline's focus on the possibility of overlapping SDH elements on the screen. They employed interjections, dialogue and music descriptors simultaneously and used colour coding, varying positions on the screen and dynamic font sizes depending on the mood of the scene. They were also bolder in using flashing subtitles to indicate the tone of the dialogue spoken by the characters, as shown in Figure 23:

Figure 23. Subtitles indicating the tone of the character's line

In addition, as can be seen by the violin emoticon at the top left of the screen, the students decided to use a specially designed emotion to suggest the eerie feeling created by the music in this scene, the size of which changed with the tempo of the music. The ninth and tenth training sessions focused specifically on the translation of subtitles into Turkish. The groups preferred to modify their translations according to the collaborative discussions that took place during these sessions. Table 8 below shows an example of one group's translation of their interlingual SDH clip:

Table 8. An Example of Interlingual SDH Belonging to One of the Groups in the Training

It was the dedication of what would be the last dreadnought-class battleship.	Dreadnought sınıfı bir gemi için yapılan son uğurlama…
A symbolic end to an age of expansion.	…Yenilik çağının sonunu getirdi.
In accordance with tradition, the king would dedicate every ship,	Geleneğe göre Kral her gemiyi ilk yolculuğuna uğurlardı…
but not this time.	…ancak bu kez uğurlayamadı.
This would be the princess's first royal duty,	Bu Prenses' in kraliyet ailesi için ilk göreviydi.
her first official act.	Onlar için yapacağı ilk şey.
The ship would be named *Peacemaker*	Geminin adı "Uzlaştırıcı" olacaktı…
and bear her royal seal.	… ve kraliyet mührünü taşıyacaktı.
Make no mistake,	Yanlış anlaşılmasın.
I was the loyal daughter of my adopted father.	Üvey babama sadığım.
I could not betray him or	Ona ihanet edemezdim ya da…
defy him.	… karşı gelemezdim.
He had told me the princess must die,	Babam Prenses' in ölmesi gerektiğini söyledi.
and die she would.	Bu yüzden ölecekti.
My father said he would not stand by and	Babam uğruna çalıştığımız her şeyin…
watch this child dismantle the war machine we sacrificed so much for.	… bu çocuk tarafından yok edilişini izlemeyeceğini söyledi.
I had faith that Balisarius would protect me	Balisarius'un beni ve…
and the empire he so loved.	… çok sevdiği İmparatorluğu koruyacağına inanıyordum.
Attention!	[Askerler]Hazır ol!
Strange.	[Kral] Tuhaf.
Something's wrong.	Bir şeylerde terslik var.
Balisarius.	[Kral] Balisarius.
Where is the Kali? Why aren't the furnaces lit?	Kali nerede? Motorlar neden çalışmıyor?
There she is, gentlemen.	Askerler karşınızdaki kişi…
The assassin of the royal family.	… kraliyet ailesinin katili.
An off-worlder.	Dış dünyadan gelen birisi.
A cancer of ethnic impurities.	Gezegenimizin kirliliğine yol açan bir dış dünyalı.
Murderer!	KATİL!
Killer! Traitor! Snake! Scum	KATİL!
I fought my way to the shuttle	Gemiye kadar savaşarak kaçtım.

One of the first issues raised by the groups was how to translate "Dreadnought" into Turkish, particularly in a way that would not be difficult for the end-user group to understand. Translating it with its common and technical use in Turkish as "dretnot" would add too much complexity to the interlingual SDH. The students were also determined to keep the text as simple as possible so as not to overwhelm the end-user with multiple effects and challenging dialogue. Some groups also claimed to be unfamiliar with the word "dretnot" but suggested that it was a military word that should be kept in the translation. They referred to the audience-tailored guideline and expressed that it would be too patronising to assume that the end-users would not know the word "dretnot," or even if they did not know it, like any audience, they were free to do an internet search. Given that this word would also be unfamiliar to

some audiences without hearing impairments, they felt that this effect should also be maintained in interlingual SDH. As a result, they decided to use the word "dretnot" for the translation "dreadnought."

There was also some confusion about the word “dedication.” The students were not able to understand its exact meaning in this context. As can be seen in Table 8, one group interpreted it in exactly the opposite way (as did some other groups), translating it as "son uğurlama," which would actually imply the decommissioning of a ship. In this case, the trainer encouraged students to re-evaluate the context of the scene and conduct deeper research in class. After researching the translation in class and discussing it with other groups, they decided that it had exactly the opposite meaning. So, it was translated as "sefere başlama/çıkma töreni" [maiden voyage]. However, for the translation of "...dismantle the war machine for which we have sacrificed so much," the same group softened the original meaning by translating it as "...uğruna çalıştığımız her şeyin" [Everything we have fought for]. Firstly, it failed to emphasise that the character was not talking about something innocent or just, but about a “war machine” that would inevitably bring destruction. When the students were alerted to discuss the translation of this line, the groups failed to recognise the potential misrepresentation of the line and thus of the character. To avoid imposing a decision on them, the trainer refrained from suggesting a translation to replace this one.

Another example of a similarly problematic use was the group's translation of the line "a cancer of ethnic impurities" as "Gezegenizimin kirliliğine yol açan..."[Causing the pollution of our planet]. The original line openly presented a racist idea that positioned a particular ethnic group as the "defilers" of an idea of ethnic "impurity." In their translation, however, the group turned this crucial line into

a complaint about environmental pollution. Thus, what was represented by the character uttering this line and the racist worldview presented in the plot was completely erased by a mistranslation. On the contrary, it positioned the character as a defender of his planet's environment. When the trainer invited the groups to re-evaluate the translation due to a possible omission in the meaning, they concluded that the character was actually talking about something completely different. After discussion, the final translation added to the interlingual SDH was “Etnik saflığın içinde bir kanser” [A cancer among the ethnic impurity], which reflected the equivalent message of the original.

After several revisions of their translations, the students finally decided which translation to use. A brief excerpt of the final translation is illustrated in Table 9 below:

Table 9. The Final Translation of *Rebel Moon 2* Clip

It was the dedication of what would be the last dreadnought-class battleship.	Dretnot sınıfı son savaş gemisinin sefere başlama töreniydi.
A symbolic end to an age of expansion.	Genişleme çağı artık bitiyordu.
In accordance with tradition, the king would dedicate every ship,	Gemileri ilk seferine hep Kral uğurlardı.
but not this time.	Ancak bu kez öyle olmadı.
This would be the princess's first royal duty,	Tören, Prenses’ in ilk kraliyet görevi olacaktı.
her first official act.	İlk resmi görevi.
The ship would be named *Peacemaker*	“Barış Getiren” adı verilecek gemi
and bear her royal seal.	Prenses’in mührünü taşıyacaktı.
Make no mistake,	Üvey babamın sadık kızı
I was the loyal daughter of my adopted father.	olduğuma şüphe yoktu.
I could not betray him or	Ona ihanet edemez
defy him.	ya da karşı gelemezdim.
He had told me the princess must die,	Babam Prenses’ in ölmesi gerektiğini söyledi.
and die she would.	Bu yüzden ölecekti.
My father said he would not stand by and	Uğruna çok şey feda ettiğimiz savaş makinesi,
watch this child dismantle the war machine we sacrificed so much for.	bu çocuk tarafından yok edilemezdi.
I had faith that Balisarius would protect me	Balisarius’un beni ve
and the empire he so loved.	çok sevdiği İmparatorluğu koruyacağına inanıyordum.
Attention!	Hazır ol!
Strange.	Tuhaf.
Something's wrong.	Bir terslik var.
Balisarius.	Balisarius.
Where is the Kali? Why aren't the furnaces lit?	Kali nerede? Kazanlar neden çalışmıyor?
There she is, gentlemen.	Beyefendiler, karşınızdaki kişi
The assassin of the royal family.	kraliyet ailesinin katilidir!
An off-worlder.	Bir dış dünyalı.
A cancer of ethnic impurities.	Etnik saflığın içinde bir kanser!
Murderer!	Katil!
Killer! Traitor! Snake! Scum	Katil! Hain! Yılan! Pislik!
I fought my way to the shuttle	Savaşarak uzay mekiğine kaçtım.

Similar to their intralingual SDH tasks, the groups held a voting session to choose the most popular clip. This time there were several favourite clips. So, when it was not possible to choose the best among them, the students decided to use one of the clips as a template and apply effects and add translations accordingly. Two groups of seven students were formed. The first group was tasked with adding the required features and the second group was tasked with performing QC on it. In the eleventh session, all groups watched the final video and decided to submit it for evaluation by the end-users. In the final session of the training, Student Survey 2 was administered to the student groups. After completing the survey, the students were invited to share their thoughts about the training orally. Finally, the trainer closed the 12-week training after a general evaluation of the whole process.

5.2.2 The discussion of the training process

The training process lasted a total of 12 weeks. The aim of the training was to implement MA training, more specifically SDH training with the CMA approach by Romero-Fresco (2021). Essentially, the purpose of the CMA approach is to improve the end-users' experiences when consuming accessibility products in a way that meets their needs. Greco's (2018) call for a universalist, user-centred and proactive approach fits perfectly with Romero-Fresco's perspective. Both researchers draw attention to the pedagogical representations of these perspectives towards MA. Greco (2019) noted the need to equip students with a "critical attitude required by the theoretical and social implications of accessibility" (p. 25) and to develop a model around this understanding. Romero-Fresco and Brown (2023) support the idea of a MA training based on a balance between standardisation and creativity. However, their proposal is not a call to move to a completely creative perspective in MA

education, but rather an invitation to researchers to find a solution that balances existing industry standards and creativity.

As discussed and presented in Chapter 3, the audience-tailored guideline created by the author of this thesis served as a reconciliation between standardisation and creativity by placing the emphasis on SDH training. In the attempt to propose a training model with a user-centred and CMA approach that improved on the standard guidelines, the way in which this training was delivered played a crucial role. How could this training be delivered in a way that would stimulate the creativity of the students and encourage them to create user-centred and creative solutions? A social constructivist pedagogy was considered to be highly effective in this sense for a number of reasons. Developed by L.S. Vygotsky (1980), the social constructivist approach essentially promotes a learner-centred model where the role of the teacher is seen as a guide. In this perspective, knowledge is not given but constructed through social interaction and collaboration with others. Learning in this perspective is "an active process of uncovering and acknowledging shared understanding" (Adams, 2006, p. 47). In this process, the instructor empowers students by creating a learning atmosphere that allows them to use their autonomy in the process in collaboration with others. (Hyslop-Margison & Strobel, 2007). Donald Kiraly (2000; 2003) points to the potential of a social constructivist pedagogy in translation education. According to Kiraly, translation can be taught in a way that allows students to engage with the complexity of real-life scenarios in a dynamic and interactive process. This perspective is supported by Yong Zhong (2002), who stresses that teacher-centred translation education would result in the training of students as "mindless, unthinking and mechanical language facilitators" (p. 577).

Zhong (2002) emphasises the potential of student-centred and interactive translation education, where the teacher plays a role as a facilitator of learning.

The above-mentioned training process was an attempt to combine these two lines of theoretical proposals, CMA-based/user-centred MA training and social-constructivist translation education. These two methods were put into practice in the training in various ways that were indicative of these theoretical propositions. Students were provided with an audience-tailored guideline, but they were explicitly informed that this would only serve as a general reference for them. Students were encouraged to do their own research and brainstorm their creative ideas with their peers in a round table format. Each group tested their creative proposals using a variety of software and presented them for peer evaluation. This guideline-based, yet flexible and creative approach, can be seen as a kind of balancing act between standardisation and creativity. During the training, the trainer facilitated discussions between the groups, refraining from imposing information directly. However, whenever necessary, the trainer guided students with his feedback in the form of "assisted bootstrapping" (e.g. to re-evaluate the translation of a word and informing them about the results of End-user Survey 1), which was a part of "scaffolding" as suggested by Kiraly (2000). Through their discussions and presentations, the students were able to construct their own meaning in a dynamic and interactive way. They had used their own decision-making process to arrive at solutions, which should have encouraged critical and autonomous thinking among the students. Also, the fact that they were informed about the connection of this training to a real end-user group who would test their assignments, made the students believe that they were actually working on a real-life scenario. They were aware that they needed to be end-user oriented from the beginning of the training. During the discussions, the focus was on

presenting their creative ideas in a way that would be highly appreciated or preferred by the end-users. This understanding turned the group of students into a real team of "professionals" working to ensure that their intralingual and interlingual SDH content met the needs and expectations of their "target audience,". In addition, with the teacher acting to some extent as a bridge of communication between the students and the end-users, the students were able to collaborate not only with their peers but also with the group of d/Deaf and hard of hearing people. Although this was a secondary form of communication, the results of Student Survey 2, as presented in the following section, indicated that students were aware of the importance of communication with end-users.

Despite the overall positive experience, it should be noted that significant challenges were encountered throughout the training process. For instance, students initially struggled to get used to the software they were presented with and thus switched to software of their choice (e.g. CapCut) to bring their ideas to life. Even when using this software, they encountered significant technical challenges when rendering the videos into their final form. In some cases, when they wanted to reflect on their peers' feedback and apply their suggestions to their own videos, they encountered physical limitations in the software. In other words, some suggestions could not be put into practice. One such suggestion was to add a mid-level creative SDH to the videos that would serve as a bridge between standard and creative SDH. However, due to methodological limitations of the present study and technical difficulties in adding such a customisation option to videos, this was not easily realised.

Another difficulty was ensuring harmonious teamwork. Although collaboration was an overall successful and satisfying experience for the students,

there were some personal and creative differences. Personal difficulties involved in this included following a disciplined schedule for delivering tasks or dividing work among peers. Difficulties related to creativity were the result of the different approaches embraced by each group of students (and within groups), which is only natural in a collaborative translation process.

Also, some students noted that, although they enjoyed the creative aspect, the technical and technology-related elements challenged their skills. However, some students expressed that they had difficulty expressing their ideas clearly and in a manner that was easy to understand, or coming up with alternative solutions that were outside the box.

From a methodological point of view, the training process allowed the trainer, the author of this thesis, to position himself as an observer of the dynamic relationships between the participating students. During the 12 weeks of training, each session provided a real-time opportunity for the researcher to become highly personally involved and thus closely involved in participant observation. In the field of research, in this case the classroom where the training took place, there was an intense "engagement with the object of study" (Koskinen, 2008, p. 37). The personal involvement of the researcher, the weekly interaction with the participants in an actual physical environment, the observation of their production process at every step would be sufficient to claim that the training process was methodologically an ethnographic one. As defined by Koskinen (2008), "ethnography is a holistic study of a particular culture or community, and the aim is to attend to the everyday details and routine text production as well as to the wider social context." (p. 37) It can be argued that the participants in the training gradually moved from groups of students to a community acting as SDH professionals to develop content for a real audience.

Their method of production, i.e. presenting and discussing creative ideas and putting them into practice, paved the way for the observed positive change in their general MA awareness, as discussed in the following section on Student Survey 2. In other words, the researcher had the opportunity to witness and observe both the "everyday details of text production" and its "wider social" implications for the participating group. In addition, through Student Survey 1 and Student Survey 2, the perspectives of the participating students, acting as SDH professionals, were collected and subjected to rigorous analysis to support the main research questions of the present study, which further positions the present study as a form of ethnographic research. It can also be argued that ethnographic research and a social constructivist pedagogical perspective are mutually supportive due to their commonalities such as the role of the teacher as guide/observer, the focus on the process itself rather than the end product, and the attention given to the opinions of the participants/students in their natural environment, the classroom.

5.3 The analysis of the second set of instruments

5.3.1 Student survey 2

This section presents the findings from Student Survey 2, which draw on responses from 14 T&I students who participated in the training. The survey's objective was to pose students similar questions to those in Student Survey 1 to identify any changes in accessibility and MA awareness following the training. The use of similar questions was considered essential to ensure comparability between the two surveys. However, these questions were not identical for two reasons. First, students were encouraged to respond from a broader perspective by making connections between different dimensions of accessibility. Second, their responses to the same questions

would naturally be more informed, as they might have conducted research on the internet or discussed their answers with one another. Furthermore, Survey 1 incorporated both open-ended and closed-ended questions. Responses to open-ended questions were manually coded and then analysed. These responses were supplemented by the examples of student responses and statistical information acquired via closed-ended questions. It should be noted, however, that some open-ended questions were not subjected to manual coding and instead were analysed qualitatively without additional quantification. The themes and codes generated for questions of the survey are displayed in Table 10 below:

Table 10. Codes Generated for the Open-Ended Questions in Student Survey 2

Themes	Codes
General Questions on Accessibility and MA	
The notion of MA	Informed: 64.29% (n=9) Partially informed: 28.57% (n=4) Not informed: 7.14% (n=1)
Challenges that people with disabilities may encounter in public life	Physical and communicative: 57.14% (n=8) MA (access to digital and non-digital information): 35.71% (n=5) Not informed: 7.14% (n=1)
Potential accessibility solutions for d/Deaf and hard of hearing individuals at universities	Accessible course materials/courses on accessibility: 35.71% (n=5) Information accessibility: 35.71% (n=5) Not informed: 28.57% (n=4)
Specific Questions on Accessibility and MA	
Ways to enhance the quality of SDH on Turkish TV and streaming platforms	Informed: 64.29% (n=9) Partially informed: 21.43% (n=3) Not informed: 14.29% (n=2)
The way SDH is used in accessible content	Informed: 57.14% (n=8) Partially informed: 42.86% (n=6)
The importance of standards in SDH	Informed: 50% (n=7) Partially informed: 7.14% (n=1) Not informed: 42.86% (n=6)
The important rules in subtitling guidelines	Informed: 50% (n=7) Partially informed: 21.43% (n=3) Not informed: 28.57% (n=4)
The link between creativity, standards, and SDH guidelines	Standards limiting creativity: 28.57% (n=4) Creativity as enhancement: 35.71% (n=5) Standards meeting the needs: 21.43% (n=3) Not informed:14.28% (n=2)

In the subsequent section, the survey results are examined in detail in a descriptive manner. These findings are then subjected to inferential analysis by focusing on their consequences for the present study.

5.3.1.1 General questions on accessibility and MA

The initial thematic category of Student Survey 2 comprised a series of general questions designed to identify any positive changes in the students' general awareness of accessibility and MA in comparison to their responses in Student Survey 1. Rather than reiterating the same questions as in Student Survey 1, this thematic category incorporated a mixture of questions to encourage students to provide a more comprehensive response encompassing all aspects of accessibility, including social, legal and practical dimensions. The following explanations may illuminate the rationale behind this choice.

Students were encouraged to conduct in-depth research on the internet regarding accessibility and MA immediately after Student Survey 1 if they had any questions in mind. Considering this, if the same question about "legislation concerning people with disabilities" were asked again, the answers would be naturally more informed. Students might have simply searched the internet and learned all about the legislative aspect of accessibility, which would have nothing to do with the type of learning that occurred as a result of the training. Similarly, if the question regarding the distinction between "deaf," "Deaf" and "hard of hearing" were to be reiterated in Student Survey 2, students would be able to distinguish between these terms, having promptly researched the topic online following the completion of Student Survey 1. Consequently, their responses would not be a reliable indicator of the training process's efficacy in enhancing student awareness.

In the category of general questions, students were first asked to share their opinion on the notion of MA in detail. Two thirds of the students gave an informed answer in the sense that they were end-user oriented and took into account the production process of accessible products. For example, Respondent 6 expressed that MA meant "the right of people with disabilities to access media products on an equal basis with those [who are not disabled]. The content of the media may be different, but if that content is developed with the needs of people with a particular disability in mind, you can ensure their access to the media." Similarly, Respondent 14 described MA as "making media products more understandable for those who have a hearing or visual impairment. Making them more enjoyable and accessible can improve the quality of the end-user's experience when viewing this content." A third of the responses were classified as partially informed, as they indicated some knowledge of MA, but at a very basic level, as exemplified by Respondent 13's answer, "MA means that people with disabilities can access media," or Respondent 2's reply, "It means that people with disabilities can consume media products." Finally, only one student gave an answer that did not provide meaningful information.

Following the question on the notion of MA, students were asked to share their thoughts on the challenges that people with disabilities may face in public life. The responses to this question showed that students approached the term “public life” by taking the combination of legal, social, physical, digital and communicative dimensions of accessibility into consideration. More than half of the responses focused not only on the physical challenges, but also on the communicative challenges that these individuals may face in public life, as evidenced by comments such as, "The lack of sign language interpreters to ensure communication between people with disabilities and public officials may result in people with disabilities not

being able to explain their problems. Also, the use of ramps in banks, public offices and buses can facilitate physical access." (Respondent 1) A third of the students highlighted the difficulties that people with disabilities may have in accessing digital and non-digital information in public life. In this sense, Respondent 7 pointed out, "In public life, information is produced in a standardised way, which makes it difficult for people with disabilities to access information. This is also an issue in working life. People [who are not disabled] get a good education and can easily take advantage of work opportunities, but this is not the case for people with disabilities because they may not have received a good education and therefore cannot find a good job." Finally, only one student was not able to give any information on this question.

In the last question in the general questions category, students were invited to answer a closed-ended question that was also asked in Student Survey 1. They were encouraged to provide information about the availability of MA services at the university where they were studying by answering "yes,", "no" or "don't know,", as shown in Figure 24:

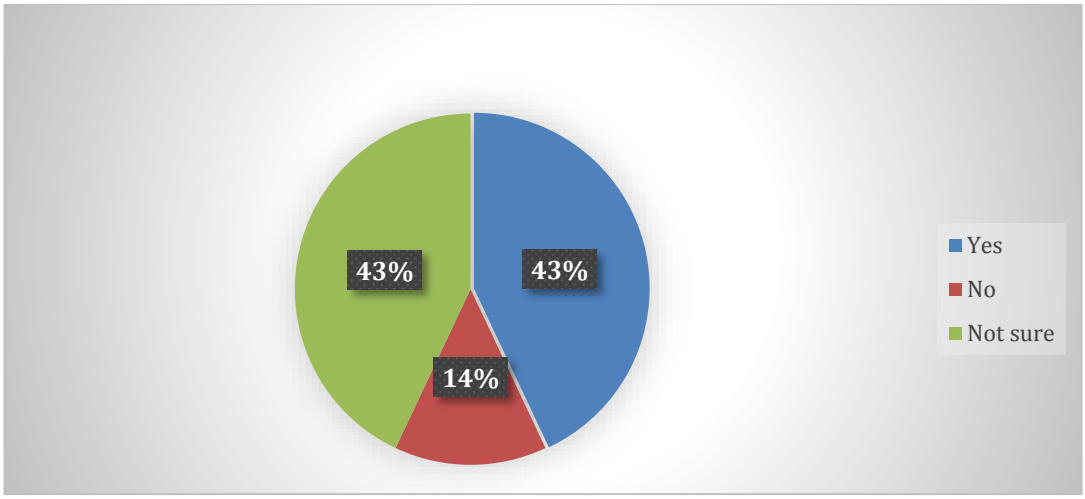

Figure 24. Percentage of students aware of the MA services provided by their university

As shown in the data, responses varied: some participants acknowledged the existence of such services, while others expressed uncertainty or explicitly denied their existence. This question was immediately followed by a question asking them to think about possible MA solutions that might be offered at the university. In this question, some students focused on the development of accessible course materials and/or the need to include accessibility courses in the curriculum. Respondent 3 highlighted the need to make courses accessible by commenting: "Students with hearing impairment may have a serious problem understanding the lecturer. The provision of SLI may be necessary for such courses." Also, Respondent 8 stressed that it was important to update the curriculum with courses "that would help [them] to integrate SLI and accessibility in general into our everyday life." Also, some responses dwelt on the importance of ensuring that students with disabilities have equal access to information at the university, as indicated in the response of Respondent 5: "The university should employ sign language interpreters, add audio description to its websites and ensure that notifications are provided to facilitate understanding for students with visual impairments." However, almost a third of the students stated that they had no idea and provided no information.

5.3.1.2 Specific questions on accessibility and MA

In the second category consisting of more specific questions, students were asked to express their opinions about the use of SDH, the relationship between SDH, standardisation, and creativity, and their expectations of MA training. They were first encouraged to reflect on how and when SDH could be used in audiovisual content, a question also asked in Student Survey 1. The responses indicated that more than half of the students were aware of SDH. As an example of what was considered to be

"informed," the answer of Respondent 1 may be illustrative: "A note symbol can be added at the beginning and end of the text if there is music in the content. Sounds that may be relevant to the plot may also need to be described. For example, in a horror film, the squeaking of a door may be important to add a sense of horror, but this may not be the case for a film about village life." Another example was the comment made by Respondent 7: "It [SDH] is used to convey important sound effects in addition to dialogue [...] It is also used, for example, to indicate shouting, a bomb falling, tense moments, screaming or doors closing". Furthermore, more than a third of the responses to this question were categorised as "partially informed," as they only reflected a general awareness of what SDH is, rather than going into detail. The following responses would be good indicators of this category: "SDH is used in movies, TV series and video games to ensure MA." (Respondent 4) or "It can be used in almost all types of audio-visual content." (Respondent 12).

In order to elicit more detailed responses, this time the students were prompted, unlike in Student Survey 1, to indicate what improvements could be made to enhance the quality of SDH. Almost two thirds of the responses proved to be "informed" by providing detailed explanations to the question, taking into account the needs of the end-users. Respondent 7's approach to the question was indicative of such an approach: "First of all, we need to be sure that we are developing a product that meets the demands and needs of our target audience. If necessary, we may need to contact a large group of end-users to get concrete data and develop solutions accordingly. In other words, rather than working with our assumptions about their needs, it can be beneficial to work in sync with our target audience." Moreover, there were some responses that provided partial information, as exemplified by the comment made by Respondent 2: "The biggest step would be to increase the amount

of SDH on TV channels and content. According to my observation, there are quite a few." Although this response may appear to be "informed," rather than “partially informed,” it lacked a concrete suggestion and merely points to the insufficient amount of SDH and the need to increase the quantity of SDH. Finally, a few students stated that they had no information or gave an answer that had nothing to do with the question, as in the case of the following statement: "Only one TV channel offers SDH. We see SLI in the bottom corner of the screen." (Respondent 12).

Following questions on how to improve SDH quality, students were asked to share their opinion on the importance of standards in SDH. Half of the responses to this question were classified as informed, as indicated by Respondent 2's response: "As an example of standards, square brackets are used in SDH to identify characters that were not present on the screen or to describe sounds. Similarly, Respondent 8 noted, "When identifying who's speaking on a particular scene, [name of the characters] dialogue' is preferred. A similar format is also used when describing sound effects. These are important because knowing who's talking and how sound effects serve the plot of the film is crucial to understanding the whole story." Furthermore, one response showed partial information about the standards. The following response from Respondent 5 was indicative of this category. It centred around standardisation and SDH but did not give concrete examples or highlight why SDH were important: "Each media company has its own standards, but we cannot know how they set the standards. It is crucial to contact SDH users when developing SDH." Finally, the remaining responses indicated that they had no information about the role of standards in SDH. An example would be the explanation by Respondent 3: "As far as I know, SDH does not have standards like regular subtitle guidelines."

Subsequently, students were invited to reflect on what might be important in subtitling guidelines. Similarly, half of the students gave responses that displayed their knowledge of some important rules stipulated in subtitling guidelines. Respondent 1 listed some of these rules as "Character limits, line limits, rules on how to break sentences by paying attention to conjunctions, restrictions on the use of vulgar language, and special instructions on how to spell out numbers." Some responses to this question, on the other hand, were labelled as partially informed. These responses provided some information about subtitling guidelines, but they were either too vague or referred to only one basic rule as exemplified by the responses of Respondent 6 and 3 respectively: "Character limits. It is important to consider the end-user" and "As far as I know, Netflix has a subtitling guideline. E.g. character limit." Finally, a third of the students explicitly stated that they had no information at all.

Following the questions concerning standards and guidelines pertaining to SDH, students were invited to provide their reflections on the relationship between SDH and creativity. To ascertain whether a shift in their perception regarding the role of creativity in SDH had occurred during the training process, students were encouraged to respond to the subsequent question, which was also asked in Student Survey 1.

The results showed that a significant majority of students (92.9%, n=13) believed creativity plays a pivotal role in the production of SDH. Conversely, only 7.1% (n=1) expressed the opinion that creativity is not important in SDH." Immediately after this question, students were asked whether they saw a link between creativity and standards/guidelines. The responses showed a positive distribution in terms of focusing on different perspectives on the relationship

between creativity and standards/guidelines. For example, a third of the students stressed that standards could be a barrier to creative solutions. In this sense, Respondent 12 shared one of his experiences during the training process: "I think standards can hinder creativity. In fact, we have seen [during the training] how far we can go in creating SDH. For example, we were able to create the effect of excessive bass in a scene by adding a swinging effect to the screen." Also, more than a third of the responses identified creativity as a way of improving the viewing experience for the audience, an approach consistent with the view that standards limited creativity. In this sense, Respondent 8 noted that "using creative graphics such as emotions to describe a siren sound can significantly enhance the viewing experience for the audience." There were also some responses that highlighted the need to find a balance between creativity and standards and that standards can indeed serve the needs of the audience. Respondent 10 highlighted that "different visual effects can be used to convey the emotion in a music or sound effect. These creative interventions may need to have some standards. This may show the link between creativity and standards." However, one student clearly stated that "one should focus on the needs and meet those needs as best as possible" without expressing any opinion regarding the question specifically (Respondent 5), and another shared that he/she was not sure if there was a link between creativity and standards. After this question, students were invited to rate which SDH features they deem to be relatively important as illustrated in Figure 25 and Figure 26:

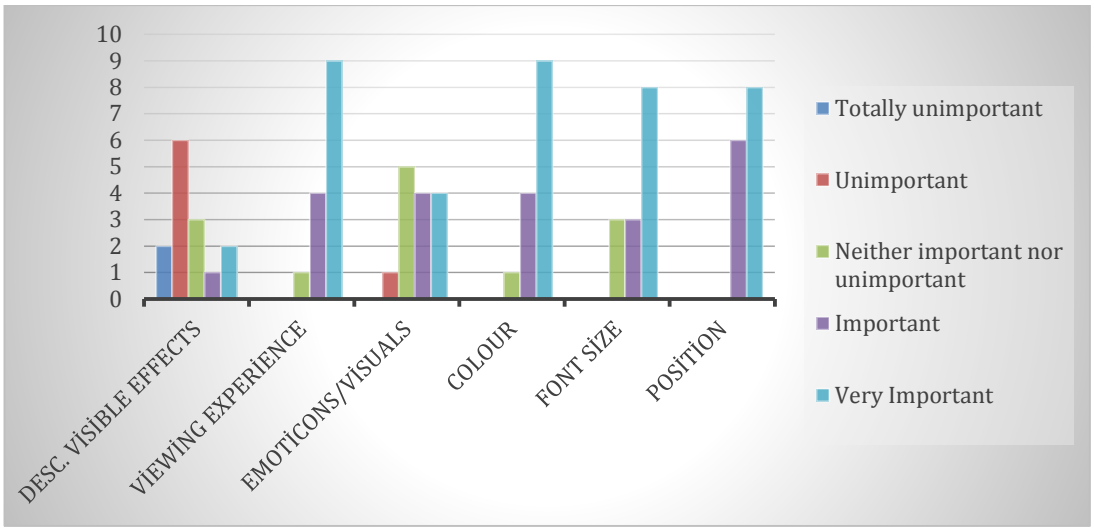

Figure 25. The distribution of students' opinions regarding non-standard/creative SDH features

According to the data, non-standard or creative features such as subtitles, emoticons, the colour and font size of subtitles, changes in the position of subtitles on the screen, and the viewing experience of the audience were mostly rated as "important" or "very important."

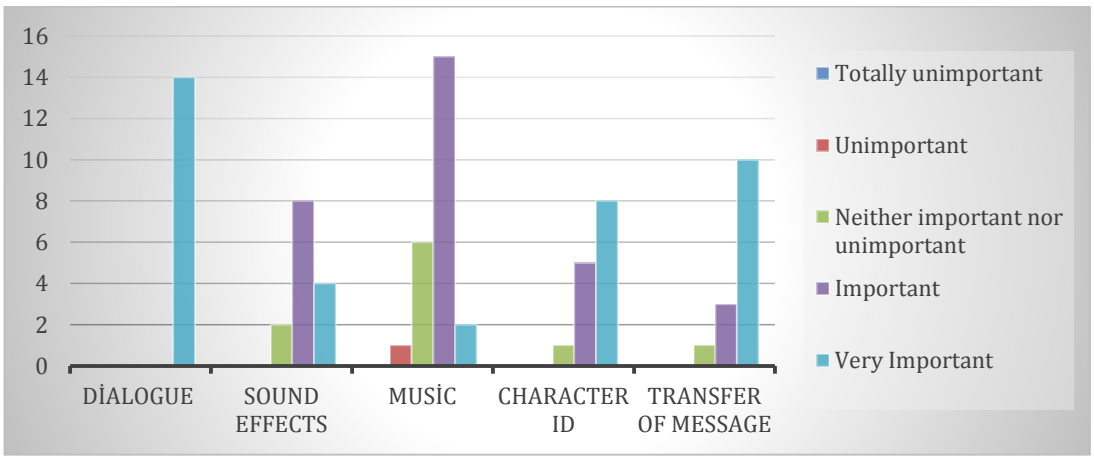

Figure 26. The distribution of students' opinions regarding standards SDH features

Still, as revealed above, standard features such as dialogue clarity, sound effects and music, and character name identification were also marked as "important" or "very

important.” In other words, the majority of students found both non-standard and standard features equally important.

After the questions on creativity and SDH, students were asked to share their thoughts on whether or not an MA course is necessary. It should be noted that this question was similar to that in Student Survey 1 asking students’ expectations from an MA course. Still, considering that this survey was conducted at the end of the training, this time they were asked to share their opinions regarding the necessity of such a course in the curriculum. As a response, all students agreed that a stand-alone MA course was crucial and needed to be integrated into the curriculum of their curent study programme. Among the students, Respondent 3 pointed out that "subtitling within the industry is not enough in terms of accessibility. An MA course can potentially pave the way for new accessible projects within the industry and make the term 'accessible media' more visible. Therefore, as a translator candidate, I think such a course is necessary." Respondent 7 offered a similar perspective, highlighting that "we have seen that MA practices [within the industry] are not enough. I believe that such a course would encourage the industry to improve their existing practices, which would eventually create a greater awareness in general. In addition to the potential benefits of such a course in close connection with the industry, some students drew attention to the general benefits of a possible MA course, as exemplified by Respondent 4's comment, "I think it is necessary because it can increase creative thinking and also empathy skills," and Respondent 9's response, "Considering that translators serve as a bridge for communication, it should be our duty to provide the same service to people with hearing and visual impairments. If the concept of 'translator' changes over time, we need to be part of that change."

Following this question, students were directly asked whether they observed a change in their awareness of accessibility as a result of the training and all the students agreed, stating that there had been a positive change in their level of awareness. Some of the responses were quite detailed and showed why the students were of the opinion that their awareness had increased. Respondent 2 explained his/her experience in the following way: "As a result of the workshop, SDH became a concrete issue rather than an abstract concept, which allowed me to realise how important it is. I started to be aware of the importance of this issue when we started working on the videos and this awareness increased as we had discussions during the workshop. For example, my classmates and I discussed the use of the word 'sound' [referring to the description of sound effects in the form of 'kuş sesi', 'silah sesi']. We talked about how meaningless it is to use the word 'sound', 'ses' to describe an effect to someone who has never heard 'sound' in their life." Moreover, Respondent 7 emphasised the role of creativity in raising his level of awareness with the following statement: "I realised that we usually have assumptions based on hearsay. Our creative interventions and exchange of ideas completely changed my perspective and increased my awareness to a great extent." Similarly, Respondent 12 made the following comment, "Definitely. Now I check to see if a TV series or film has an SDH option and I think about how a hearing-impaired person would feel watching that content. I think that this gap should be filled not only in TV series and films, but also on YouTube and other social media platforms."

After this direct question about their level of awareness, the students were invited to share their experiences of the training process. It should be noted that all respondents gave similar answers. However, to share a few, the following statements were indicative of the common experiences of the students. Respondent 1 expressed

that he/she "had the opportunity to work together as part of the training. My ability to empathise with people with disabilities has improved. I had both positive and negative experiences with different software. We also improved our critical skills in the sense that we were able to give criticism and also welcome criticism." In a similar manner, Respondent 4 made the following comment: "I learned to think creatively and out of the box. I used some online software which turned out to be problematic. These software programs should be improved. I really enjoyed working on issues that are almost invisible." Finally, an excerpt from Respondent 6's detailed comment deserves to be shared as well:

"This workshop was like a journey we took with a guide and a group of students. The best part was that we were able to create our own path. In the production process of the final video, I saw the importance of helping each other and working together [...] From time to time, I had technical difficulties with the software, but by helping each other, we overcame these difficulties [...] Empathizing was the key factor here. We were dealing with something I had never experienced before. It was a challenge. So, I approached it very sensitively."

As the final question of Student Survey 2, students were asked to rate their satisfaction with the training on a scale of 1 to 10. To this question, all the students assigned more than 7 points with an average rating of 9.57/10. These data can be considered as the quantification of the students' responses to the open-ended questions on" sharing their experiences.

5.3.1.3 Discussion of the findings

As previously highlighted, some questions in Student Survey 2 were intentionally replicated from those in Student Survey 1 to enable a direct comparison between the

results. However, certain themes were designed to be addressed by a single question, while these were covered by multiple questions in Student Survey 1. This approach was adopted to encourage students to consider these themes from a more comprehensive standpoint by fostering connections between multiple perspectives on accessibility.

In the category involving general questions on accessibility in Student Survey 1, students were invited to share their thoughts on the term accessibility, MA, and legislation concerning people with disabilities. 50% of the responses (n=7) to the question on accessibility were deemed unclear, with the rest centring on accessibility solely as a means of accessing physical or digital services. Similarly, when asked about the concept of MA, 21.43% of students (n=3) were unable to give an answer, 35.71% (n=5) were only able to give a considerably general answer, and 42.86% (n=6) were able to explain it by referring to a specific type of MA rather than giving an informed and conceptual answer. Additionally, to the question on legislation, 71.43% (n=10) of the responses were categorised as not informed. These results show that students either totally lacked awareness of various aspects of accessibility or perceived it only in terms of physical or digital access. Also, the social dimensions of accessibility and potential accessibility solutions to overcome problems were not addressed.

In the Student Survey 2, these aspects of accessibility were covered through three set of questions: students were first asked to share their thoughts on MA, then they were invited to reflect on the challenges faced by people with disabilities in public life, and finally they were encouraged to share possible accessibility solutions for hearing-impaired students at the university where they were studying. This time, instead of giving general answers or pointing to a specific mode of MA to explain

MA as seen in Student Survey 1, 64.29% of the students (n=9) gave a fairly detailed explanation as seen in Respondent 6's comment shared above, which described MA conceptually with a focus on MA as a right to access, or Respondent 14's description of MA as a way to improve the viewing experience of the audience. It should also be noted that the proportion of students who were unable to provide any information to this question was only 7.14% (n=1). This difference may indicate that, after the training, students began to approach the concept of MA not only through a specific mode of MA such as SDH, AD, but also from a more abstract, conceptual point of view. The details in their answers also support this conclusion.

In addition, responses to the question about the challenges that people with disabilities face in public life show that students were able to approach the question from multiple perspectives. Only 7.14% (n=1) of the responses showed a clear lack of information regarding the difficulties people with disabilities may go through. The remaining respondents demonstrated a high level of awareness by highlighting their understanding of accessibility beyond physical and digital aspects. They emphasised the significance of accessibility in facilitating communication in public life and reiterated the importance of access to non-digital information alongside access to physical spaces and digital information. The fact that 57.14% (n=8) of responses placed a special emphasis on the communicative aspect of accessibility, as demonstrated by Respondent 1's comment on the role of SLI in facilitating communication between citizens and public officials, may be interpreted as a sign of a heightened awareness of accessibility among students. Similarly, the fact that 35.71% of respondents (n=5) viewed accessibility not only as access to digital services, but also to non-digital information that is crucial in public life, as illustrated by Respondent 7's emphasis on the importance of access to educational information,

may point to a broadened perspective and positive change in students' awareness as well. This shift in perspective may underscore that, as opposed to a reductionist approach that views accessibility solely as access to physical or digital services, students were now aware of the multiple aspects of accessibility in public life. They approached it via its communicative, social, and educational aspects.

The findings are further supported by the students' improved perspective on the potential accessibility solutions that can be offered to students with disabilities at their university. In Student Survey 2, when students were asked whether their university offered accessibility services, 42.9% (n=7) responded positively, which is a dramatic increase from the 7.1% (n=1) recorded for the same question in Student Survey 1. When they were encouraged to share potential accessibility solutions for their peers with disabilities, the percentage of responses that can be considered informed was even higher. Only 28.57% (n=4) of the students were unable to propose a solution, while the remaining 71.42% (n=10) offered reasonable solutions, focusing on developing accessible course materials, opening courses on accessibility, and ensuring that students with disabilities had access to the information provided by the university. This was evidenced by Respondent 3's call for the provision of SLI in course materials and Respondent 5's emphasis on the importance of adding audio descriptions to the university website to enable access for students with visual impairments. These responses suggest that, as a result of the training, the students may have gained an awareness of the difficulties that people with disabilities can face and that, as accessibility professionals, they may have something to offer to overcome these difficulties together.

Furthermore, when students were encouraged to share their experiences of the training, the vast majority emphasised that they were now able to empathise with

people with disabilities and realised the importance of working together in developing SDH. Respondent 6's description of the training as a journey with his classmates under a guide and the emphasis on helping each other to overcome difficulties and find solutions was indicative of a positive change in the level of general accessibility awareness of the students. The fact that all students responded in the affirmative when asked if they had seen a change in their level of awareness was also encouraging in terms of showing the potential benefits of the training in the present study. In this regard, Respondent 9's approach to accessibility, as outlined in his/her statement, merits attention. His/her assertion that translators have a duty to facilitate communication between individuals with disabilities and public officials illuminates the social awareness cultivated among students during the training process. Moreover, Respondent 7's admission that their preconceived notions were shaped by hearsay rather than direct feedback from end-users, and the subsequent shift in their perspective that occurred during the training, may highlight the transformative impact of collaborative learning environments on fostering a more inclusive and user-centric mindset among students.

With regard to the more technical aspects of SDH, students were invited to suggest ways to improve the quality of SDH on TV and streaming platforms. In contrast to the more general questions in the Student Survey 1, which centred around the accessibility options available on TV and streaming platforms, this question aimed to assess students' knowledge of SDH from a more detailed and practical perspective. It is noteworthy that in Student Survey 1, only 14.29% of the students (n=2) acknowledged SDH as an option available on TV and streaming platforms. This can be considered as a relatively low percentage, since it suggests that SDH as a concept was not widely recognized by the students, and they were unaware of its

availability on TV/streaming platforms prior to the training. However, when asked to suggest ways to improve SDH in Student Survey 2, 64.29% (n=9) of the respondents provided detailed answers as shared in the presentation of the findings above.

This dramatic change in percentages was also evident in the following questions on SDH in Student Survey 2. Whereas in Student Survey 1, 71.43% of the students (n=10) had no information about how and when SDH could be used in audiovisual content and only 28.57% (n=4) of them were considered informed, the answers to the same question in Student Survey 2 showed that 57.14% of the students (n=8) were able to provide an informed reply and 42.86% (n=6) of them were partially knowledgeable about SDH, as exemplified by the comments of Respondent 1 and Respondent 7. Similarly, when asked to share their thoughts about the importance of standards in SDH, in Student Survey 1, 85.71% (n=12) of the students provided responses categorised as not informed, and only 7.14% (n=1) of these responses were considered as informed. However, in Student Survey 2, when asked the same question, 50% of the students (n=7) gave an informed reply and 42.86% of the responses (n=6) were classified as not informed. While a higher percentage would be preferable, it is important to note that 7.14% rose to 50% while 85.71% fell to 42.86%.

The statistical differences between Student Survey 1 and Student Survey 2, and the fact that responses in Student Survey 2 were evidently more structured and detailed as shown in the presentation of the findings, can be seen as evidence of the substantial contribution of the training to students' awareness of SDH and MA in general. That is, before the training students could not answer basic questions about SDH and did not even acknowledge its presence on TV and streaming platforms, but

as indicated in Student Survey 2, they are now able to make extensive suggestions for improving the quality of SDH, reflect on the role of standards, etc.

Furthermore, with regard to the perceptions surrounding the role of creativity and standards in SDH, a notable discrepancy emerges between Student Survey 1 and Student Survey 2. In the former, 64.29% of the students (n=9) were categorised as "not informed," whereas the remainder gave responses that perceived standards as either limiting creativity (14.29%, n=2) or meeting the needs of the end-users (7.14%, n=1), and considered creativity as a way to enhance the quality of SDH (14.29%, n=2). In the latter, however, only 7.14% of the students (n=1) were considered "not informed", whereas some students viewed standards as limiting (28.57%, n=4) and considered creativity as enhancement (35.71%, n=5). Additionally, some students suggested a balance between creativity and standards (21.43%, n=3) while others did not consider creativity to be important at all (7.14%, n=1).

In addition, it should be noted that in Student Survey 1, only 28.6% (n=4) of the students saw creativity as having an important role in SDH, while the number of students considering creativity as a significant factor rose to 92.9% in Student Survey 2. In a similar vein, when students were asked to rate standard and non-standard (e.g. creative interventions) SDH features, the majority of the students deemed both standard and non-standard features as important or very important. This result contrasts with the results of Student Survey 1, where standard features were mostly rated as important or very important, and non-standard features were seen as less important. It is noteworthy that the rise in the significance attributed to creative elements did not lead to a decline in the importance assigned to standard features. These elements were similarly ranked as "important" or "very important," in Student

Survey 2, showing a balanced perception of significance among students regarding both creativity and standards. Also, the statistical difference between Student Survey 1 and Student Survey 2 in terms of the role of creativity in SDH, indicates that prior to the training, students lacked familiarity with the role of creativity in SDH, although some exceptions were noted. However, following the training, it can be concluded that students have recognised the importance of creativity in SDH, a claim supported by the present study and verified in the results of End-user Survey 2, which will be discussed in the following sections.

To determine the results of the two student surveys administered, the Wilcoxon signed-rank test was performed on some identical questions featured in both surveys. Although first explained in detail in Chapter 4, it should be reiterated that a t-Test was not possible since it required the use of identical questions and responses. Table 11 below reveals the results of the Wilcoxon signed-rank test:

Table 11. The Wilcoxon Signed-Rank Test

Category	Pre-training median (Student Survey 1)	Post-training median (Student Survey 2)	p-value
Notion of MA	2	3	0.0143
Importance of standards in SDH	1	3	0.0139
Important rules in subtitling guidelines	1	2.5	0.0196
Link between creativity, standards & SDH guidelines	1.5	3	0.0040

The median values here can be interpreted as: The higher the median value was, the more informed the students were in that specific category. A p‑ value below 0.05 indicates there is less than a 5% chance that the observed change is random. In each category, students' median scores increased significantly after the training, which shows that students gained awareness or can be considered more informed in these categories.

As a reminder, the present study investigates the training of T&I students to produce interlingual and intralingual SDH that would meet the needs of d/Deaf and hard of hearing people and improve their viewing experience, while at the same time raising awareness of MA among students. It proposes a learner-centred, collaborative training model that uses an alternative, audience-tailored guideline that enhances standard SDH guidelines by encouraging creative interventions.

The comparison of the results of Student Survey 1 and 2 have confirmed the first part of the present study's main research problem. The results show that MA awareness among students has increased as a result of the learner-centred, collaborative training that encouraged creative interventions via an audience-tailored guideline. The theoretical foundations of the training centred around the CMA approach (Romero-Fresco, 2021; Romero-Fresco & Brown, 2023), a user-centred education model for MA (Greco, 2018; Greco, 2019) and a social constructivist (Adams, 2006; Hyslop-Margison & Strobel, 2007) perspective towards translation education (Kiraly, 2000; Kiraly, 2003; Kiraly 2006; Zhong, 2002) proved to be useful as well. When asked to share their experiences, Respondent 7 noted that the exchange of ideas and creative interventions had changed their perspective and raised their awareness. Respondent 4 highlighted that they had learned to think creatively and outside the box, which they attributed to an "interesting" experience of working as a team and developing content collaboratively. This viewpoint is further corroborated by Respondent 6, who emphasised the significance of collaboration in overcoming challenges throughout this "journey" conducted with a “guide” and a group of classmates. Moreover, students expressed high levels of satisfaction with the training programme, as evidenced by their average rating of 9.57/10 points on a satisfaction inquiry.

Lastly, the results of End-user Survey 2 confirmed the second part of the present study's main research problem, which essentially claimed that the training carried out was user-centred in the manner that it met the needs and expectations of the d/Deaf and hard of hearing audience. The following section presents and discusses the findings of the End-user Survey 2 and their implications for the research problem of the present study.

5.3.2 End-user survey 2

This section examines the results of End-user Survey 2, which was conducted with a total of 26 participants. The aim of the survey was to find out whether the d/Deaf and hard of hearing participants were satisfied with the intralingual and interlingual SDH content produced by the students during the training. The student content was labelled B, while the standard, actively streamed counterparts of the same clips were designated A. The participants were not given any information as to which videos were the standard ones (A) and which were the ones produced by the students (B) according to an audience-tailored guideline with creative interventions.

The majority of the questions in the survey were closed-ended, which invited participants to rate the questions between 1 and 5. They were of the same thematic focus for both A and B clips to provide comparable data for analysis. Participants were asked to watch the *Börü* [The Wolf] clips first and then complete the relevant part of the survey. After completing the *Börü* clips, they were presented with the *Rebel Moon 2* clips and completed the second half of the Survey 1n the same way. This was to ensure that participants could fully concentrate on the intralingual and interlingual SDH content and remember what they watched. Also, the questions were not presented in the order of the set of questions for clips A followed by the set of

questions for B clips. Instead, a question was asked with regard to clip A and immediately after that the same question was asked with regard to clip B (see. Appendix C and D). This would allow participants to make an immediate comparison for the same question asked for clip A and clip B. The survey also included a limited number of open-ended questions where participants were asked to explain their reasoning if they felt it was necessary. However, given the total number of questions and the same reasons as explained in End-user Survey 1, these responses did not provide sufficient data for analysis, although there were some exceptions. Those with sufficient data were analysed thematically without quantification through manual coding, as was done for some open-ended questions in other instruments in the present study.

Furthermore, it should be noted that even though the majority of the participants from End-user Survey 1 also participated in End-user Survey 2, three participants were unable to complete the second survey. As a result, the demographics shifted slightly, with minor changes of between +/- 1 and 3 per cent for each category. Table 12 below shows the percentages of scores assigned to each subcategory for *Börü* clip A and B.

Table 12. Comparative Percentages of Responses Across Sub-Categories Created for Börü Clips "A" And "B"

Intralingual SDH clips: *Börü* [The Wolf]	
clip A	clip B
Overall comprehensibility 1: 7.7% (n=2) 2: 30.8% (n=8) 3: 46.2% (n=12) 4: 7.7%, (n=2) 5: 7.7% (n=2)	Overall comprehensibility 1: 0% (n=0) 2: 0% (n=0) 3: 15.4% (n=4) 4: 15.4% (n=4) 5: 69.2% (n=18)
Overall readability 1: 0% (n=0) 2: 30.8% (n=8) 3: 57.7% (n=15) 4: 7.7% (n=2) 5: 3.8% (n=1)	Overall readability 1: %0 (n=0) 2: %0 (n=0) 3: 3.8% (n=1) 4: 23.1% (n=6) 5: 73.1% (n=19)
Positions on the screen 1: 3.8% (n=1) 2: 34.6% (n=9) 3: 42.3% (n=11) 4: 11.5% (n=3) 5: 7.7% (n=2)	Positions on the screen 1: 0% (n=0) 2: 0% (n=0) 3: 3.8% (n=1) 4: 19.2% (n=5) 5: 76.9% (n=20)
White subtitles 1: 7.7% (n=2) 2: 30.8% (n=8) 3: 42.3% (n=11) 4: 11.5% (n=3) 5: 7.7% (n=2)	Colourful subtitles 1: 3.8% (n=1) 2: 7.7% (n=2) 3: 11.5% (n=3) 4: 7.7% (n=2) 5: 69.2% (n=18)
No screen effects 1: 7.7% (n=2) 2: 26.9% (n=7) 3: 50% (n=13) 4: 7.7% (n=2) 5: 7.7% (n=2)	Screen effects 1: 3.8% (n=1) 2: 7.7% (n=2) 3: 11.5% (n=3) 4: 15.4% (n=4) 5: 61.5% (n=16)
No emoticons 1: 7.7% (n=2) 2: 38.5% (n=10) 3: 34.6% (n=9) 4: 11.5% (n=3) 5: 7.7% (n=2)	The use of emoticons 1: 7.7% (n=2) 2: 7.7% (n=2) 3: 3.8% (n=1) 4: 15.4% (n=4) 5: 65.4% (n=17)
Creativity Average rating: 4.73/10	Creativity Average rating: 8.73/10
Overall satisfaction Average rating: 4.88/10	Overall satisfaction Average rating: 8.58/10

The questions posed for the *Börü* clips were carefully designed to be representative of each of the features shown in both clips. To do this, different features such as screen effects, the position of subtitles on the screen, readability, etc. were presented as questions in the survey. However, to avoid overloading the participants with more detailed questions, these categories were considered sufficient to obtain the information needed for the analysis. The results in the table show a striking difference between the scores for each clip. The majority of the scores for clip A tended to be significantly lower than the scores for clip B. That is, whereas clip A

received mostly three or lower points for each subcategory, clip B was given primarily fours and fives. To cross-validate the scores assigned to the sub-categories, participants were also asked directly which clip they would prefer to see in audiovisual content displayed on TV and streaming platforms. According to the results, 84.6% of the participants preferred clip B, while 15.4% chose clip A. The answers to this question show that the overwhelming majority of participants would prefer to see content similar to clip B, while only a few participants would prefer to see content similar to clip A. This general distribution further confirms the scores assigned to *Börü* clip A and clip B. To ensure that the differences between the two clips are statistically meaningful, the t-Test was applied to the statistics presented above. Table 13 shows the results accordingly:

Table 13. T-Test Results for Clip A and Clip B of *Börü*

Categories	Clip A (average)	Clip B (average)	t-value	p-value
Overall comprehensibility	2.77 (0.99)	4.54(0.76)	7.22	< 0.0001
Overall readability	2.85 (0.70)	4.69 (0.60)	10.28	< 0.0001
Positions on the screen	2.85 (0.80)	4.73 (0.70)	8.70	< 0.0001
The use and non-use of colour	2.81 (1.00)	4.31 (0.90)	4.87	< 0.0001
The use and non-use of screen effects	2.81 (1.00)	4.23 (0.90)	4.78	< 0.0001
The use and non-use of emoticons	2.73 (1.10)	4.23 (0.90)	4.58	< 0.0001
Overall creativity	4.73	8.73	-	-
Overall satisfaction	4.88	8.58	-	-

As indicated here, the t-Test values calculated for each category were significantly high. This indicates that clip B received higher scores than clip A for each category and that these differences were statistically significant with each p-value lower than 0.0001. Table 14 reveals the scores assigned to *Rebel Moon 2* clips:

Table 14. Comparative Percentages of Responses Across Sub-Categories Created for Rebel Moon 2 Clips "A" and "B"

Interlingual SDH clips: *Rebel Moon 2*	
clip A	clip B
Overall comprehensibility 1: 3.8% (n=1) 2: 34.6% (n=9) 3: 50% (n=13) 4: 3.8%, (n=1) 5: 7.7% (n=2)	Overall comprehensibility 1: 0% (n=0) 2: 0% (n=0) 3: 23.1% (n=6) 4: 38.5% (n=10) 5: 38.5% (n=10)
Readability 1: 7.7% (n=2) 2: 11.5% (n=3) 3: 69.2% (n=18) 4: 0% (n=0) 5: 11.5% (n=3)	Readability 1: %0 (n=0) 2: %0 (n=0) 3: 15.4% (n=4) 4: 23.1% (n=6) 5: 61.5% (n=18)
Positions on the screen 1: 3.8% (n=1) 2: 38.5% (n=10) 3: 42.3% (n=11) 4: 7.7% (n=2) 5: 7.7% (n=2)	Positions on the screen 1: 3.8% (n=1) 2: 0% (n=0) 3: 19.2% (n=5) 4: 34.6% (n=9) 5: 42.3% (n=11)
White subtitles 1: 0% (n=0) 2: 26.9% (n=7) 3: 50% (n=13) 4: 11.5% (n=3) 5: 11.5% (n=3)	Colourful subtitles 1: 3.8% (n=1) 2: 3.8% (n=1) 3: 23.1% (n=6) 4: 15.4% (n=4) 5: 53.8% (n=14)
No screen effects 1: 7.7% (n=2) 2: 42.3% (n=11) 3: 26.9% (n=7) 4: 15.4% (n=4) 5: 7.7% (n=2)	Screen effects 1: 0% (n=0) 2: 26.9% (n=7) 3: 11.5% (n=3) 4: 23.1% (n=6) 5: 38.5% (n=10)
No emoticons 1: 3.8% (n=1) 2: 30.8% (n=8) 3: 50% (n=13) 4: 3.8% (n=1) 5: 11.5% (n=3)	The use of emoticons 1: 7.7% (n=2) 2: 3.8% (n=1) 3: 7.7% (n=2) 4: 15.4% (n=4) 5: 65.4% (n=17)
Creativity Average rating: 4.62/10	Creativity Average rating: 7.77/10
Overall satisfaction Average rating: 4.77/10	Overall satisfaction Average rating: 7.65/10

Similar to the responses for the *Börü* clips, the results show a high degree of disparity between clip A and clip B of *Rebel Moon 2*. According to the data in Table 14, clip A scores were mostly around three points and below, whereas clip B scores tended to cluster around four and five points. Lastly, when they were asked which clip they would like to see on the TV or on the streaming platforms, the majority of participants preferred clip B (76.9%) to clip A (23.1%) in *Rebel Moon 2*. In a similar vein to statistics in the *Börü* clips, a t-Test was performed to verify that the

differences between clip A and clip B in *Rebel Moon 2* yielded statistically meaningful outcomes as shown in Table 15:

Table 15. T-Test Results for Clip A and Clip B of *Rebel Moon 2*

Categories	Clip A (average)	Clip B (average)	t-value	p-value
Overall comprehensibility	2.77 (0.91)	4.15 (0.78)	5.88	< 0.0001
Overall readability	2.96 (0.96)	4.46 (0.76)	6.25	< 0.0001
Positions on the screen	2.77 (0.95)	4.12 (0.99)	4.99	< 0.0001
The use and non-use of colour	3.08 (0.93)	4.12 (1.14)	3.59	p=0.0006
The use and non-use of screen effects	2.73 (1.08)	3.73 (1.25)	3.09	p=0.003
The use and non-use of emoticons	2.88 (0.99)	4.27 (1.25)	4.42	< 0.0001
Overall creativity	4.62	7.77	-	-
Overall satisfaction	4.77	7.65	-	-

Table 15 shows that the average of the t-values estimated for each category was significantly higher for clip B, meaning that Clip B scored higher than Clip A in each category. The t-values and p-values for each category can also be interpreted as the differences between two clips being statistically significant. Despite the variation in p-values in the case of *Rebel Moon 2* clips, all values indicate that each score is still statistically significant.

5.3.2.1 Discussion of the findings

The results of End-user Survey 2 proved to be closely related to End-user Survey 1 in a number of ways. In the first survey, a clear majority of the respondents, almost 70%, gave a score of 3 or less when asked to rate their satisfaction with SDH. Similarly, when asked to share their thoughts on the need to improve the quality of SDH on TV channels and streaming platforms, 96.6% of the participants (n=28) explicitly responded in the affirmative to improve the quality of existing SDH, whether intralingual or interlingual. Furthermore, when asked whether SDH should

be more creatively produced, 82.8% of the group (n=24) felt it was important for SDH to be more creative, while 13.8% (n=4) were undecided and only 3.4% (n=1) saw no need for this change. Taken together, these results may indicate that the group of participants were not satisfied with the standard SDH offered by TV and streaming platforms.

In the second survey, it can be argued that this dissatisfaction was also evident in the fact that they gave explicitly lower scores to standard clips (clips A) from both *Börü* and *Rebel Moon 2* compared to creative SDH clips (clips B). The question of whether these differences between clips A and clips B were statistically significant was answered by running a t-Test for each category, which showed that the differences were indeed statistically significant. For the *Börü* clips, the scores of clip A were lower than clip B in all categories, with varying percentages of points given by the participants. However, a closer look at the figures shows that for each category in clip A, almost half of the participants chose to give 3 points, with the remaining responses spread between points 1, 2, 4 and 5. At first glance, this may look like a methodological trap. However, the figures also show that the majority of the remaining responses were spread between points 1 and 2 rather than 4 and 5.

The group still tended to give lower scores for clip A. Furthermore, the fact that half of the group gave 3 points can be interpreted in the following way. It should be borne in mind that this was probably the first time these participants had been asked such detailed questions about SDH and they had probably never thought about these details before in their lives. Therefore, when asked to rate these details that they had never thought about before, it is reasonable that they were relatively undecided about what they would think. It may also not be unusual for participants not to want to spend hours answering surveys. So, if they were not sure about the

answer, it would be natural to give an average score. This is where cross-validation comes in as a double check. When asked to answer more general questions, and this time to give a score on a scale of 10, they were able to give a more decisive answer, as can be seen from the obvious results. For creativity, the participants gave 4.73 points to clip A and 8.73 points to clip B. For general satisfaction, they gave 4.88 points to clip A and 8.58 points to clip B. When asked which one they would prefer to see on the screens, 84.6% (n=22) chose clip B, while 15.4% (n=4) preferred clip A. It should also be noted that these general questions, with a scale of 10, had stars and hearts instead of numbers. These were only quantified for the analysis of the present study. By refraining from making any generalised propositions, it should be noted that the use of symbols to indicate satisfaction (i.e. stars and hearts) instead of numbers may have made it easier for them to express their overall satisfaction.

For the *Rebel Moon 2* clips, the scores of clip A were still lower than clip B in all categories, but the distribution of higher scores for each category to clip B this time was lower compared to the distribution of higher scores in clip B of *Börü*. For example, whereas 80.8% (n=21) of the answers in clip B of *Börü* were given a full 5 points, this percentage was 53.8% (n=14) in clip B of *Rebel Moon 2*. This is also the case for the category where participants were asked to rate screen effects. In clip B of *Börü*, 61%5 (n=16) of the participants gave 5 points, whereas only 38.5% (n=10) gave 5 points to clip B of *Rebel Moon 2*. This difference was also reflected in the overall scores for clip B of *Börü* and *Rebel Moon 2*. For *Rebel Moon 2*, the average scores of clip A and clip B for creativity were 4.62 and 7.77 respectively. For overall satisfaction, it was 4.77 for clip A and 7.65 for clip B. Also, 76.9% (n=20) preferred clip B more, while 23.0% (n=6) chose clip A. Although clip B was still preferred

over clip A, when compared to those of *Börü*, it is evident that the average ratings were statistically significantly lower in *Rebel Moon 2*.

In general, there is no significant difference between the ratings of the sets of clips from *Börü* and *Rebel Moon 2*. However, the slight differences in participants' ratings for *Börü* and *Rebel Moon 2*, which become more apparent when comparing the ratings for each category, can be explained by several possible reasons. Firstly, it can be argued that the plot of *Börü* itself was much more familiar to the group of participants. The plot of the clips focused on a terrorist attack on civilians, a sadly familiar event for Turkish citizens, especially in recent history, and the intervention of police forces to prevent it. This may have helped the audience to connect more emotionally with the clip. Also, the actors in the *Börü* clips were well-known figures from the entertainment industry. This may also have had an impact on the audience's perception. Although this is the subject of another study and it would not be possible to make an informed guess for the present study, it could be assumed that these factors might be one of the reasons why the *Börü* clips were perceived more favourably by the participant group than *Rebel Moon 2*. The *Rebel Moon 2* clips were in the sci-fi genre and had a relatively unfamiliar plot for the participants. Similarly, the actors portraying the characters were not well known. Therefore, it may be natural that the participants were not able to connect with these clips compared to their affinity with the *Börü* clips.

The technical success of the students is evident in the scores for both the specific and overall questions for the clips in *Börü* and *Rebel Moon 2*. However, when explaining the general tendency of the participants to choose clips B over clips A in both *Börü* and *Rebel Moon 2*, some objections might be raised. First, it could be argued that if these standard clips were presented to the participant group without the

creative clips, their scores could potentially be significantly higher. In other words, it could be claimed that the standard clips were of lower quality than the creative clips, but this might not be the case in their own right. This may be true, but only to a limited extent. The statistical differences between the two sets of clips are significant and cannot be explained by comparison bias. And it should be noted that this disparity could be an issue in any research that relies on comparisons. Second, it could be suggested that the participants' enthusiasm and sense of being helpful may have played a role in their more favourable ratings of the creative clips over the standard clips. Similarly, this might be true only to a very limited extent.

The present study emphasises the need to consider the needs and experiences of end- users in the development of intralingual and interlingual SDH and, more generally, all MA products. This study should not be seen as a mere collection of end-user opinions for technical details on how to make SDH or other MA products more enjoyable and "functional,". The end-users, d/Deaf and hard of hearing people, want to be heard and integrated, as shown in the studies of Greco (2018; 2019), Romero-Fresco (2021), Romero-Fresco and Chaume (2022) and Romero-Fresco and Brown (2023), who reiterated that the new approach to MA should focus on the integration of end-users to work together with professionals to design accessibility products. During the preliminary meetings and also during the application of End-user Survey 1 and End-user Survey 2, the group of participants in the present study were indeed found to be enthusiastic and satisfied to be contacted to develop accessibility solutions for themselves and to participate in university level research. However, attempting to place too much emphasis on 'enthusiasm' by not recognising its limitations has its own significant risks. First, it reduces d/Deaf and hard of hearing people to individuals who cannot make an objective judgement and should

be "grateful" to be seen. Second, it calls into question the reliability of any empirical research conducted in MA. Thirdly, participants were only informed that this was a scientific study aimed at producing functional SDH. They were in no way told that one option was better than another, and the wording of the questions asked in no way implied this.

Another important finding in the analysis of the data collected in End-user Survey 2 was the fact that there were statistically significant differences in the responses of participants from various educational backgrounds. While the distribution of responses based on age range does not demonstrate any significant statistical differences, the same cannot be said for the analysis based on education level. For the *Börü* clips, 37.5% (n=3) of the participants with a university education gave higher scores to clip A in terms of creativity, and even more participants with this educational background, 50% (n=4), gave higher scores to Clip A compared to Clip B. Also, 50% (n=4) expressed that they would generally prefer SDH in Clip A to Clip B. To back this statistical distribution with open-ended responses, Respondent 24 gave a very detailed and illuminating response with regard to the use of colour in clip B, the creatively produced intralingual SDH: "I prefer white subtitles as used in clip A; they are simple and more understandable. This conventional use of white does not strain my eyes and helps me to concentrate on the content. However, the use of multiple colours in clip B strains my eyes and makes it difficult to follow the scene." Respondent 12, on the other hand, preferred clip B with a completely opposite reasoning: "Watching clip A is like reading a book, I cannot concentrate on the characters. It confuses me. With clip B, I can concentrate on the characters." Furthermore, when asked about the use of screen effects in clip B, Respondent 24 replied: "Even if they look good, the most important thing is to read

the subtitles. Sometimes, some effects make it harder to follow the subtitles." Respondent 12, on the other hand, noted that: "It excites me because it creates tension, which I like." When asked about the use of emoticons, this time Respondent 24 stressed that "emoticons and other visual signs help us understand the sound effects and music, but they should not be used excessively."

The differences were even higher in the responses of participants with a university education to clips from *Rebel Moon 2*. 37.5% (n=3) rated clip A higher in terms of creativity, a similar percentage to *Börü*. However, when this group was asked to rate their overall satisfaction, 62.5% (n=5) rated Clip A higher than Clip B. Finally, 75% (n=6) of them said that they would like to see more SDH content like that in Clip A, while only 25% (n=2) preferred Clip B. Similarly to the responses to the *Börü* clips, analysis of the responses of the participants with a university level education to the open-ended questions asked for *Rebel Moon 2* provided intriguing information. For example, Respondent 24 expressed that "having subtitles in a fixed position facilitates reading speed and comfort. Although subtitles with changing positions on the screen may be good, they can strain the eyes and cause me to miss some subtitles on the screen." Similarly, Respondent 6 stated that "the positions are fine as they do not block the faces of the characters or the scene as a whole, but they should not be too scattered around the screen." Regarding the use of creative interventions in interlingual SDH of *Rebel Moon 2* clips, Respondent 24 shared that "the dialogue in clip A is clear and understandable, but sometimes it is difficult to understand who is saying a line. In clip B, the use of different colours to identify characters and describe tone allows me to follow the action. The standard format in clip A helps me to read the subtitles better, but the creative approach in clip B helps me to fit in better with the action." Finally, on the use of sound effects, Respondent 7

pointed out that "sound description is important, but it's not necessary to write out what's already on the screen."

The reason for this divergence could be that people with a university education have already had close contact with all kinds of written materials and videos. Therefore, they may be able to understand written materials such as SDH better than those with lower levels of education. Their answers to open questions also showed that they were able to express their thoughts verbally more easily, as mentioned in the presentation of the results above. Taking this into account, it can be said that they did not have much difficulty in understanding the standard clips. It can also be said that they belong to an age of digital products: they were born into such an environment. For this reason, it can be assumed that they are also more familiar with digital content. Creative SDH content, on the other hand, relies heavily on visual representations of sound effects and dialogue. It has less text and is supported by visuals where necessary. This may have appealed more to participants with a lower level of education, who may have had more difficulty processing written material. However, for some of the university level participants, these may have been distracting, as illustrated by the responses of Respondent 24 in the presentation of the findings above. However, it should be noted that this was not the case for all participants with higher education. When the statistics for *Börü* and *Rebel Moon 2* were calculated together, approximately half of the participants with a higher level of education preferred clips A, while the other half still preferred clips B.

The first part of the main research problem of the present study, i.e. the collaborative and creative implementation of an MA training based on an audience-tailored guideline and the consequent raising of students' awareness, was confirmed as discussed in the comparative discussion of the results of Student Survey 1 and

Student Survey 2. It was found that the general awareness of the students increased after the training. However, the second part of the research problem, that this training is user-centred in terms of meeting the needs and expectations of the d/Deaf and hard of hearing audience, was confirmed in the discussion of End-user Survey 2, with creative student content using intralingual and interlingual SDH scoring significantly higher than the clips with standard SDH. Through the empirical data elucidated by End-user Survey 2, the theoretical propositions underlying the present study, Romero-Fresco (2021) and Romero-Fresco and Brown (2023), which position CMA as a user-centred approach to accessibility solutions, and Greco's (2018; 2019) call for a new line of universalist accessibility approach, were also shown to be beneficial in paving the way for the production of user-centred SDH. In this sense, Kiraly's (2000; 2003; 2006) and Zhong's (2002) social-constructivist approaches (cf. Adams, 2006; Hyslop-Margison & Strobel, 2007) to translation education served as the backbone of the practical implementation of the training and confirmed that they could produce positive results in applying the CMA approach to MA training. However, it should be noted that no survey or research can provide results that are one hundred percent valid.

CHAPTER 6

CONCLUSION

The present study investigated whether and how T&I students can be trained to develop interlingual and intralingual SDH in a way that both meets the needs of d/Deaf and hard of hearing people and enhances their viewing experience. To this end, a training model was proposed and implemented based on an alternative, audience-tailored guideline. The research objectives were threefold: (i) to raise general awareness of media accessibility (MA) among T&I students through the proposed training model; (ii) to improve the viewing experience of d/Deaf and hard of hearing individuals by adopting CMA approach that is based on non-standardised, creative interventions; and (iii) to encourage the integration of an SDH training module within T&I programmes in Türkiye.

With comprehensive research consisting of multiple steps such as the implementation of training and the testing of student content by the end-users, the present study aimed to address the gap in the literature on MA research and more specifically SDH training within T&I curricula in Türkiye. Furthermore, it intended to encourage the integration of MA as a stand-alone course or as part of AVT classes and promote further empirical research into user-centred SDH models.

To achieve these research objectives, the present study was divided into several chapters. Chapter 2 focused on the existing literature that informed the study both methodologically and theoretically. This chapter first examined existing research on SDH with a particular focus on studies conducted in Europe and in Türkiye. The category concentrating on research in Europe included studies from three thematic perspectives:

i. the multi-semiotic nature of SDH and the importance of creative interventions in developing non-standardised accessibility solutions,
ii. the pedagogical aspect of SDH, including research on SDH training for students and professionals; and
iii. questioning of the functionality of SDH standards along with their advantages and limitations.

Taken together, these themes resonated with the main research problem of the present study in the sense that the present study also benefited from multi-semiotic/creative, pedagogical, and non-standardised approaches to SDH. The review also covered MA research in Türkiye from a broader perspective because of the limited amount of SDH-focused research in Turkish TS. This section contextualised the study within the Turkish TS and highlighted the need for further research on MA and SDH.

Chapter 2 also introduced the theoretical framework of this thesis. The present study was primarily grounded in the CMA approach (cf. Romero-Fresco, 2021; Romero-Fresco & Chaume, 2022; Romero-Fresco & Brown, 2023) and Greco's pedagogical perspective for an MA education (cf. Greco, 2018; 2019). These theoretical foundations were put into practice through social-constructivist pedagogical approaches of Donald Kiraly (cf. Kiraly, 2000; 2003; 2006; 2012) and Yong Zhong (2002) within the context of translation education.

Chapter 3 focused on a comprehensive analysis of four major SDH guideline: SEBEDER, BBC, Netflix, and DCMP. This comparative analysis laid the foundation for the development of an alternative, audience-tailored guideline, which was designed to critically address the limitations of existing standards and instead encourage the application of CMA principles in SDH production. The proposed guideline was

presented in detail with each instruction carefully outlined. It was made clear that the guide was intended to serve as a general reference, rather than a rigid rulebook.

Chapter 4 examined the methodology of the present study. In this thesis, four surveys were administered to T&I students and d/Deaf and hard of hearing individuals. The surveys were developed based on a mixed-methods approach for several reasons. The Student Surveys were specifically designed to have more open-ended questions to allow students to express their thoughts in greater detail. The End-user Surveys, on the other hand, included closed-ended questions to a greater extent with a limited number of open-ended questions. This decision was taken due to the challenges d/Deaf and hard of hearing participants faced when expressing themselves in writing. For this reason, closed-ended questions were deemed more practical to elucidate their opinions regarding the video clips presented to them. Chapter 4 also included information about the demographics of the participant groups and the ethical consideration of the present study. After receiving approval from the Ethics Committee (see. Appendix B), consent forms were shared with potential participants. After the signing of the consent forms, two groups of participants were created. The student group was composed of 14 T&I students, aged between 20 and 22. The d/Deaf and hard of hearing group, referred to as "end-users," included 29 participants for the first survey and 26 for the second survey.

Chapter 5 presented a detailed analysis of the surveys conducted as part of the present study. Student Survey 1, administered prior to the training, aimed to assess the students' initial level of MA awareness. Student Survey 2, conducted at the end of the training, measured any changes in students' awareness because of the training process. End-user Survey 1 was administered to a group of 29 participants to identify their needs and expectations regarding SDH and MA in general. The results were shared

with students at the early steps of the training to inform them about the needs and expectations of their target audience. End-user Survey 2 was conducted with 26 participants. They were first presented with two sets of clips (*Börü* and *Rebel Moon 2*), each featuring standard SDH and creative SDH produced by the students. Participants were then asked to evaluate the clips comparatively. For the data analysis, manual coding was used to categorise the responses to open-ended questions. These codes were subsequently quantified and shared numerically. For the analysis of the data received via closed-ended questions, inferential statistical analysis was preferred. To determine whether the results were statistically significant, a t-Test was performed on the data elucidated through End-user Survey 2. This served as the cross-validation of the findings.

Having outlined the focus and structure of each chapter, the key findings of the study can now be discussed in relation to the research objectives and the present study's contribution to the existing literature. Firstly, a detailed comparison of the data received via Student Survey 1 and Student Survey 2 revealed that the general awareness of MA among students increased significantly as a result of the training. The percentage of responses that were flagged as "uninformed" or "partially informed" in Student Survey 1 were observed to be significantly lower in Student Survey 2. Also, the percentages of responses categorised as "informed" in Student Survey 1 increased in parallel with the decline in the percentages of responses "uninformed" and "partially informed." Similarly, the percentage of "informed" responses were found to be higher in Student Survey 2. To ensure that these results are statistically significant, the Wilcoxon signed-rank test was performed on the results of some identical questions in Student Survey 1 and Student Survey 2. According to the test, the differences between two surveys for these questions were statistically significant.

These findings indicate that creativity-oriented SDH training grounded in a social-constructivist perspective could indeed foster a learning environment in which students engage in in-depth reflection through the exchange of ideas. Within the limitations of the present study, this collaborative, student-centred setting appeared to have promoted creative thinking among the students. In other words, a CMA-based MA training carried out with a social-constructivist perspective as part of the present study produced positive results that may contribute to MA education in Turkish T&I departments in general. In essence, the results of the present study supported its theoretical claim that putting CMA-centred principles (Romero-Fresco, 2021; Romero-Fresco & Chaume, 2022; Romero-Fresco & Brown, 2023) and universalist, pro-active, user-friendly propositions (Greco, 2018; Greco, 2019) into practice via social constructivism (Zhong, 2002; Kiraly, 2000; 2003; 2006; 2012) could substantially enhance training outcomes. This suggests that the proposed training model could serve as a valuable component of T&I curricula. Furthermore, the results of End-user Survey 2 showed that the end-users preferred the clips containing creative SDH over the clips with standard SDH. To check whether the differences were statistically significant or not, a t-Test was performed on the results for clips A and clips B in both *Börü* and *Rebel Moon 2*. These findings validate that CMA as suggested by Romero-Fresco can indeed produce viable results when applied to the production of SDH.

Building on these findings, the present study may offer several contributions to both the existing literature on MA and practical application of MA training. By demonstrating the effectiveness of a CMA-based, creativity focused training model with a social constructivist perspective, the present study may serve as a general reference for similar MA training attempts in Türkiye. In this sense, it can be suggested

that the present study was the pilot implementation of a structured course based on a pre-designed syllabus shared in Chapter 4. Moreover, the presentation and discussion of the training process in Chapter 5 provided valuable insights into the collaborative decision-making process of the students during the training by showing the challenges they encountered and the strategies they used to overcome these challenges with the support of the trainer whenever needed. Also, the fact that a group of d/Deaf and hard of hearing individuals tested the content produced by the students in the training and evaluated it positively may further confirm the success of the training as well. Such empirical data revealing the results of a training programme has been largely absent from the existing literature in Turkish TS. Therefore, it can be claimed that the present study fulfilled its aim of contributing to the field by offering a concrete step toward putting theoretical models into practice. Finally, regarding the lines of research that expound on the CMA, the present study may serve as one of the few reference points for future empirical investigations of CMA since it attempted to demonstrate its potential by presenting concrete steps and evidence that explore the rich possibilities of collaborative SDH production including feedback from an actual group of end-users.

Furthermore, the findings of the present study showed that standard SDH content can/often falls short of its intended purpose, namely, to address the real needs of d/Deaf and hard of hearing viewers. In this regard, the present study may contribute to the ongoing discussions about the adequacy of existing SDH practices by calling for a critical rethinking of existing SDH standards in favour of approaches that are more closely aligned with the principles of CMA. Despite technological advancements and more customisation options, the potential of technology to offer more creative and user-centred SDH solutions has not yet been fully realised. The present study therefore

highlighted the need to exploit this potential to improve the viewing experience of d/Deaf and hard of hearing viewers.

However, it should be noted that, from an industry perspective, the production of creative content may appear to be impractical for a number of reasons. When reflecting on this issue, it is important to remember that the translation process was considerably slower two decades ago. The advent of cloud environments has facilitated real-time collaboration among the various parties involved in the translation process, thereby enabling the expeditious fulfillment of customer demands. Furthermore, technological tools that automatically detect guideline violations during the subtitling process (e.g., exceeding character limits or reading speed) have facilitated more accurate outcomes. In a similar manner, in light of the recent technological advancements, it is conceivable that creative solutions may become more readily implementable in the near future as well, thereby rendering them feasible. This could encourage the industry to embrace a creativity-oriented approach in their products.

While the present study provided valuable insights and contributed to both theory and practice in the field of MA and SDH training, certain limitations must be acknowledged. Recognising these limitations can offer a more balanced perspective and may serve as important reference points for future researchers as well.

The first limitation of the present study lies in the relatively small number of individuals in both participating groups. Conducting a similar study with a larger sample size could potentially yield more statistically significant results. Secondly, within the scope of the present study, the training proved effective with third- and fourth-year students who had taken courses in line with the curriculum of their departments. However, this outcome may vary across different participant groups. For

example, applying this training to first- or second-year students, who may not have yet taken introductory or advanced translation courses, could result in less effective outcomes compared to those observed in the present study. Furthermore, even with students at similar academic levels, variations in curriculum could influence the ability of students to tailor the content to the needs of d/Deaf and hard of hearing viewers. Additionally, conducting the present study with students who have already received AVT class could potentially produce different results altogether.

Changes in the demographics of d/Deaf and hard of hearing individuals could lead to different outcomes as well. As indicated in the present study, the points assigned by the participants with tertiary education were evenly distributed between standard and creative SDH with a slightly higher preference for standard content. Therefore, the findings of the present study are reliable for the specific participant group involved and generalizations to other groups should be avoided. Furthermore, it should be noted that the creative SDH content in the present study was prepared by students, rather than by professionals. It can be assumed that content produced by an SDH professional who have expertise in various graphic software would likely be evaluated more favourably than the content produced by the students. It should also be noted that these results are only valid for these videos and this genre. The results could be entirely different with another genre or video.

The present study had also a few limitations that need to be addressed from a methodological perspective. First, the use of a Likert scale with points ranging from 1 to 5 could have led participants to choose the middle point (3) when they were unsure about how to answer by serving as an easy escape for them. However, this response could also show that participants were indeed indecisive regarding their preferences. Second, a comparison bias may have caused the participants to rate creative content

more favourably because it both appeared visually more stimulating, and it had traces of the hard work of the students who had produced it. Still, the t-Test results showed a high degree of statistical significance. This may suggest that comparison bias cannot be the only reasons why the participants chose the creative SDH content instead standard SDH content.

As for future research, there are exciting opportunities to explore considering the latest technological advancements. The inclusion of AI in the production of accessible content may play a transformative role in our understanding of MA. Through AI, sound effects can be described visually in ways that significantly enrich the viewing experience for d/Deaf and hard of hearing viewers. Also, it can reduce production time considerably and open up new possibilities for creating content that's more inclusive and tailored to the needs of the viewers. However, we should carefully consider the role of human translators and avoid eliminating them entirely from the production process. By showing how AI and humans can work collaboratively to create more functional and engaging accessibility solutions, we can highlight the crucial role that skilled professionals will continue to play in producing accessibility solutions.

The integration of AI to the MA training should be carefully evaluated as well. Introducing AI into MA courses may help students understand the needs of their target audiences and develop their content accordingly. By teaching students to use AI effectively, we can ensure that future translators and MA professionals make significant contributions to the production of more engaging MA content. As such, research into the integration of AI into T&I curricula could provide valuable insights into how pedagogical approaches might be reshaped in response to evolving technological landscapes.

Further research focusing on the skills and competencies required for 21st-century translation education can also reveal further opportunities in close connection with technological potential. Such lines of research could be incorporated into an MA training program that uses CMA or other approaches to improve students' translation skills for the future, as demonstrated in the present study as well. A social-constructivist approach could support such research from a practical, student-centred perspective.

Additionally, it is important to acknowledge that accessibility extends beyond conventional modes of MA such as SDH, AD, and SLI. In this context, research on Tactile Sign Language (TSL) may offer unique perspectives on how to facilitate the access of the individuals with Usher Syndrome (rare genetic condition that results in combined hearing and vision loss) to MA content. By allowing an individual to perceive signs through touching, TSL research can significantly improve the overall quality of life of those individuals with Usher Syndrome. Moreover, the integration of TSL with emerging technologies, particularly AI, holds great promises for the development of TSL based MA content. That is, real-time tactile feedback systems could enable users with Usher Syndrome to interact with digital content more effectively and thus foster greater inclusion in multiple areas within public life. Also, TSL can be adapted to various media platforms with the integration of wearable devices. This would add an additional layer to cutting-edge accessibility technologies.

From a broader perspective, in our attempt to build a more civilized and inclusive society, accessibility may play a truly significant role. In the 21st century, we must be able to create an order of life that offers an equal access to all aspects of the public life. However, as the present study was primarily centred on the pedagogy of

accessibility, we should underline the urgency of making our universities accessible for all students and personnel:

We must create accessible spaces on campus. We must offer all services in an accessible manner. We must make our curricula accessible by providing extensive and comprehensive accessibility options. We must act now to include all and leave no one outside. No one alone.

APPENDIX A

SYLLABUS USED IN THE TRAINING

<table>
<tr><td colspan="4">Media accessibility training in line with an audience-tailored guideline</td></tr>
<tr><td colspan="2">Medium of Instruction</td><td colspan="2">Turkish</td></tr>
<tr><td colspan="2">Duration</td><td colspan="2">12 Weeks</td></tr>
<tr><td colspan="2">Total hours</td><td colspan="2">36 Hours (3 hours per week)</td></tr>
<tr><td colspan="2">Training level</td><td colspan="2">☒ Bachelor’s level
☐ Master’s level
☐ Doctoral level</td></tr>
<tr><td colspan="2">Instructor</td><td>Mert Moralı</td><td>mert.morali@std.bogazici.edu.tr</td></tr>
<tr><td colspan="2">Learning goals</td><td colspan="2">The training aims to raise the students' awareness of MA in general by equipping them with an understanding of end-user needs and how to produce SDH in a creative and user-friendly manner.</td></tr>
<tr><td colspan="2">Learning outcomes</td><td colspan="2">By the end of the training, participants will be able to:
Prioritize end-user needs and expectations in the design of SDH
Effectively use relevant software and tools to produce creative, engaging, and high-quality SDH
Critically analyse the functionality of their strategies and tailor them to the specific content they are working on
Make well-informed decisions and provide MA solutions in a proactive, user-centred manner.</td></tr>
<tr><td colspan="4">Weekly breakdown</td></tr>
<tr><td>Week</td><td>Coverage</td><td>Pre-session assignments</td><td>Methodology</td></tr>
<tr><td>1</td><td>General overview of the training
Distribution of the consent form
The application of Student Survey 1</td><td>None</td><td>Discussion</td></tr>
<tr><td>2</td><td>Introduction of the software
Distribution of the audience-tailored guideline
Selection of peers to work with throughout the training</td><td>Having appropriate technical setup</td><td>Discussion</td></tr>
<tr><td>3</td><td>Introduction of end-user needs via End-user Survey 1
Distribution of the video material (Börü) for creative intralingual SDH
Initial tests with the video material within the classroom</td><td>Research on existing SDH guidelines and the notion of creativity in subtitling</td><td>Discussion & Application</td></tr>
<tr><td>4</td><td>Group presentations on the initial results of Börü assignments
Receiving feedback from the groups
Brainstorming session on how to overcome technical/aesthetic challenges</td><td>Working on Börü to produce creative intralingual SDH</td><td>Discussion</td></tr>
<tr><td>5</td><td>Group presentations on the Börü assignments
Receiving feedback from the groups
Brainstorming session on how to overcome technical/aesthetic challenges
Voting session to select the most favoured Börü clip</td><td>Working on Börü to further improve their assignments in line with the feedback and solutions offered by groups</td><td>Discussion</td></tr>
</table>

6	• Presentation of the final version of *Börü* clip • Receiving the final feedback from the groups • Further refining the clip to share with the end-users	Two groups of seven people (translators and QC'ers) work on to how to finalise the selected *Börü* clip	Discussion & Application
7	• Collaborative self-reflection on the production process of creative intralingual SDH for *Börü* • Distribution of the video material (*Rebel Moon 2*) for creative interlingual SDH	Reflecting on challenges and opportunities so far and possible suggestions to overcome them	Discussion
8	• Group presentations (the same groups) on the initial results of *Rebel Moon 2* assignments • Receiving feedback from the groups • Brainstorming session on how to overcome technical/aesthetic and translation related challenges	Working on *Rebel Moon 2* to produce creative interlingual SDH	Discussion
9	• Group presentations on the *Rebel Moon 2* assignments • Receiving feedback from the groups • Brainstorming session on technical/aesthetical and translation related challenges in *Rebel Moon 2* clip • Applying suggested translation changes	Working on *Rebel Moon 2* to further improve their assignments in line with the feedback and solutions offered by groups	Discussion & Application
10	• Group presentations on the *Rebel Moon 2* assignments • Receiving feedback from the groups • Brainstorming session on how to overcome technical/aesthetic challenges • Voting session to select the most favoured *Rebel Moon 2* clip	Working on *Rebel Moon 2* to further improve their assignments in line with the feedback and solutions offered by groups	Discussion
11	• Presentation of the final version of *Rebel Moon 2* clip • Receiving the final feedback from the groups • Further refining the clip to share with the end-users	Two groups of seven people (translators and QC'ers) work to finalise the selected *Rebel Moon 2* clip	Discussion & Application
12	• Collaborative self-reflection on the production process of creative interlingual SDH for *Rebel Moon 2* • The application of Student Survey 2	Reflecting on challenges and opportunities so far and possible suggestions to overcome them	Discussion
Assessment criteria			
The training has no assessment criteria. The final versions of the content with creative intralingual SDH and interlingual SDH will be shared with a group of Deaf and hard of hearing people to get their detailed opinions. However, if it is developed into a stand-alone course, it is recommended that the assessment criteria are set in a flexible and student-centred way. In line with the principle of the training, students can present their work in the first and second half of the course to receive feedback from their peers and get support from the instructor if needed.			

Suggested reading	● Bogucki, Ł., & Deckert, M. (Eds.). (2020). The Palgrave handbook of audiovisual translation and media accessibility. Springer International Publishing AG. ● Jankowska, A., & Szarkowska, A. (Eds.). (2016). New points of view on audiovisual translation and media accessibility. Peter Lang UK. https://doi.org/10.3726/978-3-0353-0761-0 ● Okyayuz, A. Ş., & Kaya, M. (2017). Görsel-işitsel çeviri eğitimi. Siyasal Kitabevi. ● Okyayuz, A. Ş. (2019). Ayrıntılı altyazı çevirisi. Siyasal Kitabevi

Ethical statement
Students should sign the consent form before starting the training. Throughout the training they have the absolute right to withdraw from the training at any time without having to provide an alibi.
Students with disabilities and/or special needs.
Students with disabilities and/or special needs should contact the instructor to make their requirements known regarding any training related issues.

APPENDIX B

ETHICS COMMITTEE APPROVAL

T.C.
BOĞAZİÇİ ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal ve Beşeri Bilimler İnsan Araştırmaları Etik Kurulu (Sbinarek)

Sayı : E-84391427-050.04-212468 23.12.2024
Konu : 2024-67T Kayıt Numaralı Başvurunuz Hakkında

Sayın Prof. Dr. Mehmet ŞAHİN

Tez danışmanlığını yürüttüğünüz öğrenciniz Mert Moralı'nın "A pedagogical approach based on an alternative SDH guideline: A media accessibility training model for translation and interpreting students" başlıklı projesi ile Boğaziçi Üniversitesi Sosyal ve Beşeri Bilimler İnsan Araştırmaları Etik Kurulu (SBİNAREK)'e yaptığınız 2024-67T kayıt numaralı başvuru 03.12.2024 tarih ve 2024/09 sayılı kurul toplantısında incelenmiş ve projeye etik onay verilmesi uygun bulunmuştur.

Bu karar tüm üyelerin toplantıya on-line olarak katılımıyla ve oybirliği ile alınmıştır. Onay mektubu tüm üyeler adına Komisyon Başkanı tarafından e-imzalanmıştır. Bilgilerinizi rica ederiz.

Saygılarımızla,

Dr. Öğr. Üyesi Işıl ERDUYAN
Kurul Başkanı

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Belge Doğrulama Kodu : 0BVH-L2JK-0565 Belge Doğrulama Adresi : https://www.turkiye.gov.tr/bogazici-universitesi-ebys

Adres: Boğaziçi Üniversitesi 34342 Bebek/ İstanbul
Telefon No: Faks No:
e-Posta: İnternet Adresi: www.bogazici.edu.tr
Kep Adresi: bogaziciuniversitesi@hs01.kep.tr

Bilgi İçin: Nurşen MUNAR
Mühendis
Telefon No: 0 212 359-6749

APPENDIX C

THE ENGLISH TRANSLATIONS OF THE SURVEYS

Student Survey 1

1. Have you heard of the notion of accessibility before? Please explain.
2. Have you heard of the notion of media accessibility before? Please explain.
3. Do you have any friends or relatives with physical/cognitive disabilities?
    a. Yes
    b. No
4. What problems can people with disabilities face in daily life? Please explain.
5. Do you have any information about legal regulations regarding the rights of people with disabilities? Please explain.
6. Have you heard the term d/Deaf and hard of hearing before?
    a. Yes
    b. No
7. What is the difference between the terms “deaf”, “Deaf”, “hard of hearing”? Please explain.
8. Are there any “d/Deaf” and/or “hard of hearing” individuals around you?
    a. Yes
    b. No.
9. Does your university offer accessibility services for the students with disabilities?
    a. Yes
    b. No.
    c. I don't know.
10. Does your university offer accessible content for the d/Deaf and hard of hearing students?
    a. Yes
    b. No.
    c. I don't know
11. What are the needs of d/Deaf and hard of hearing people in public life? Please explain.
12. What types of audiovisual content may d/Deaf and hard of hearing people consume? Please explain.
13. Do television channels in Türkiye offer accessible audiovisual content for the d/Deaf and hard of hearing viewers?
    a. Yes
    b. No.
    c. I don't know
14. If your answer to the previous question is yes, what kind of content could this be? Please explain.
15. Do you use online streaming platforms?
    a. Yes
    b. No.

16. If your answer to the previous question is yes, which platforms do you have subscriptions to?
17. Do these platforms offer accessible content to their audiences?
    a. Yes
    b. No.
    c. I don't know
18. If your answer to the previous question is yes, what kind of accessibility options are available on these streaming platforms?
19. Do you think the accessibility services provided by these platforms are sufficient? Rate on a scale of 1-5.
20. Have you heard of AD (Audio Description) before?
    a. Yes
    b. No.
21. If your answer to the previous question is yes, please explain.
22. Have you heard of SDH (subtitles for the d/Deaf and hard of hearing)?
    a. Yes
    b. No.
23. If your answer to the previous question is yes, in which type of content/when is SDH used? Please explain.
24. Have you ever watched audiovisual content with SDH?
    a. Yes
    b. No.
    c. I don't know
25. Which of the following platforms have SDH content available?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. Other
26. How often do you watch audiovisual content with SDH? Please rate on a scale of 1-5.
27. Is there a standard for SDH production?
    a. Yes
    b. No.
    c. I don't know.
28. If your answer to the previous question is yes, what these standards could be and why are they important?
29. If available, give an example to describe how SDH might be used in audiovisual content.
30. Do online streaming platforms have subtitling guidelines?
    a. Yes
    b. No.
    c. I don't know
31. If your answer to the previous question is yes, please explain what might be important in these guidelines.
32. Is creativity important in the SDH?
    a. Yes
    b. No.
    c. I don't know.
33. If your answer to the previous question is yes, what is the relationship between creativity and standards/guidelines?

34. Which of the following do you think plays an important role in SDH?

If you reduced the size of the font slightly throughout this table, the words would not be divided from line to line in such an annoying way.	Not important at all	Not important	Neither important nor unimportant	Important	Very important
Readability/comprehensibility of the dialogues					
Description of sound effects					
Description of music					
Identification of character names					
Description of effects visible on the screen					
Conveyance of the meaning					
Viewing experience					
The use of emoticons/visuals					
The colour of subtitles					
The font size of subtitles					
The placement of subtitles on the screen					

35. If you watch audiovisual content with SDH, classify the SDH content according to the following criteria.

	Very insufficient	Insufficient	Neither insufficient nor sufficient	Sufficient	Very sufficient
Readability/comprehensibility of the dialogues					
Description of sound effects					
Description of music					
Identification of character names					
Description of effects visible on the screen					
Conveyance of the meaning					
Viewing experience					

36. Can SDH quality vary by genre?
    a. Yes.
    b. No.
    c. I don't know.
37. Are there subtitling or audiovisual translation courses in your department?
    a. Yes
    b. No.
    c. I don't know
38. Are these courses actively offered?
    a. Yes
    b. No.
39. Is there a course on accessibility or media accessibility in your department?
    a. Yes
    b. No.
40. Are these courses actively offered?
    a. Yes
    b. No.
41. What would you expect from a subtitling or audiovisual translation course?
42. Do you think that a media accessibility course is necessary?
    a. Yes
    b. No.
    c. I don't know
43. If your answer to the previous question is yes, please explain why and your expectations from such a course.

Student Survey 2

1. Please explain what media accessibility means to you.
2. What kind of problems can people with disabilities face in accessing information in public life?
3. Does your university offer media accessibility services to the students with disabilities?
    a. Yes
    b. No.
4. What can be done to improve media accessibility services at your university? Please explain.
5. Do television channels in Türkiye offer accessible audiovisual content to d/Deaf and hard of hearing viewers?
    a. Yes
    b. No.
    c. I don't know.
6. If your answer to the previous question is yes, what do you think should be considered in the design of such content? Please explain.
7. Do you use online streaming platforms?
    a. Yes
    b. No.
8. Do these platforms offer accessible content to their audiences?
    a. Yes
    b. No.
    c. I don't know.
9. Do you think the accessibility services of these platforms are sufficient? Rate between 1-5.
10. Considering the score you gave to the previous question, explain the reasons behind your rating.
11. Have you heard of SDH (subtitles for the d/Deaf and hard of hearing)?
12. If your answer to the previous question is yes, in which types of content/when are SDH used? Please explain.
13. How often do you watch audiovisual content with SDH? Please rate on a scale of 1-5.
14. Do you find the audiovisual content with SDH sufficient? Please give a score between 1-5.
15. Considering the score you gave to the previous question, explain the reasons behind your rating.
16. Is there a standard for SDH production?
    a. Yes
    b. No.
    c. I don't know
17. If your answer to the previous question is yes, explain what these standards might be and why they are important.
18. Do online media content platforms have subtitling guidelines?
    a. Yes
    b. No.
    c. I don't know
19. If your answer to the previous question is yes, please explain what might be important in these guidelines.

20. Is creativity important in SDH?
    a. Yes
    b. No.
    c. I don't know
21. If your answer to the previous question is yes, what could be the relationship between creativity and standards/guidelines? Please explain with examples.
22. Which or which of the following do you think play an important role in SDHs?

	Not important at all	Not important	Neither important nor unimportant	Important	Very important
Readability/comprehensibility of the dialogues					
Description of sound effects					
Description of music					
Identification of character names					
Description of effects visible on the screen					
Conveyance of the meaning					
Viewing experience					
The use of emoticons/visuals					
The colour of subtitles					
The font size of subtitles					
The placement of subtitles on the screen					

23. If you have viewing experience, classify the SDH content according to the following criteria.

	Very insufficient	Insufficient	Neither insufficient nor sufficient	Sufficient	Very sufficient
Readability/comprehensibility of the dialogues					
Description of sound effects					
Description of music					
Identification of character names					
Description of effects visible on the screen					
Conveyance of the meaning					
Viewing experience					

24. Does the quality of SDH vary according to genre?
25. What would you expect from a subtitling or audiovisual translation course? Please explain.
26. Do you think a media accessibility course is necessary?
    a. Yes
    b. No.
    c. I don't know
27. If your answer to the previous question is yes, please explain why and your expectations from such a course.
28. Do you think there is change in your awareness of media accessibility as a result of the training?
29. Can you share your experiences during the training?
30. How satisfied were you with the training process (score out of 1-10)?
31. If you have any suggestions for future training, please share them.

End-user Survey 1

1. Please indicate your education level (e.g., primary school, middle school, high school, university)
2. Have you heard of the notion of media accessibility before?
    a. Yes
    b. No
    c. Not sure
3. If your answer to the previous question is yes, please explain what you understand by this concept.
4. Do you watch audiovisual content (films, series, documentaries, etc.)?
    a. Yes
    b. No
5. If your answer to the previous question is yes, how often? Please rate on a scale of 1 to 5.
6. Do you watch television?
    a. Yes
    b. No
7. Which television channels do you watch?

8. Which online streaming platforms are you familiar with?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. MUBI
    e. HBO
    f. BluTV
    g. Exxen
    h. Gain
    i. Other
9. Which type of content do you prefer to watch?
    a. Local
    b. Foreign
    c. Both
10. Which online streaming platforms are you subscribed to?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. MUBI
    e. HBO
    f. BluTV
    g. Exxen
    h. Gain
    i. Other
    j. None
11. Are you satisfied with the television channels or streaming platforms? Please rate on a scale of 1 to 5.

12. When watching audiovisual content (films, series, documentaries, etc.) on these channels and streaming platforms, which types of accessibility options do you use and how often?

13. If you prefer to watch content with subtitles, how satisfied are you with this service? Please rate on a scale of 1 to 5.
14. If you prefer to watch content with SDH, how satisfied are you with this service? Please rate on a scale of 1 to 5.
15. If you prefer to watch content with sign language interpreting options, how satisfied are you with this service? Please rate on a scale of 1 to 5.
16. If you prefer lip reading, how much of the content can you understand? Please rate on a scale of 1 to 5.
17. What are the reasons for your preferences? Please explain.
18. For SDH, how important are the following features to you? Please rate each on a scale of 1 to 5.

a. Dialogue intelligibility
b. Description of sound effects
c. Description of music
d. Description of character names
e. Conveyance of meaning
f. Viewing pleasure
g. Creativity

19. Do you think SDH on television channels are sufficient? Please rate on a scale of 1 to 5.
20. Do you think SDH on the streaming platforms are sufficient? Please rate on a scale of 1 to 5.
21. Is there a difference in terms of quality between SDH options offered in foreign films and those in local films? Please explain.
22. Do you enjoy SDH on these channels and platforms?

a. Yes
b. No
c. Sometimes

23. Please explain the reasons for your answer to the previous question.
24. Do you think SDH on these channels and platforms need to be more creative?

a. Yes
b. No
c. I don’t know

25. Do you think SDH on television channels and online streaming platforms should be improved?

a. Yes
b. No

26. Do you have any suggestions for improving the quality of SDH? Please explain.
27. Do you have any suggestions for improving media accessibility services in general? Please explain.

End-user Survey 2

Questions on "*Börü* A and B"

1. Please indicate your education level.
2. Please rate the subtitles in the "*Börü* A" video for overall comprehensibility.
3. Please rate the subtitles in the "*Börü* B" video for overall comprehensibility.
4. Please rate the subtitles in the "*Börü* A" video for overall readability.
5. Please rate the subtitles in the "*Börü* B" video for overall readability.
6. Please rate the subtitles in the "*Börü* A" video for on-screen visibility (text colour intensity and background opacity remain constant).
7. Please rate the subtitles in the "*Börü* B" video for on-screen visibility (text colour intensity and background opacity vary by scene).
8. Please rate the subtitles in the "*Börü* A" video for area coverage on screen (the amount of space they occupy is fixed).
9. Please rate the subtitles in the "*Börü* B" video for area coverage on screen (the space they occupy shrinks/enlarges by scene).
10. Please rate the subtitles in the "*Börü* A" video for display duration (synchronized with the audio).
11. Please rate the subtitles in the "*Börü* B" video for display duration (sometimes longer or shorter than the audio).
12. Please rate the subtitles in the "*Börü* A" video for their screen position (always at the bottom).
13. Please rate the subtitles in the "*Börü* B" video for their screen position (appear in various areas).
14. The subtitles in "*Börü* A" are all white (no colour changes). Are you satisfied with this?
15. The subtitles in "*Börü* B" change colour by emotion/scene. Are you satisfied with this?
16. What aspects of the subtitle colours bother or please you? (Compare "*Börü* A" vs. "*Börü* B.")
17. The "*Börü* A" video contains no scene effects. Are you satisfied with that?
18. Are you satisfied with the scene effects in "*Börü* B" (e.g., screen shifts, blurring, flashing)?
19. Which aspects of those scene effects bother or please you? (Compare "*Börü* A" vs. "*Börü* B.")
20. Are you satisfied with the appearance (font style/size/colour) of the subtitles in "*Börü* A"?
21. Are you satisfied with the appearance (font style/size/colour changes by scene) of the subtitles in "*Börü* B"?
22. What aspects of the font usage bother or please you? (Compare "*Börü* A" vs. "*Börü* B.")
23. Please rate the entry/exit animations of subtitles in "*Börü* A" (always the same animation).
24. Please rate the entry/exit animations of subtitles in "*Börü* B" (varying animations).
25. What aspects of those entry/exit animations bother or please you? Please explain. (Compare "*Börü* A" vs. "*Börü* B.")
26. The subtitles in "*Börü* A" contain no emojis or graphic elements. Are you satisfied with that?

27. The subtitles in "*Börü* B" contain emojis/graphics (e.g., record icon during music, bullet icon). Are you satisfied with that?
28. What aspects of emoji/graphic usage bother or please you? (Compare "*Börü* A" vs. "*Börü* B.")
29. Please rate the inter-scene explanatory text in "*Börü* A" (long paragraph during transitions) for comprehensibility.
30. Please rate the inter-scene explanatory text in "*Börü* B" (short text at the start and during transitions) for comprehensibility.
31. Are there any aspects of the dialogue subtitles in either video that bother or please you? Please explain. (Compare "*Börü* A" vs. "*Börü* B.")
32. Please rate your satisfaction with the sound-effect descriptions in "*Börü* A" (e.g., "gunshot," "scream" described uniformly).
33. Please rate your satisfaction with the sound-effect descriptions in "*Börü* B."
34. What aspects of the sound-effect descriptions bother or please you? (Compare "*Börü* A" vs. "*Börü* B.")
35. Please rate the music descriptions in "*Börü* A" (note icon used) for adequacy.
36. Please rate the music descriptions in "*Börü* B" (lyrics animate, emoji used) for adequacy.
37. Please rate the character descriptions in "*Börü* A" for adequacy.
38. Please rate the character descriptions in "*Börü* B" for adequacy.
39. Please rate the creativity of the subtitles in "*Börü* A" (1–10 stars).
40. Please rate the creativity of the subtitles in "*Börü* B" (1–10 stars).
41. Overall, how satisfied are you with the subtitles in "*Börü* A"? Please rate (1–10), considering your viewing pleasure.
42. Overall, how satisfied are you with the subtitles in "*Börü* B"? Please rate (1–10), considering your viewing pleasure.
43. When consuming visual content, which subtitles do you prefer: those in "*Börü* A" or those in "*Börü* B"?

– *Börü* A
– *Börü* B

Questions on "*Rebel Moon 2* A and B"

47. Please rate the subtitles in "*Rebel Moon 2* A" for overall comprehensibility.
48. Please rate the subtitles in "*Rebel Moon 2* B" for overall comprehensibility.
49. Please rate the subtitles in "*Rebel Moon 2* A" for overall readability.
50. Please rate the subtitles in "*Rebel Moon 2* B" for overall readability.
51. Please rate the subtitles in "*Rebel Moon 2* A" for on-screen visibility (constant colour intensity and background opacity).
52. Please rate the subtitles in "*Rebel Moon 2* B" for on-screen visibility (varying by scene).
53. Please rate the subtitles in "*Rebel Moon 2* A" for area coverage (fixed).
54. Please rate the subtitles in "*Rebel Moon 2* B" for area coverage (shrinks/enlarges by scene).
55. Please rate the subtitles in "*Rebel Moon 2* A" for display duration (synchronized with audio).
56. Please rate the subtitles in "*Rebel Moon 2* B" for display duration (sometimes longer or shorter than audio).
57. Please rate the subtitles in "*Rebel Moon 2* A" for screen position (always bottom).
58. Please rate the subtitles in "*Rebel Moon 2* B" for screen position (various areas).
59. The subtitles in "*Rebel Moon 2* A" are white only. Are you satisfied?
60. The subtitles in "*Rebel Moon 2* B" use multiple colours. Are you satisfied?
61. What aspects of the subtitle colours bother or please you? (Compare "*Rebel Moon 2* A" vs. "*Rebel Moon 2* B.")
62. The "*Rebel Moon 2* A" video has no scene effects. Are you satisfied?
63. Are you satisfied with the scene effects in "*Rebel Moon 2* B" (screen shifts, blurring, flashing)?
64. What aspects of those scene effects bother or please you? (Compare "*Rebel Moon 2* A" vs. "*Rebel Moon 2* B.")
65. Are you satisfied with the appearance of the subtitles in "*Rebel Moon 2* A" (font style/size/colour)?
66. Are you satisfied with the appearance of the subtitles in "*Rebel Moon 2* B" (font changes)?
67. What aspects of font usage bother or please you? (Compare "*Rebel Moon 2* A" vs. "*Rebel Moon 2* B.")
68. Please rate the entry/exit animations of subtitles in "*Rebel Moon 2* A" (uniform animation).
69. Please rate the entry/exit animations of subtitles in "*Rebel Moon 2* B" (varied animations).
70. What aspects of those animations bother or please you? Please explain.
71. The subtitles in "*Rebel Moon 2* A" contain no emojis/graphics.
72. The subtitles in "*Rebel Moon 2* B" contain emojis/graphics (record icon, bullet icon). Are you satisfied?
73. What aspects of emoji/graphic usage bother or please you? (Compare "*Rebel Moon 2* A" vs. "*Rebel Moon 2* B.")
74. Please rate the inter-scene explanatory text in "*Rebel Moon 2* A" for comprehensibility (long paragraphs).
75. Please rate the inter-scene explanatory text in "*Rebel Moon 2* B" for comprehensibility (short text).

76. Are there any aspects of the dialogue subtitles that bother or please you? Please explain.
77. Please rate the sound-effect descriptions in "*Rebel Moon 2* A" (e.g., "gunshot," "scream").
78. Please rate the sound-effect descriptions in "*Rebel Moon 2* B."
79. What aspects of sound-effect descriptions bother or please you?
80. Please rate the music descriptions in "*Rebel Moon 2* A" (note icon used).
81. Please rate the music descriptions in "*Rebel Moon 2* B" (lyrics animate, emoji used).
82. Please rate the character descriptions in "*Rebel Moon 2* A."
83. Please rate the character descriptions in "*Rebel Moon 2* B."
84. Please rate the creativity of the subtitles in "*Rebel Moon 2* A" (1–10).
85. Please rate the creativity of the subtitles in "*Rebel Moon 2* B" (1–10).
86. Overall, how satisfied are you with the subtitles in "*Rebel Moon 2* A"? Please rate (1–10).
87. Overall, how satisfied are you with the subtitles in "*Rebel Moon 2* B"? Please rate (1–10).
88. When consuming visual content, which subtitles do you prefer: those in "*Rebel Moon 2* A" or "*Rebel Moon 2* B"?

a. *Rebel Moon 2* A
b. *Rebel Moon 2* B

APPENDIX D

THE TURKISH ORIGINALS OF THE SURVEYS

Öğrenci Anketi 1

1. Erişilebilirlik kavramını daha önce duydunuz mu? Lütfen açıklayınız.
2. Medya erişilebilirliği kavramını daha önce duyunuz mu? Lütfen açıklayınız.
3. Etrafınızda herhangi bir fiziksel/zihinsel engeli bulunan arkadaş veya akrabanız var mı?
    a. Evet
    b. Hayır
4. Engelli bireyler gündelik hayatta ne gibi sorunlarla karşılaşabilir? Lütfen açıklayınız.
5. Engelli bireylerin haklarına yönelik yasal düzenlemeler hakkında bilginiz var mı? Lütfen açıklayınız.
6. S/sağır ve işitme engelli kavramlarını daha önce duydunuz mu?
    a. Evet
    b. Hayır
7. "sağır", "Sağır", "işitme engelli" kavramları arasındaki fark nedir? Lütfen açıklayınız.
8. Etrafınızda hiç "S/sağır" ve/veya "işitme engelli" birey var mı?
    a. Evet
    b. Hayır
9. Okuduğunuz üniversite engelli öğrencilerine yönelik erişilebilirlik hizmetleri sunuyor mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
10. Okuduğunuz üniversitede S/sağır ve işitme engellilere yönelik erişilebilir görsel-işitsel medya materyalleri mevcut mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
11. Kamusal hayatta S/ağır ve işitme engellilerin ne gibi ihtiyaçları olabilir? Lütfen açıklayınız.
12. S/sağır ve işitme engellilerin ne tür görsel-işitsel medya türleriyle ilişkisi olabilir? Lütfen açıklayınız.
13. Türkiye'deki televizyon kanalları S/sağır ve işitme engelli izleyicilerine erişilebilir görsel-işitsel medya içeriği sunuyor mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
14. Bir önceki soruya cevabınız evet ise, bunlar ne tür içerikler olabilir? Lütfen açıklayınız.
15. Çevrimiçi medya içerik platformlarını kullanıyor musunuz?
    a. Evet
    b. Hayır

16. Bir önceki soruya cevabız evet ise, hangi platformlarda aboneliğiniz bulunmaktadır?
17. Bu platformlar izleyicilerine erişilebilir içerikler sunuyor mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
18. Bir önceki soruya cevabınız evet ise, içeriklerde ne tür erişilebilirlik seçenekleri mevcut?
19. Bu platformların erişilebilirlik hizmetleri sizce yeterli mi? 1-5 arasında puanlayınız.
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
20. AD (Audio Description/Sesli Betimleme) kavramını daha önce duydunuz mu?
    a. Evet
    b. Hayır
21. Bir önceki soruya cevabınız evet ise, lütfen AD kavramını açıklayınız.
22. SDH (subtitles for the d/Deaf and hard of hearing/Sağır ve işitme engellilere yönelik alt yazı) kavramını daha önce duydunuz mu?
    a. Evet
    b. Hayır
23. Bir önceki soruya cevabınız evet ise, SDH hangi tür içeriklerde/ne zaman kullanılır? Lütfen açıklayınız.
24. Hiç SDH içerikli görsel-işitsel medya içeriği izlediniz mi?
    a. Evet
    b. Hayır
    c. Bilmiyorum
25. Aşağıdaki hangi platformlarda SDH içerik mevcuttur?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. Diğer
26. Ne sıklıkla SDH içerikli görsel-işitsel medya içeriği izliyorsunuz? 1-5 arasında bir puan veriniz.
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
27. SDH üretiminde bir standart mevcut mudur?
    a. Evet
    b. Hayır
    c. Bilmiyorum
28. Bir önceki soruya cevabınız evet ise, bu standartların neler olabileceğini ve önemlerini açıklayınız.
29. Eğer varsa, platformlardaki SDH kullanımına dair bir örnek veriniz ve açıklayınız.

30. Çevrimiçi medya içerik platformlarının alt yazılara yönelik bir yönergesi mevcut mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
31. Önceki soruya cevabınız evet ise lütfen bu yönergede önemli olabilecek maddeleri açıklayınız.
32. SDH'de yaratıcılığın bir önemi var mıdır?
    a. Evet
    b. Hayır
    c. Bilmiyorum
33. Önceki soruya cevabınız evet ise, yaratıcılık ve standartlar/yönergeler arasındaki ilişki ne olabilir?

34. Sizce aşağıdakilerden hangisi veya hangileri SDH'lerde ne kadar önemli bir rol oynar?

	Hiç önemli değil	Önemsiz	Ne önemli ne de önemsiz	Önemli	Çok önemli
Diyalogların rahat okunması/anlaşılabilirliği					
Ses efektlerinin betimlenmesi					
Müziklerin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Görsel olarak görülen sahnelerin alt yazıyla da betimlenmesi					
Anlamın iletilmesi					
Seyir zevki					
Emoji/görsel kullanımı					
Alt yazıların rengi					
Alt yazıların boyutu					
Alt yazıların ekrandaki konumu					

35. İzleme deneyiminiz varsa SDH içeriklilerini aşağıdaki kriterlere göre sınıflandırınız.

	Çok yetersiz	Yetersiz	Ne yeterli ne yetersiz	Yeterli	Çok yeterli
Diyalogların rahat okunması/anlaşılabilirliği					
Ses efektlerinin betimlenmesi					
Müziklerin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Anlamın iletilmesi					
Seyir zevki					

36. SDH kalitesi türe göre değişiklik gösterebilir mi?
    a. Evet
    b. Hayır
    c. Bilmiyorum
37. Okuduğunuz bölümde Alt Yazı Çevirisi veya Görsel İşitsel Medya Çeviri dersleri var mı?
    a. Evet
    b. Hayır
    c. Bilmiyorum
38. Bu dersler aktif olarak açılıyor mu?
    a. Evet
    b. Hayır
39. Okuduğunuz bölümde Erişilebilirlik veya Medya Erişilebilirliği üzerine bir ders var mı?
    a. Evet
    b. Hayır
40. Bu dersler aktif olarak açılıyor mu?
    a. Evet
    b. Hayır
41. Bir Alt Yazı Çevirisi veya Görsel İşitsel Medya Çevirisi dersinden beklentiniz ne olurdu?
42. Sizce bir Medya Erişilebilirliği dersi gerekli mi?
    a. Evet
    b. Hayır
    c. Bilmiyorum
43. Bir önceki soruya cevabınız evet ise, lütfen sebebini ve beklentilerinizi açıklayınız.

Öğrenci Anketi 2

1. Medya erişilebilirliği kavramının sizin için ne ifade ettiğini lütfen açıklayınız.
2. Kamusal hayatta engelli bireyler bilgiye erişim konusunda ne gibi sorunlarla karşılaşabilir?
3. Eğitim gördüğünüz kurumda engelli bireylere yönelik medya erişilebilirliği çalışmaları var mı?
    a. Evet
    b. Hayır
4. Eğitim gördüğünüz kurumdaki S/sağır ve işitme engelli bireylere yönelik ne tür medya erişilebilirliği çalışmaları yapılabilir? Lütfen açıklayınız.
5. Türkiye'deki televizyon kanalları S/sağır ve işitme engelli izleyicilerine erişilebilir görsel-işitsel medya içeriği sunuyor mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
6. Bir önceki soruya cevabınız evet ise, bu tür içeriklerin geliştirilmesinde sizce nelere dikkat edilmelidir? Lütfen açıklayınız.
7. Çevrimiçi medya içerik platformlarını kullanıyor musunuz?
    a. Evet
    b. Hayır
8. Bu platformlar izleyecilerine erişilebilir içerikler sunuyor mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
9. Bu platformların erişilebilirlik hizmetleri sizce yeterli mi? 1-5 arasında puanlayınız.
10. Bir önceki soruya verdiğiniz puanı göz önünde bulundurarak puanlamanızın arkasında yatan sebepleri açıklayınız.
11. SDH (subtitles for the d/Deaf and hard of hearing/Sağır ve işitme engellilere yönelik alt yazı) kavramını daha önce duydunuz mu?
12. Bir önceki soruya cevabınız evet ise, SDH hangi tür içeriklerde/ne zaman kullanılır? Lütfen açıklayınız.
13. Ne sıklıkla SDH içerikli görsel-işitsel medya içeriği izliyorsunuz? 1-5 arasında bir puan veriniz.
14. Medya içerik platformlarında yer alan SDH içerikli görsel-işitsel medya içeriklerini yeterli buluyor musunuz? 1-5 arasında bir puan veriniz.
15. Bir önceki soruya verdiğiniz puanı göz önünde bulundurarak puanlamanızın arkasında yatan sebepleri açıklayınız.
16. SDH üretiminde bir standart mevcut mudur?
    a. Evet
    b. Hayır
    c. Bilmiyorum
17. Bir önceki soruya cevabınız evet ise, bu standartların neler olabileceğini ve önemlerini örnekler üzerinden açıklayınız.

18. Çevrimiçi medya içerik platformlarının alt yazılara yönelik bir yönergesi mevcut mu?
    a. Evet
    b. Hayır
    c. Bilmiyorum
19. Önceki soruya cevabınız evet ise lütfen bu yönergede önemli olabilecek maddeleri açıklayınız.
20. SDH'de yaratıcılığın bir önemi var mıdır?
    a. Evet
    b. Hayır
    c. Bilmiyorum
21. Önceki soruya cevabınız evet ise, yaratıcılık ve standartlar/yönergeler arasındaki ilişki ne olabilir? Lütfen örneklerle açıklayınız.
22. Sizce aşağıdakilerden hangisi veya hangileri SDH'lerde ne kadar önemli bir rol oynar?

	Hiç önemli değil	Önemsiz	Ne önemli ne de önemsiz	Önemli	Çok önemli
Diyalogların rahat okunması/anlaşılabilirliği					
Ses efektlerinin betimlenmesi					
Müziklerin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Görsel olarak görülen sahnelerin alt yazıyla da betimlenmesi					
Anlamın iletilmesi					
Seyir zevki					
Emoji/görsel kullanımı					
Alt yazıların rengi					
Alt yazıların boyutu					
Alt yazıların ekrandaki konumu					

23. İzleme deneyiminiz varsa SDH içeriklilerini aşağıdaki kriterlere göre sınıflandırınız.

	Çok yetersiz	Yetersiz	Ne yeterli ne yetersiz	Yeterli	Çok yeterli
Diyalogların rahat okunması/anlaşılabilirliği					
Ses efektlerinin betimlenmesi					
Müziklerin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Karakter isimlerinin betimlenmesi					
Anlamın iletilmesi					
Seyir zevki					

24. SDH kalitesi türe göre değişiklik gösterebilir mi?
25. Bir Alt Yazı Çevirisi veya Görsel İşitsel Medya Çevirisi dersinden beklentiniz ne olurdu? Lütfen açıklayınız.
26. Sizce bir Medya Erişilebilirliği dersi gerekli mi?
    a. Evet
    b. Hayır
    c. Bilmiyorum
27. Bir önceki soruya cevabınız evet ise, lütfen sebebini ve beklentilerinizi açıklayınız.
28. Atölye sürecinde medya erişilebilirliğine yönelik farkındalığınızda bir değişiklik olduğunu düşünüyor musunuz?
29. Atölye sürecinde edindiğiniz deneyimlerinizi paylaşabilir misiniz?
30. Atölye sürecinden ne kadar memnun kaldınız? (1-10 üzerinden puanlayınız).
31. Bundan sonraki eğitimler için önerileriniz varsa lütfen paylaşınız.

Son Kullanıcı Anketi 1

1. Eğitim durumunuzu belirtiniz. (Örn. İlkokul, ortaokul, lise, üniversite)
2. Medya erişilebilirliği kavramını daha önce duydunuz mu?
    a. Evet
    b. Hayır
3. Emin değilim
4. Bir önceki soruya cevabınız evet ise bu kavramdan ne anladığınız lütfen açıklayınız.
5. Görsel-işitsel medya içeriklerini (Film, dizi, belgesel vs.) takip ediyor musunuz?
    a. Evet
    b. Hayır
6. Bir önceki soruya cevabınız evet ise, ne sıklıkla? 1-5 arasında puanlayınız.
7. Televizyon izliyor musunuz?
    a. Evet
    b. Hayır
8. Hangi televizyon kanallarını takip ediyorsunuz?
9. Hangi çevrimiçi medya içerik platformlarını biliyorsunuz?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. MUBI
    e. HBO
    f. BluTV
    g. Exxen
    h. Gain
    i. Diğer
10. Hangi içerikleri tercih ediyorsunuz?
    a. Yerli
    b. Yabancı
    c. İkisi de
11. Hangi çevrimiçi medya içerik platformlarına abonesiniz?
    a. Netflix
    b. Amazon Prime
    c. Disney +
    d. MUBI
    e. HBO
    f. BluTV
    g. Exxen
    h. Gain
    i. Diğer
    j. Hiçbiri
12. Takip ettiğiniz televizyon kanalları veya medya içerik platformlarından genel olarak memnun musunuz? 1-5 arasında puanlayınız.
13. Bu kanal ve platformladaki görsel-işitsel medya içeriklerini (Film, dizi, belgesel vs) izlerken hangi tür erişilebilirlik seçeneklerini, ne sıklıkla kullanıyorsunuz?
14. Alt yazı tercih ediyorsanız, bu hizmetten ne kadar memnusunuz? 1-5 arasında puanlayınız.

15. S/sağır ve işitme engellilere yönelik alt yazı tercih ediyorsanız, bu hizmetten ne kadar memnusunuz? 1-5 arasında puanlayınız.
16. İşaret dili tercih ediyorsanız, hizmetten ne kadar memnunuz? 1-5 arasında puanlayınız.
17. Dudak okumayı tercih ediyorsanız, içeriğin ne kadarını anlayabiliyorsunuz? 1-5 arasında puanlayınız.
18. Tercihlerinizin sebebi nedir? Lütfen açıklayınız.
19. S/sağır ve işitme engellilere yönelik alt yazılarda sizin için aşağıdakilerden hangileri, ne kadar önemli? Lütfen 1- 5 arasında puanlayınız.
    a. Diyalogların anlaşılabilirliği
    b. Ses efektlerinin betimlenmesi
    c. Müziklerin betimlenmesi
    d. Karakter isimlerinin betimlenmesi
    e. Anlamın iletilmesi
    f. Seyir zevki
    g. Yaratıcılık
20. Televizyon kanallarındaki S/sağır ve işitme engellilere yönelik alt yazılar sizce yeterli mi? 1-5 arasında puanlayınız.
21. Çevrimiçi medya içerik platformlardaki alt yazı ve S/ağır ve işitme engellilere yönelik alt yazılar sizce yeterli mi? 1-5 arasında puanlayınız.
22. Yabancı filmlerde sunulan alt yazı seçenekleri ile yerli filmlerde sunulan alt yazı seçenekleri arasında kalite ve ulaşılabilirlik açısından bir fark var mı? Lütfen açıklayınız.
23. Bu kanal ve platformlardaki alt yazılardan keyif alıyor musunuz?
    a. Evet
    b. Hayır
    c. Bazen
24. Lütfen önceki soruya verdiğiniz cevabın gerekçelerini açıklayınız.
25. Sizce bu kanal ve platformladaki alt yazıların daha yaratıcı olmasına gerek var mı?
    a. Evet
    b. Hayır
    c. Bilmiyorum
26. Sizce televizyon kanallarındaki ve çevrimiçi medya içerik platformlarındaki S/sağır ve işitme engellilere yönelik alt yazılar geliştirilmeli mi?
    a. Evet
    b. Hayır
27. Bu alt yazıların geliştirilmesi için önerileriniz var mı? Lütfen açıklayınız.
28. Genel olarak medya erişilebilirliği hizmetlerinin geliştirilmesi için önerileriniz var mı? Lütfen açıklayınız.

Son Kullanıcı Anketi 2

Börü dizisi üzerine sorular

1. Lütfen eğitim durumuzunu belirtiniz.
2. "*Börü* A" videosunda yer alan alt yazıları genel anlamda anlaşılabilirlikleri bakımından puanlayınız.
3. . "*Börü* B" videosunda yer alan alt yazıları genel anlamda anlaşılabilirlikleri bakımından puanlayınız.
4. "*Börü* A" videosunda yer alan alt yazıları genelanlamda okunabilirlikleri bakımından puanlayınız.
5. "*Börü* B" videosunda yer alan alt yazıları genel anlamda okunabilirlikleri bakımından puanlayınız.
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14. "*Börü* A" videosunda yer alan alt yazılarda farklı renk kullanımı bulunmamaktadır (alt yazılar beyazdır). Bu durumdan genel anlamda memnun musunuz?
15. "*Börü* B" videosunda yer alan alt yazılarda farklı renk kullanımları bulunmaktadır (duygu ve sahne değişimlerine göre farklı renkler kullanılır). Bu durumdan genel anlamda memnun musunuz?
16.
17. Sizi alt yazıların rengiyle ilgili rahatsız eden veya memnun eden kısımlar nelerdir? ("*Börü* A" ve "*Börü* B" videolarını kıyaslayınız.)
18. "*Börü* A" videosunda herhangi bir sahne efekti bulunmamaktadır. Bu durumdan memnun musunuz?
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20. Sizi bu sahne efektlerinde memnun eden veya rahatsız eden kısımlar nelerdir? ("*Börü* A" ve "*Börü* B" videolarını kıyaslayınız.)
21. "*Börü* A" videosunda yer alan alt yazıların görünüşlerinden (yazıların şekli/büyüklüğü/rengi aynıdır) memnun musunuz?

22. "*Börü* B" videosunda yer alan alt yazıların görünüşlerinden (yazıların şekli/büyüklüğü/rengi sahneye göre değişiklik gösterir) memnun musunuz?
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30. "*Börü* A" videosunda yer alan alt yazılardaki sahne arası açıklamayı (ara sahne geçişinde ekranda çıkan uzun paragraf) anlaşılabilirlik bakımından puanlayınız.
31. "*Börü* B" videosunda yer alan alt yazılardaki sahne arası açıklamayı (videonun başında ve ara sahne geçişinde ekranda çıkan kısa yazı) anlaşılabilirlik bakımından puanlayınız.
32. İki videoda yer alan alt yazılardaki konuşmalarda sizi rahatsız eden veya memnun eden kısımlar var mı? Lütfen açıklayınız. ("*Börü* A" ve "*Börü* B" videolarını kıyaslayınız.)
33. "*Börü* A" videosunda yer alan alt yazılardaki ses betimlemelerinden (silah sesi, çığlık sesi şeklinde tek biçimde betimlenir) memnun musunuz? Lütfen puanlayın.
34. "*Börü* A" videosunda yer alan alt yazılardaki ses betimlemelerinden (silah sesi, çığlık sesi şeklinde tek biçimde betimlenir) memnun musunuz? Lütfen puanlayın.
35. İki videoda yer alan alt yazılardaki ses betimlemelerinde sizi rahatsız eden veya memnun eden kısımlar var mı? Lütfen açıklayınız. ("*Börü* A" ve "*Börü* B" videolarını kıyaslayınız.)
36. "*Börü* A" videosunda yer alan alt yazılardaki müzik betimlemelerini (nota simgesi kullanılır) yeterlilikleri bakımından puanlayınız.
37. "*Börü* B" videosunda yer alan alt yazılardaki müzik betimlemelerini (sözler dalgalanır, emojiyle müzik betimlenir) yeterlilikleri bakımından puanlayınız.
38. "*Börü* A" videosunda yer alan alt yazılardaki karakter betimlemelerini yeterlilikleri bakımından puanlayınız.
39. "*Börü* B" videosunda yer alan alt yazılardaki karakter betimlemelerini yeterlilikleri bakımından puanlayınız.
40. "*Börü* A" videosundaki alt yazıları yaratıcılığı bakımından yıldızlarla derecelendiriniz (1-10 üzerinden).

41. "*Börü* B" videosundaki alt yazıları yaratıcılığı bakımından yıldızlarla derecelendiriniz (1-10 üzerinden).
42. "*Börü* A" videosundaki alt yazılardan genel olarak ne kadar memnun musunuz? Lütfen seyir zevkinizi göz önünde bulundurarak puanlayınız (1-10 üzerinden).
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44. Görsel içerik tükettiğiniz yerlerde "*Börü* A" videosundaki alt yazıları mı, yoksa "*Börü* B" videosundaki alt yazıları mı daha çok görmeyi tercih edersiniz?
    a. *Börü* A
    b. *Börü* B

Rebel Moon 2 dizi üzerine sorular

1. Lütfen eğitim durumuzunu belirtiniz.
2. "*Rebel Moon 2* A" videosunda yer alan alt yazıları genel anlamda anlaşılabilirlikleri bakımından puanlayınız.
3. . "*Rebel Moon 2* B" videosunda yer alan alt yazıları genel anlamda anlaşılabilirlikleri bakımından puanlayınız.
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    a. *Rebel Moon 2* A
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