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Subtitling for the Deaf and the Hard-of-hearing: A Reception Study in the Turkish Context

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Declaration of Originality

I, Ali Gürkan, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

This study aims to contribute to a better understanding of subtitling for people with hearing impairments and to improve the accessibility to audiovisual material for hearing-impaired viewers in Turkey. It starts by providing a detailed general overview of the current state of accessibility and includes a detailed discussion on existing legislation, an outline of the limited practice of subtitling for the deaf and the hard-of-hearing (SDH) in Turkish and a profile of the assumed target audience. The ultimate goal of this research is to create a set of guidelines that can be used in the production of quality SDH in Turkey.

In order to achieve these aims, the study adopts a product-oriented descriptive approach and first investigates the guidelines applied in countries where SDH has long been established as a professional practice in an attempt to reveal some of the shared values of good practice as well as potential divergences.

Following this descriptive analysis, some of the key contradicting practices in the guidelines – speaker identification, reading speed, indication of sound and paralinguistic information – are tested on an audience of (37) Turkish hearing-impaired viewers so as to unveil their needs and preferences within the framework of Audience Reception Theory.

Quantitative data on the preferences of Turkish viewers was collected by means of questionnaires filled in by the participants after they had watched different sets of subtitles, each of them testing a different feature. Further qualitative data was obtained through interviews conducted with four participants who took part in the experiment so as to generate more in-depth information regarding their preferences. The results yielded by the statistical analysis of the quantitative data and the interpretive phenomenological analysis of the qualitative data culminated in the drafting of a set of guidelines that can be used in the production of SDH in Turkey.

Impact Statement

The current research contributes to the creation of a set of guidelines for the provision of subtitling for the deaf and the hard-of-hearing (SDH) in the Turkish context by conducting a series of experiments that explore the needs and preferences of Turkish hearing-impaired viewers. This study also supplies valuable information as regards the profile of people with hearing loss, including access to education, social rights and legislation, TV viewing habits, reading skills and the role of Turkish Sign Language. In this sense, this investigation can be seen as a contribution to the growing body of research being carried out on Audience Reception Studies and practices like SDH, since it provides data and a national perspective on how actual viewers receive and process audiovisual productions in their socio-cultural context.

The situation of the hearing-impaired in Turkey is rather lacking when it comes to accessing information, especially when this is communicated through audiovisual sources, as the majority of programmes do not contain any subtitles. This has, of course, led to acute inequality within society as a whole, with some of its members being unable to enjoy certain opportunities. It is hoped that by looking closely at the creation and reception of these types of subtitles, this research project will draw attention to this state of affairs and, most importantly, help to initiate changes that will ultimately contribute to the creation of a more balanced society. To the best of my knowledge, this is the first piece of academic work in the Turkish context to concentrate on the needs and preferences of hearing-impaired people when it comes to the consumption of intralingual subtitles.

This raised awareness should encourage the development of further accessibility services that have the needs and preferences of people with hearing loss as one of their central tenets. Explorations of this type are expected to stimulate debate in the Turkish environment and help bring together the various stakeholders, namely hearing-impaired viewers, deaf

associations, broadcasters and distributors, producers, educational centres, language service providers, translation agencies and government bodies.

As a pioneering project in the Turkish context, this study should also help increase academic interest in the study of accessibility and encourage other scholars to conduct similar studies on SDH and other areas of accessibility to the audiovisual media, like audio description for the blind and the partially sighted.

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Abbreviations

AD:	Audio Description
ARS:	Audience Reception Studies
ART:	Audience Reception Theory
AVM(s):	Audiovisual Material(s)
AVP(s):	Audiovisual Production(s)
BBC:	British Broadcasting Company
CAB:	Canadian Associations of Broadcasters
CI:	Cochlear Implant(ation)
CPS:	Characters per Second
DCT:	Dual Coding Theory
DCMP:	Described and Captioned Media Program
DTS:	Descriptive Translation Studies
DTV4ALL:	Digital Television for ALL
EEG:	Electroencephalogram
EFHOH	European Federation of Hard of Hearing
HA(s):	Hearing Aid(s)
ITC:	Independent Television Commission
MEG:	Magnetoencephalography
MMR:	Mixed-Method Research
Ofcom:	Office of Communication
OS:	Operating System
OSL:	Ottoman Sign Language
RTÜK:	Radio and Television Supreme Council
SDH:	Subtitling for the Deaf and the Hard-of-Hearing
SiL:	Sign Language
SL:	Source Language
SLI:	Sign Language Interpreting
ST:	Source Text
TL:	Target Language
TRT:	Turkish Radio and Television Corporation
TS:	Translation Studies

TSL: Turkish Sign Language

TSLI: Turkish Sign Language Interpreting

TT: Target Text

UN: United Nations

WPM: Words per Minute

CHAPTER 1

Introduction

Information has always been a source of power, and the ability of human beings to use and exploit it can arguably be considered one of the key factors that have enabled us to survive across the centuries. This ability to deal with information has been employed to progress all together or to gain advantage over other groups of human beings and communities. Over the years, the importance of information, and our dependence on it, have increased substantially. The advances witnessed in the field of Information and Communication Technologies (ICTs), particularly in the area of digitisation, have had a great impact on the way we communicate, favouring the proliferation and easy distribution of information. Its pre-eminence is observed in the fact that we live in a 'digital society', in which we are surrounded in our daily lives by a multitude of screens of various types and sizes. This ubiquitous presence of information assumes a key role in all aspects of our lives by affecting our decisions as regards entertainment, education, personal or professional development, commercial habits, and the like. In a society led by technology, access to information has become crucial for making the right decisions and fully enjoying the opportunities on offer around us.

1.1. Aims and Motivation

Audiovisual productions (AVPs) have become one of the main ways of creating and sharing information since the advent of moving images, gaining immense ground against written materials and even replacing them, especially in the field of entertainment. After the introduction of sound to silent movies towards the end of the 1920s, gaining access to AV productions became challenging, not only for those who could not speak the language of the movie but also for those who were deaf or hard-of-hearing (HoH).

Although producers and distributors were quick to realise the need to develop methods to overcome the language barrier in order to sell their products to different countries, their interest was not as pronounced when it came to making those very films accessible to audiences with sensory impairments, presumably for economic reasons, as the number of people in this category was comparatively low. It was not until the 1970s that the special needs of people with some degree of sensory loss and a lack of access to AV productions started to be debated in some countries like the USA and the UK. In other countries where people with a sensory impairment are less visible in society, their special needs are still overlooked despite the fact that technology is readily available and has been in use for nearly 50 years. People in some of these countries are forced to fight for their basic rights, not only access to education and health services but also the right to equal access to information like the rest of their compatriots. Many people with sensory impairments are not even aware of their rights as regards the consumption of AV productions, of what they may be missing and of how this situation is affecting them. Since they tend to be more concerned with securing access to vital provision such as health services and education, they often fail to realise that the lack of access to information is one of the main triggers of exclusion. Scholars like Tucker (1997) highlight the fact that the exclusion of the deaf from mainstream society is due to the lack of accessibility to audiovisual programmes, whether TV broadcasting, cinemas, theatres and museums.

Turkey is one of the countries where the needs and rights of people with disabilities have generally been overlooked by governments and the rest of society. In 2011, Burcu conducted research in the capital city of Ankara with 500 participants to gain an insight into how the respondents perceived and defined disabled people. The results of the study revealed that 43.4% of the participants perceived disabled people as outcasts or excluded from society, while 39.4% saw them as pitiful individuals in constant need of help or care. In addition, the statistics from the report of the *Symposium on Fighting against Disability Discrimination* held in Ankara in 2010 clearly point to the exclusion of disabled people from society. The vast majority of disabled people in the

sample confirmed that they had experienced some kind of discrimination: 77.3% in accessing public places, 73.1% in accessing information, 72.1% in using public transport and 70% in accessing education. These rather alarming figures emplasise the invisibility of the disabled and the sorry state they find themselves in in terms of accessibility in Turkey.

On the upside, awareness of their rights and needs has been slowly increasing in the country, with a few significant developments in terms of legislation. The first and most significant of these advancements was the approval of The Turkish Disability Act of July 2005 No. 5378, which states that "[d]iscrimination shall not be made against persons with disabilities; non-discrimination is the fundamental principle of policies concerning persons with disabilities". Two years later, in 2007, Turkey signed the UN Convention on the Rights of Persons with Disabilities and ratified it in 2009, making it part of national legislation. In 2010, an amendment was introduced to Article 10 of the Turkish Constitution, which establishes that measures taken for the disabled "cannot be considered to be contrary to the principle of equality".

These legislative developments have brought about some practical changes for the disabled, but, as these mainly include facilitating physical access to buildings and public transport, they are still limited and far from fully meeting the broader needs of this section of society. On occasions, these physical changes are not fit for purpose and ramps are built so steep that they are difficult, if not impossible, for a wheelchair to use. Also, metro networks and some buses tend to be accessible only in big cities, with the rest of the country fairly underdeveloped in these issues. The precarious nature of access services in Turkey is also highlighted by Akbulut (2010:10), who uses the metrobus as an example – a rapid transportation system that has been operating in Istanbul since 2007. The author deplores the fact that despite being the biggest transportation project developed in recent years, the metrobus was not designed with access for the disabled in mind.

In Turkey, physical disabilities that can easily be seen by others, rather than sensory ones, are the first to come to mind and be acted upon. This means that

accessibility tends therefore to be generally associated with provision of access to physical surroundings and public transportation, thus overlooking the needs of people with sensory impairments, especially the deaf and HoH. Given all the challenges encountered when it comes to physical access, it is not surprising to see that disabled people's access to information and means of communication is lagging considerably behind in the country. It would not in fact be wrong to state that people with sensory impairments are the people experiencing most difficulties when accessing information that is widely delivered through audiovisual media, as these programmes do not make use of any access services. When this is combined with the problems that the disabled experience in accessing transportation, education, buildings, health services and the like, it becomes clear to what extent these limitations impair their daily lives and prevent them from taking part in society and reaching their full potential.

As an ordinary member of Turkish society, I used to share some of the same misconceptions of disabilities, becoming only aware of the disabled and their needs when I saw the ramps on buildings being used by them. Apart from these measures to facilitate access to physical surroundings, the only other service I was aware of was the use of sign language interpreting (SLI) in a very few programmes on television, broadcast very sporadically. Information exchanges being so prevalent in our daily life and we being so used to receiving them with ease, I was not aware of how inaccessible the sources of information are for the disabled, especially those with a sensory impairment. Before embarking on this research project, it can be said that my knowledge about access services and their potential impact on the lives of the disabled was rather limited.

The turning point for me was my master's degree in Translation at Imperial College London, in the academic year 2012-2013 in which I was introduced to audiovisual translation (AVT) and accessibility. My ignorance of the needs of the disabled was so deep that on my first encounter with SDH on TV in the UK, I thought it was provided and used solely for language learning purposes. When I discovered the true value of these broadcast subtitles, and became more knowledgeable regarding AVT, I realised the sorry state of affairs in my own country as regards accessibility to AV productions. I suddenly became aware of

how inaccessible Turkish society is, and how difficult it is for disabled citizens to develop personally and to take part in society at large.

One of the negative aspects derived from the lack of access services is that disabled people tend to feel isolated and, thus, confine themselves to their own community, which in turn contributes to their invisibility in society, as they are not partaking with the rest. All this creates a vicious circle in which their isolation increases their invisibility in society and their invisibility diminishes their chances of raising their voice and fighting for their rights, which again impedes the development of access services. As they are excluded from society by the mere fact of not being able to access public events and spaces, they tend to spend most of their time within their own community and in their homes – a situation which foregrounds the importance of making sure that the information sources at their disposal are as appropriate to their needs as possible. Although printed materials are significant sources of information, their low education levels – 23.3% of the disabled are illiterate (TÜIK 2011) – point to the possible difficulties they might encounter on this front. Considering its popularity in Turkish society (Aykan 2012:2), television emerges as the most prominent source of information, ahead of the internet, being in many cases the only way for the disabled (especially females) to get a glimpse of the outer world. Given the increasing importance and prevalence of audiovisual materials (AVMs) as a source of information and enjoyment in society, and bearing in mind that access services like SDH and AD have a long history in many western countries and are reasonably straightforward practices, it is imperative that they are made accessible to all in Turkey.

The above realisations motivated me to research the development of these accessibility services in the Turkish context so as to contribute to changing the current situation. I decided to focus on SDH because, although the Turkish market produces interlingual subtitles for the broadcast of some foreign films on TV and their distribution in cinemas, the special requirements of the deaf have been so far ignored. As indicated by De Linde and Kay (1999:1) standard subtitles for hearers and SDH share some common features such as the conversion of spoken language into written text, presentation under spatial and

temporal constraints, adherence to a maximum display rate to suit the reading speed of the viewers and dependence on other semiotic systems. These shared features have led to the misconception that standard subtitles are also adequate for the deaf, thus ignoring their special needs.

Even though it is obvious that deaf viewers cannot access any acoustic semiotic signs contained in the AV programmes, the fact that these viewers not only need a transcription of the dialogue but also of all other (non)verbal semiotic signs (sound effects, paralinguistic information, instrumental music, etc.) to comprehend the overall meaning is generally overlooked. Although they can comprehend visual (non)verbal elements such as headlines, street names, facial expressions, lighting, hairstyle, make-up, etc., it is nearly impossible for them to grasp the meaning of audio verbal (dialogue, comments, intonation, accents, etc.) or nonverbal elements (sound effects, music, silence, crying, shouting, etc.) without any additional information. Understanding the interdependent relationships between audial and visual signs and subtitles is crucial for viewers and explains why subtitles sometimes become ambiguous or even meaningless without one of the semiotic signs. In this respect, De Linde and Kay (1999:9) suggest that the difficulties the deaf encounter can be better understood when the sound of the AV programme is turned down. Some of the issues include the confusion as to who is speaking, unexplained changes in the characters' behaviours caused by sound effects (unknown footsteps) or an alteration of paralinguistic elements (tone of voice).

As Mozziconacci (2002:1) notes, paralinguistic elements have the ability to alter the meaning of the utterances and "provide information such as a speaker's gender, age and physical condition, and the speaker's views, emotion and attitude towards the topic, the dialogue partner, or the situation". The various semiotic codes found in AV productions act in a simultaneous and interdependent manner to create meaning, and the overall result is broader than the sum of each individual semiotic code. These codes have different levels of effect over the meaning-making process and the relationships between them are not the same in each and every part of the AVP. They are intentionally shaped by the original creator and need to be carefully analysed before

proceeding to the subtitling of the programme. Focusing on paralinguistic as well as non-linguistic elements is therefore crucial when creating SDH.

Another insight that I gained from my reading and encouraged and shaped my research was that, although the nature of deafness and the challenges faced by deaf individuals when watching videos are generally the same in different countries, the solutions developed in the provision of access services vary from nation to nation. For instance, deaf and HoH viewers need to be informed about who is talking in a particular scene, but this is addressed differently according to the country or company in question, namely speaker-dependent placement in France, Poland and Germany and the use of different colours in the UK and Spain. Another example of such variation can be observed in the strategies used to render sound effects. In France, red is assigned to sound effects whilst in Spain these are written in white over a black background, which is then placed in the top right hand corner of the screen. In the USA, the use of onomatopoeia is recommended in all programmes, together with labels describing sounds, whereas in the UK onomatopoeia is only favoured when subtitling cartoons or animations.

These strategies hinge on factors such as AVT tradition (being a subtitling or dubbing country), experience with accessibility and SDH, the technological tools available, previous research on SDH, the existence of legislation governing accessibility and the assumed profile of the deaf and HoH communities. To varying degrees, these factors have an impact on the current state of SDH and methods employed in a given country and make the standardisation of strategies a particularly arduous and complicated task, even within the same country. This is one of the reasons why the practices change from country to country, from broadcaster to broadcaster and, sometimes, even from programme to programme within the same provider. Needless to say that such an approach risks confusing the audience, particularly in a country like Turkey, where viewers are not normally exposed to SDH, and where the provision of a SDH service that is consistent and caters to the needs and preferences of the deaf and the hard-of-hearing should be prioritised.

In the pursuit of a high quality, consistent SDH service, a deep knowledge of the target audience and their needs and preferences is vital so that the professionals providing the service, who are hearing individuals, can offer the best for them. A widespread false assumption is that the deaf and the HoH are a homogenous group, whereas in fact they are very heterogeneous groups of people with different needs and preferences according to the level and onset of their hearing impairment, their level and type of education, the hearing aids (HAs) that they use, their preferred way of communication, etc. All these personal factors are interdependent and affect each other. For instance, individuals born deaf, or becoming deaf before acquiring their mother tongue, generally have sign language (SiL) as their mother tongue, employ it as their preferred way of communication, and receive their education in deaf schools. This will in turn determine and shape their social environment and affiliation and, ultimately, every aspect of their lives. Although specific profiles will be as numerous as hearing-impaired people, scholars have come up with three distinct categories that could be taken into consideration when providing SDH that caters to the specific needs of these groups, namely, Deaf, deaf and hard-of-hearing (Neves 2005, 2008, 2009; Haualand and Allen 2009).

Individuals in the ‘Deaf’ group, with a capital ‘D’, adopt SiL as their preferred way of communication and consider themselves as a distinct cultural and linguistic minority (Zárate 2014:42). On the other hand, people in the ‘deaf’ group, have an affiliation to the hearing society rather than considering themselves as a minority and, depending on their level of hearing loss, tend to employ spoken language as their main way of communication. Lastly, individuals in the ‘hard-of-hearing’ group generally have enough residual hearing to adopt spoken language as their mother tongue and only way of communicating and feel a stronger affiliation to the hearing community than the deaf one. Their profiles, physiological and sociocultural differences affect and determine their needs and preferences as, for instance, individuals in the ‘Deaf’ group are generally more open to visual stimulus as they do not usually have any residual hearing, cannot make any use at all of the sound in the AV programme and are more likely to struggle with reading. On the other hand, individuals in the ‘hard-of-hearing’ group have enough residual hearing to

access some of the acoustic signs in the AV production and reduce their dependence on the subtitles, especially in the case of sound effects. Yet, despite this disparity in profiles, the industry only produces one set of subtitles for all the different groups of viewers. To change and improve the situation, all stakeholders, including the deaf, hard-of-hearing, broadcasters, programme creators, distributors, researchers and government bodies need to collaborate in an attempt to find solutions that satisfy (most of) them.

In the specific case of Turkey, when this research was initiated, no SDH service was offered on free TV, no established conventions or guidelines were available and most hearing-impaired people did not know of SDH. This desperate situation could also be interpreted as an opportunity to initiate rapid and radical change on this front. As revealed by the DTV4ALL project, which is the largest reception study on SDH to be conducted in several European countries to date, viewers tend to prefer the conventions already applied in their respective countries and show resistance to change (Romero-Fresco 2015). The fact that a high percentage of Turkish deaf and hard-of-hearing viewers are not familiar with SDH means that they have not developed any kind of attitude toward any of the strategies used to convey acoustic information in the subtitles, and this may be the right time to conduct reception experiments to find out their likes and dislikes with regard to the matter with the ultimate objective of creating an accessibility service that is tailored to their specific needs. Thus, my aim was to elicit the country-specific factors that determine and shape the profiles of the hearing-impaired, from a socio-cultural perspective, as well as to assess some of the strategies employed in SDH empirically in order to make the (non)verbal acoustic elements accessible. Research on SDH carried out in other countries, some of which provide high levels of accessibility on their screens, presented itself as an ideal platform from which to learn from their experiences, failures and successes.

The lack of accessibility to audiovisual media for people with hearing loss and the apparent apathy when it comes to providing any kind of access measures in the country have been highly motivating factors throughout this research project, which, in its empirical dimension, has been divided into two distinct

parts. The first one focuses on the SDH practices implemented in other parts of the world while the second teases out the likes and dislikes of the Turkish hearing-impaired people, by means of some experiments. Using research methods and tools such as questionnaires, interviews, comprehension tests, eyetracking technology, electroencephalogram (EEG) and magnetoencephalography (MEG), the empirical studies conducted in countries that are more experienced in the provision of SDH tend to focus on improving the already available services by investigating which subtitling strategies are better for reading, understanding and enjoying the subtitles. In the current research, however, as there is barely any SDH available in Turkey, the aim is to test various potential strategies in order to ascertain the preferences of the audience and help in the creation of SDH conventions that could cater to the needs of the Turkish hearing-impaired.

1.2. Methodology

The ultimate goal of the current research is to contribute to a set of guidelines that can be employed and consulted when creating SDH in the Turkish context. To do so, the study first focuses on the prevailing strategies employed in countries that have ample experience in providing SDH. By analysing the guidelines and practices in these countries, a list of the potential strategies to convey acoustic signs in AV productions can be drawn and then tested on a group of Turkish deaf and hard-of-hearing participants. The second area of interest centres on the most significant stakeholders in the SDH process, namely deaf and the hard-of-hearing viewers, with special focus on their socio-cultural profile in Turkey. As their subtitling preferences seem to vary from country to country, as attested by the different takes on SDH witnessed in different countries, it therefore seemed crucial to analyse and understand the preferences of the Turkish hearing-impaired in this respect so that the subtitles reflect them. Two methodological frameworks are adopted in this thesis: Descriptive Translation Studies (DTS) and Audience Reception Studies (ARS).

DTS is the main methodological framework adopted in the first part of this research in an attempt to map out the prevailing strategies used in countries with vast experience in the provision of SDH. First introduced by Holmes (1988), DTS is a branch of empirical translation studies (TS) that sits in opposition to previous linguistically oriented studies of a prescriptive nature. This new approach endeavours to describe and explain actual translations rather than evaluating or prescribing how a translation should be. By adopting a target-oriented approach, DTS aims to explore the position and function of translations in the target socio-culture rather than assigning STs a primary position and evaluating the translations in reference to their STs only. Another distinction between prescriptive and descriptive studies is that the latter considers actual translations as their main research interest, whilst the former focuses on comparing two abstract linguistic systems without much context. Scholars relying on DTS examine the norms and constraints that shape the translations by exploring and identifying regular patterns of behaviours.

According to Interis (2011), 'norms' are behaviours that are different from, but may be affected by, beliefs, values, ethics, etc. Their value is known to society, and they regulate the behaviour of its members through its binding force, which stems from the members' internalisation of the norms, or from the sanctions applied by other members or by an authority. The concept of norms can easily be applied to translation since translators are perceived as social actors and translation is a form of communication and social interaction. With this in mind, Toury (1995:3) developed a target-oriented and systematic general theory of translation to describe and explain actual translations, with the ultimate aim of describing and revealing recurrent patterns in the translators' behaviour as well as the socio-cultural constraints that affect their decisions. Although norms govern and affect translational behaviour, it is not possible to detect and observe them on their own. For Toury (2012:87), what is observable and open to investigation are "instances of norm-governed behaviour, or – to be even more precise – their end-products". There are two major sources of data, namely textual and extratextual sources. The former are the actual translations themselves and the latter are "semi-theoretical or critical formulations such as prescriptive 'theories' of translation, statements made by translators, editors,

publishers and other stakeholders involved in or connected with the event" (*ibid*.).

In the first part of the present study, extratextual sources are employed in the form of SDH guidelines that have been drafted by various companies and agencies in countries with a significant amount of experience in the creation and provision of SDH, so as to tease out any recurrent patterns of translational behaviour. This analysis is implemented so as to reveal some of the common points shared among the various sets of guidelines as well as to ascertain the more controversial topics that seem to escape consensus. Although these guidelines are extratextual sources of data, which, according to Toury (1995), need to be approached with circumspection and, as they are prescriptive in nature and may not reflect real practice, they are ultimately based on experience and research, with a focus on receivers and their preferences.

Indeed, Toury's solely descriptive approach has been criticised by different authors, such as Chesterman (1993) and Hermans (1999), who argue that besides being descriptive, norms can also be of use in a prescriptive sense, as they can offer a template for translators to produce high quality translations. Along similar lines, I would like to foreground the validity of a study that, like the present one, begins with a descriptive analysis of several guidelines in order to elucidate norms and aims ultimately to offer a new set of guidelines that can be used in the creation of SDH in a specifically Turkish context.

Indeed, the current research has a two-fold aim. Firstly, it seeks to extract the norms prevailing in the creation and presentation of SDH services in countries with a rich experience in the field, by analysing some of the guidelines implemented in these countries. By describing and comparing these norms, I aim to reveal not only the common points that could also be used in other socio-cultural systems without much disagreement, but also the issues that have caused controversy and vary depending on the cultures in question. My role in this first phase of the research is one of a researcher with a descriptive stance. In the second part of the research, however, a more prescriptive approach is adopted, whereby some of these norms and conventions are tested in the

Turkish context, with a number of hearing-impaired subjects. A panoply of SDH strategies governing character identification, subtitling editing as well as the representation of sound information and paralinguistic elements, which happen to show more variety in the various guidelines, are presented to a Turkish audience made up of deaf and hard-of-hearing individuals so that their preferences can be evaluated. Here, I adopt a role of norm/standard setter as there are no SDH services on free TV in Turkey and viewers are not accustomed to any given sets of norms. The main aim of the current research is to propose a set of guidelines for use in the production of SDH in Turkish does not necessarily mean that this is a prescriptive study since the guidelines proposed stem from a descriptive analysis that is later ratified by a target audience. In this sense, they are recommended in order of preference rather than prescribing or dictating only one option.

To ascertain the preferences of the Turkish hearing-impaired viewers as regards the SDH strategies presented to them, the Audience Reception Theory (ART) has been used as the main theoretical framework. A solid and in-depth knowledge of the target audience is key in all kinds of communication in order to convey the intended message successfully to the receiver. For instance, if the sender/encoder of the message misjudges the receiver's knowledge of the topic s/he is trying to communicate and uses advanced vocabulary and specific terms, the receiver might experience difficulty in understanding or might not even understand the intended message at all. For this reason, gaining a detailed insight into the target audience and the socio-cultural factors that define it is of vital importance to the success of the translation's fulfilment of a certain function in the target culture and to meet the needs of the readers/viewers. This is particularly relevant in the case of SDH, which is generally produced by hearing agents who may not have a detailed knowledge of the target deaf receivers and deaf culture, and where a comprehensive overview of the target audience as well as their preferences is therefore of great importance to help translators make better informed choices.

The paradigm of 'uses and gratification', which allocates a core role to the audience in the meaning-making process, highlights the fact that the focus has

shifted from the text and the message to the audience and the way in which individuals interpret the message to create meaning, as dicussed in Section 4.7. For the message to have an impact on the receivers, the latter need to conceive the text as a meaningful discourse and decode it in a meaningful way. As Hall (1980) argues, the way in which the message is decoded by the audience depends on the degree of symmetry or asymmetry that exists between the encoder-producer and decoder-receiver. Potential asymmetries are especially important in the context of SDH where the producers (encoders) are generally hearing individuals and the receivers (decoders) are hearing-impaired individuals. Reception studies are therefore central to understanding how hearing-impaired individuals actually decode the messages encoded by the subtitlers and then produce subtitles that are based on experimental research rather than on translators' assumptions.

The analysis based on the reception of AVMs is somewhat more complex than in the case of other texts, due to the former's multisemiotic nature and dependence on technology. Different methodologies and heuristic tools are required to investigate different levels of reception. De Linde and Kay (1999:35) offer a three-category classification: survey strategies (aiming to reveal the receivers' opinion regarding a translated audiovisual product), semi-controlled experiment strategies (aiming to analyse the effect of a specific translation strategy by controlling the other variables of the AV product) and controlled experiment strategies (aiming to analyse the effect of a specific translation strategy by controlling not only the medium but also the viewers).

The second main part of the current research consists of an empirical experiment in which Turkish hearing-impaired viewers are exposed to different SDH strategies and asked about their preferred solutions. From this point of view, this project can be considered as a micro-level study investigating the effects of the specific SDH solutions on a given audience by mainly adopting semi-controlled strategies in which there is only control over variables regarding the AV production. Given that no SDH services existed on Turkish free-of-charge TV at the time of the experiment, it was very unlikely for the viewers to have had any previous exposure or expectations with regards to SDH. From

this perspective, the present study is the first reception study ever conducted in the Turkish context to assess the preferences of the audience as to the implementation of some SDH strategies. The results are expected to guide professional subtitlers in the production of SDH services that really cater to the needs and preferences of the deaf and the hard-of-hearing by ultimately building a set of guidelines in Turkish (Appendix 9). This is very much needed in Turkey, as some legislation has been passed regulating the provision of SDH on Turkish television, and various TV stations have recently started to produce SDH (Chapter 3). In this sense, the present study takes on the role of norm/trend setter and it is hoped that it will act both as a trigger and an initiator in a growing number of academic studies in the Turkish context that will continue to investigate, validate or refute all aspects of SDH, including the guidelines proposed in these pages.

To carry out the reception study, associations based in various Turkish cities were contacted to recruit deaf and hard-of-hearing participants, which turned out to be a rather challenging task due especially to communication and trust issues. These obstacles were overcome by learning Turkish Sign Language (TSL) at a basic level, enough to communicate with the participants, and by conducting repeated visits to the associations in order to foster a close relationship with the hearing-impaired and to gain their trust by explaining the potential benefits of the study to them. My efforts materialised in the participation of 37 deaf and hard-of-hearing individuals from four different cities – Ankara, Antalya, Denizli and Konya –, who consented to take part in the experiment.

As for the material, the *Güldür Güldür Show* (Meltem Bozoflu 2013–), which was and continues to be a very popular comedy-theatre show depicting events from the daily lives of ordinary people in a humorous way, was used to create various clips of some three to four minutes each (Appendix 10). With the intention of testing four subtitling parameters, the excerpts were provided with various sets of subtitles presenting different solutions when dealing with character identification, verbatim vs. edited subtitles, representation of sound information and paralinguistic information. The various short clips were

combined and edited into one longer video for each of the four parameter categories. The subtitles were created, timed and merged into the clips with the freeware Aegisub (version 3.2.2), as this program can be run on MacOS, which was the operating system (OS) used to prepare the materials.

In the first part of the experiment, the participants were first required to fill in an initial questionnaire in Turkish on their personal details (including age, sex, educational background, level of hearing-impairment), their viewing habits as well as their knowledge and experience of accessibility and SDH in particular. The items in this first questionnaire were employed as independent variables to analyse any relationships between these variables and the various strategies tested. In the second phase of the experiment, the respondents were presented with a video containing different clips, each illustrating a different strategy. At the end of each video presentation, the participants were asked to indicate their preferences. Lastly, after the questionnaires, randomly selected participants were invited to attend a semi-structured interview to express themselves and their preferences freely, in their own words. These interviews were conducted with the objective of gaining an in-depth insight into the preferences they had indicated in the questionnaires, and the pre-prepared questions that guided the interviews cover more or less the same topics as the ones touched upon in the questionnaires.

Since the research did not involve any children or vulnerable adults, no sensitive data were collected and the data gathered were totally anonymised, an application was submitted to the UCL's Research Ethics Committee for the Chair's review only, which was approved in December 2016. The ethical approval number given to the project is 9987/001.

1.3. Thesis Structure

After the introduction, Chapter 2 will offer a literature review on the four main topics of this research, namely, AVT, deaf and hard-of-hearing individuals and their reading skills, and ARS and the audiovisual mediascape in Turkey. The

chapter begins with a historical overview of the development of AVT and explains how the need for the translation of multimedia productions emerged. After this outline, the complex and multisemiotic nature of AVMs is discussed, by detailing each semiotic code and the role it plays in the meaning-making process. Following this discussion, the different AVT modes are presented, with a special focus on SDH, its development, the key differences between SDH and standard interlingual subtitles, the specificities of SDH and the like. The chapter continues with an exploration of the profile of the most important stakeholders and the raison d'être of SDH services: the deaf and the hard-of-hearing viewers. The nature of hearing loss and its effects on hearing-impaired individuals are discussed by providing information on the categorisation of deafness from different perspectives. Special emphasis is put on the impact of hearing loss on the development of the hearing-impaired individuals' language development, as reading is a crucial skill in the provision of accessibility through SDH. Although the principles and theoretical background behind ARS are detailed in the methodology chapter, a review of the relevant research conducted thus far is provided, mainly based on the detailed and comprehensive review of reception studies on live and pre-prepared SDH provided by Romero-Fresco (2018). The final section of this chapter centres on the historical development of AVT in Turkey and the current state of affairs on the AVT front.

Chapter 3 begins with an examination of the profile of the deaf and the hard-of-hearing in Turkey, which first introduces some statistical data that might sometimes appear to be ambiguous and contradictory because of the sources available. Secondly, the current approach to the education of the deaf and the issues surrounding the system are discussed, as well as the hearing-impaired individuals' relatively low level of education and literacy skills. The oralist approach adopted in the current education system denies the use of SiL in the classroom as its key aim is to teach and improve spoken language skills. The flaws and detrimental impact of this approach on the individual's education are also examined. The chapter moves on to investigating the origins of TSL, which dates back to the Ottoman Empire, and explores how its prohibition in the education of the deaf, so as to improve their spoken language skills, obstructed its further development and standardisation. Another aspect discussed in this

chapter are the TV viewing habits of the hearing-impaired, which is especially crucial in the early stages of SDH provision, when not all programmes can be subtitled and a decision needs to be made as to which are the most suitable for subtitling. National legislation regulating the rights of disabled people is explored, including the international treaties on accessibility that have been ratified by the country. Given the sorry state of SDH in Turkey, a battery of suggestions to improve the current state of accessibility is also volunteered.

Chapter 4 focuses on the two methodological frameworks, DTS and ARS, within which the current research is developed. The way in which TS have evolved from a prescriptive to a descriptive approach is discussed, followed by an exploration of Toury's (1995) conceptualisation of norms, their nature and role in the analysis of translations as well as their categorisation into initial, preliminary and operational norms. Chesterman's (1993) approach to DTS is also debated, as he does not dismiss prescriptiveness completely and considers it as a crucial dimension in any theory of translation, arguing that any translation norms that are accepted by society at a given time gain a prescriptive force and can serve as a didactic tool to enhance trainee translators' skills and knowledge. The last part of this chapter examines the main theoretical premises of ARS, defines the notion of audience and looks into the way in which its role has evolved over time to become less passive and more active and engaged. Theoretical paradigms such as indirect effect and uses and gratification are discussed in detail.

Chapter 5 offers a descriptive analysis of the guidelines implemented in countries with ample experience in the production and broadcast of SDH, such as Canada, the UK and the USA, with the aim of discovering the prevailing norms in these varied socio-cultural contexts. The norms and conventions that regulate the provision of SDH services in these countries are compared to reveal not only their commonalities but also the issues that cause controversy and tend to vary across the different guidelines. The key parameters are grouped and discussed under four broad categories, namely, the layout and presentation of subtitles on screen, the temporal dimension, linguistic issues and non-linguistic information. This descriptive analysis constitutes the starting

point of the experimental research by providing necessary data/parameters that are later tested on an audience of Turkish hearing-impaired viewers.

Chapter 6 focuses on the materials employed in the experiments. The chapter begins with a discussion of the criteria used to select the AV programme and the various clips that have been cut from the selected material. The technological tools employed to prepare the materials are also introduced. The chapter then moves on to presenting the parameters applied in the creation of the subtitles and a step-by-step explanation of how the clips have been prepared is also provided. Each of the strategies tested in the clips is illustrated by a screenshot. After the presentation of the materials and tools employed, the collection strategies as well as the design of the questionnaire and the semi-structured interviews are explained in detail. Information is also provided on the steps taken to facilitate the participants' reading and comprehension tasks of the items included in the questionnaire.

Chapter 7 expands on the quantitative and qualitative analysis of the data collected and is divided into two main sections. The first explains the recruitment process and the way in which the questionnaires are conducted and moves on to discuss the analysis of the data gathered from the questionnaires and the interpretation of the results. The data on personal details are analysed through descriptive statistics. After the analysis of the data on viewers' preferences, these are ranked in order of preference, with the frequencies of the various choices displayed by means of clustered bar graphs. Non-parametric tests are used to detect the potential associations between dependent and independent variables and any meaningful relationship is further discussed qualitatively through cross tabulation. The second section of the chapter provides a qualitative analysis of the data gathered from the interviews. An interpretive phenomenological analysis (IPA), which is accounted for at the beginning of the section, was adopted to analyse the qualitative data. As a result of the IPA, eight superordinate themes have been grouped under two broad categories in line with the aims of the study, that is to say the viewing habits and SDH preferences. The various themes are discussed by providing extracts from the interview.

The last chapter recapitulates the key points of the research and summarises the most important results. The limitations of the current research are detailed and potential research avenues are suggested, including the exploitation of traditional as well as innovative research strategies. It is hoped that this research will encourage and motivate other researchers in Turkey and beyond to look into the field of accessibility in general, and SDH in particular, so that the collective efforts of all stakeholders can contribute to transformative change that accommodates the likes and dislikes of the audience regarding SDH.

The thesis is finally completed with a comprehensive list of bibliographical references, containing all the works mentioned in the different chapters, as well as a compilation of appendices that expand on the content provided in the body of the thesis.

CHAPTER 2

Literature Review

2.1. Introduction

Scholars have discussed the definition and limits of the concept of translation and the course of its development as a discipline, with the practices that this concept encompasses being altered and expanded to include new forms. In this respect, accessibility to audiovisual media for viewers with sensory impairments is one of the new key concepts to have entered the discipline of TS. Accessibility is defined by the Oxford online dictionary as the quality of "being able to be reached or entered" or "being easy to obtain or use". In this sense of the word, translation has been applied since time immemorial to make information linguistically and culturally accessible to those who otherwise cannot access it. This expanded concept is also supported by Díaz-Cintas (2005:4), who states that "whether the hurdle is a language or a sensorial barrier, the aim of the translation process is exactly the same: to facilitate the access to an otherwise hermetic source of information and entertainment".

Technological developments have altered and transformed the way in which information is produced and disseminated, which has also inevitably brought about changes in the scope of translation. The exponential increase and mass dissemination of audiovisual information required in the first instance the activation of new types of translation, in the form of dubbing and subtitling, to break the language barrier and make this material accessible to people all over the world. Later, it became evident that people with sensory impairments were being excluded from accessing the same information, and within AVT new professional practices were created, namely subtitling for the deaf and the hard of hearing (SDH) and audio description (AD) for the blind and the partially sighted.

The first part of this chapter begins with a discussion of the multimodal nature of AV texts and then offers a brief history of AVT as well as a definition of its various modes and finishes with an in-depth analysis of SDH, including its technical and specific features. Such an approach will help to situate the current study within TS and to draw a framework for the present research. The second part of this chapter elucidates the nature and types of hearing disorders and is followed by an analysis of how hearing-impaired people read and their reading abilities and difficulties, since their ability in this respect is a determining factor in their enjoyment of SDH. A discussion of some of the most prominent reception studies conducted on SDH is presented so that readers can gain an insight into the topics that have been already researched and their results, thus preparing the ground for the experimental part of this research. Given that the current research focuses on the Turkish context, the last section debates the audiovisual mediascape in Turkey.

2.2. Audiovisual Translation

The technological developments that have made possible the spread of AVMs in a digital format (movies, TV series, documentaries, videogames) and the increasingly easy access to live performances like theatre and opera have taken prime stage in today's society. These advances have inevitably affected the field of translation as a practice and discipline.

The invention of moving images in 1895 signalled an immense change in the way ideas were to be conveyed. Since the first movies were silent and considered universal, the need for translation was not fully recognised till the advent of the talkies in 1927, with the release of *The Jazz Singer* by Warner Bros. During the silent era, only intertitles – texts inserted between images to provide details about the events in the movies – needed to be translated for the distribution of movies in different countries. As Georgakopoulou (2003:42) claims, with sound "the 'masking effect' of silence as to the national origins of films was now lost". People realised that their favourite characters spoke in

another language and they could not understand the dialogue on the screen, which of course hindered the international distribution of films. The solution devised by the film industry was the shooting of different versions of the same films in various languages. At first, local actors from France, Germany, Spain and other countries were employed by Hollywood studios but later, instead of bringing in local actors, film studios were built in Europe to shoot multilingual films. However, after a few years of trial, this translation strategy was abandoned, as it was apparent that the revenue generated by multilingual films did not cover the costs of these versions.

The new developments brought about new translation solutions for overcoming the language barrier, i.e. subtitling and dubbing. Other technological developments, especially the internet and the widespread use of digital cameras, have further altered the production and dissemination of AVPs and have also markedly increased the socio-cultural importance of AVT as this is the only way to make these products available globally.

Although the practice of AVT can be dated back to the origins of cinema, its standing as an academic discipline did not raise much interest among researchers until much later. As Díaz-Cintas (2009:1) notes, after a "sluggish and shaky start in the late 1950s and 1960s", the field attracted remarkable attention in the 1990s and has been burgeoning with ever increasing interest. The changing nature of the discipline can be inferred from the lack of a widely accepted term to denominate the field till the proposal of *audiovisual translation* which "is today the most commonly used term in the field" (Gambier 2013:46).

Digitalisation and ICTs have altered the way in which programmes are produced (sound effects, special effects, shooting, editing), disseminated (new file formats and platforms), consumed (mobile screens of different sizes, on-demand services) and translated (development of better translation tools), making the production and consumption cycles as effortless and speedy as possible. As stated above, another factor which contributes to the complexity of AVT is the coexistence and interdependence of different sign systems, which are conveyed through (non)verbal acoustic and visual channels (Delabastita

1989). These different sign systems operate simultaneously and coalesce into a meaningful whole, which comprises all these sign systems and conveys a meaning that goes beyond what any separate semantic code can express on its own. Since AV texts are not static in nature, unlike written texts, AVT modes need to be synchronised and follow the pace of the ST. The time-boundedness of AVT, another contributor to its complexity, is also one of the most distinctive features of AVT. The multimodality of AV texts and their specifity are further elaborated in the following section.

2.3. The Complex and Multimodal Nature of Audiovisual Texts

Although multimodality has long been ignored in academic exchanges, and texts have been mainly considered and analysed as monomodal structures, Ventola and Kältenbacher (2004:1) highlight the fact that it "has been omnipresent in most of the communicative contexts in which humans engage". O'Sullivan (2013) emphasises that even typographical elements for plain written texts exert a connotative influence over the meaning being rendered. Although translation is mostly conceived as transferring linguistic elements, written or spoken, into another language, nonverbal elements also carry meaning that might need to be transferred or interpreted.

As Zabalbeascoa (2008) argues, not only texts but also a statue, painting, photograph or sound can be considered as an instance of communication, for they also carry meaning encoded by its creator waiting to be decoded and interpreted by its consumers. For him, "there are verbal texts and nonverbal texts, and […] there are texts that combine both verbal and nonverbal signs" (*ibid*.:22). AV texts are examples of the latter, as they convey signs through audio and visual channels. With today's prominence of AV texts, multimodality has attracted greater attention than ever before. Taylor (2013:98) emphasises this by stating that, although multimodality is not a new area of research, "archetypal multimodal texts such as films, television programmes and websites, have greatly broadened the scope of such studies".

Given that two different types of sign are conveyed through two different channels in AV texts, Zabalbeascoa (2008:23) defines four types of sign: *audio verbal* (words uttered), *audio nonverbal* (all other sounds), *visual verbal* (writing), and *visual nonverbal* (all other visual signs). Gambier (2013:48) further details 14 types of semiotic code which actively influence the overall meaning to a varying degree, as illustrated in Table 2.1:

	Audio channel	Visual channel
Verbal elements (signs)	• linguistic code: dialogue, monologue, comments / voices off, reading • paralinguistic code: delivery, intonation, accents literary theatre codes: plot, narrative, sequences, drama progression, rhythm	• graphic code: letters, headlines, menus, street names, intertitles, subtitles
Nonverbal elements (signs)	• special sound effects / sound arrangement code • musical code • paralinguistic code: voice quality, pauses, silence, volume of voice, vocal noise such as crying, shouting, coughing, etc.	• iconographic code • photographic code: lighting, perspective, colours, etc. • scenographic code: visual environment signs • film code: shooting, framing, cutting/editing, genre conventions, etc. • kinesic code: gestures, manners, postures, facial features, gazes, etc. • proxemic code: movements, use of space, interpersonal distance, etc. • dress code: hairstyle, make-up, etc.

Table 2.1: Semiotic codes which affect the meaning-making process

As Chaume (2004), Neves (2005) and Gambier (2013) argue, these different semiotic codes work together simultaneously and add up to an overall meaning, which is broader than the sum of the meanings of each semiotic code. These resources might not possess the same importance or exert the same level of influence towards the meaning-making process in each and every part of an AV text, and their relative importance may vary depending on the relationships created intentionally by its author. The analysis of the relationships established between these different semiotic codes is a crucial step in the translation of AV texts. However, translators are generally more interested in the verbal codes, thus disregarding the roles and interaction of audio or visual nonverbal elements in the meaning-making process (Zabalbeascoa 2008; Perego 2009; Gambier 2013).

Translators therefore need to analyse how the various semiotic codes interact and contribute to the overall meaning and then find solutions that take into account the various semiotic codes and recreate a very similar effect on the target viewers. Without comprehending the message fully, it is very unlikely that a translator can provide a solution which renders the meaning of the original and evokes a similar overall effect in the target viewers. Scholars have proposed different models of analysis of AV texts such as the multimodal approach suggested by Taylor (2003) or the model based on film studies suggested by Chaume (2004). Zabalbeascoa (2008) and Gambier (2013) describe different relationships between these semiotic elements, which might guide translators in their choice of translation strategies and the source material to be translated or omitted (Table 2.2):

Zabelbaescoa (2008)	Gambier (2013)
Complementary (when all elements depend on each other for a full grasp of overall meaning)	Complementarity (e.g. music creates a certain mood)
Redundancy (repetitions regarded as unnecessary at different levels)	Redundancy (one sign repeats or emphasises another one)
Contradiction (defeated expectations of viewers or surprising combinations to create irony, paradox, satire, humour, etc.)	Contradiction (e.g. a certain sign may be opposed to the meaning of another one)
Incoherence (inability to combine elements meaningfully, or as intended)	Autonomy (a focus on an element has nothing to do immediately with the current utterance)
Separability (a feature displayed by elements of sign systems whereby they can (better or worse) autonomously or independently from the AV text)	Distance (in order to be humorous or to create a sign of complicity)
Aesthetic quality (author's intention to produce something of beauty by combining certain elements)	Criticism (forcing the spectator to take a stand)
	Help (a sign aids understanding why certain signs are used in a given way)

Table 2.2: Relationships between different semiotic codes

Although these relationships are not definitive and the list can be expanded, their nature can be broadly categorised into three groups: complementary, redundant or contradictory. Before proposing a solution, translators need to be aware of, and analyse carefully how, authors of AV texts build these

relationships by deploying different semiotic codes. After this discussion of the complexity of AV texts, the various AVT modes will be presented in the following section, with a specific focus on SDH.

2.4. AVT Modes

AVPs and AVT are dependent on technological developments, which have given rise to new types of text and translation practices. Díaz-Cintas and Orero (2010:41) divide the various AVT modes into two umbrella categories: revoicing and subtitling, within which "further classifications of AVT techniques and modes can be established". The first category involves translation types in which ST audio and sometimes visual codes (as in the case of AD) are either replaced or partially covered by a new soundtrack in the target language (TL). In subtitling, audio verbal or nonverbal codes in the ST are rendered in visual form in the target text (TT) and presented on screen, thus adding to the other semiotic layers of the ST. In what follows, the most commonly used AVT modes are discussed.

2.4.1. Revoicing

The most widely used type of AVT in this category is dubbing, which "consists of replacing the original track of a film's (or any audiovisual text) source language (SL) dialogues with another track on which translated dialogues have been recorded in the target language" (Chaume 2012:1). The most prominent feature of dubbing is the synchrony that needs to be established between the translated soundtrack and the timing of the original dialogue and the lip movements of the characters, especially if their faces appear on screen. To enjoy the AVP, viewers opt to suspend their disbelief and embrace the illusion that the characters on screen are native speakers of the TL. From the industry perspective, dubbing is a more costly practice than subtitling "simply because of the number of the operators involved in dubbing a film from start to finish: dubbing director, translator, dubbing translator, actors, sound engineers, etc." (Chiaro 2009:147).

The second most widely employed type of revoicing is voiceover, in which the original soundtrack is not removed completely. Chiaro (*ibid.*:152) defines it as "a technique in which a disembodied voice can be heard over the original dialogue, which remains audible but indecipherable to audiences". In voiceover, the translated dialogue generally begins a few seconds after the original utterance in the SL, which is muffled after this very brief initiation but can still be heard faintly in the background. Voiceover is conventionally used for non-fictional products, like documentaries, but, as Baños-Piñero and Díaz-Cintas (2018:4) state, it is "also used to translate fictional material in certain East European countries".

Fryer (2016:1) defines AD for the blind and the partially sighted as "a verbal commentary providing visual information for those unable to perceive it themselves". In this sense, AD is an intersemiotic type of AVT and, as Díaz-Cintas (2008:7) asserts, it transforms "visual images into words, which are then spoken during the silent intervals in audiovisual programmes or live performances". Unlike other types of AVT, the main focus in AD is on visual sources of meaning rather than the dialogue and there is no ST to be translated. Snyder's (2014) phrase, 'the visual made verbal', sums up the nature of AD and highlights its multimodal nature. The visual nonverbal and verbal elements such as body language, facial expressions, settings, clothes, newspapers headlines etc., which are crucial to the overall meaning, are rendered through audio verbal codes. The objectivity and subjectivity of the descriptions, together with what to describe and how much, are among the most widely discussed and researched issues in AD (Fryer 2016:164).

2.4.2. Subtitling

With the proliferation and mass dissemination of AV products, the need for their translation has also risen proportionally. Subtitling, as a cost-effective and fast way of translating these products, has gained immense ground and become the most widely used method of AVT. Díaz-Cintas (2012:274) defines subtitling as a practice "that consists of rendering in writing, usually at the bottom of the

screen, the translation into a target language of the original dialogue exchanges uttered by different speakers, as well as all other verbal information that appears written on the screen (letters, banners, inserts) or is transmitted aurally in the soundtrack (song lyrics, voices off)". He also adds that, unlike dubbing, subtitling preserves both the visual and aural semantic codes of the ST. This co-existence of source and TT simultaneously gives viewers the opportunity to constantly compare ST with the translations. Gottlieb (1994:102) also highlights this issue by describing subtitling as an overt type of translation, which lays itself "bare to criticism from everybody with the slightest knowledge of the source language".

Another definition sees subtitling as a "diamesic translation in polysemiotic media (including films, TV, video and DVD) in the form of one or more lines of written text presented on the screen in sync with the original verbal content" (Gottlieb 2012:37). He further argues that the diamesic transfer from speech to writing prevents certain prosodic features from being represented in the subtitles and the use of "exclamation marks, italics, etc. are only faint echoes of the certain ring that intonation gives the wording of the dialogue" (*ibid*.:51). Although most of the paralinguistic features of the spoken language are lost in written form, viewers are expected to compensate for this loss of information from the other verbal and nonverbal codes.

Both of these definitions encapsulate the most prominent features of subtitling, which can be summed up as follows:

1. diamesic translation,
2. presentation on screen, usually at the bottom, in the form of one or more lines,
3. rendering in written form original dialogue and other written or aurally transmitted information,
4. ancillary addition to the other original semiotic codes, with which it remains in sync.

These distinctive features of subtitling constitute the reasons why subtitling practice is labelled as ‘constrained translation’ (Titford 1982). The fact that the subtitles are added to the original visual and audio codes brings about spatial considerations since subtitles should be presented in such a way that they do not obstruct other visual semiotic codes, like covering the face of characters, and are as unobtrusive as is needed to maintain the enjoyment of viewers, meaning that there has to be a maximum for the number of lines and words. As Díaz-Cintas (2012) states, subtitles should attract as little attention as possible and let the viewers enjoy the AV product rather than just become a reading exercise. Subtitles are therefore generally placed at the bottom of the screen and rendered in a maximum of two lines consisting of around 35 to 42 characters per line so as not to cover too much of the screen. With recent technological developments, these limitations are changing and some lines can have up to 60 characters, and more.

Synchronising the subtitles with the soundtrack and the other semiotic codes – known as spotting, cueing, originating and timing – brings about temporal considerations since subtitles need to follow the pace of the dialogue and appear/disappear together with the utterances. This temporal constraint affects the way subtitles are perceived and read since, unlike reading a book, viewers/readers cannot determine their own reading speed and need to follow the pace of the subtitles. Furthermore, they do not have the opportunity to re-read subtitles that may be unclear. For this reason, subtitles need to stay on the screen enough time for the viewers to be able to read the subtitles, perceive the other semiotic codes and comprehend the overall meaning. Subtitles that run too fast and disappear before the viewers have finished reading them disrupt the viewing experience and can upset the viewers. When the subtitles are too dense, as is noted by Díaz-Cintas and Remael (2007:95), they create a feeling in the viewers that they “have ‘read’ rather than ‘watched’ the film”. Determining a reading speed which suits all the viewers is not an easily attainable goal since it depends on a few variables ranging from age, education, reading habits, and familiarity with subtitles to the complexity, pace, and density of the other semiotic codes. Although its validity is now being questioned (Moran 2012) and different values are being tried with different audiences on different media

(internet, cinema, etc.), the six-second rule has been traditionally employed to determine a comfortable exposure time for subtitles (D'Ydewalle *et al.* 1987; Brondeel 1994; Karamitroglu 1998). According to Díaz-Cintas and Remael (2007:96), this rule states that a "viewer can comfortably read in six seconds the text written on two full subtitle lines", when each consists of 37 characters, i.e. 74 in total. This six-second rule is also proposed as the maximum exposure time for a full two-line subtitle since, if the subtitles stay on screen for longer, this may cause them to re-read the same subtitle.

The prevalence of these temporal and spatial constraints makes the use of certain translation strategies necessary to facilitate the cognitive process of watching the programme and reading the subtitles. The core strategy, especially when translating fast paced utterances, is reduction of the original dialogue, which can be divided into two subcategories: partial, as in the case of condensation, and total, as in the case of deletion or omission. Díaz-Cintas and Remael (2007:145) assert that "since the verbal subtitle sign interacts with the visual and oral signs and codes of the film, a complete translation is, in fact, not required". This brings us to the principle of relevance, i.e. "it is the balance between the effort required by the viewer to process an item, and its relevance for the understanding of the film narrative that determines whether or not it is to be included in the translation" (*ibid*.:148). At this point, the redundancy of certain elements is also crucial in determining what to include and what to eliminate from the original utterance. If the same meaning is expressed and signified by different semiotic codes simultaneously, subtitlers can condense or omit some linguistic elements without sacrificing the overall meaning since the 'loss' is compensated for by other semiotic codes. To be successful, subtitlers need to use the multimodal nature of AV productions to their own advantage, by analysing each scene individually and paying attention to the relationship that exists among the different semiotic codes before making any reduction. Since subtitles and images require the visual attention of viewers and cannot be processed simultaneously, viewers need to keep switching their attention between the images and the subtitles (Koolstra and Beentjes 1999; Koolstra *et al.* 1999). In this sense, viewers need to grasp information coming from three parallel sources (subtitles, images and soundtrack) if they are to enjoy the AVP.

Processing subtitles is therefore said to require a greater cognitive effort than processing dubbed products (Marleau 1982; Gottlieb 1994; Koolstra *et al.* 2002). However, Perego (2018) maintains that reading subtitles is a semi-automatic process, regardless of the knowledge of the SL, the familiarity with reading subtitles or the age of the viewers, which seems to point to the fact that reading subtitles does not necessarily impinge on the viewers' enjoyment of AV productions.

Díaz-Cintas and Remael (2007) note that subtitles can be categorised depending on the languages used (interlingual, intralingual or bilingual), on the time spared for their preparation (pre-prepared or live/real time), on technical parameters (open or closed), on the strategies employed to project them (mechanical, thermal, photochemical, optical, laser or electronic) and on the distribution format (cinema, television, video/VHS, DVD or internet).

The following section provides information on the development of AVT in the Turkish context.

2.5. Audiovisual Mediascape in Turkey

As already mentioned, subtitling and dubbing have been the most widely adopted solutions used to overcome the language barrier in films ever since the integration of sound in movies. The preferred translation method varies depending on the country concerned, and the decision to adopt one particular method was initially "dictated by complex political, geographical, economic, and cultural reasons" (Perego *et al.* 2018:138). As Koolstra *et al.* (2002:326) note, in Europe, dubbing typically became a favoured translation mode in Austria, France, Germany, Italy and Spain, while subtitling was preferred in Belgium, Denmark, Finland, Greece, Luxembourg, the Netherlands, Norway, Portugal and Sweden. Mostly due to the dominance of the USA in the cinema industry, AV programmes in Anglo-Saxon countries are mainly produced and imported in English, and it seems that there is no specific preference for the translation of the small number of films produced in other languages (Perego *et al.* 2018).

Economic reasons are generally considered to play a key role in the choice of a given translation method since dubbing is significantly more costly than subtitling and, hence, it seems to be preferred in larger countries, where higher revenues can be expected (Danan 1991). These economic reasons, however, do not explain the whole picture. Indeed, factors such as the nationalistic agendas of some European governments, especially after World War II, and their keenness to control the national film industry, the protectionism against the domination of US films and the implementation of local language policies have also exerted a great impact on the choice of translation method.

Of the two AVT modes, and in the initial stages of the cinema industry, dubbing was the method preferred in Turkey. It can thus be argued that it has continued to be the preferred AVT mode since then, especially on TV. As Mencütekin (2009) notes, Turkey can be considered one of the leading countries in dubbing. The first movies were imported from the USA, France and Egypt and were presented to Turkish audiences through dubbing, as Okaykuz and Kaya (2018) report, arguing that low literacy levels as well as the lack of financial resources and knowledge were the main reasons for the preference shown to dubbing in the 1930s. Although low literacy levels can be seen as a legitimate reason, a lack of financial resources is clearly contradictory, given the higher cost of dubbing. Yet, owing to the fact that it reached a significantly larger number of viewers, the potential revenue required by dubbing was considered better than adopting the much cheaper AVT mode, subtitling, that risked reaching significantly fewer people. As discussed above, the reasons behind the selection of a given AVT mode are rather complex and, in Turkey too, these were not the only reasons behind the choice. Foreign AV programmes, and hence AVT, were employed as ideological mechanisms to support the government's nationalistic agenda (*ibid*.). Scenes and stories from the Western world, depicting the Western life style, were used as a tool to promote westernisation and presented as examples to Turkish society, which, despite turning its face to the West, still wanted to preserve its national and traditional identity.

In the 1950s, adaptions of foreign AV programmes served to introduce new genres to the Turkish cinema industry, while promoting the westernisation of society and contributing to the formation of an image of Turks who were keen to adopt Western values on screen (Özön 1968, in Okyakuz and Kaya 2018). The 1970s saw the proliferation of foreign programmes being broadcast on the national public service broadcaster, *Türkiye Radyo Televizyon Kurumu* (TRT). People began watching foreign productions in their homes and, as is the case in other countries, the number of domestic products could not match or compete with the imported programmes. Although voiceover was used for a while by TRT to translate documentaries, other types of programme were dubbed, emulating what was being done in the cinema. Standard Turkish was used in dubbing as an ideological attempt to purge the language from Arabic and Persian words (Okyakuz and Kaya 2018).

During this period, subtitling was rarely used in cinemas and at very few film festivals. After 1983, subtitling began to be considered as a cost-effective alternative to dubbing, especially in cinemas (Gül 2009), to the point that the number of subtitled products has matched, and on occasions surpassed, that of dubbed ones. This can be explained by the profile of the cinema audience since, after the TV became widespread in Turkish homes, cinemas started targeting a more specific group of people, who were generally more educated, with a knowledge of foreign languages, particularly English, and willing to pay to enjoy a foreign film. On the other hand, TV stations, especially national free-to-air channels, target the whole population and, not to lose any viewers, they tend to use dubbing as their preferred translation method. Although dubbing preserves its strong position, the situation on TV has recently been changing, particularly with the introduction of digital TV and the exponential growth in the number of paid TV streaming services which provide viewers with the opportunity to choose their favourite AVT mode. Some free-to-air channels, which only broadcast foreign series, movies and shows also give viewers the opportunity to choose between subtitling and dubbing.

As to the accessibility services available, SLI is provided on a few programmes specifically produced for the hearing-impaired community and only one free-to-

air channel, FOX TV, began to broadcast programmes with SDH in April 2018. To the best of my knowledge, AD has never been provided on any free-to-air TV channel, though various paid streaming services, such as Digiturk, broadcast a certain number of programmes with SDH and AD.

The following section will specifically focus on the main subject of this study, SDH, by presenting its most distinctive features and highlighting the parameters that regulate its delivery.

2.6. Subtitling for d/Deaf and Hard-of-Hearing People

SDH aims to provide people with hearing loss with greater access to AV productions by rendering the speakers' utterances and other audial (non)verbal paralinguistic elements, such as tone of voice, the ringing of a phone, accents, etc. in written texts of up to four lines (De Linde and Kay 1999; Díaz-Cintas and Remael 2007). As a subtitling practice, SDH has much in common with standard interlingual subtitling for hearing audiences. De Linde and Kay (1999:1) outline these shared features as follows:

1. They take place in the same AV context.
2. They involve a conversion of spoken dialogue into written text.
3. They involve a reduction in the amount of dialogue in order to meet spatial and temporal constraints and match the reading speed of the viewers.
4. In both, language is transferred between different linguistic systems (different languages or different registers of a single language).
5. They function interdependently with other semiotic systems.

As we can see from this list, both types of subtitle share a substantial number of features, which can explain why standard subtitles are considered by some as an adequate access service for people with hearing loss, particularly in countries where SDH does not exist. With the advent of sound, the issue of accessibility was exacerbated. As Norwood (1988) notes, the talkies became

the true silent films for the deaf, and it took approximately 30 years to provide them with a captioned movie and another 30 years, after the advent of TV in the 1950s, to gain access to captioned programmes. The focus in the cinema industry was on solving the language barrier so that they could distribute their products all over the world, which in turn meant that people with sensory disabilities were ignored for a long time. The deaf Cuban actor Emerson Romero pioneered the creation of intertitles representing dialogue and rented them out to different deaf organisations in the 1940s (De Linde and Kay 1999:8).

According to Norwood (1988: online), another effort which proved to be a forerunner was the creation of the Captioned Films for the Deaf Inc. by superintendents of the American and Lexington School for the Deaf, which circulated the first “truly captioned films, as the captions were etched directly onto the film”. This scheme became a part of the United States Office of Education, and educators quickly realised the importance of captioned programmes for the education of the deaf. The movie industry’s experience of this programme later shed light onto the problems encountered in the captioning of TV programmes (*ibid*.). Broadcasters were not willing to provide open captions to their programmes since they did not know the exact number of hearing-impaired viewers and did not want to lose hearing viewers who might feel annoyed at the captions. The solution to this problem was developed in the First National Conference on Television for the Hearing-Impaired that took place in 1972 at the University of Tennessee and brought together hearing-impaired individuals, parents, producers and representatives of major networks (*ibid*.). The collaboration of all these stakeholders proved to be the only way to ensure the success of long-lasting accessibility measures. In this conference, two TV programmes, *French Chef* and *Mod Squad*, were presented with captions for the hearing-impaired. The former was shown with open captions whilst the latter was captioned with a new technology which was introduced at this conference and provided captions concealed in “a portion of the video system that was unused in normal transmissions”, the 21 vertical blanking interval. With the development of this technology, in 1980 closed captions became available to the deaf and, after several tests, closed captioning began to be officially offered

on ABC, NBC and PBS. Sixteen hours of captioned programmes per week began to be broadcast on these channels. Since then, the number of hours has been growing exponentially (Neves 2005:109).

With an increasing awareness of the needs of people with hearing loss and the growing lobbying activity on the part of the deaf community, endeavours to develop a viable solution to provide accessibility services for the deaf started in Europe, especially in the UK and France. Two teletext systems, Ceefax and Oracle, were developed in the 1970s by the BBC and ITC, with the help of researchers from the University of Southampton and from ITV and Channel 4 respectively, to provide closed subtitles for the deaf. Unlike the closed captioning system employed in the USA, which condensed the captioning information into just one line, the teletext system allowed for the end of each line, from 6 to 22 and from 318 to 335, to contain the information (*ibid*.:111). The main characteristics of the captions, such as character size, font type, use of colours and the like, were decided on in 1976, and "the world's first public teletext service was put into general use in England" (NCAM/International Captioning n.d.: online). Another kind of teletext system called Antiope was developed in 1976 and only used in France to provide closed subtitles. The service was replaced in 1994 by Ceefax, which was widely used in Europe (Muller 2015). The first closed teletext subtitles were officially broadcast for weekly programmes on the public channel France 2 from 1983 (Neves 2005:9). The teletext system developed in the UK was adopted by several countries in Europe, Asia, Africa and the Pacific, including Turkey. Other European countries followed suit and Belgium, Italy, Germany and the Netherlands began providing SDH in the 1980s, and Portugal and Spain in the 1990s.

Teletext offers two kinds of service: an information service that includes topics such as news, sports, the weather forecast, economics, etc. and is organised in pages; and closed SDH, which can be switched on at will (Neves 2005:112). In Turkey, teletext has only been used as an information service and has never been employed to provide hearing-impaired viewers with accessibility services.

Subtitles were pre-prepared initially; however, the need for accessibility services to cover live programmes gave raise to real-time teletext subtitles, which were either created and cued in by stenographers or produced thanks to speech-to-text technology. With the switchover from analogue to digital technology, teletext subtitles were replaced completely in some countries (e.g. the UK and France) and are still being replaced in others with digital subtitles at varying speeds. As Zárate (2014:40) notes, digital television offers many advances and new possibilities such as “higher resolution pictures, the use of a wider range of colours and a multitude of complex fonts”.

The brief history of SDH in the USA and Europe (specifically the UK and France), vividly demonstrates the challenges encountered on the way towards the development and provision of proper accessibility services for the deaf and hard-of-hearing (HoH) on AV productions; it took nearly 30 years to provide regular SDH on TV. In Turkey, the special needs of the deaf and HoH are still not fully realised and this sector of the audience is still deprived of their basic right to access TV programmes, with the exclusion of just one channel and a few websites of TV channels (Chapter 3).

The advancement of accessibility services in these pioneering countries highlights the instrumental value of legislation in this field since the development of SDH has only been possible after the support and authorising of laws, both in the USA and in Europe, such as the Public Law 87-715 in the USA (1962) (Web 2.1), the Television Without Frontiers Directive in Europe (1989) (Web 2.2) and, at international level, the Convention on the Rights of People with Disabilities (2006) (Web 2.3). In addition to these, national regulations, which demand TV channels to meet certain SDH targets, have proved to be the main impetus in the provision of accessibility services. Figure 2.1 below illustrates the state of SDH in Europe in 2011 and 2013 (EFHOH 2015):

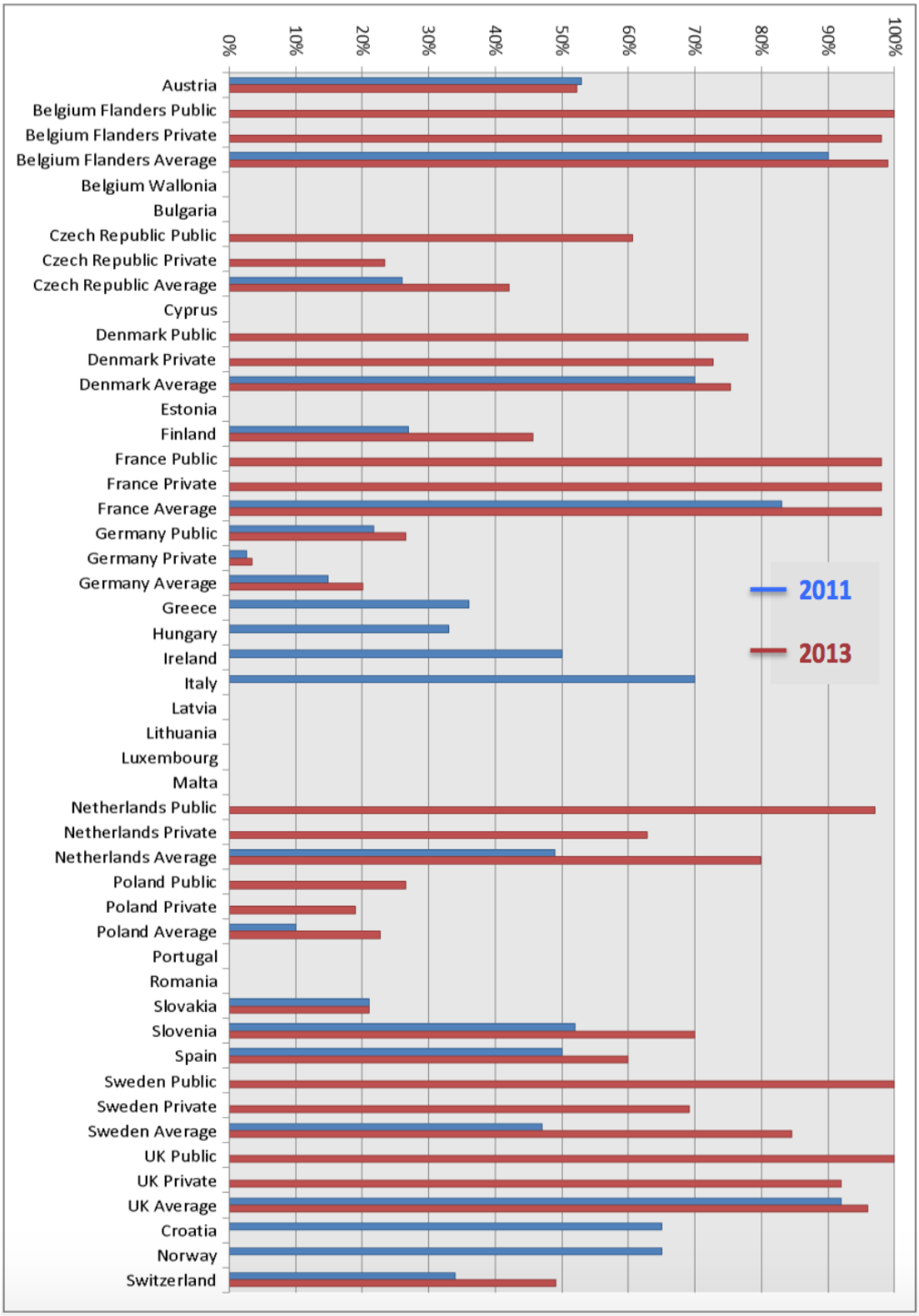

Figure 2.1: State of SDH in Europe – TV

As can be seen from the percentages, the provision of SDH has been growing exponentially in Europe, both inside and outside the EU. Countries like the UK, France, Belgium and the Netherlands have reached, or are very close to

reaching, their aim to subtitle all of their TV programmes and provide the deaf and HoH with access to AV productions equal to that enjoyed by hearing viewers. Although the amount of information on media accessibility has been constantly and rapidly growing through the research and projects conducted in different parts of the world and from different perspectives, this growing mass of information is not easy to access due to its fragmented nature and linguistic problems. With the aim of overcoming these challenges and providing this growing amount of information in a single place, the Media Accessibility Platform (MAP, www.mapaccess.org) was developed, covering and providing valuable, up-to-date information on a wide range of crucial topics regarding media accessibility; research, training (in/formal), events on accessibility, modalities, accessometer (an interactive world map organised by country, which depicts the current state of legislation, standards and guidelines on media accessibility), stakeholders and news.

The focus will now be turned to the peculiarities of SDH and the specific needs of people with hearing loss. Even though people with hearing loss are perceived as a homogeneous group of people who cannot access any kind of sound, they are in fact a very heterogeneous group whose needs and profiles differ greatly, and are profoundly affected by their varying level of access to sound. It is also of note that deaf and HoH viewers have problems in accessing any kind of sounds contained in the AV productions, not only dialogue, and when providing them with accessibility services, this should always be kept in mind when dealing with every one of the scenes. As mentioned above, subtitles for hearers take into account both audial and visual codes, and viewers can generally grasp the complete meaning only after processing all these semiotic signs, which explains why some subtitles might not mean anything and seem ambiguous when read on their own. Given the fact that deaf viewers cannot access audial codes, it would seem really challenging – and sometimes even impossible – for them to understand the complete meaning of the subtitles without comprehending their interaction with the soundtrack. De Linde and Kay (1999:9-10) also emphasise the difficulties that d/Deaf and HoH people encounter when watching programmes with subtitles intended for hearers:

> Turn down the volume of an interlingual subtitled film and you will experience some of the frustrations endured by deaf viewers: confusion over who is speaking the subtitled words; puzzlement as to why, for example, there is a sudden change of human behaviour (e.g. the panic stricken face of someone who hears a murderer's footsteps); misunderstanding due to an overlapping subtitle across a shot change.

This quotation also highlights two of the key dimensions which are instrumental in building meaning and most probably missed by the deaf and HoH: character identification and sound effects. These elements can be grouped in two broad categories: verbal (phonological) and nonverbal components. The former are expressed acoustically through language, whereas nonverbal components include paralinguistic (e.g. tone of voice) as well as non-linguistic (e.g. facial expressions) signs, and can convey meaning beyond the words spoken. Concerning the functions of these signs, Mozziconacci (2002:1) states:

> in addition to fulfilling a linguistic function such as to structure discourse and dialogue, and signal focus, prosodic cues provide information such as a speaker's gender, age and physical condition, and the speaker's view, emotion and attitude towards the topic, the dialogue partner, or the situation.

Although deaf viewers can grasp the meaning of visual signs such as gestures, it is nearly impossible for them to comprehend the paralinguistic signs that are expressed acoustically, such as the tone of voice, intonation, loudness and rhythm of the speech, as well as language variation aspects such as accents, dialects, idiolects etc. Nonverbal components consist of acoustic elements which are not conveyed through speech but have the potential to affect the overall meaning. Neves (2005:231) notes the importance of these elements by stating: "If there is one characteristic that best defines SDH, it is its need to include information about the nonverbal acoustic components of audiovisual texts". These components mainly include sound effects (siren of an ambulance, explosion of a bomb, and the like), speaker identification and music.

Verbal or nonverbal, all these elements need to be represented in the subtitles to avoid any loss of meaning so that the deaf and HoH can enjoy AV productions as much as their hearing counterparts. To this aim, subtitlers employ different strategies, highly dependent on the technological developments at their disposal, such as using colours, displacing subtitles to

follow the speakers, changing the font size, etc. Special attention also needs to be paid to issues such as reading speed, segmentation and synchronisation. All these distinctive features of SDH and the strategies employed to represent them in the subtitles will be discussed in greater depth in the Chapter 5, in which various guidelines are analysed and compared.

Citing Sinha's (2004:173) work, Neves (2005:138) claims that subtitles for hearers can be seen as the "third dimension [as] they come from outside to make sense of the inside". However, as she argues, from the perspective of the hearing-impaired, they are "the other side of sound since they still come from the outside to make sense of the inside but they are the second dimension, and by no means an expendable extra". Although, as previously discussed, the relationship between the sound and the subtitles can be of a redundant and complementary nature for hearers, this is not the case in SDH since subtitles are considered as a substitute for acoustic semantic codes which cannot be grasped through any visual code and convey more than just verbal messages. Neves (2005:164) asserts that "redundancy is then a device that helps to make text cohesive and coherent", a point also made by Gielen and d'Ydewalle (1992:257), who underscore the importance of the relationship between different elements by indicating that "redundancy of information facilitates the processing of subtitles". SDH therefore needs to compensate and recreate the lost relationship of redundancy between acoustic elements and subtitles so as to ease the reception of deaf and HoH audiences.

As the number of AV productions grows exponentially, so does the demand for SDH as well as the interest shown both in academia and industry. Remael *et al.* (2016:251) suggest that the most recurring themes in SDH research are:

> nation-bound studies into local practices, SDH for children (including didactic angles), training requirements in SDH, expanding target audiences for SDH, layout and formal characteristics of the translation mode (including icons and punctuation), quality control, linguistic issues such as cohesion and explicitation, the challenges of interlingual SDH and live subtitling through speech recognition.

The exponential growth of SDH has brought about cost- and time-cutting pressures in the industry. In this respect, some projects, like the EU funded SAVAS, have contributed to developing automated subtitling technologies through speech recognition, a notably under-researched topic in the discipline (Romero-Fresco 2011; Van Waes *et al.* 2013; Remael *et al.* 2014).

2.7. Hearing Loss and Reading Skills of the Deaf and the HoH

Possessing a deep knowledge of the target population is a requirement for reaching a high quality translation level that meets the needs of target readers. This is especially crucial in the case of SDH since the vast majority of translators are hearing individuals who may not have adequate knowledge about the deaf and the HoH population, except for the simple fact that they experience difficulties in accessing sound. Another widespread misconception is to think of deaf and HoH people as one homogenous group as they are indeed a very heterogeneous group of individuals with respect to their type and level of hearing loss, education background, preferred type of communication and social affiliation. This also outlines the controversy that intralingual SDH is a literal transcription of the dialogue and that subtitlers working in this field do not need specific training. On the contrary, subtitlers who provide accessibility services for these groups of people need to be aware that they are targeting a very diverse sector of the population and need to be properly trained to understand and consider their diversity and special needs when producing subtitles.

The types of hearing loss, education profile and, in particular, the reading skills of the deaf and the HoH will be examined in this section.

2.7.1. Hearing loss

As human beings, we make sense of our surroundings through our senses and the loss of one of them has the potential to exert a negative effect on our knowledge of the world, unless this information is compensated for from other

sources. As the American Speech-Language-Hearing Association (ASHA n.d.) notes, our ear is composed of three main parts: outer, middle and inner, all of which have a function in conveying sounds to the brain, as shown in Figure 2.2:

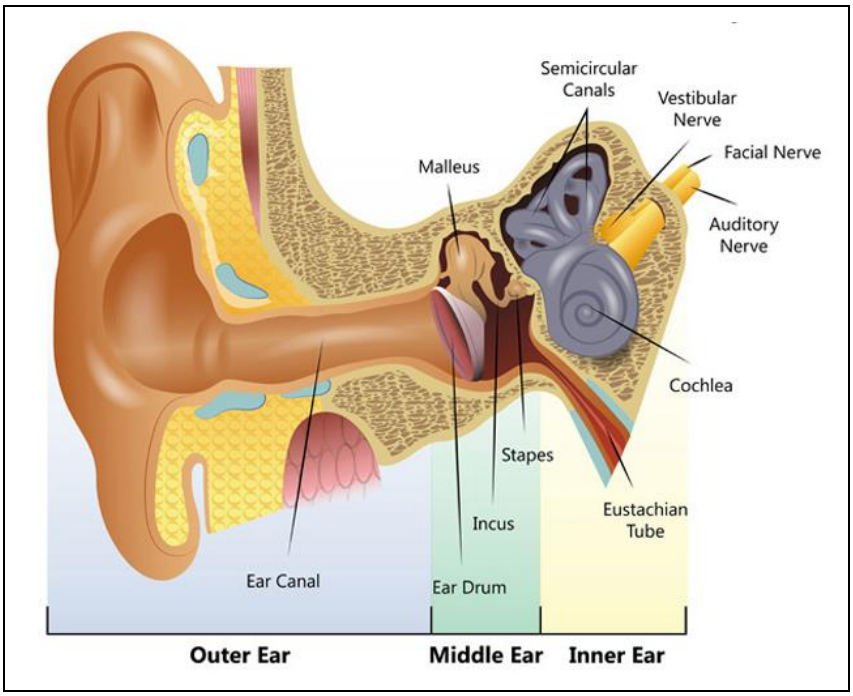

Figure 2.2: Parts of the human ear

The outer ear collects the sound and sends it down to the middle ear through the ear canal and drum. The middle ear includes three tiny bones called ossicles, which are moved by the ear drum and “form a chain from the ear drum to the inner ear” (*ibid*.). The inner part includes the cochlea, which is bony and consists of fluid and hair cells. The sound is collected by the outer ear and sent to the ear drum, which moves back and forth at varying levels hinging on the pitch of the sound and makes the tiny bones move at the same level, sending a signal to the inner ear. When the bones in the middle ear start to move, the fluid in the inner ear does so too, and this movement triggers some hair cells to move and turn the acoustic messages into electrical ones, which are sent to the brain through the auditory nerve to be interpreted. Any kind of malfunction during this process will cause hearing loss.

As Zárate (2014:146) notes, there are two main types of hearing loss, conductive and sensorineural, depending on the part of the ear where the

problem occurs. Conductive hearing loss happens when sound cannot be collected and carried to the inner ear due to a fault that has occurred in the outer or middle ear's drum or ossicles. Mechanical problems such as a blockage in the ear canal (e.g. an accretion of ear wax), accumulation of fluid from a cold, or a hole in the ear drum generally cause this kind of hearing loss. Conductive hearing loss can often be treated by medication or surgery, but if these treatments are not helpful then sound can be amplified with the help of HAs.

Sensorineural hearing loss (SNHL), which is often permanent and cannot be treated with medication or surgery, is caused by a problem in the inner ear (generally with the hair cells within the cochlea) or with the auditory nerve. Zárate (2014) lists some of the causes of SNHL: prolonged exposure to loud sounds, genetic predisposition, aging, complications at birth, injury to the head, and some infections. SNHL might often muffle the sound and distort its quality, making it difficult (sometimes impossible) for individuals to understand the sound. Since this hearing loss is permanent and irreversible, a cochlear implant, (CI) which sends sounds directly to the auditory nerve by bypassing the deformed hair cells might help, although it does not lead to normal hearing (ASHA n.d.). Hearing loss caused by problems both in the outer and inner ear is named as mixed hearing loss.

Another categorisation is based on the degree of hearing loss, articulated around the quietest sound that a deaf or HoH person can hear, measured in decibels (DB). Four categories, cited by Báez Montero (2010), can be observed including: mild (21-40 DB), moderate (41-70 DB), severe (71-90 DB) and profound (>90 DB). Zárate (2014) details slightly different thresholds: 25-39 DB, 40-69 DB, 70-94 DB and >95 DB. Assessing the levels of hearing loss through audiological test procedures is crucial in determining whether deaf and HoH individuals can hear any sounds, with either of their ears, and under what circumstances before commencing any treatment. In addition to the level of the sound that can be heard, the quality and clarity of sounds are equally important since hearing sounds at certain decibels might not be helpful at all for the

communication of a hearing-impaired person if the sound is distorted and cannot be properly interpreted by the individual.

Hearing loss can be classified in two groups in accordance with its onset: prelingual or postlingual. If the hearing loss began after the acquisition of a language, it is called postlingual deafness, whilst prelingual deafness occurs before the acquisition of a language. Acquiring a mother tongue before or after becoming deaf is of seminal importance since it is one of the determining factors affecting the way a deaf or HoH individual will communicate. For instance, a prelingually deaf child who is not provided with a HA and has not been offered special training before the age of two, which is a critical age in the development of a spoken language, will most probably end up using a SiL to communicate.

In addition to these three taxonomies, deafness can also be classified according to the aetiology of deafness (genetic, antenatal (embryopathy), neonatal (prematurity) or acquired in childhood (infectious diseases), its presence in one ear (unilateral) or in both (bilateral), as shown in Table 2.3. In the case of bilateral, there can be symmetry of hearing loss in both ears, progressive or sudden and fluctuating or stable (ASHA n.d.; Bàez Montero *et al.* 2010; Iriarte 2017):

Part of the ear the problem occurs	Degree of hearing loss	Onset of hearing loss	Aetiology of deafness	Ears affected	Socio-cultural affiliation
Conductive	Mild	Prelingual	Genetic	Unilateral	Deaf
Sensorineural	Moderate	Postlingual	Antenatal	Bilateral	Deaf
Mixed	Severe		Neonatal		HoH
	Profound		Acquired in childhood		

Table 2.3: Categorisation of hearing loss

These types of hearing loss exert a determining impact on the treatment, the education and the communication choice of a hearing-impaired person, and ideally the different profiles ought to be taken into consideration when producing subtitles. For instance, a deaf child who has a bilateral, severe, congenital and

sensorineural hearing loss may be implanted with a cochlear device and is likely to be educated through a SiL, depending on the policy of the country concerned. S/he may thus use a SiL as her/his preferred communication method and experience potential problems in reading and writing.

These physiological categories also have social influence leading to hearing-impaired people being classified into three groups; Deaf, deaf and hard-of-hearing (Neves 2005, 2008, 2009; Haualand and Allen 2009). Zárate (2014:42) defines the 'Deaf', with a capital 'D', as "the group of people who have a strong deaf identity and belong to a cultural and linguistic minority". They consider themselves as a different minority, rather than a group of 'disabled' people. On the other hand, their high degree of hearing loss notwithstanding, the 'deaf' tend to have a close affiliation to the hearing community and, most probably, have a spoken language as their mother tongue. Lastly, the HoH also have an affiliation to the hearing community and probably have enough residual hearing to use spoken language as their preferred method of education.

All these physiological and sociocultural categories clearly demonstrate the heterogeneity of the hearing-impaired population. Although providing individual subtitles for each and every member of the deaf community is clearly impossible, subtitlers need to take account of the multiple features of the hearing-impaired and aim to produce subtitles which meet the needs of as many people as possible.

The next subsection will focus on the reading capabilities of people with hearing loss since they are directly relevant to their enjoyment of AV productions with SDH.

2.7.2. Deafness and reading

Iriarte (2017:23) notes that "the very first three years are often assumed to be especially sensitive […] being associated with a rapid growth in the brain volume". These first years in which children begin acquiring their first language (L1) are naturally also very critical for language development. According to

Lenneberg's (1967) critical period hypothesis, language development begins at the age of two and finishes by the age of around 13.

The vast majority of hearing-impaired children, about 95%, are born to hearing parents, who are not generally ready to supply the necessary support and help for their children in their early years and, more crucially, do not have essential communication skills (a fully developed natural SiL) to interact with their children. Frequently, however, children with hearing loss can receive special treatment such as surgery, HAs, CI and appropriate training depending on the particular country's health system, helping them to develop necessary communication skills, whether spoken or signed.

Although these skills can be enough for them to lead an independent life, when it comes to literacy skills such as reading and writing, which require greater cognitive effort on the part of children with hearing loss, they generally encounter difficulties and lag behind their hearing peers. Furthermore, factors such as the age at which they receive treatment, their level of exposure to an intelligible language and the type of education they receive become even more critical. Of these literacy skills, reading is particularly relevant to the current study so as to be able to determine a reading speed for subtitles for the deaf and HoH which allows them to read subtitles and enjoy the rest of the AV programme comfortably.

By drawing on authors like Allen (1986), Holt *et al.* (1997), Traxler (2000) and Karchmer and Mitchell (2003), Peterson (2015:1) reports that "on average, students who are Deaf/hard of hearing (D/HH) graduate or complete high school with a fourth-grade reading comprehension level". The postulation that people with hearing loss struggle with developing their reading skills, regardless of their level of hearing loss, and that their reading ability is equivalent to hearing people way below their age, has been widely researched and verified by the results of a good number of studies. Even after decades of research to improve their reading skills, after the introduction of improved or new strategies and technologies (early intervention, cochlear implantation) to treat hearing loss, and after new developments in education, the situation has not changed

much for the hearing-impaired. This is demonstrated and supported by more recent studies conducted by Antia *et al.* (2009) and Easterbrooks and Beal-Álvarez (2012).

Variability in the profiles of the deaf and the HoH in the same country, let alone across different countries, is a factor that hinders widespread change and militates against the improvement of literacy skills among the hearing-impaired (Skerrit 2015). As mentioned above, only 4 to 5% of the deaf and the HoH are born to parents that are both deaf, while the rest are born into families where both parents are hearers, HoH or one is deaf/HoH and the other one is a hearer. This exerts an immense influence on their approach to sound/speech, SiL and sociocultural affiliation, identifying them either with the Deaf community or with the hearing community and considering deafness as a difference rather than a disability (Horejes 2012). Another point, which varies greatly among hearing-impaired individuals, is their access to auditory stimulation through HAs or CI, which also affects their preferred way of communication and sociocultural affiliation. Lastly, depending on the education they are exposed to – whether it is focused on oral language development, on SiL or on both of them – and on the support they receive from their parents, their language development varies greatly in that some are severely delayed whilst others, a minority, are fluent in a SiL or bilingual in both sign and oral language.

Skerrit (2015:14) describes “language deprivation or language delays and world experiences that are not linked with the language used in the early learning environment of D/hh learners as the fundamental challenge”. She adds that even deaf children who are exposed to a natural SiL from birth may experience difficulty in the way they develop their literacy skills if they do not acquire the necessary metacognitive awareness that SiL is structurally different from spoken language and has its grammatical specificities (*ibid*.). Skerrit (*ibid.*) and Runnion (2017) list the most prominent causes that might impede the development of reading skills among the deaf and HoH people.

The first cause noted by Skerrit (2015) is language delay or deprivation. As discussed, about 95% of deaf children are born to parents who cannot sign and

are usually unprepared for the needs of the newborn. Added factors, such as the “late detection of hearing loss” and “late enrolment in school that uses sign language” (Mayberry 2007, in Skerrit 2015:15), lead to delays in language acquisition and cognitive development. The late acquisition of L1 also hinders the development of any further languages. Skerrit (2015:15) highlights the fact that “even though the caregivers may attempt to communicate with the child through speech, the child is unable to map the language labels for entities experienced on a daily basis”. Subtitles can be of great use in the solution of this problem since they combine visual elements with verbal language, which therefore provides viewers with the opportunity to map the verbal elements for visual entities on screen. Another implication of the delay in L1 acquisition is the hindrance to the development of cognitive skills such as decoding and making sense of print and encoding thoughts using print (*ibid*.). Thus, deaf and HoH children, unlike their hearing peers, often begin their education lacking important linguistic and cognitive skills, which has a detrimental effect on their literacy skills.

Another challenge to the development of reading skills is related to short-term and working memory, “skills that are highly predictive of achievement in language comprehension and reading” (Hamilton 2011, in Skerrit 2015:18). For Postle (2006:23), working memory “refers to the retention of information in conscious awareness when this information is not present in the environment, to its manipulation, and to its use in guiding behaviour”. Baddeley and Hitch (1974, in Wingfield 2016:38-39) developed a highly influential model of working memory which included three components at the beginning: visuo-spatial sketch pad (a temporary store for visual input), phonological loop (a temporary and limited store for spoken input) and central executive (that controls the operations that might be performed with the inputs). The phonological loop is considered to have a limited capacity in which the information is maintained through subvocal rehearsal. It can therefore explain why the deaf experience difficulty in retaining linguistic information in their working memory since most of them do not posses the ability to subvocalise. They are therefore required to expend more effort than their hearing counterparts, which impacts their learning process adversely. Skerrit (2015) acknowledges that, although deaf and HoH

people may be better at processing things in their peripheral vision, they tend to struggle when it comes to placing their attention on a specific thing in their immediate environment. This is particularly relevant to SDH and subtitlers need to activate syntax and segmentation that do not add extra cognitive load to the short and working memory of deaf viewers. The creation of subtitles that are easy on their memories will allow viewers to better enjoy the programmes. According to Skerrit (*ibid*.), another point that hinders the development of metacognitive skills is the lack of exposure to easy texts. Once more, subtitles can be especially helpful on this front by providing texts at varying levels of difficulty.

The difficulties that hearing-impaired individuals experience are usually connected to one another, as in the case of their limited knowledge of vocabulary, which is mainly caused by their lack of exposure to accessible language. In this respect, Traxler (2000) claims that an insufficient level of vocabulary knowledge and slow rate of vocabulary development directly hinders the development of literacy skills. Subtitles can help the hearing-impaired improve their knowledge of vocabulary by providing them with exposure to new words in a multimodal context. When creating subtitles, subtitlers may want to opt for easier and more frequently used words, though they should also remember that subtitles can help the hearing-impaired improve their knowledge of vocabulary by introducing new words.

Phonologically encoding written text enables readers to hold the content of the text in their short-term memory at the sentential level in order to construct meaning, which in turn reduces the cognitive load since, otherwise, abstract units need to be processed at a sub-morphemic and sub-lexical level and kept in the working memory (Miller *et al*.:2013). Yet, many deaf and HoH individuals cannot use phonological strategies, but skilled deaf readers develop and employ other strategies to encode written language such as SiL, dactylic or fingerspelling, semantic association, phonology and orthography (Wang *et al.* 2008; Bergeron *et al.* 2009; Bael-Álvarez *et al.* 2012; Paul *et al.* 2013).

This section has provided general information about deafness and the reading skills of the hearing-impaired. The profile of people with hearing loss in Turkey is discussed in Chapter 3.

2.8. Reception Studies

While a detailed insight into the theoretical background and principles of Reception Studies is discussed in Chapter 4, a review of relevant reception research is provided here, based on the detailed and comprehensive overview offered by Romero-Fresco (2018). His review covers the first pioneering studies conducted in the USA on the educational value of SDH to the more experimental recent research focusing on specific SDH features. The review begins with studies conducted in the USA on the educational benefits of captions for deaf and HoH students in the 1970s. The author indicates that the majority of the analyses in this period tended to focus on "comparing different ways in which information could be conveyed for deaf students" (*ibid*.:201), and many of the experiments yielded results which demonstrated that comprehension scores of the deaf and HoH were better when the material contained closed captions.

The first experiments on subtitling speeds were conducted by Shroyer (1973) and Norwood (1980). With the participation of 185 deaf and hearing participants, the former aimed to determine the average reading speed of the deaf and HoH. They concluded that 84% of the participants were not comfortable with a speed of 160 wpm and recommended a presentation speed of 120 wpm instead. Norwood (1980) probably offered the first formula for the calculation of subtitling speeds for children and adults, recommending 18 frames for the first word and 12 for each subsequent word. Some authors continued to research the effects of captions on the comprehension levels of the deaf and the HoH. Studies carried out by Murphy-Berman and Jorgensen (1980) and Nugent (1983) compared deaf students' comprehension when watching videos with or without captions and concluded that subtitles could be of use in increasing the comprehension levels of the participants. Similarly, in

Stewart's (1984) study, 82% of deaf and HoH students self-reported that their comprehension level had increased when watching captioned videos.

In the UK, Baker and his colleagues conducted a series of experiments between 1978 and 1981, which aimed to reveal the best techniques to meet the needs of hearing-impaired people, at a time when there was not much experience in the production and provision of subtitles. In the experiments, deaf and HoH people were presented with clips making use of different subtitling techniques and their preferences were investigated. The results are reported in Baker (1981, 1982), Baker and Lambourne (1982) and Baker *et al*.'s (1984) *Handbook for Television Subtitles*, "the first research based monograph on SDH published in Europe" (Romero-Fresco 2018:204). Baker (1985) further investigated subtitling speeds for deaf children and, as a result, recommended a speed of 60 wpm for middle and secondary school students and the creation of subtitles with simple vocabulary.

In the USA, Braverman (1981) researched the impact of subtitling speeds on caption density in a study incorporating 187 deaf participants from elementary to secondary schools for the deaf, who watched clips subtitled at 60, 90 and 120 wpm with a high or low level of complexity. The results indicated that participants at third grade level or higher could read the subtitles at the highest level of complexity and that captions with a lower level of complexity could be presented at a speed of 120 wpm and with high density.

Jensema *et al.* (1996) explored the average speed of subtitles on TV by creating a corpus of 205 TV programmes with speeds ranging from 74 to 234 wpm. The average speed calculated in this study was 141 wpm and, by scrutinising a corpus of 26 segments, they also identified editing levels varying between 0% and 19%. Drawing on these results, Jensema (1998) further analysed the opinions of 578 deaf, HoH and hearing participants by presenting them with videos containing subtitles at 96, 110, 126, 140, 156, 170, 186 and 200 wpm. The results revealed 145 wpm as the most comfortable speed, with no differences detected depending on the age and sex of the participants. On the other hand, participants with more experience in watching programmes with

subtitles and those who attended graduate school opted for a higher speed of up to 170 wpm.

The first studies on SDH parameters other than speed and editing began in the 1990s. King *et al.* (1994) analysed the use of colour and subtitle displacement for character identification and found that subtitle displacement did not yield any significant difference in the viewers' comprehension levels, whereas the use of colour contributed to comprehension. Harkins *et al.* (1996) and the National Center for Accessible Media (NCAM 1998) conducted research that formed the basis of captioning guidelines in the USA. Harkins *et al.* (1996) focused on the preferences of 189 deaf and HoH viewers with regard to non-speech information (NSI) – sound effects, location of speaker off screen, distortions of speech, speech in a foreign language, music – by presenting 19 videos with different NSI parameters. The participants asked for more transcription of NSI than was provided at the time and generally opted for explicit descriptions, like labels for speaker identification over colours. In the research conducted by NCAM (1998), 26 participants were asked to rate and state their preferences on different features: size, font, spacing, colour, window style, character edging and presentation method. The participants preferred captions to be displayed in a mixed case, with a sans serif font and in white against a black background. When asked about the features that they would like to control, the respondents mentioned the background, colour and size of the captions.

In Europe, until very recently, reception studies were mainly limited to the UK and drew on the pioneering studies conducted by Baker, Lambourne and the BBC in the 1980s and 1990s. Kyle (1993) investigated users' preferences and, although the participants raised some concerns over the use of colour for speaker identification and the speed and editing of subtitles, they were generally satisfied with the quality of the subtitles. In their study on the complexity levels (simple, basic and complex) of SDH for deaf and HoH children (aged 5-7, 8-11 and 12-16), Gregory and Sancho-Aldridge (1998) found that participants retained the most information with simplified subtitles. In one of the seminal studies on SDH, de Linde and Kay (1999) not only offered a comprehensive report on the SDH provided on UK television, but also

conducted one of the first eye-tracking studies in Europe. The authors recorded the eye movements of 20 participants (10 hearing and 10 hearing-impaired) who watched excerpts from different kinds of programme such as the news, documentaries, soap operas, comedies and chat shows. The study suggested that, apart from the features of the subtitles, the visual content of the programme is also an important element that should be taken into account. The results demonstrated that the type of programme has an influence on the reading experience of the participants, and fast/slow discourse rates induce faster/slower reading speeds. Subtitles displayed at an unusually slow speed cause the subjects to re-read them. They also showed that programme content and editing, as well as shot changes, also influence the reading process, e.g. when only one speaker is visible at a time, viewers are more inclined to re-read the subtitles. Scenes with a higher number of shot changes increased both the duration of the deflections and the number of re-readings. The authors also reported that an on-screen static speaker exerted less cognitive load on the viewers' processing than off-screen speakers.

The first decade of the 21st century saw the rise of eye-tracking technology as an innovative tool for the analysis of viewing behaviour. Jensema *et al.* (2000a) conducted one of the pioneering studies in the USA and analysed the eye movements of six participants. The results accorded with the findings of a previous study by D'Ydewalle and Gielen (1992), inasmuch as viewers began by looking at the middle of the screen, turned their attention to the captions when these appeared and then re-focused on the image again. It was also revealed that the time the viewers spent on the captions increased in proportion to the speed of the captions, and the increase varied depending on the reading strategies adopted by the participants. Jensema *et al.* (2000b) conducted another study on 23 deaf participants to evaluate the amount of time spent on the captions and the images. The results showed that when the subtitles were displayed at a rate of 180 wpm, most viewers spent 86% of their time on the captions and the rest on the images. In the study carried out by Fels *et al.* (2005), the graphical representation of emotive information normally conveyed through nonverbal sound elements was tested with the results suggesting that HoH participants greatly enjoyed the graphic information provided in the

captions. The speed of subtitles was tested by Burnham *et al.* (2008), who revealed that the optimum speed of subtitles varied according to the participants' hearing status and reading fluency, with HoH adults performing best at 180 wpm, whilst for proficient deaf readers the speed was 130 wpm. For Tyler *et al.* (2009) the optimum reading speed was 120 wpm and they concluded that decreasing the reading speed to 90 wpm was not beneficial.

Romero-Fresco (2018) shows that reception studies in this century were mainly developed through a series of studies conducted in the UK by the Royal National Institute for the Deaf (RNID), currently known as Action on Hearing Loss, and by the Office of Communications (Ofcom), the official communication regulator in the UK. Drawing on the findings of a previous study (RNID 1999), which demonstrated that younger viewers opted for less editing and more background information than older viewers, the RNID (2001) surveyed 5,074 participants about their opinions on SDH. When asked about their preferences for programmes to be subtitled, the participants opted for the news, general entertainment, films and documentaries. The speed of the TV subtitles on the news and live programmes was rated low by 5.94 and 4.43 people out of 10 respectively. Ofcom (2005) surveyed 54 viewers mostly concerning the speed of subtitles, revealing that the maximum speed should not exceed 180 wpm and the subtitles on screen should not consist of more than three lines. According to the respondents, the main features used to provide quality subtitles, in order of priority, were accurate timing, linguistic correctness, presence of nonverbal information and a readable speed.

In Brazil, Franco and Araújo (2003) highlighted the importance of editing and condensation for the better comprehension of SDH by hearing-impaired people. In 2005, Neves concluded her doctoral research on the subject, in which she developed guidelines for the provision of high quality SDH in Portugal. Romero-Fresco (2018:20) commented on the remarkable contribution of Neves' thesis, which helps "contextualise SDH as an area of research firstly within Translation Studies and more specifically within Audiovisual Translation as a modality of media accessibility". In the first of part of her study, in which she adopts a descriptive approach, Neves examined the norms governing the production of

SDH in various European countries. In the second part, within the framework of Action Research, she involves various stakeholders in the research in order to analyse the preferences and views of the participants and compile a set of guidelines for the creation of SDH, which are now the foundations of the current official guidelines in Portugal. In Spain, Cambra *et al.* (2008, 2009) investigated the comprehension levels of seven deaf children and 20 deaf teenagers, respectively and concluded that the participants experienced difficulties in understanding the subtitled programmes because of the high speed and the linguistic complexity of the subtitles. The authors suggest the creation of subtitles appropriate to the limited reading skills of the students.

In the second decade of this new century, in contrast to the descriptive approach adopted in the first decade, researchers have turned mainly to experimental research. Many of the studies have been conducted in countries apart from the UK and the US and have focused on their strategies and research questions (Romero-Fresco 2018:210). The largest reception study in Europe to date was conducted as part of the DTV4ALL project funded by the EU (2008-2011). The researchers analysed the reception of SDH (preferences, comprehension and perception) in Denmark, France, Germany, Italy, Poland, Spain and the UK through questionnaires, tests and eye-tracking technology. In the first part of the study 1,365 participants' preferences (including respondents' profile and viewing habits as well as their views on subtitling and on specific features of SDH) were analysed and the comprehension level and visual perception of 103 German, Italian, Polish and Spanish participants were examined in the second part. Although reaching a unique set of guidelines was originally one of the potential outcomes of this cross-national research, it was soon realised that achieving such an aim was impractical due to the social, political and economic conditions prevalent in each country and the heterogeneity of the hearing-impaired community in terms of rights, education, and health services. The study, however, provided data illustrative of hearing-impaired individuals in Europe as a whole and also specific to the deaf and HoH communities in each of the countries surveyed as part of the project.

As Gottlieb (2015) notes, in Denmark respondents, whether deaf, HoH or hearing, were quite satisfied by the quality of the subtitles though there was still room for improvement, such as the addition of character identification. It was also revealed that 24% of the deaf and 39% of the HoH were unaware of the SDH service provided by the Danish public service broadcasters, and the author concludes that "even a handful of simultaneously broadcast subtitled versions in different languages and at different reading speeds would be much cheaper than monolingual dubbing" (*ibid*.:41). In Poland, respondents demanded more SDH, including live programmes, and the introduction of legislation obliging broadcasters to provide more accessibility services. The participants opted for (near-)verbatim subtitles rather than edited ones and chose subtitling as their preferred accessibility method over signing. In Italy, deaf participants were very familiar with SDH and opposed any changes to the already implemented norms in existence there. The same was also true for the respondents from Spain, who were reluctant to adopt any innovative subtitling strategies (e.g. the use of icons). Spain was the only country to participate in the project in which deaf participants preferred signing over subtitling as an accessibility service. Another interesting result was that deaf respondents did not consider the integration of paralinguistic information in the subtitles necessary since they felt that it could be inferred from the context and the body language.

In the UK, although a considerable number of participants (45.4%) had problems reading the subtitles at least sometimes, SDH was still the preferred way of making AV programmes accessible. Unlike Spain and Italy, deaf respondents were more open to innovative changes than the HoH, and they were also more knowledgeable and more resourceful where SDH was concerned. Most of the participants complained about delays, errors and technical glitches in live subtitling. The respondents were mainly satisfied with the practices implemented in pre-recorded subtitles in the country (colour, font, placement, etc.). As for the information that should be contained in SDH, the respondents considered dialogue as the most crucial followed by character identification, sound effects, mood information and the inclusion of discourse markers. In France, the findings indicated that the conventions needed to be

revised and further researched, particularly in areas such as character identification, colour codes, reading speed and paralinguistic elements. German respondents asked for more programmes to be subtitled and also placed much more importance on verbatim subtitles than any other respondents. Unlike in other countries, sound information was interestingly regarded as the least important element to be included in the subtitles.

In the second part of the research, the participants were presented with 23 clips, each including different parameters (e.g. tags) to be tested in nine categories (e.g. character identification). Eye tracking technology was used to record the eye movements of the participants and to test their first reaction time and mean reading time. After the presentation of each clip, respondents were asked comprehension questions in order to ascertain their overall, textual and visual comprehension. The cross-analysis of the data gathered in all the participating countries (Table 2.4) yielded some pan-European patterns with regard to how different kinds of viewers watched subtitles, as is shown by Romero-Fresco (2015: 350):

All participants	Hearing	Hard of hearing	Deaf
332ms (Min:309; Max: 393)	348ms	340ms	309ms

Table 2.4: Average reaction times

As shown in Table 2.4, the participants took 332ms on average to spot the subtitles and it took approximately 10% less time for the deaf to realise the appearance of the subtitles when compared with the hearing and HoH. According to Romero-Fresco (*ibid*.:350), this might be explained by their dependency on the subtitles in that the more dependent the viewers are on the subtitles to access a programme, the faster they realise the subtitles.

Concerning average reading times (Table 2.5), the participants spent on average 52.7% of their viewing time on reading the subtitles and the rest (47.3%) on watching the images, with an average subtitling speed of 150 wpm. The deaf spent nearly 20% more time on reading the subtitles than the hearing participants:

All participants	*Hearing*	*Hard of hearing*	*Deaf*
52.7% (Min: 35.9%; Max: 63.2%)	48.2%	53.1%	56.7%

Table 2.5: Average time spent on subtitles (Romero-Fresco 2015:350)

Table 2.6 contains information about the participants' comprehension levels:

	All participants	*Hearing*	*Hard of hearing*	*Deaf*
Overall	69.6%	77.2%	65.3%	66.2%
Subtitles	67.4%	76.25%	64.6%	61.4%
Images	71%	73.5%	66.2%	73.25%

Table 2.6: Participant's average comprehension (Romero-Fresco 2015:351)

The average overall comprehension among all the participants was 69.6%, and the overall comprehension level of the deaf (66.2%) was approximately 14% worse than that of the hearing participants (77.2%). When this is combined with the deaf's average time spent reading the subtitles, the problems experienced by the members of this community when reading the subtitles might become clear. Although the deaf spotted the subtitles 10% faster and spent 20% more time reading them, their textual comprehension was almost 20% worse than that of the hearing. An interesting result from the study was that the visual comprehension of the deaf was nearly at the same level as the hearing participants (and even better in some countries) and 10% better than the HoH (*ibid*.:351). Even though they spent less time on the images, the deaf made up for their poor textual comprehension by their significantly better visual perception.

Romero-Fresco (*ibid*.:337) proposed the notion of 'viewing speed', which he defines as "the speed at which a given viewer watches a piece of AVM, which in the case of subtitling includes accessing the subtitle, the accompanying images and the sound, if available". The analysis of the eye-tracking data yielded the following average viewing times and gaze distributions between the subtitles and the images, as shown in Table 2.7:

Viewing speed	*Time on subtitles*	*Time on images*
120wpm	±40%	±60%
150wpm	±50%	±50%
180wpm	±60%-70%	±40%-30%
200wpm	±80%	±20%

Table 2.7: Viewing speed and gaze distribution (Romero-Fresco 2015:351)

As Jensema *et al.* (2000) and Romero-Fresco (2012) argue, the faster the subtitles are displayed, the more time viewers spend on reading them. Of all the options tested, the traditional speed of 150 wpm that is recommended in many guidelines offered an equal distribution of gaze time between the subtitles and the images.

In Spain, the studies on deaf and hearing children and teenagers carried out by Cambra *et al.* (2010, 2015) revealed that the comprehension of film narrative depended on their reading skills and ability to follow the subtitles. In another experiment using 11 deaf and 11 hearing children, Cambra *et al*. (2014) highlighted the differences between adults and children when viewing subtitled AV programmes by comparing their results with other studies on adults and adolescents and found that, unlike adult viewers, children spent more time on the images than on the subtitles. Lorenzo's (2010) investigation with deaf children foregrounded the importance of prior explanations about the episodes for deaf children's comprehension. Tamayo (2015) exposed 75 participants to standard and enhanced subtitles (including modifications in character identification, vocabulary, music and reading speed) and tested their reception. The results showed that the participants' comprehension scores were higher with the enhanced subtitles.

In the UK, Zárate (2014) conducted research with 20 deaf children from mainstream schools in order to find out whether some techniques not employed in broadcast subtitling could be used to improve deaf children's reading comprehension and word recognition. The participants were divided into a control and an experiment group and were exposed to standard broadcast

subtitles and enhanced subtitles prepared by the author. The enhancements included the use of repetition and uppercase for new/difficult vocabulary, the use of italics and underlining for non-standard language, the application of a lower reading speed and careful spotting and line breaking. In terms of content comprehension, no significant difference could be found between the scores obtained by enhanced and broadcast subtitles. As to word recognition, there was a tendency for higher scores with enhanced subtitles.

As Romero-Fresco (2018:213) emphasises, other SDH aspects that have been researched through reception studies are the use of name tags and subtitle displacement for character identification (Vy and Fels 2010), the comparison between standard and expanded subtitles (Stinson and Stevenson 2013), the use of SDH in multilingual films (Szarkowska *et al.* 2013, 2014) and the benefits of subtitles to treat speech-language disorders (Porteiro Fresco 2012).

Eye-tracking technology has also been used in this decade to confirm or refute some of the generally held assumptions that inform professional guidelines. Bisson *et al.* (2012) recorded the eye movements of 36 participants by presenting them with a clip in different languages, and the results corroborate the fact that even the viewers who do not need the subtitles still read them automatically – a result already confirmed by D'Ydewalle and Gielen (1992) and Jensema *et al.* (2000a). Szarkowska *et al.* (2011) analysed the impact of editing and reading speed on viewers' reception of subtitles, emphasising that deaf participants differed from the hearing and HoH groups when viewing clips with verbatim subtitles in that they had significantly more fixations on the subtitles than the other groups when viewing verbatim subtitles, which may be explained by their difficulty in reading Polish, which is a second/foreign language for them. In a different study, Szarkowska *et al.* (2016) found that verbatim subtitles displayed at a higher presentation rate resulted in slightly better comprehension results. Krejtz *et al.* (2013) analysed 71 participants' eye movements watching news and documentary clips and discovered that most did not re-read the subtitles displayed over shot changes in contrast to what is normally stated in the literature. In a later study, Kretjz *et al.* (2015) conducted another eye-tracking experiment with 39 deaf, 27 HoH and 56 hearing Polish subjects, and

the results demonstrated that participants spent the least time on function and short content words, while the deaf spent significantly more time on content words than the rest.

In addition to viewers' comprehension levels, in order to assess the effectiveness of subtitles, recent reception studies have started to focus on viewers' sense of immersion in AV productions, using different devices. In this respect, Romero-Fresco (2018:214) argues that "the extent to which the subtitles enable the viewers to suspend disbelief and be transported into the audiovisual fiction is just as important, if not more, as comprehension". Viewers' sense of immersion is evaluated through offline self-reported presence/transportation scales and questionnaires and/or online physiological measures (e.g. electroencephalography). As a part of the Hybrid Broadcast Broadband for All (HBB4ALL) project, Romero-Fresco and Fryer (2016) explored the reception of SDH on LED screens and tablets in the theatre by 157 deaf, HoH and hearing participants. The results showed that the effectiveness of the devices varied depending on the viewers, the venue and the type of play. As to the viewers' immersion in the AV production, and contrary to the widely adopted belief that subtitles distract viewers' viewing experience and prevent them from being transported into the AV fiction, the authors revealed that the SDH produced for the research enabled the hearing-impaired participants to be immersed in the audiovisual fictional world.

As far as live SDH is concerned, the reception studies carried out so far are "scarce and mostly limited to user surveys commissioned by regulators and user associations" (Romero-Fresco 2018:215). Eugeni (2008) conducted a study in Italy with 197 deaf adults on their perception of live subtitles for the news. The author examined the effectiveness of syntactically and semantically edited live subtitles, and one of the recommendations was that subtitles should mirror the grammar of Italian sign language while respecting the Italian grammatical rules. Romero-Fresco (2010, 2011, 2012) conducted the first reception studies in the UK investigating the participants' views, comprehension and perception of live SDH. The respondents raised concerns about the accuracy and delay of the live subtitles and achieved poor scores in a

comprehension test, which was explained by the high speed and scrolling presentation of the subtitles.

Focusing on game subtitling, Mangiron (2016) conducted an exploratory study with 12 hearing and 13 deaf users to determine the best practices used to cater to the needs of deaf and HoH people and to raise awareness of the lack of standardisation in subtitling practices in games. The findings concluded that hearing participants preferred more creative subtitling solutions such as the use of speech bubbles, whilst the deaf favoured subtitles displayed directly onto the screen without any boxes. Although subtitles are mostly left-aligned in games, all the participants opted for centre-aligned subtitles, and when it came to sound effects, the favoured method was the use of pop-up onomatopoeia. The author finally recommended that, considering the interactive nature of games, different versions of subtitles should be offered to the users so that they could enjoy a more personalised gameplay experience.

In a recent study, Miquel Iriarte (2017) examined whether and how viewers' profiles and the speed of subtitles affected the perception of subtitles, with 72 participants grouped into three profiles: hearing, deaf-sign language users and deaf-spoken language users. Two videos were presented with subtitles with three different exposure times: high (between one and two seconds), medium (between two and four seconds) and low (between four and six seconds). The participants' reading patterns and viewing behaviour (response), textual and visual comprehension (reaction) and self-assessment on the time and ease of reading and viewing (repercussion) were investigated through questionnaires and eye tracking technology. The study concluded that the participants' individual profiles affected all stages of the reception, and the speed of the subtitles affected only the time the participants allocated to the written text and the images respectively. The AV genre was also found to impact the whole reception process significantly. Lastly, the reading skills of the participants seemed to be the key element in causing the differences, rather than factors related to language, hearing and communication.

Gerber-Morón and Szarkowska (2018) conducted an eye tracking experiment with 21 English, 26 Spanish and 21 Polish hearing people and 19 deaf and HoH people from the UK to determine their preferences as regards line-breaks and examine how they processed the content from a syntactical perspective. The results indicated that the participants opted for coherently syntactically segmented subtitles, and the linguistic units were processed differently depending on the linguistic category and the viewers' profiles.

CHAPTER 3

Developing SDH in Turkey

3.1. Introduction

Information has been a source of power since time immemorial and all countries have created intelligence agencies so as to gather any kind of information that may be of use to their society. Information is not only required for taking major decisions which may affect the present and future of a society, it is also instrumental for making ordinary decisions and therefore essential for people from all walks of life.

Controlling information and people's desire to access, restore and (mis)use it continue to be just as important nowadays, though, as Holvast *et al.* (2005:145) argue, the biggest change in the modern world is the fact that, thanks to Information and Communication Technologies (ICTs), individuals now "have, for the first time, a convergence of all the technical components with the result that the consequences have been more rapid and radical". Information is at the heart of many governments' strategies and policies, and ICTs have affected communities and peoples so deeply that we are commonly said to be living in an Information Era and an Information Society (Crawford 1983; Castells 2010). There is a continuous flow of information on which people depend to perform a great variety of activities such as learning a new language, deciding on a tourist destination, buying a product or service and finding a treatment for an illness. Given its centrality and growing importance in our society, issues are raised as to its dissemination and availability, particularly among citizens with sensory disabilities. Technology goes hand in hand with most economic and social developments and has unleashed many opportunities for those who master it, but it also risks bringing about the exclusion of individuals, communities and regions, which do not have proper access to ICTs, thus creating digital divides.

According to figures provided by Dutton (2004), 70% of internet users live in the 24 richest countries, a figure supported by a more recent report published by the International Telecommunications Union (2015), in which it is claimed that only 9.5% of the 940 million inhabitants in the least developed countries have access to the internet. The benefits and opportunities brought by technology tend to improve people's lives, but individuals who lack the necessary skills and tools run the danger of being left behind and isolated more severely than ever before.

People with disabilities are one of the most disadvantaged groups in society when it comes to access to technology and information, as this is closely linked to the use of special tools, the provision of certain services and the existence of legislation. The UN has long realised the importance of access to information, declaring accessibility as one of the basic human rights. Indeed, the Convention on the Rights of Persons with Disabilities (Web 3.1), adopted in 2007, establishes in its Article 1 the aim to "promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities". However, as Ellcessor (2012) demonstrates, without the necessary measures in place people with sensory disabilities cannot fully partake in the new mediascape, to which they are only partially invited, and they will continue to find it difficult to integrate and participate unless the right steps are taken to facilitate their access. Given that the technology required to allow full access to audiovisual media is already available, the question remains whether it is financial pressure and/or lack of enthusiasm that lie behind Turkish media providers' reluctance to supply the necessary services to guarantee full accessibility.

Turkey is currently in the process of being transformed into an information society, aiming to become a country which "uses information and technology as an effective tool that produces more value with information-based decision-making processes" (State Planning Organization 2006: online). In this environment, the role of ICT in economic and social spheres becomes the catalyst to "ensure sustainable growth and competitiveness" (*ibid.*), with the ultimate goal of benefiting all segments of society by promoting the participation

of all citizens in this transformative process. However, the affirmation of this intention does not in itself guarantee that access to information is available for citizens with disabilities – a fact that is corroborated by the results of a statistical report conducted in 2010, which indicate that 60.6% of the Turkish disabled population do not have access to a computer, a mobile phone or the internet (State Planning Organization 2011). Against this backdrop, deaf and hard-of-hearing people are two of the most neglected groups when it comes to the availability of appropriate services since accessibility is generally associated with physical rather than sensory disabilities. And yet, even though simple and cost-effective solutions exist that facilitate access to audiovisual media for people with hearing impairments, subtitling or SLI for instance, hardly any productions are accessible nowadays on Turkish TV, making a travesty of the government's pledge to promote access to information. Some positive changes have taken place, such as the signing and ratification of the UN *Convention on the Rights of Persons with Disabilities* or the provision of SLI on some channels, but the fact remains that deaf and hard-of-hearing people are not anywhere near their hearing counterparts when it comes to access to information.

This chapter analyses the situation of SDH in Turkey, particularly on TV, which is still the main source of information for most people in the country. Firstly, it discusses the profile of people with hearing impairments in Turkey, including their level of education, knowledge of TSL and TV viewing habits. Secondly, legislation concerning the rights of people with hearing disability is presented and analysed, followed by a discussion on the state of SDH on Turkish television.

3.2. The Deaf and the Hard-of-hearing in Turkey

To cater best to the needs of people with hearing impairments, it is crucial to understand this target audience. Their language preferences, educational background and literacy levels as well as their expectations and preferences when confronted with audiovisual media are all factors that should play a

decisive role in deciding the most appropriate approach to accessibility services.

3.2.1. General overview

Deaf and hard-of-hearing people may have a hearing impairment in common, but glossing it and referring to them as a homogenous and unified group, as is often done in the provision of access services, risks overlooking the fact that this sector of the population represents a wide range of individuals with different capabilities and sensory limitations.

For Neves (2005:83), “deafness may be defined in terms of audiological measurements, focusing on the causes and severity of the impairment, but it can also be seen in terms of social integration and language usage”. According to Action on Hearing Loss, a charity based in the UK, there are four different levels of hearing loss, defined by the quietest sound that people are able to hear and measured in decibels: 25-39 dB is considered mild, 40-69 dB moderate, 70-94 dB severe and over 95 dB profound. Depending on their degree of loss, people have different capabilities and difficulties, which will in turn have an impact on their preferred way of communication. People with mild hearing loss may communicate easily by using a spoken language whilst people with severe or profound hearing loss may prefer to communicate in SiL. Linguistically speaking, a person born deaf is considered ‘pre-lingual’, whilst they are ‘post-lingual’ if deafness has occurred after having acquired a spoken language. From a socio-cultural perspective, being ‘deaf’ refers to the physical condition of being unable to hear; yet, being ‘Deaf’ is a conscious decision to belong to a specific cultural group, whose means of communication tends to be a SiL. These categorisations explicitly point out not only the difficulty, but also the importance of providing the appropriate access services to the right segment of the audience. Although providing different subtitles for each of these groups does not seem to be financially viable at present, it is important to bear these differences in mind when preparing subtitles.

There are two sets of official statistics provided by the *Türkiye İstatistik Kurumu* [Turkish Statistical Institute, TÜIK] on the number of people with disabilities in the country: one is from 2002 and the other from 2011, which is actually a population and housing census containing limited information on the profile of people with disabilities. According to statistics from 2002 (Web 3.2), from a total population of circa 67 million, in Turkey around 1.75 million (2.61%) had a disability and some 250,000 individuals (0.37%) were hearing-impaired. By 2011, with an increase in population of about 75 million, the percentage of individuals with a disability or hearing impairment had risen to 6.9% (5.1 million) and 4.8% (3.6 million) respectively. In the latter group, 1.1% could not hear or had difficulty hearing even if they used HAs, and 3.7% declared that they had some difficulty in hearing (TÜIK 2011:80). These figures, if slightly higher, are in line with those provided by WHO (2013:2), which, for the same year, estimated that the prevalence of hearing loss per 100 population hovered between 2.72% and 4.41%, that is to say between 2.04 and 3.3 million Turkish people. The wide discrepancies between the 2002 and 2011 reports are striking, though, which together with the dearth of national statistical research on the topic bring to the fore the difficulty of providing reliable data on the actual number of people with (hearing) disabilities in Turkey. One of the root problems is a lack of consistency when defining people with hearing impairments, and, for instance, in the census of 2011, individuals who stated that they could hear with the help of a HA or who were under the age of three were, rather surprisingly, not considered as having a hearing impairment (TÜIK 2011:80). This issue of nominal inconsistency is also raised by Kemaloğlu (2010), who highlights the fact that the 2002 research did not define 'hearing loss', and the figures provided depended entirely on the declaration of the people who took part in the survey.

The unreliability of the figures makes it difficult to determine the exact number of people with hearing disabilities and virtually impossible to classify them according to the severity of the impairment or their linguistic competence. Some glimpses can be obtained from dispersed sources. For instance, the percentage of people with a hearing disability of above 40% was estimated at 83.4% (13,779 people) in another set of official statistics produced by TÜIK (2010) on

the problems and expectations of disabled people, though the segment of the population covered was very small and included 280,014 disabled people who were registered in the National Disabled People Database at the time. The figures from the 2002 and 2010 reports provided limited data on the onset of the hearing disability. The former indicated that 29.49% of people with hearing disabilities had a congenital disability, without providing any specific details of the age; whereas the set of statistics from 2010 volunteers has more details about the onset of the impairment and claimed that 62.8% of hearing-impaired people had developed a hearing disability before reaching the age of one (TÜIK 2010). Although these records might help us conjecture a potential number of users of SiL in Turkey, it is virtually impossible to know the exact amount. Nonetheless, Kemaloğlu (2010) estimates the number of D/deaf people to be between 85,000 and 100,000, of whom about 40,000 were at the age of active participation in education and the work force. This, of course, does not take into consideration hard-of-hearing people, whose numbers are increasing as the population gets older.

Based on linguistic criteria, Kemaloğlu (*ibid.*:1) distinguishes between *işitsel yetersizlikten etkilenmiş birey (İYE)* [a person who is affected by hearing loss] and *farklı iletişim yöntemleri geliştiren işitsel yetersizlikten etkilenmiş birey (FİTYE)* [a person who is affected by hearing loss and develops different means of communication], the latter, being a term used to refer to people who are D/deaf and part of a community that has its own distinct way of communicating. In this paper, 'deaf and hard-of-hearing' and 'Deaf' will be used, instead of İYE and FİTYE, to refer to these two different groups of people. Kemaloğlu (*ibid*.) claims that an early diagnosis, the use of HAs and the participation in a rehabilitation process are instrumental in the development of a spoken language among deaf and hard-of-hearing people, whereas for others, who do not have the same opportunities, the chances of acquiring a spoken language are minimal. The hearing cortex in the brain of people with severe or profound deafness loses its potential to develop after two years of age, when this cellular structure is transformed into a partially visual and partially somatosensory cortex (*ibid.*). As the speaking ability is closely dependant on hearing ability, people with a severe hearing impairment from an early age are less likely to

develop their speaking ability without appropriate measures. To compensate, deaf people tend to develop other sensorial abilities such as visual and three-dimensional perceptions. Deaf children, thus, try to understand their surroundings through these other sensorial abilities, though they are not usually enough to ensure full comprehension, and they tend to suffer from learning difficulties and from a lack of conceptual knowledge unless they are guided through a special education programme.

As far as Turkey is concerned in terms of early diagnosis, the National Newborn Hearing Screening programme was first conducted in 2003, but it was not implemented in all provinces, let alone in small towns. According to Bolat *et al.* (2009), 764,352 children were screened between 2004 and 2008, which constituted 13% of all the children born during that period. In addition, research conducted by the audiology departments of Hacettepe and Gazi universities shows that the age of diagnosis is 1.6 and the age when children are provided with a HA is 2.5, which might be too late for them to develop a spoken language. Although some improvements have been noted in recent years, it would not be wrong to claim that the majority of deaf adults in Turkey did not benefit from an early diagnosis and were not given HAs or the opportunity to attend special schools that would have allowed them to develop a spoken language. This has to be taken into consideration when providing a SDH service that meets their needs.

3.2.2. Education

SiL was used and taught in the Ottoman palace to communicate with the hearing-impaired and mute people who served the royal family (Miles 2009). According to Gündüz (2014), the first institution to provide special education in Turkey, during the Ottoman State, was a school for the hearing-impaired founded in İstanbul by Grati Efendi around 1889, during the reign of Sultan Abdülhamid II (1876-1909). The first deaf teacher of this school was Pekmezyan, a graduate of a Parisian deaf school. There was a major schooling movement during this period and four more schools for the deaf were also founded during the reign of Abdülhamid II in Merzifon, Corfu, Selanik-

Thessalonica and İzmir (Turgut and Taşcı 2011). SiL was used in both İstanbul and İzmir deaf schools despite the resolution of the international Milan Conference in 1880 forcing oralism to be adopted as the only or best approach for the education of the hearing-impaired – a decision that would affect the education of deaf children for the next hundred years (Mliczak 2015). As for the other schools, there is no solid information about the education system they followed (Kemaloğlu and Kemaloğlu 2012).

The sign method was initially adopted in the education of Turkish deaf people in the 1880s, and it was not until 1925, after the foundation of the Turkish Republic and during the period of westernisation, that the method of learning Turkish phonetically with the help of gestures started to be implemented by the head teacher of the İzmir deaf school (*ibid.*). He was determined to teach speech to deaf and mute pupils and believed that the sign method hindered the development of a spoken language. During the same period, three further deaf primary schools were opened with the oralist approach in Ankara, İstanbul and Diyarbakır (Gök 1958) and later transferred from the Ministry of Health and Social Services to the Ministry of Education in 1951 (Girgin 2006), thus sealing the beginning of formal special education in Turkey. Although the move was seen as a positive step towards the provision of a unified and systematic special education for disabled people, it also led to the supremacy of the oralist approach and the disappearance and prohibition of SiL in an educational setting. Kemaloğlu and Kemaloğlu (2012:72) record the experience of an elderly deaf informant, who claims that “teachers and special teachers were like the ‘enemy’ to the sign language because it was thought that sign language prevented speaking”. Seventy years after the Milan conference, the use of SiL in the education of hearing-impaired people was also ruled out in Turkey.

The prohibition to use SiL was a turning point in the education of deaf people. Its effects can be felt even today, as the oralist approach is still prevalent in educational settings in Turkey despite the fact that most Western countries acknowledge the importance and positive effects of SiL in the classroom. Adopting only the oralist approach is unlikely to be a successful pedagogical strategy, as the development of a spoken language is closely related to the

hearing ability of an individual. As mentioned before, hearing-impaired people who have not received a HA or followed proper treatment before the age of two are highly likely to lose their chance of developing a spoken language and tend to communicate in SiL. Considering that the National Newborn Hearing Screening programme was only launched in 2003 and that the average age of children who receive a HA is 2.5, the severity of the situation can be better understood. Firstly, the oralist approach risks excluding older individuals who are at too late a stage to develop a spoken language and, secondly, the late age at which children are being provided with HAs reduces their chances of becoming successful oral language users. Forcing a specific education method that does not seem to suit many hearing-impaired people can affect these individuals' communication skills and personal development adversely. Indeed, it risks excluding them from society rather than helping them to develop the communication and interpersonal skills that would help them to integrate and participate in society. Although using SiL is nowadays considered a basic human right and a *sine qua non* for education and public services, an aural/oral approach is still being forced in the education of some hearing-impaired people in Turkey.

Despite the unreliability of the figures available on the education levels of disabled people in Turkey, the feature they all share is the wide gap that exists between people with disabilities and the general public. According to a survey carried out by TÜIK in 2002, the percentage of illiterate disabled people was 36%, dropping to 13% for the rest of the population. In the *Survey on Problems and Expectations of Disabled People* (TÜIK 2010), the illiteracy rate for disabled people went up to 41.6% and, for people with a hearing loss, it stayed at 31.6%. The same study found that only 11.1% of people with a hearing loss attended high school level or above. The *Population and Housing Census* (TÜIK 2011) was more positive in its outlook and estimated the percentage of illiterate disabled people as 23.3%, in contrast to 4.5% for the general public, whilst only 2.6% of disabled people were enrolled in higher education. For people who have great difficulty in hearing or cannot hear at all, the illiteracy rate increased to 29.1%, and 19.7% had not completed their primary education. These statistics highlight the urgent need to do more in order to improve the education

of people with disabilities and, in this respect, SDH has the potential to improve literacy, as it has proved to be crucial and instrumental in the development of viewers' reading abilities (Kothari, *et al.* 2004; Stewart and Pertusa 2004; Kothari and Tathagata 2007; Yüksel and Tanrıverdi 2009; Linebarger *et al.* 2010; Caimi 2013; Zárate 2014). Nonetheless, the socio-cultural reality of the hearing-impaired population should be duly taken into account when producing SDH since subtitles prepared at a reading speed above the capabilities of the target audience risk becoming a source of frustration rather than a tool for education and enjoyment. This is especially relevant in the Turkish context, where access to education for the deaf is limited and their levels of illiteracy rather high. Miller *et al*. (2013) also emphasise this sorry state in their exploration into the poor reading comprehension of the prelingually deaf Turkish readers, highlighting two alarming deficits that can be considered as atypical among this population. The first is "zero development in RC skills over a time span of seven school years", which means that deaf students do not benefit from the education provided to them and they miss an opportunity to develop themselves (*ibid.*:234). The other issue raised by the authors is the deaf's "apparent failure to recruit prior knowledge and experience in the form of a top-down processing strategy in order to make sense of the message conveyed in writing" (*ibid*.). When creating SDH, this point needs to be borne in mind since it foregrounds their poor reading skills and lack of necessary alternative strategies to compensate for their hearing loss.

3.2.3. Turkish Sign Language

The oldest use of SiL was recorded in Anatolia, where it was used by the Hittites (1200 – 2000 BC) to participate and work in religious ceremonies (Soysal 2001). This supportive environment towards hearing-impaired people was sustained during the Ottoman Empire (14th–19th centuries). Although there is not much information about the lives and education of hearing-impaired people outside the palaces, it is a known fact that they were appointed as special servants to the royal family and to the sultans themselves, carrying out various responsibilities, from executing or providing intelligence to entertaining the sultan or serving the royal family. Miles (2009) states that there is evidence

of the development of a complex communication system, the Ottoman Sign Language (OSL), which was capable of conveying even difficult matters in a detailed manner. This language was formally taught at the Topkapı Palace by experienced deaf users and was also learned by some courtiers and even sultans for its practical benefits, thus contributing to the perpetuation of OSL for around 500 years.

Although OSL was used, taught and transmitted to subsequent generations, there is no firm evidence as to whether it constitutes the origin of the TSL, although, as Miles (*ibid.*) argues, it seems legitimate to expect OSL to have contributed, to some extent, to the development of TSL. As mentioned before, the first deaf school in the Ottoman Empire was founded in İstanbul around 1889 and taught hearing-impaired people SiL, whose alphabet, as Kemaloğlu and Kemaloğlu (2012:71) note, was one-handed and "most probably originated from French sign language and was used by adding some extra finger positions to demonstrate Arabic letters and Turkish vowels of Ottoman Turkish". This language continued to be used until the alphabet revolution of 1928, which changed the Turkish alphabet from Arabic to Latin. After this episode, a two-handed manual alphabet similar to modern TSL started to be used commonly. It was around this period that the idea of deaf people being educated with an oralist approach began gaining ground, leading some 20 years later to the banning of TSL in schools and the adoption of the oral method as the dominant method in the education of deaf people. This lack of interest in TSL hindered all research on the topic as well as the development of a national, unified SiL system (Akalın 2013), giving rise to a multitude of systems that differ from region to region, making it difficult for hearing-impaired people to communicate among themselves. For a long time, the only manual available was the *Guidebook of Turkish Sign Language for Adults*, published by the Ministry of Education in 1995 and, as explicitly mentioned in the title, intended for deaf adults only, as children were supposed to develop their speaking ability in the oralist primary schools.

The importance of SiL in the classroom and as a rightful means of communication for hearing-impaired people began to be realised during the last

decade. Article 15 of the Turkish Disability Act No. 5378, which came into force in July 2005, considers TSL as a rightful tool for the communication and educational needs of people with hearing disabilities and gives the Turkish Language Institution (TLI) the responsibility of creating a national and standard SiL system. The standard alphabet of the current TSL was determined two years after the Disability Act in the first ever Turkish Sign Language Workshop that took place on 7 July 2007 – a date which, since then, has been celebrated as Turkish Sign Language Day. A second workshop, entitled *Türk İşaret Dili Sistemi Hazırlık Çalıştayı* [The Preparation of the Turkish Sign Language System], was held in October 2010 with the aim of preparing a dictionary, a grammar book and education materials for TSL, though the results are clearly lagging behind, and only the TSL dictionary has been available on the TLI website since 2012, whilst the remaining objectives seem to have been completely neglected. Some universities, including Boğaziçi, Hacettepe and Koç, are conducting research on TSL and have compiled dictionaries that they host on their official websites. More recently, thanks to a piece of legislation by the Council of Higher Education, TSL has become an elective course in related undergraduate programmes, although it is not yet widely available, and some teachers at deaf schools, who graduated before the passing of this regulation, do not know TSL and use signed Turkish, which is a signed version of spoken Turkish (Kemaloğlu 2014). Signed Turkish is not an actual language and it simply changes spoken words for signs whilst still using the grammar structure of spoken Turkish. Although it may seem logical to use signed Turkish to communicate with hearing-impaired people, TSL has a completely different grammatical structure from spoken Turkish and is not therefore used or even understood by some Deaf people. This emphasises the need for special teachers graduating from related programmes to learn TSL so that they can communicate properly with their students.

3.2.4. TV viewing habits of people with disabilities

Watching TV is one of the two main sources of information for Turkish citizens, the other being the internet (Karahasan 2012). Although the latter is gaining popularity exponentially and is used by 46% of the population, TV is still the

most common method of mass communication, with 84% of the population watching it every day (Aykan 2012). According to statistics from *Radyo ve Televizyon Üst Kurulu* (Radio and Television Supreme Council, RTÜK), the national regulatory and monitoring office for radio and television broadcast, people watch TV for 3.5 to 5 hours a day on average (RTÜK 2013). Statistics from an older survey on television watching/listening trends of disabled people claim that people with disabilities watch TV for 4.3 hours a day on average and 13.5% of them spend 10+ hours a day in front of a small screen (RTÜK 2007). Compared with other disability groups, the hearing-impaired watch TV most, with an average of 4.5 hours during weekdays and 4.9 hours at weekends (*ibid*.), foregrounding the significant place that TV occupies in their lives.

The importance of TV for people with disabilities is indirectly supported by the findings of a report brought out by the *Symposium on Fighting against Disability Discrimination* (Web 3.3), which took place in Ankara in 2010, and concludes that 77.3% of disabled people have experienced difficulties gaining access to public places, 72.1% cannot use public transport because of the lack of appropriate provision, and 82.2% have faced some kind of discrimination when trying to partake in leisure activities. These statistics show why accessible TV can be so important for people with disabilities since, for many of them, it is the only and simplest way of connecting with the rest of the world until a fully accessible society in terms of transportation, access to buildings and participation in social activities becomes a reality in Turkey.

As previously discussed, being able to access information is crucial in today's information society, and although this can be achieved in many ways, the role played by TV in a country like Turkey cannot be underestimated. According to the same report (Web 3.3), 73.1% of disabled people declared that they had experienced some kind of discrimination when trying to access information – a percentage that could be substantially reduced by making TV broadcasts more accessible to audiences with sensory impairments. In an attempt to ascertain the opinion of disabled people on the content and characters portrayed in programmes targeting them specifically, RTÜK (2007) found that most disabled viewers considered such productions largely irrelevant for helping them solve

their problems or providing them with the right guidance, and some even felt that TV channels were exploiting their plight in order to increase their own ratings. Broadcast time was also an issue, as most interesting programmes tend to be aired late at night, outside prime time, despite evidence from research indicating that 62.3% of the disabled watch TV between the hours of 18:00 and 21:00 on weekdays (*ibid.*). Although the ultimate goal should be to make all TV programmes fully accessible to people with sensory disabilities, it is vital that in the initial developments their preferences and needs are fully considered both in terms of suitable content and the time of broadcast.

3.3. Legislation

The design of new technologies that do not take due consideration of the special needs of people with disabilities may complicate their integration into society rather than serving as a catalyst for solving some of their problems. For Ellcessor (2012:330), this becomes a vicious cycle in which new technologies and services are developed without bearing in mind any accessibility concerns. They are met with negative critique and have to be substantially overhauled and revamped if not dismissed altogether. She contends that this cycle is symptomatic of a pervasive apathy on the part of the main stakeholders and claims that technological developments in themselves are not enough to foster accessibility. For scholars like Story *et al*. (1998: online), this cycle can be reversed through 'universal design', i.e. "the design of products and environments to be usable to the greatest extent possible by people of all ages and abilities". Designing products from inception that are accessible to the widest range of people might also prevent the unnecessary waste of time and resources in terms of having to re-adapt obsolete ones. But, in Ellcessor's (2012:336) opinion, this fight against discrimination on the basis of disability is far from being a seamless process, and for any new measures or technological advances to be successful they need to "have the force of the law behind them in order to ensure their existence, quality and availability". All-encompassing and detailed legislation has to be in place in order to regulate the provision of

access services as, given the financial implications, this is unlikely to be championed by product developers or service providers.

Article 10 of the Turkish constitution states that all Turkish citizens are equal before the law regardless of their language, colour, political opinion, religion, race, sex or philosophical beliefs, implicitly recognising that measures should be taken so as to meet citizens' needs and enable them to participate fully in all spheres of life. Acts of discrimination on the basis of any of the above criteria are prohibited and penalised by Article 122 of the Turkish Penal Code, and although none of these two articles are specifically designed for the sole benefit of people with disabilities, they can certainly be used to campaign for their equal access to rights and greater participation in society.

Since the 1990s, there has been a concerted effort to shift the approach to disabilities from a medical model, which considers disabilities as a form of illness and disorder and burdens only the disabled individual with the vicissitudes of having been diagnosed as such, to a more social model wherein individuals with disabilities are treated on equal terms with the rest of the citizens, and responsibility falls on society to make the necessary adjustments to ensure the complete and equal enjoyment of disabled people. Although some attempts have been made in the country to pass legislation with a social agenda, they have not been systematic and are rather difficult to account for since they are scattered under various acts. The Turkish Disability Act of July 2005 No. 5378, without a doubt the most notable piece of legislation in the right direction, sets its general principles "on the basis of the inviolability of human dignity and integrity" and entrusts the State with the development of "social policies against the exploitation of disability and persons with disabilities. Discrimination shall not be made against persons with disabilities; non-discrimination is the fundamental principle of policies concerning persons with disabilities" (www.ohchr.org/Documents/Issues/Disability/FirstDebate/Turkey.pdf). The Act also ensures the participation of disabled people, their families and relevant voluntary organisations in all decision-making processes concerning their rights, and introduces some amendments to existing laws so as to make them compatible with the new legislation.

In the international arena, Turkey signed the UN Convention on the Rights of Persons with Disabilities in 2007 and ratified it nationally two years later, on 27 May 2009. In this sense, and according to Article 90 of the Turkish constitution, any international treaties, which are duly ratified nationally, bear the force of law and become part of national legislation in Turkey. What is more, it also ensures that international agreements prevail in the case of potential contradictions with national laws. Hence, it seems legitimate to expect the Turkish government to take a more proactive stance and encourage appropriate measures to guarantee and enhance the provision of access services to people with sensory impairments. Positive discrimination in the form of adopting extra measures for people with disabilities and special needs is regulated by an amendment to Article 10 of the Turkish constitution approved in 2010, which states that "measures taken for the children, the elderly and the disabled, as well as orphans and widows of the martyr and the veteran cannot be considered to be contrary to the principle of equality" (ILNET n.d: online). However, as discussed on the Independent Living Network (*ibid.*) project's website, there is still a long way for Turkey to go before securing the ultimate aim of full inclusion:

> a simple search through the Regular EU Progress Reports reveals that Turkey is lagging behind in the EU acquis related to disability policies. Some of the remaining issues are: absence of definition in the Turkish legislation of direct and indirect discrimination; the acquis covering discrimination on grounds of inter alia, disability has not been transposed into national legislation; access to education, health, social and public services, the right to vote and to be elected, still remain critical issues for the disabled people of Turkey. All these are also a barrier to enjoyment of the right to independent living.

Accessibility in Turkey is generally associated with the provision of access in physical environments and transportation, whilst access to information is not given much prominence despite the crucial role of ICTs in people's lives. Such a situation has prompted authors like Çağlar (2012:579) to advocate that the right to access information and communication should be a basic human right, entrenched in the constitution or the Disability Act.

With regard to the broadcasting industry, legislation regulating TV accessibility was finally passed in April 2014 in the form of an amendment to the RTÜK's

Directive on Procedures and Principles Regarding Broadcast Services (Web 3.4). This amendment requests the public service provider, *Türkiye Radyo Televizyon Kurumu* (Turkish Radio and Television Corporation, TRT), to start providing SDH on news programmes, movies and series, progressively reaching 30% of programmes in three years and 50% in five years. The targeted percentages are slightly lower for private service providers with a national terrestrial broadcast license, i.e. 20% in three years and 40% in five years. Although it is not clearly indicated, the intended programmes to come with SDH are of a pre-recorded nature, and no regulations on the provision of live programmes have been passed. This amendment also stipulates that public and private broadcast service providers have the obligation of annually declaring statistical data on the levels of access services provided in the previous year and must send this information electronically to (izlemeburo@rtuk.org.tr) in the first three months of the following year. This regulation may well signal a turning point in the pursuit of fully accessible television for people with disabilities, although for the time being only SDH is considered and other forms of access services, such as SLI and AD, are so far being ignored. The amendment does not specify whether any sanctions will be imposed to stations not meeting their obligations, which is bound to have a negative effect on the provision of these services, as some reluctant broadcasters may find it hard to find the motivation to reach the prescribed levels of accessibility without the pressure of punitive legislation.

3.4. State of SDH in Turkey

As we can see from the above discussion, accessibility in general, and in audiovisual media in particular, is a neglected issue in Turkey, where barely any programmes are accessible on TV. SLI was traditionally the only access service provided by broadcasters like the public TRT and the private FOX TV, usually for the news. TRT only signs the programme *İşitme Engelliler Bülteni* [The Bulletin of the Hearing-Impaired], which is broadcast at 17:30 on weekdays on its channel TRT News, whilst FOX TV provides SLI on its morning news programme, *İsmail Küçükkaya ile Çalar Saat* [Alarm Clock with İsmail

Küçükkaya], broadcast at 07:30 on weekdays. Of course, these very few programmes are only accessible to those who are fluent in TSL and not necessarily to the whole hearing-impaired audience. The other downside of this state of affairs is that their broadcasting time might not be convenient for most deaf and hard-of-hearing people.

The main AVT mode used on public and private service broadcasting in Turkey is dubbing, which means that domestic as well as most foreign productions are beyond the reach of people with hearing impairments. Some private channels, especially TLC and Bloomberg, broadcast foreign productions such as series and films with Turkish subtitles; however, these interlingual subtitles are not genuinely intended for hearing-impaired people and therefore lack many of the important features that are specific to SDH and help people with a hearing impairment to fully enjoy the programmes, such as an indication of who is speaking, description of sounds and the like.

To date, and despite the amendment of April 2014 mentioned in section 3, hardly any SDH is provided on any of the many free-of-charge TV stations operating around the country. However, thanks to an increased social awareness, positive developments have recently taken place in regards to the provision of SDH in Turkish. In April 2018, private broadcaster FOX TV began providing SDH on some of its series' episodes that are reruns after the actual broadcast of the programme, although apart from this access provision, services are only available to the pay-per-view sector. Various private service providers such as Channel D (since 2011) and Show TV (since 2016), together with the public service provider TRT (since 2013) have been broadcasting some of their programmes with SDH, AD and SiL for some years now free of charge, although only on the internet.

TRT, for instance, streams 43 of its programmes through its many different channels – TRT 1, TRT *Çocuk* [Child], TRT *Belgesel* [Documentary], etc. – with SDH, SLI and AD, whilst on Show TV three of its series are fully accessible and, on Channel D, 83 of its productions are also accessible to people with sensory disabilities. Foreign productions are not on offer and the main genres covered

tend to be national series, cartoons, talk shows and quiz shows that viewers can access at any time of the day. Another recent development has been led by Tivibu, a new private TV platform which only broadcasts via a broadband internet connection (IPTV). To date, Tivibu has an archive of 21 fully accessible films (with SDH, SLI and AD), which are only available over the internet and can be watched on a TV set or any other screens whenever viewers want, and since September 2013, the paid-for satellite television provider Digiturk has been broadcasting various national and foreign films and TV series with SDH, SLI and AD on its movie and series channels. Apart from these developments, the fansubbing website Divxplanet provides SDH for Turkish and foreign movies as well as TV series. *İşitme Engelliler ve Aileleri Derneği* [Association of the Hearing-Impaired and Their Families], in collaboration with Divxplanet, has developed an archive named *Türkçe Altyazılı Türk Filmleri Kütüphanesi* (Library of Turkish-Subtitled Turkish Films, www.ied.org.tr/turkcealtyazi.htm), made up of over 44 DVDs of Turkish movies with SDH for the enjoyment of the hearing-impaired audience, who can either borrow these DVDs or watch them in a place provided by the association. Despite these recent promising, though timid, developments, the fact remains that there is no real application of SDH on analogue, digital or satellite TV that is free of charge in Turkey, which raises serious ethical issues about the role of the government in the provision of access services.

Given that these are very early steps in the provision of SDH on Turkish screens, it is crucial that a code of good subtitling practice and a set of guidelines be drawn up according to the audience profile and needs in order to ensure decent levels of quality. To achieve these aims, hearing-impaired audiences, deaf associations, universities and service providers should collaborate closely in the drafting of such guidelines, and the experience of more seasoned countries that have gone through similar processes in the past – UK, USA or Spain to name but a few – should be borne in mind so that lessons can be learnt from their mistakes and successes. With accessibility to the audiovisual media being in its tender infancy in Turkey, the outlook for future development is indeed very promising.

CHAPTER 4

Methodology

4.1. Introduction

This research project is a two-fold study and consists of two major parts, with the ultimate goal of developing a set of guidelines to be used in the production of subtitles for Turkish deaf and hard-of-hearing audiences. The first part of the study is conducted within the framework of DTS so as to reveal the norms, i.e. the recurrent standards and practices that prevail in the guidelines employed in countries with a longstanding tradition in the provision of SDH. The second part of the research takes over from where the first part leaves off and strives to include one of the most important stakeholders of the reception process – the Turkish hearing-impaired viewers. Since norms are highly culture- system-bound notions, as Toury (1995) states, it is not expected that a norm will have the same validity and intensity across different sub-systems within the same culture, let alone among different cultures and contexts. The second part of the current research project therefore aims to analyse the Turkish hearing-impaired viewers' preferences regarding SDH strategies that tend to vary from nation to nation and cause more controversy. In this first attempt to discover Turkish viewers' needs and preferences, ART is used as a framework. This chapter therefore first presents DTS by placing a specific emphasis on the discussion of the norms central to this study. Subsequently, ART is introduced and its importance for this research project discussed.

4.2. Descriptive Translation Studies

At the beginning of the flurry of academic activity centred on translation, the early works were generally linguistics-oriented and were dominated by the concepts and theories pertaining to this discipline, especially comparative linguistics. Within this framework, a great emphasis was placed on the concept

of equivalence (Nida 1964), and translation was conceived as a practice consisting of transferring meaning from one linguistic system to another. Studies on translation focused mainly on the contrastive analysis of two different linguistic systems, highlighted the issues creating problems for translators in terms of translatability and suggested mechanisms to overcome them without paying much attention to extralinguistic factors or the wider sociocultural context. Within this framework, the SL was valorised as the generator of meaning, the TL was relegated to a secondary position, and the translator was responsible for creating as identical a meaning as possible in the TL.

The limitations of the linguistic-oriented approach were soon realised since translated solutions that are linguistically correct in a TL might not fulfil the intended function. This prescriptive and judgmental perspective was criticised by McFarlane (1953:93), who stated that TS should be "diagnostic rather than hortatory" by concentrating on empirical data and explaining rather than evaluating the translations: "an examination of what translation is and can be rather than what it ought to be but never is" (*ibid.*: 92-3). Toury (1995) also bemoans the limitations of the linguistic approach by emphasising the cultural importance of translation activities and the social role played by translators as active members of a given community.

By pointing out that research into translation conducted so far lacked a home of its own and was dispersed across other disciplines like modern languages and linguistics, Holmes (1988) endeavoured to establish a field of translation research as an independent discipline and developed the profoundly influential framework displayed in Figure 4.1:

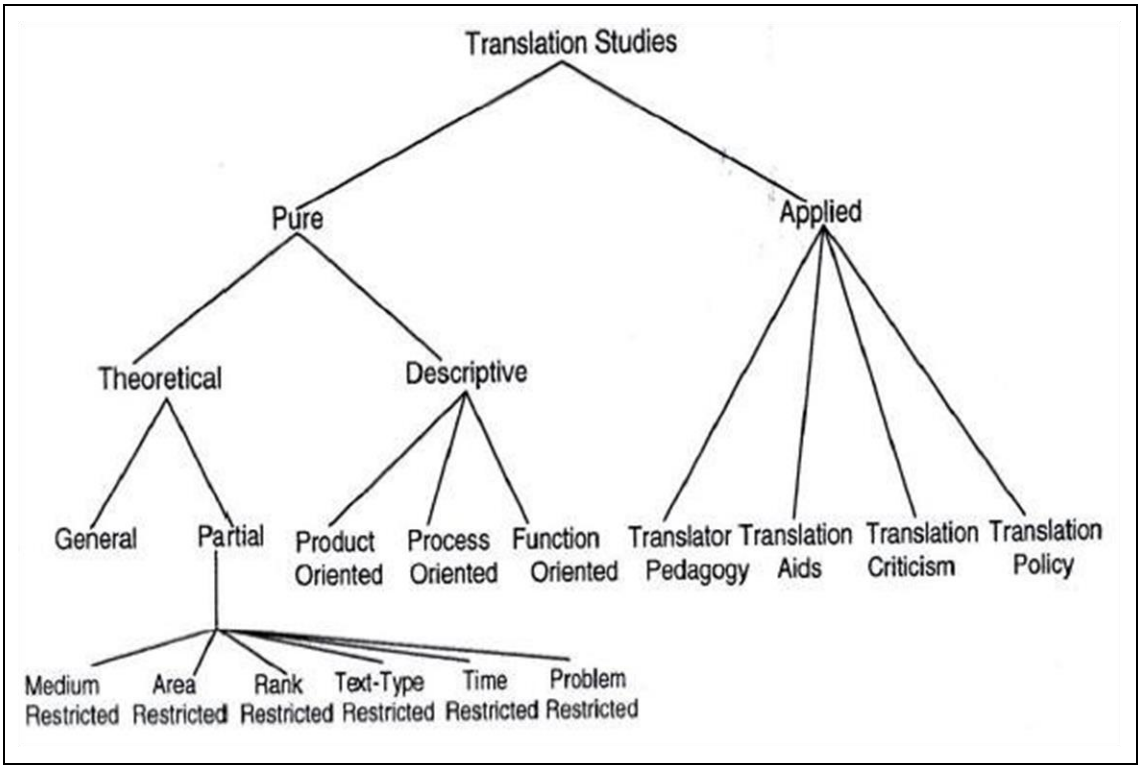

Figure 4.1: Holmes' map of translation studies

He divided the study of translation into two main branches: 'pure' and 'applied'. The former concentrates on the theoretical study of translation, whilst the applied branch is more practical and focuses on the application of the knowledge and information created by the pure branch. The pure branch is further subdivided into 'theoretical' and 'descriptive', the objectives of which are defined as "the establishment of general principles to explain and predict such phenomena" and "the description of the phenomena of translation" respectively (Munday 2012:16). The descriptive branch therefore tries to understand and explain how actual translations are produced, whilst the theoretical branch aims to promote either a "general theory of translation" or "partial theories of translation restricted according to the subdivisions" medium, area, rank, etc. (*ibid.*). The descriptive branch is further divided into three sub-branches: product-oriented, function-oriented and process-oriented. Product-oriented studies centre on the investigation of the actual translations, including an analysis of a single ST-TT pair of translations occurring at a given period or done by a specific translator. Function-oriented studies seek to explore the function and effect of the translation in the target culture. Lastly, process-

oriented research focuses on the cognitive processes taking place in the mind of translators during the act of translating.

As Hermans (1985:10-11) concludes, what scholars working within the DTS paradigm have in common is:

> a view of literature as a complex and dynamic system; a conviction that there should be continual interplay between theoretical models and practical case studies; an approach to literary translation which is descriptive, target-oriented, functional and systemic; and an interest in the norms and constraints that govern the production and reception of translations, in the relation between translation and other types of text processing, and in the place and role of translations both within a given literature and in the interaction between literatures.

This summary puts forward the general and basic principles of DTS and its place in opposition to the prescriptive, source-oriented linguistic approaches to the study of translation. Although this system theory was mainly applied to the study of literary translation in the early stages of DTS, it can easily be applied to other translation types as suggested by Díaz-Cintas (2004), who talks about an audiovisual polysytem which includes subtitled and dubbed films as well as original works.

The DTS paradigm targets actual translations as the area of research interest and, by being target-oriented, it analyses the importance and position of the TT in the target culture unlike traditional approaches, which assign STs a primary position as the yardstick by which to evaluate translations. In this sense, Hermans (*ibid*.:38) suggests that:

> once the claim for the relevance of translation has been made, on historical, linguistics, philosophical and other grounds, and translations are felt to be worthy objects of study, it is worth asking what the problem was that a given translation was intended to solve.

The last core principle revolves around the norms and constraints affecting translations in the target culture. Norms, which are active throughout the process of translation and affect translators' decisions, become the object of study and are examined through regularities of behaviour. In the framework of

DTS, norms are generally considered from a purely descriptive point of view to explain why translations turn out as they do without any intention of building a set of guidelines or rules for translators – an approach that has been challenged by researchers such as Chesterman (1993) and Hermans (1999).

Within the framework of DTS, the first stage of the present study aims to tease out the norms governing the practice of SDH in cultures which have a considerable amount of experience in producing SDH. These norms will then be used in the development of SDH for the experiment and they will be tested on a Turkish audience. Norms are therefore key concepts for the current study and will be delineated by referring to two of the most prominent figures in the study of norms: Toury (1980, 1995) and Chesterman (1993).

4.3. The Nature of Norms

Norms have been a key concept within the social sciences ranging from psychology, ethics and sociology to international relations. On the nature of norms, Interis (2011:426) argues that they are different from "beliefs, values, ethics… and the like by the property that norms are behaviours", although the former may influence behaviours. After arguing that there is no agreement on the definition of norms, Gibbs (1965:588) puts forward Dohrenwend's (1959) generic definition:

> a rule which, over a period of time, proves binding on the overt behaviour of each individual in an aggregate of two or more individuals. It is marked by the following characteristics: (1) Being a rule, it has content known to at least one member of the social aggregate. (2) Being a binding rule, it regulates the behaviour of any given individual in the social aggregate by virtue of (a) his having internalised the rule; (b) external sanctions in support of the rule applied to him by one or more of the other individuals in the social aggregate; (c) external sanctions in support of the rule applied to him by an authority outside the social aggregate; or any combination of these circumstances.

The existence of norms hinges on their content being known to members of a society, and they govern the members' behaviours through their binding force, which is rooted in an individual internalising norms or sanctions exerted by external elements in a society. Through their binding force, norms increase

predictability by regulating individuals' behaviours and interpersonal relations in a society. The regularising force of norms therefore creates expectations among the members of a society that an individual will behave in a certain way in a given situation, and that an individual feels that s/he is expected by others to behave in a certain way under certain conditions.

The concept of norm is useful for the analysis of the needs and peculiarities of the translation field since translators are social actors and translating is conceived as social behaviour that plays a role in its hosting socio-cultural context. Like other forms of social behaviours, translation is thus governed by norms prevailing in the culture in which they are embedded. In order for communication to succeed, there needs to be coordination between the parties involved in the interaction, and norms play a key role in solving the challenges encountered during this interaction by affecting and shaping the expectations and decisions of the parties at every stage of the process.

Levý (1967) considers translating as a decision making process which requires translators to choose from among various options at every stage of the translation process. All of these decisions have an impact on each other and, from an academic perspective, the decisions made under the control of translators are the most interesting as they must choose certain options over others. These decisions are recurrent across a range of texts, leading to the establishment of patterns which, in turn, affect the expectations that readers bring to the translated texts.

4.4. Toury, DTS and Norms

In a reaction to prescriptive studies, Toury (1980:62) develops a target oriented general theory of translation, whereby actual translations can be described and explained in a systematic manner, and decries the limited nature of source-oriented, prescriptive studies by stating:

> Most of the theories of translation hitherto formulated tend to be prescriptive, and thus are in no position to serve as a point of departure for research. Therefore I here posit the need for a revision of the theory in keeping with the needs of the

> translation scholar, namely a revision which will lend it a greater descriptive and explanatory force.

This quote also foregrounds two other key aspects underpinning the theoretical framework he created, namely being descriptive and explanatory. Toury (1985:16) constantly and clearly indicates his stance against prescriptiveness or directiveness in his discussions on DTS, and he places great importance on the empirical nature of descriptive studies since "actual facts of 'real life' […] rather than the merely speculative outcome of preconceived hypotheses and models" constitute the real object of study. He goes on to stress the crucial nature of descriptive studies for TS by stating that "no empirical science can make a claim for completeness and (relative) autonomy unless it has a proper *descriptive branch*" (Toury 1995:1). With his empirical stance, Toury (*ibid*.:3) aims to develop a systematic descriptive branch:

> what is missing is […] a systematic branch proceeding from clear assumptions and armed with a methodology and research techniques made as explicit as possible and justified within translation studies itself. Only a branch of this kind can ensure that the findings of individual studies will be intersubjectively testable and comparable, and the studies themselves replicable.

He proposes a methodology revolving around three sub-branches – product-, process- and function-oriented, and affirms that it is not possible to reach a comprehensive, explanatory theory without paying attention to the relation and interdependency that exists between these sub-branches. For him, the function of a translation has priority over the other two as it has a governing effect over, and determines, the makeup of the product, "in terms of underlying model, linguistic representation, or both" (*ibid*.:183). The function of a translation may govern the strategies employed by the translator during the process of translation "via the necessary make-up of the translation and/or the relationships obtaining between it and the source text" (*ibid*.). The centrality/peripherality or high/low prestige assigned to the translating activity in the recipient culture may also influence the strategies employed by the translator.

Toury's (*ibid.*) target-oriented approach to translation has had a great influence on TS which, until then, had generally focused on STs and considered

translations as mere reproductions. Rather than prescribing what translations should be like, studies conducted in the new paradigm endeavour to describe real translations in the target culture at a particular time in history.

In this general research paradigm, Toury (1991:185) describes the bi-directional relationship between the theoretical and descriptive branches of TS as follows: “it is a fact that the findings of a well-performed study always bear on underlying theories and contribute to the *verification* or *refutation* of the latter, and particularly their modification”. This bi-directional relationship leads to refined theories which, in turn, enable more elaborate descriptive studies that can be employed to create more detailed theories. For Toury (*ibid*.:185-186), TS needs to account for:

1) all that translation CAN, in principle, BE;
2) what it actually IS, under any defined set of circumstances, cultural, communicational, linguistic, text-typological, textual, social, psychological, etc., and WHY it is realized the way it is, and
3) what it is LIKELY TO BE, under one set of conditions or another.

The first and the last requirements pertain to the theoretical branch of TS and the second pertains to the descriptive one. While the first is related to theory in its most general form, the last is a “theory in a far more elaborate form, one which is *probabilistic* in nature” (*ibid*.). The second can be conceived as a mediator between the two theoretical requirements since it provides the factual knowledge required to refine the broad initial possibilities expressed in (1) so as to establish solid grounds to make predictions. As presented above, individual descriptive studies, provide much needed factual findings to refine the theories, which in the end will enable researchers to account for translations, translators’ decisions and socio-cultural constraints affecting them and to ultimately make more accurate predictions. Toury (2012:31-34) furthermore proposes a three-stage systematic methodology for DTS so as to establish the required grounds for predictions:

1) situate the text within the target cultural system, looking at its significance or acceptability,
2) undertake a textual analysis of the ST and the TT in order to identify relationships between corresponding segments in the two texts. This leads to the identification of translation shifts, both 'obligatory' and 'non-obligatory',
3) attempt generalisations about the patterns identified in the two texts, which helps to reconstruct the process of translation for this ST-TT pair.

The aim of the studies conducted under this systematic methodology is to tease out the decisions made during the translation process, to discover recurrent patterns of translators' behaviour and to account for the socio-cultural constraints that affect these decisions. These socio-cultural constraints are Toury's (1995:54-55) norms, which are bound by time, culture and society and which he defines as:

> the translation of general values or ideas shared by a community – as to what is right and wrong, adequate and inadequate – into performance instructions appropriate for and applicable to particular situations, specifying what is prescribed and forbidden as well as what is tolerated and permitted in a certain behavioural dimension.

As a culturally determined activity, translating is governed by norms and being a translator means "to fulfil a function allotted by a community to the activity, its practitioners and /or their products in a way which is deemed appropriate in its own terms of reference" (*ibid*.). To fulfil the allotted function, a prerequisite to becoming a translator is the acquisition, during the socialisation process, of a set of norms that regulate the appropriateness of the translational behaviour. Toury (*ibid.*:65) posits that "from a scholarly point of view, norms do not appear as entities at all, but rather as explanatory hypotheses for actual behaviour and its perceptible manifestations". In other words, by examining samples of actual behaviour, researchers can detect norms, and norms in turn may explain the actual behaviours.

The idea of translation being a norm-governed activity does not, however, eliminate the free will of translators in their decision making process. Thus,

compliance or non-compliance with certain norms is still the prerogative of translators despite potential (positive or negative) sanctions as a result of their actions. Agents involved in the process of translation are not passive and introduce changes and innovations to the socio-cultural system through their actions, e.g. by not complying with an existing norm or introducing a new norm from another socio-cultural (sub)system. This, however, is a risky course of action to take, and not every agent can introduce such changes to the pre-existing norms, and the deviant behaviour of a novice translator may be viewed as an error rather than an act of innovation.

When discussing the multiplicity of norms, Toury (1995:76) states that “in the social life of a group, especially a comprehensive and/or heterogeneous one, there tends to be more than just one norm for each behavioural dimension”. He further argues that this multiplicity of alternative norms neither causes anarchy nor eliminates the binding force of norms since each norm is not equally accessible or does not have the same status and, therefore, an individual’s choice from among the alternatives entails a risk of its own. These alternative norms do not only exist side by side within a socio-cultural system, but also compete to dominate the centre as a result of the dynamic structure of a society. In the socio-cultural system, it is not unusual to find three competing norms side by side “each having its own followers and a position of its own in the culture” (*ibid*.:77):

- norms that dominate the centre, and hence direct the translational behaviour of what is recognised as the mainstream, alongside
- remnants of previous mainstream norms, which are still there but have grown weaker and been relegated to the margin, and
- rudiments of what may eventually become part of a new set of norms.

Changes may occur among these three competing norms, and a set of new norms may become popular and mainstream with time, ultimately dominating the centre. On the other hand, progressive translators may become mainstream or even passé if they do not keep up with the changes. As discussed earlier, deviant behaviours of novice translators are generally viewed as errors, and the

agents most likely to succeed in introducing new norms are experienced translators to whom society has “granted more than mere recognition” (*ibid*.).

4.5. Translational Norms

Translational norms can be found to operate not only in all kinds of translation activity, but also at all stages of translation acts. In the course of translation activity, “norms may well be brought into the picture […] by editors, revisers, publishers, censors, proofreaders, etc.” and they may be in accord, or they may be in conflict with each other, which makes it difficult to “reconstruct the translation event underlying a given corpus” (Toury 2012:81).

4.5.1 Initial norms

Toury (2012) posits that the value of translation may involve two basic principles:

- the production of text in a particular culture/language which is designed to occupy a certain position, or fill a certain slot, in the host culture,
- constituting a representation in that language/culture of a text already existing in some other language, which belongs to a different culture and occupies a definable position within it.

These two principles are termed as ‘acceptability’ and ‘adequacy’ respectively, and initial norms pertain to the decisions made between these two poles. If the first stance is adopted, and the translation act is mainly governed and regulated by norms prevailing in the target culture, then the translation product is considered as ‘acceptable’ within the target culture. Although the distance between the ST and its realisations in the target culture and the nature of the changes may vary, shifts from the ST are inevitable, even in the most adequacy oriented translation acts.

Norms apply both to obligatory changes stemming from the differences between language systems and to non-obligatory shifts, which are “of more interest since they reveal the choices made by the translator” (Munday 2012:174). If a translator opts to take the latter stance by adhering to the norms of the SL or culture, the translation act will be governed by these source oriented norms, which can be expected to result in contradictions to some of the usual practices and norms prevailing in the TC. Products regulated by the ST-oriented norms are called “adequate” translations by Toury (2012:70). A translated text cannot be utterly adequate or acceptable, and it usually entails a compromise between the two poles. The precedence of initial norms over other more specific and lower level norms, as the highest level decision, is a logical one and does not necessarily reflect the actual actions, which does not mean that this decision is only made once and at the beginning of the translation act. As Toury (*ibid*.:80) states “the choice between adequacy and acceptability may be […] repeated time and again during the [translation] act”.

4.5.2. Preliminary norms

Preliminary norms pertain to two main sets of considerations, namely ‘translation policy’ (its existence and nature) and ‘directness of translation’. The former has to do with the factors that govern the choice of texts to be brought into a TC through translation at a particular time. Such choices are of interest to the translation researchers as long as they are not made randomly. Directness of translation refers to the limits of tolerance shown for translating original works through intermediate languages (e.g. Japanese to Turkish via English). An example of these norms given by Neves (2005) within AVT is that in the case of minoritised languages, the DVD industry tends to use English master titles, rather than the original ST, to produce subsequent translations in other languages.

4.5.3. Operational norms

These norms govern the decisions made about “the text’s matrix – i.e., the way linguistic material distributed in it – as well as its textual make-up and verbal

formulation" (Toury 2012:82) during the act of translation. Operational norms govern the decisions on which parts of the ST will be transferred into the TT, directly or indirectly, and are further divided into matricial and textual-linguistic.

Matricial norms relate to the existence (the completeness of the TT) and the presentation (its place in the text and its segmentation) of the target linguistic material intended to replace its SL counterpart. The level of omissions, additions or manipulation of the TT may also be regulated by matricial norms. Textual-linguistic norms regulate the decisions on the selection of certain TT linguistic items to replace their SL counterparts.

As already mentioned, the first part of the present study will be conducted within the framework of DTS. Through a product-oriented descriptive study, it aims to detect the prevailing norms in the production of SDH in countries where it is widely practised, by examining some of the guidelines applied in these countries and comparing them. Operational norms are of special interest, particularly when it comes to ascertaining the level of omissions, segmentation of subtitles, stylistic features (different use of colours, size and type of font), etc. Since SDH is an intersemiotic form of translation rather than an interlingual one, initial norms are not applicable to SDH in a straightforward way. However, it can be argued that, instead of the dichotomy between source-oriented and target-oriented norms, there is a dichotomy between the norms that are drawn from spoken SL and those that prevail in the written language and other semiotic channels (e.g. images and emoticons). As to preliminary norms, the directness of a translation is not really applicable to the case of SDH since a language transfer does not really occur during the act of subtitling. As for the translation policy, some broadcasters offer full accessibility in all their programmes so as to ensure equality between hearers and hearing-impaired viewers. In other cases, it is worth investigating the preliminary norms governing the translation policy adopted in certain countries, where it is neither viable nor feasible to request broadcasters to provide accessibility measures for all their programmes, which inevitably leads to the selection of certain programmes to be subtitled. Given that SDH is not currently provided on any of the programmes broadcast on Turkish TV, and that initially broadcasters would not be able to provide subtitles

for all their programmes, a translation policy that takes into consideration the voice of the hearing-impaired audience as to the selection of programmes to be shown with SDH is definitely something that should be considered.

4.5.4. Sources of translational norms

Norms play a key role at all stages of the translation act, but they are not open to direct observation. Instead, what is directly observable are "instances of norm-governed behaviour, or – to be even more precise – their end products" (Toury 2012:87), which can be investigated in:

1. Textual sources, e.g. the translations themselves for all kinds of norms, as well as analytical inventories of translations established within a research project and assigned the status of virtual texts for the study of various preliminary norms.

2. Extratextual sources, e.g. semi-theoretical or critical formulations such as prescriptive 'theories' of translation, statements made by translators, editors, publishers and other stakeholders involved, in or connected with, the event, critical appraisals of individual translations, or of the activity of a translator or 'school' of translators, and so forth.

The scholar assigns textual sources a primary position and considers them as the immediate representation of norm-governed behaviour. Extratextual sources are relegated to a secondary position and are conceived as "by-products of the existence and activity of norms" (*ibid*.:88). Since these sources are created by interested parties, the scholar advises that they should be treated "with every possible circumspection" and recommends precaution before employing them: they should not be taken at face value and various formulations should be compared with each other and repeatedly confronted with the regularities found in actual acts of translation.

Because of the situation in Turkey, mainly extratextual sources in the form of SDH guidelines will be analysed so as to ascertain some of the most frequent

norms governing the production of SDH. Various sets of guidelines from different countries with a rich history of SDH provision will be analysed to reveal recurrent themes. They will be compared with each other in order to detect common points as well as to elucidate those areas where a consensus has not been reached. The examined guidelines, usually created and validated by an authority, generally derive from the results of studies which take viewers as their main focus of attention and aim to discover their opinions on the SDH services provided rather than being merely speculative, prescriptive statements. SDH is mostly created either by the in-house teams of some TV channels or by the agencies hired by those channels; in either case, it is the individual translators who are usually instructed to follow a set of guidelines imposed on them by the channel or agency they work for, and they behave within the limits of these guidelines. These style guides have been chosen as the main source for the study of norms since most SDH broadcast in those countries are likely to be governed by them. Since no SDH service is provided on Turkish TV at the time of writing, and there are no existing norms governing this kind of behaviour, this study acts as a pioneer in the field and ultimately aims to propose a set of SDH guidelines that can be used in the Turkish TV mediascape.

As we have seen so far, Toury puts great emphasis on the descriptive studies branch within TS and totally overlooks any kind of evaluative aspects. Even the probabilistic laws he envisages beyond descriptive studies are not normative since he claims that these laws do not oblige any translator to behave in a certain way. Hermans (1999) criticises Toury's approach to norms as being limited to the translator's point of view and emphasises that norms not only describe how other members of society expect an individual to behave, but also prescribe how an individual should behave in a given condition. The varying prescriptive force of norms, from permissive to obligatory (from conventions to rules), implies that there is a course of action which is deemed correct or appropriate by society collectively. Chesterman (1993:2) also believes that TS and DTS need to include an evaluative dimension in order to make a distinction between good and bad translations, a stance shared in this study.

4.6. Chesterman and Norms

Chesterman (1993) also adopts a descriptive approach to the study of translation in that he takes the actual translations as his main object of study in order to reveal the norms governing the translation act. However, in contrast to Toury's rejection of any kind of evaluative approach, Chesterman (*ibid*.:1) states that "translation studies need to cater for both description and evaluation", arguing that the bias in favour of descriptiveness stems from "the long tradition of confusion in translation studies, between descriptive and prescriptive aims" (*ibid*.:2). For Toury (1980), translation is whatever is regarded and accepted as such by a society at a given time, which means that any product regarded and accepted as a translation in the TC can become an object of study, regardless of the quality of the product and the competence of the translator. By emphasising the lack of evaluative features in DTS, Chesterman (1993) foregrounds the fact that even 'appalling' translations or translations which have a very 'tenuous' relationship with their ST are still conceived as proper translations and are described and explained within the framework of DTS. He further criticises this purely descriptive approach by stating that "such an approach necessarily overlooks much of the motivation for studying translation behaviour in the first place and inevitably leads to a rather one-legged theory" (*ibid*.:4). What is suggested here is that, in addition to providing descriptive explanations of translations, TS need to distinguish between good and bad translations and reveal features of them individually.

Chesterman (*ibid*.:5) accepts that norms can be examined descriptively but adds that "insofar as they are indeed accepted by a given community as norms, they by definition have prescriptive force within that community". To this end, he employs Bartsch's (1987:4) definition of norms as the "social reality [of] correctness notions" and puts forward the idea that the existence of norms hinges on their being consciously known by members of a society. As mentioned before, the function of norms is to regulate individuals' behaviour and to maintain a balance in society by providing instructions as to what courses of action are deemed appropriate/correct, tolerated or forbidden in a

given situation by the members of a community. Although norms are recurrent instances of behaviour under specific circumstances, how they are validated as correct, appropriate forms of behaviour requires an answer. For Chesterman (1993:6), norms can be validated either by "a norm authority" or "by their very existence alone". In the latter case, the existence of a valid norm depends on these three conditions: (1) most of the members comply with the norm and behave accordingly, (2) if an individual does not comply with the norm, s/he will be criticised by other members of society, and this criticism will be viewed as justified and will not be criticised by others, and (3) members of society employ the norm to justify their actions with expressions like "an X ought to do H under condition C" (Raz 1975:53, in Chesterman 1993:6). On occasions, norms may be validated by both approaches.

Chesterman (*ibid*.:5) distinguishes the following three higher order norms central to the study of translation: social (interpersonal relationship), ethical (values of clarity, truth, trust and understanding) and technical (including language and language use). He also proposes two types of norms: professional norms and expectancy norms. Behaviours of competent professional translators, whose actions are accepted to be standard-setting, are sources of professional norms, while the sources of the expectancy norms are translated texts that reflect a desired quality level and whose transfer is deemed to have been carried out by a competent translator, though Chesterman himself admits the challenge of defining the terms competent and professional.

Professional norms, aka production norms, govern the strategies employed during the translation process and can be analysed under the three higher-order norms, namely, accountability norms (ethical in nature, requiring translators to meet demands of loyalty with respect to the ST, readers, clients, etc.), communication norms (social in nature, requiring translators to optimise communication between the original writer and the prospective audience) and relation norms (textual in nature, requiring translators to establish an appropriate relation between the ST and the TT).

Expectancy norms operate at a higher level than professional norms and are established by the receivers' expectations of "what a translation (of a given type) should be like, and what a native text (of a given type) in the target culture should be like" (*ibid*.). Thus, translators should aim to produce TTs conforming to the expectations of the target receivers so that their products will be conceived as proper/appropriate translations. Expectancy norms therefore have an impact on the professional norms in that the strategies adopted in the translation process will determine whether a final product conforms to the expectations of the prospective receivers and is considered by them as adequate for communication in a given situation.

Chesterman (1993:11) views TS as a normative science, in a descriptive rather than prescriptive sense, bemoaning the fact that "recent translation scholars have tended to shun the use of the word because they take it exclusively in its prescriptive sense". For the scholar, TS should be normative in the sense that they should be norm-describing and norm-defining. As part of the general translation laws proposed by Toury (2012), Chesterman (1993:14) puts forward the concept of normative translation law understood as "a norm-directed strategy which is observed to be used (with a given, high, probability) by (a given, large, proportion of) competent professional translators". Like general translation laws, normative laws are also descriptive since they describe behavioural regularities but, unlike general laws, they only represent a subset of competent translators' behaviours. By focusing only on the behaviour of competent translators, rather than any translator, and by considering them as models of desirable behaviours, normative laws have a prescriptive force for the members of a socio-cultural system at a given time and context.

Chesterman (*ibid*.) argues that a theory should not only describe and explain translation phenomena as well as predict future actions consistently and reliably, but that it should also be useful and have practical applications. He argues that translation norms can be restructured so that they serve as a didactic tool to help trainee translators enhance their knowledge with a repertoire of desired models of behaviour and improve their translational skills. This can be achieved with the provision of guidelines or codes of good practice,

which are in line with the description of best practices and have been tested in real practice.

The current study has a two-fold aim and, similarly, the researcher assumes a two-fold role throughout the research. The first role as a translation researcher endeavours to reveal/describe the main norms governing the production of SDH in different countries. Yet, agreeing with Chesterman that descriptive studies can also have a prescriptive force, the other aim of this research is to introduce some of these protocols into the production of Turkish SDH for the community of hearing-impaired people. The second role of the author is that of a norm/trend setter since SDH is almost completely non-existent on Turkish TV and no set of norms exists in this area. The current research thus aims to initiate a negotiation/socialisation process by presenting a set of guidelines, based on informed practices in other countries, which is then evaluated by some Turkish hearing-impaired individuals. This seemingly prescriptive objective does not really clash with the descriptive nature of the study since the proposed guidelines are based on the descriptive analysis of existing guidelines and actual practices. In addition, after having conducted various experiments, the proposed set of guidelines will draw on options given by the target audience in order of preference rather than prescribing a specific practice. This is where the ART paradigm steps in. Within this framework, the needs and preferences of the target audience will be examined and, depending on their feedback, a set of guidelines will be proposed. The next section concentrates on reception studies and explains their relevance to the present study.

4.7. Audience Reception Theory

In any kind of communication, detailed knowledge about the receiver is essential for the encoder or sender of the message to reach her/his aims and create the desired effect on the receiver. As a form of communication and social interaction, translation requires translators to have a deep knowledge of the target audience and socio-cultural system into which the translations will be embedded so that they can produce a TT which can be processed and

understood by the target audience with the least effort possible and create the desired effect on them. The wider the socio-cultural distance between the translator and the target audience, the harder it is for a translation to succeed. This is especially true in the case of SDH since it is produced by hearing agents, who inevitably have a different perception of the world and a different socio-cultural background from the hearing-impaired audience, even though they may live in the same community. As Gambier (2003:186) notes, "translators can only aim at a potential target audience whose profile they inevitably construct on the basis of their own stereotypes and prejudice", which means that the success of a translation hinges on the extent to which a translator's stereotypes or prejudices come close to the real nature of the target audience. The aforementioned socio-cultural gap between the hearing translators and the hearing-impaired target audience in the case of SDH is likely to impinge on the translator's choices. The study of the target audience is imperative for the translators to make informed choices based on the needs, preferences and perceptions of their viewers. As Leppihalme (1996:215) emphasises, "there is indeed a clear need for more research on receivers, the extent and type of their knowledge, and their expectations".

4.7.1. The concept of audience

The concept of audience has long existed as a factor in inter-personal interactions or public events such as theatres and musical performances. Traditionally, as McQuail (1997:3) notes, "the audience of classical times was localized in place and time": people gathered in certain locations, like theatres or main squares, and performances were live. However, with the advent of mass communication technologies, the boundaries have become blurred and the concept of audience has become more complex, as it is not necessarily place- and time-bound anymore. Furthermore, it can be used to denote a single person who is watching a pre-recorded programme in private surroundings or hundreds of thousands of people watching a live performance in a venue or remotely.

The increasingly interactive nature of new social platforms and communication technologies has brought about a shift in the role of audiences, who have gained more control over the reception (and distribution) of information, and their role has evolved from passive receiver to contributor. The study of audiences can be divided into two, depending on whether its focus is on the message or on the audience. Morley (1999:121) also puts forward this division:

> on the one hand, message-based studies, which moved from an analysis of the content of messages to their 'effects' on audiences; and, on the other, audience-based studies, which focused on the social characteristics, environment and, subsequently, 'needs' which audiences derived from, or brought to, the 'message'.

Earlier approaches showed the audience as being made up of powerless beings who receive and are affected by a message. Opposite to this vision is that of the 'active audience', which acknowledges the fact that socio-cultural factors brought by audiences also play a role in the meaning creation process. The first approach, which focuses solely on the message and considers the audience as passive and docile participants in the communication process, is known as the 'effects' paradigm. It soon led to the 'indirect effect' model, which takes account of some socio-cultural factors and personal experiences but still mainly focuses on the message as the sole creator of meaning. Conceptualising the audiences as passive and inactive participants is clearly not enough to account for the complicated processes that audiences go through when trying to make sense of the messages presented to them. The 'uses and gratifications' paradigm tries to overcome these inadequacies by placing greater emphasis on the role of the audience, with authors like Halloran (1970, in Wall and Rayner 2016:126) proposing an "interaction or exchange between the medium and the audience" in which, instead of accepting all that is presented to them, receivers participate "with a complicated piece of filtering equipment".

One of the criticisms of this paradigm is the emphasis placed on individuals, on their psychological origins and on the analysis of their needs, which atomises audiences, thus preventing researchers from accounting for socio-cultural structures in a meaningful way. Such criticism has led to a new 'cultural' paradigm that is more concerned with the audiences' socio-cultural context and

its effects on the way in which they interpret meaning. The cultural approach, unlike traditional ones, focuses solely on the message itself or the audience and does not take into account the socio-cultural ecosystem, which impacts on the communication process and the reception of the message. This also indicates that the meaning encoded in the message by the producer may not necessarily be understood and decoded by audiences in the same way since, as Hall (1999:510) claims,

> the degrees of symmetry – that is the degrees of 'understanding' and 'misunderstanding' in the communicative exchange – depend on the degrees of symmetry/asymmetry (relations of equivalence) established between the positions of the 'personifications', encoder-producer and decoder-receiver.

This is especially relevant in the case of SDH, where deep asymmetry can be detected between the producers (who are generally hearing) and the receivers (who are hearing-impaired). From this viewpoint, understanding how hearing-impaired viewers decode (audiovisual) messages is crucial for the provision of subtitles if these are to meet the needs and preferences of hearing-impaired audiences.

4.7.2. The study of audience in (Audiovisual) Translation Studies

As the focus of interest in TS has shifted from a source to a target oriented analysis of translations by considering their function in the target socio-cultural system, the investigation of how and to what extent audiences receive messages has emerged as a fruitful research topic among TS scholars.

The question of how audiences receive and process meaning becomes a more complicated issue in the case of AVT due to the polysemiotic nature of the medium. In SDH, the fact that the producers of the messages and the subtitles are generally hearing individuals, who are not part of the Deaf community, together with the great diversity of viewers (from mildly hearing-impaired to totally deaf), increases the importance and complexity of this type of analysis. Without this knowledge, Kovačič (1995, Brems and Pinto 2013:145) asserts that translators will not be able to detect and meet the needs and expectations of

'real audiences' and will "continue to be left to their own devices and to work based on assumptions often grounded on individual stereotypes and prejudices". By revealing the preferences and needs of the audiences, reception studies can directly influence and increase the quality of subtitling. Although the number of studies on viewer reception is increasing, as Gambier (2016:900) notes, the proliferation and growing variety of AVMs together with "the ongoing fragmentation of audiences demand a better understanding of viewer needs".

The slippery nature of the concept of audience, fluctuating between the very abstract and the real-life individual, has led Literary Theory to propose various definitions of the notion of 'reader', which in the case of translation has been identified as an actual-real reader, ideal reader and implied reader (Assis Rosa 2006). The first type is defined by Chatman (1978:150, in Assis Rosa 2006:101) as "the flesh-and-bones you or I sitting in our living rooms reading the book". Real-life readers consume the encoded product in a certain sociocultural and historical context which conditions their behaviour. The ideal reader is informed and capable of fully comprehending the encoded meaning and "is distant from any given context" (Assis Rosa 2006:101). Finally, the implied reader represents the producer's expectations and is embedded and implied in the message. For Assis Rosa (*ibid.*), the ideal reader is the one most distant from the study of translations while the other two types are important for the analysis of the reception of translations since they have an influence on the process and on the decisions made by the translators. Yet, Assis Rosa (*ibid.*:104) places greater importance on the implied reader as symbolising the translators' expectations of the receivers of translated texts, which seem to "determine the norms the translator will consider – either to follow, alter or even discard". This is in line with the expectancy norms proposed by Chesterman (1993), which operate at a higher level than the professional norms since they affect the strategies employed by the translator during the translation process in order to create a product which is deemed acceptable and adequate by the receivers.

Sousa (2002:27) also emphasises the potent role played by the notion of implied reader on the strategies the translators adopt and states that "the

translator needs to assess the TL reader's receptivity to the TT beforehand and address it as he builds the TT from the ST". Although he does not investigate the actual readers, Mossop (2007:203) makes a fruitful distinction between implied ("from the point view of production", "reaction imagined in the mind of translator") and actual ("from the point view of reception", "actual reaction of the reader") readers. By highlighting the limitedness and inadequacy of the implied reader, Mossop (*ibid*.) suggests that examining actual readers would be really intriguing. Tuominen (2013:48) also argues that "the concept of implied reader cannot provide an exhaustive picture of reading and of audience preferences and attitudes" and further underlines that the most significant source of differences between actual and implied readers is the "context-boundedness of reception, and the effect of individual circumstances and backgrounds".

Even though the position of implied reader is a useful analytical tool since it provides a general and easily conceivable idea of potential receivers, it is nevertheless limited and lacks the ability to explain the complexity, reality and numerous contexts in which actual reception takes place. Empirical research on reception is therefore necessary in order to contrast the assumptions and expectations of the encoder regarding the imagined receiver with factual information gathered from the experiments rather than basing the investigation on the researchers' educated guesses or subjective assumptions based on their communicative experiences. Every profile of the implied reader created by the translator involves a piece of information on the notion of the actual reader and reception since translators are real beings who have experienced communication situations in a plurality of contexts and for whom these experiences inevitably form a part of their expectations. Thus, conducting empirical analyses that can shed light on the preferences and needs of actual receivers is an important activity in an attempt to close the gap between implied and actual receivers, which can ultimately help produce texts tailored to meet the needs and preferences of the receivers.

Although the types of reader proposed by Assis Rosa (2006) are based on literary studies, these definitions can also be easily applied to the investigation of viewers of AV products. The complexity and polysemiotic nature of these

products, with their close relationship with technological developments, make the reception process of AV products more challenging and corroborate the need for more in-depth analyses of the audience. Adding hearing impairment to this process of reception widens the gap further between the translator and the audience, making the exploration and empirical study of actual viewers, their needs and preferences imperative.

As Díaz-Cintas (2004) notes, one of the main points for which DTS has been criticised is that it excludes the evaluation and examination of translation errors. However, Chesterman (2007:174) argues that translations are not only affected by various casual conditions, as they also affect the receivers during the reception process, including the perception of quality. In his opinion, "if translation sociology includes the description of translation effects, that is translation reception, quality assessment can become a natural part of the descriptive branch" (*ibid*.:172). In this pursuit, he suggests three levels for the analysis of translation reception: reactions (the first mental and emotional effects created by translations on receivers), responses (actions prompted by the reactions) and repercussions (the effects of translations at a cultural level). Chesterman (*ibid*.) considers quality assessment as a combination of reaction and response, whilst prescriptive statements are "predictive hypotheses of such translation effects", therefore establishing a connection between descriptive and prescriptive studies. This approach also highlights the importance of reception studies since the data collected from such analyses can contribute to forming more informed and detailed predictive hypotheses, which, in turn, can help translators come up with the desired translations.

Although Chesterman employs these three levels of reception for the analysis of written translations, he claims that these categories are not only specific to translation and can also be applied to the reception of any other text. Following Chesterman (2007), Gambier (2009:22) proposes a model specifically for the analysis of AV reception, based on the same three levels of reception, i.e. response, reaction, and repercussion. Response, defined as perceptual decoding, is closely linked to the legibility of AV products and the physiological and behavioural responses towards their messages. Reaction takes into

account psycho-cognitive issues as well as the readability of the written elements and involves the short/long term memory and comprehension of the message. Lastly, repercussion is both concerned with attitudinal issues and the socio-cultural dimension. The former considers the receivers' preferences regarding the various AV modes and translation strategies. The latter takes into account the non-TV context which influences the receiving process, such as the values and ideology dominant in a given society.

Another fruitful division can be established between micro- and macro-level studies. Micro-level studies focus on the analysis of the reception of specific AVT elements, like humour or taboo language, and aim to reveal the receivers' preferences, comprehension and interpretation of such elements. Macro-level research, on the other hand, is concerned with the reception process as a holistic experience. The analysis of different levels of reception may require the use of different methodologies or heuristic tools. For instance, eye tracking may be more suitable to studying the response level, whilst standardised comprehension tests are more convenient for the analysis of reaction. De Linde and Kay (1999:35) offer a classification of the various strategies employed in reception studies:

- *Survey strategies*, which aim to reveal receivers' opinions regarding their experience of a translated AV product, especially "the differences of opinion held within a population".
- *Semi-controlled experiment strategies*, which involve the investigation of the effect of a specific translation strategy over the receivers by controlling all other variables with regard to the AV product.
- *Controlled experiment strategies*, which, like semi-controlled ones, exert control over the medium, yet they also control the viewer in an attempt to analyse the effects that different translation features have over receivers. Studies employing this approach are normally designed to record actual motor behaviour by using biometric sensors such as eye trackers.

Against this backdrop, the present research can be considered as a study with a micro-level focus in terms of investigating the repercussion level of the

reception process. To this end, it employs a semi-controlled experiment approach since it presents the participants with various pre-categorised sets of subtitles, each of which aims to test a specific feature of the subtitles, without exerting any control over the receivers. The following section focuses on the Dual Coding Theory which helps explain some of the memory strengths of people with a hearing loss as well as the cognitive factors underlying the participants' preferences.

4.8. Dual Coding Theory

As explored in Chapter 2, and according to Skerrit (2015), deaf and HoH individuals find it very difficult to process and encode written text phonologically, a strategy that enables readers to hold the written content at sentential level in the short-term memory and reduces the cognitive load to construct meaning. The hearing-impaired are therefore forced to employ other strategies to encode and comprehend a written text, which tends to increase their cognitive load considerably and, as Dehn (2008) indicates, the higher the cognitive load, the less successful the performance generally becomes. Hamilton (2011) further adds that the memory deficit of the deaf includes sequential memory (recalling a list of items in the same order in which it was presented), processing speed (the speed at which an individual can perform a cognitive task), attention and memory load. The author also claims that, on the other hand, some areas of the memory emerge as particularly strong in the case of the deaf, namely, free recall (recalling a list in any order not in a sequence), visuospatial recall (the recall of items presented in some form of visual array), imagery (the ability to create, maintain and manipulate a visual image) and dual encoding (using sign and speech to encode) (*ibid*.:405).

The memory strengths of the hearing-impaired can also be supported and explained by the dual coding theory (DCT) proposed by Paivio (1971), which suggests that "memory and cognition are served by two separate symbolic systems, one specialized for dealing with verbal information and the other with nonverbal information" (Paivio and Lambert 1981:532). These systems are composed of modality-specific internal representations, namely logogens

(linguistic codes) and imagens (non-linguistic codes), which are both independent and interconnected at the same time. The interconnectedness means that a modality-specific representation in one system can activate varying numbers of representations in the other. Independence means that these two systems can operate and be drawn upon independently in different memory and cognition tasks, contingent on the specific attributes of different tasks. Independence also implies that items can be encoded using verbal codes, nonverbal codes or both and their encoding in two systems has an added effect on recall (Paivio and Csapo 1973). Paivio and Csapo (*ibid*.) acknowledged that a verbally encoded picture was recalled twice as well as a word that was encoded verbally since the former is dually encoded both in the verbal and nonverbal systems.

Special attention needs to be paid when employing a combination of different strategies since, as discussed earlier, the representations are modality-specific, and the capacity of different modalities is limited, which makes it challenging, if not impossible, to do different things in the same modality simultaneously. To llustrate this point, Harris and Hodges (1995:33) refer to the "cocktail-party phenomenon", which implies that it is difficult to follow two conversations at the same time since our "verbal, auditory capacity is quickly overcome and we must "shuttle" between the two". In this sense, the use of SDH strategies based on visual representation needs to be researched further to ascertain whether they add any extra load to the hearing-impaired viewers' nonverbal, visual capacity and causes their comprehension to deteriorate. When watching an AVP, their nonverbal, visual capacity is mainly being used for the onscreen images, which may be overcome by the addition of other nonverbal, visual strategies (e.g. emoticons, displacement, colours or a sign language interpreter).

Along these lines, Mayer *et al.* (2001) researched whether adding redundant text, which duplicates or summarises the narration, to the narrated animation might improve multimedia learning by presenting the same information dually. Consistent with the cognitive theory of multimedia learning and the split-attention hypothesis, which indicates that "when words are presented visually, learners must split their visual attention between the on-screen text and the

animation, thereby failing to adequately attend to some of the presented material" (*ibid*.:190), the results revealed that adding onscreen text distracted the participants' attention and affected their learning adversely. Mayer *et al.* (*ibid*.) discuss whether the results would be valid for a situation in which the presentation rate of the multimedia material is fast and cannot be controlled by the learners (e.g. subtitling), and conclude that it does not necessarily mean that spoken narration must never be presented together with written narration. However, it is of note that this research was conducted with hearing participants, and the results cannot be directly applied to the case of hearing-impaired viewers. Another issue is that the research was conducted in a teaching environment where the participants aimed to learn the material rather than merely enjoying it.

The DCT can also help explain other areas of memory strength of the hearing-impaired, namely, imagery, visuospatial and free recall. For Paivio and Clark (2006:7), cognitive development begins with a base of nonverbal representations formed by "the child's observations and behaviors related to concrete objects and events, and relations among them". This phase can be argued to be non-problematic both for deaf and hearing children, though even at this stage deaf children start lagging behind their hearing peers in their experiences since they cannot receive or process auditory information. Language is developed on this basis and "remains functionally connected to it as referential connections are being formed so that the child responds to object names in the presence or absence of the objects, and begins to name and describe them" (*ibid*.). During this phase, deaf individuals begin to struggle due to their lack of exposure to an intelligible input for most of them are born to hearing parents, e.g. 90-95% in the USA (Weaver and Starner 2010). This impedes the development of logogens in the verbal system and, therefore, the development of language is hindered considerably, even though they have an adequately developed network of logogens in their nonverbal system. On the other hand, imagens are organised and processed in a more continuous, integrated way and cannot be separated as easily into discrete elements comparable to phonemes, letters, or words. Moreover, as discussed in Chapter 2, after two years of age, the hearing cortex of severely or profoundly deaf

individuals loses its potential to develop, and this cellular system is turned into a partially visual and partially somatosensory cortex, which might potentially account for the visuospatial and imagery skills of the hearing-impaired.

Another result revealed by the DCT with potential implications for the provision of SDH is that concrete stimuli increase the probability of recalling a response. This is explained by the DCT conceptual peg hypothesis which indicates that "compound images that link pairs (e.g., monkey-bicycle imaged as a monkey riding a bicycle) are formed during presentation and are reinstated during recall by a concrete stimulus (e.g., monkey)" (Paivio and Clark 2006:4). This implies that the concreteness of a stimulus contributes more to recall than does the concreteness of the response. This has a potential implication for the use of strategies which involve using concrete images. Therefore, theoretically, if the images to be used in the subtitles are paired with an explanation (e.g. emoticons with emotions, images with their meaning) and presented to viewers before watching the AVP with the subtitles, so as to enable them to practise and learn the pairs in their own time, this would help them remember the response (e.g. emotion) when presented with the stimulus (e.g. emoticon) during the actual viewing process. This practice is adopted by some European broadcasters that offer an explanation of the symbols on separate teletext pages. TV stations in Turkey should also strive to provide this information on their websites or teletext pages and, in line with the peg hypothesis, they should also provide images and emoticons paired with their meaning to help the viewers to recall the meaning more effortlessly during the viewing process.

4.9. Mixed-Method Research

The complex nature and structure of contemporary society call for new, sophisticated and rigorous research methods that will help with understanding the root of the problems and find solutions to them. Given their multifaceted nature, it is rather challenging to fully understand any object of study by adopting a single method that only focuses on one aspect. As Greene (2008:7) points out, social scientists in practical fields like education, nursing and evaluation have been intuitively adopting multiple research methods to address

their research challenges. The contexts in which they work can be so complex and multi-layered that some researchers have felt the need to combine different research methods (quantitative or qualitative) in an attempt to examine separate aspects of a phenomenon and provide a more holistic picture.

As Johnson and Onwuegbuzie (2004) indicate, advocates of quantitative and qualitative research methods have been in dispute for many years and have firmly held their ground against each other. Quantitative purists defend a positivist approach and believe that a social phenomenon can be treated objectively without the researcher's bias. On the other hand, qualitative purists ardently deny positivist approaches to research and, by adopting a constructivist viewpoint, argue that "multiple-constructed realities abound" and "time- and context-free generalisations are neither desirable nor possible" (*ibid*.). They further contend that since the researcher, as a "subjective knower", is the source of reality, completely separating them from the phenomenon being researched is not possible (*ibid*.). One thing that researchers from both standpoints agree upon is the incompatibility of the quantitative and qualitative research methods in a single study context (Howe 1988).

Other investigators detach themselves from these paradigm wars and realise that, to answer complicated research problems and understand a sociological phenomenon holistically, researchers need to draw on both paradigms and embrace "increased methodological diversity and alternative research methods" (Hanson *et al*. 2005:224). These calls have given rise to the mixed methods research (MMR) paradigm, in which both qualitative and quantitative approaches are regarded as important and valuable so that the whole picture can be seen. Johnson and Onwuegbuzie (2004) conceive MMR as covering the middle ground of a continuum with the qualitative approach at one end and the quantitative on the other. Similarly, Greene (2008:20) argues that any single approach to complex and multifaceted phenomena is inevitably limited and partial and emphasises that:

> A mixed methods way of thinking is an orientation toward social inquiry that actively invites us to participate in dialogue about multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important and to be valued and cherished.

Several definitions have been suggested over the years. One of the first, provided by Greene *et al*. (1989:256), highlights the incorporation of two research methods by mentioning the fact that MMR approaches are "those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm". Other definitions have emphasised what is being mixed, the place in the research where the mixing occurs, the scope of the mixing or the purpose of mixing (Creswell and Plano Clark 2018). Johnson *et al*. (2007:123), draw on 19 definitions provided by 21 highly published researchers and reach the following compound definition:

> mixed methods research is the type of research in a researcher or team of researchers that combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purposes of breadth and depth of understanding and corroboration.

The authors place emphasis not only on the methods but also on the other dimensions of research, while at the same time focusing on methodology and incorporating the rationale for adopting MMR rather than a single approach. Lastly, Creswell and Plano Clark (2018:5) define MMR by listing its core characteristics as follows:

- collects and analyses both qualitative and quantitative data rigorously in response to research questions and hypotheses,
- integrates (or mixes or combines) the two forms of data and their results,
- organises these procedures into specific research designs that provide the logic and procedures for conducting the study, and,
- frames these procedures within theory and philosophy.

This definition is broad enough to include most types of MMR studies while providing the main methodological steps. The researchers can thus adhere to

MMR by describing their research problems, framing their research within a theory, providing a rationale for choosing multiple methods, choosing a specific MMR design compatible with the purpose of the study, collecting/analysing/integrating/inferring the data concurrently or sequentially, depending on the design, and finally reporting the results.

Since the current research project analyses a complex topic (SDH) with a highly unknown and diverse population, MMR has been adopted in an attempt to reach a more holistic, complete and detailed picture of the population under study, their preferences and the underlying factors affecting their preferences. Two main challenges define this project, namely, the isolation and enclosed nature of the target population as well as the fact that SDH is virtually unknown in Turkey.

The quantitative approach is based on a Likert-type questionnaire designed to reveal the preferences of the participants when exposed to SDH and to unravel any potential relationship or correlation between independent variables (e.g. age, education, employment, level of deafness, etc.) and the respondents' preferences. The aim of the qualitative approach is to harvest more detailed data and gain personal insight from the respondents, so that the underlying factors, causes and motivations for their preferences can be elicited. The outcome of this analysis is also used to verify the reliability and validity of the results of the quantitative study.

When it comes to the rationale for conducting MMR, Hanson *et al.* (2005) point out that in the mid-1980s, scholars like Greene *et al.* (1989) and Rossman and Wilson (1985) raised the issue that researchers conduct studies by mixing, compounding and integrating multiple research methods and data without identifying and indicating a clear rationale or a purpose for doing so. Researchers need to identify their objectives in a clear and detailed manner and to determine which approach (quantitative, qualitative or mixed) would be most beneficial and efficient in responding to their problems and enabling them to understand the phenomenon they are investigating. Conducting research within the MMR framework requires investigators to have solid knowledge about

quantitative and qualitative approaches. MMR is also considerably more time- and resource-consuming.

After revieweing 57 mixed-method evaluation studies, Greene *et al.* (1989) identify five purposes: (1) triangulation (seeking convergence by offsetting the limitations of each research method), (2) complementarity (to acquire an enriched and elaborated understanding of the phenomenon under investigation), (3) development (to develop a second method based on the result of the first), (4) initiation (to discover contradictory and fresh perspectives of a phenomenon) and (5) expansion (to increase scope and breadth by adopting multiple methods). Although Bryman (2006) and Creswell and Plano Clark (2018) provide a more comprehensive list, that compiled by Greene *et al.* (1989) is employed here to discuss the purposes of the current research due to its inclusive nature.

In the present research, the two key points for adopting a mixed-method approach are triangulation and complementarity. Although objective quantitative data will be collected to determine the preferences of the participants and to discover any correlations between their preferences and other independent data (level of deafness, education, etc.), I also adopt a qualitative research method. This is to see whether the data gathered corroborate and converge and to acquire a more holistic and elaborate understanding of their preferences and the factors affecting their opinions. It is also used to understand their views regarding the subtitles employed in the experiment and the practice of SDH.

Quantitative results gathered from the questionnaire regarding the participants' preferences are used to design and develop the semi-structured interview, which aims to investigate their preferences further so as to gain a deeper insight from their own perspective (Development). The inclusion of a qualitative research method aims to discover any contradictory or novel points emerging from the research (Initiation) as well as to examine the aspects which are not covered in the first phase of the research, thus widening the breadth and scope of the results (Expansion).

There are various typologies of MMR designs (Greene *et al.* 1989, Morse 1991, Creswell *et al*. 2003, Creswell and Plano Clark 2007) but the most popular is the one proposed by Ivanko and Creswell (2009:139), who distinguish four types:

1. Explanatory design studies generally use qualitative findings to explain, refine and extend the quantitative findings and are conducted in two phases sequentially. First, quantitative data is collected and then a qualitative phase follows to clarify and extend the findings of the first phase. Priority is placed on the quantitative analysis and the qualitative findings are used in a supportive role.

2. Exploratory designs are used when little is known about the phenomenon under investigation, the relevant constructs and the variables to measure. They are also conducted in two phases. In the first phase qualitative data are collected and analysed in an attempt to explore the unknown phenomenon deeply, which then forms the basis for the subsequent quantitative approach. Integration of both types of data occurs at this stage of the research and findings from both methods can be further integrated at the interpretation stage to reach more comprehensive conclusions. Drawing on the findings of the qualitative stage, quantitative research is conducted to test the hypotheses and constructs that emerged in the qualitative phase and to generalise the results (Morgan 1998). More weight is generally given to the qualitative part of the study.

3. In the triangulation design, the researcher aims to combine two different research methods to offset their individual weaknesses and draw on their strengths and, according to Ivanko and Creswell (2009), it is the most frequently used MMR design. Both quantitative and qualitative approaches are conducted concurrently, with the same participants, though the data are collected and analysed separately. The findings are then compared and contrasted in order to reach well-validated conclusions (Creswell *et al.* 2003). In this design, priority can be given to either of the research approaches or equal weight to both.

4. Embedded designs are used when a secondary research method (qualitative or quantitative) is embedded within the primary research method (qualitative or quantitative) in order to answer a different research question or to reveal a different facet of the phenomenon. For Caracelli and Greene (1997:26) it is an approach “framed by one methodology within which a different methodology is located”. The two methodologies are unequal and the mixing and integration of the qualitative and quantitative data occur at the analysis or interpretation stage.

As discussed above, although the main MMR factors for conducting the current study are triangulation and complementarity, all other purposes are also relevant. As for the design, the present project borrows features from multiple types, though it can be defined mainly as a triangulation design in which both sets of data are collected and analysed separately and at the same time. The findings from both analyses are integrated at the interpretation stage. Features from the sequential explanatory design are also employed for the purposes of development. Quantitative data are collected first and the respondents’ preferences regarding the subtitles they have watched in the experiment are analysed before the qualitative approach is initiated. The findings are then used to devise a qualitative instrument (i.e. semi-structured interview) in which the participants are asked to explain and expand on their replies in the questionnaire. They are given the chance to express themselves freely to provide a deeper and more personal insight concerning their preferences. However, a complete quantitative analysis in which the relationships between the dependent and independent variables are examined is not carried out. As mentioned previously, a complete analysis of the qualitative and quantitative data is conducted separately, after the data collection process has been concluded. The findings are then compared, contrasted and converged to reach conclusions and reveal any contrasting points between the qualitative and quantitative findings.

CHAPTER 5

SDH Guidelines across Countries

5.1. Introduction

Guidelines provide standards on the provision of SDH audiences in order to achieve readable, accurate, clear and consistent subtitles. If implemented consistently, guidelines can help people with hearing impairments since, in the absence of recommendations on how to reach a certain standard, the subtitles would vary from one supplier to another, and the viewers would have difficulty watching and comprehending AVMs.

The reality in Turkey is that, as mentioned before, SDH has only been provided on one private channel, FOX TV, since April 2018 on Turkish TV, which in turn means that a set of appropriate guidelines has not yet been developed. Given this situation, an interest in regulating the creation of SDH on state-owned TV channels has been shown by certain quarters in Turkey. Having a set of guidelines that would help SDH providers offer subtitles, which are properly tailored to the needs of the target audience, is one of the most crucial steps to ensuring that a good level of quality is achieved consistently by setting clear standards. Even pioneering countries in this field, like the UK or the USA, realised at an early stage the need for a set of standards that would help guarantee the presentation on screen of consistent and accurate subtitles. In order to propose a set of professional SDH guidelines that would work in Turkey, it would be beneficial for us to examine the standards implemented in more SDH aware countries, where a large number of the audiovisual programmes broadcast on TV have, for some time now, been provided with SDH. This chapter aims to analyse some of the most common guidelines implemented in the United Kingdom, the USA and Canada – pioneering countries in the production of SDH –, with the objective of identifying similarities and differences that could help in the design of guidelines for the Turkish

market. Proper SDH guidelines will be mainly used for the analysis, but standard guidelines for interlingual subtitling will be also used in cases in which the recommendations could be also useful for SDH. In this research, only block, pre-prepared subtitles will be considered with the belief that this study will awake the interest of other scholars and professionals and lead to further studies on other types of SDH, like live subtitling. The parameters to be investigated are grouped under the following four categories:

- layout and presentation on screen,
- temporal dimension,
- linguistic issues,
- non-linguistic information.

For the analysis, the following five sets of SDH guidelines have been used as primary sources:

- The Independent Television Commission (ITC), which since 2003 has been known as the Office of Communications (Ofcom), based in the UK. The guidelines are from 1999 (hereafter referred to as ITC guidelines).
- The Canadian Association of Broadcasters (CAB) Closed Captioning Standards and Protocol for Canadian English Language Broadcasters from 2012 (hereafter referred to as CAB guidelines).
- The British Broadcasting Corporation Guidelines, from 2019 (hereafter referred as BBC guidelines).
- Described and Captioned Media Program (DCMP) Captioning Key, from 2019 and with application in the USA (hereafter referred to as DCMP Captioning Key).
- Netflix Guidelines from 2019 which was last edited in 2018 (hereafter referred to as Netflix guidelines)

Lastly, although no specific set of guidelines is available, Turkish SDH broadcast by FOX TV on repeats of series' episodes after its main broadcast will be analysed and the conventions employed will be detailed in the relevant

sections. Five subtitled episodes from different series (e.g. Kadın) have been used to anaylse these conventions.

5.2. Layout and Presentation on Screen

The presentation of the text is a very important factor in the provision of SDH, as it has a substantial impact on the readability and legibility of the subtitles. Subtitles that take into account all other technical dimensions, for instance reading pace and synchronisation between sound and images, may nevertheless fail to reach their accessibility aims if they are not presented in a way that enables viewers to read them on screen with the least effort possible. The type and size of font, the positioning on the screen, the number of lines and line breaks, and the use made of colours are the four main dimensions included in the analysis of the on-screen presentation of SDH.

5.2.1. Font

The type and size of the font is a parameter that is very much influenced by available technology. In all guidelines sans serif fonts (AaBbCc), which eliminate all flourishes and decorative elements attached to the characters, are recommended in order to ensure the legibility of the subtitles. Similarly, a sans serif font without embellishment is adopted on the subtitles broadcast on FOX TV. Font types of this nature are also preferred by associations for visually-impaired users (Kitchel, 2006; ONCE, 2006; RNIB-BBC, 2004). Ivarsson and Carroll (1998:42) indicate that “embellishments like serifs might make the type more attractive and legible on paper, but tend to impair legibility on screen”. This emphasises the fact that increasing the legibility of the subtitles should always be one of the prime aims when deciding on the font. DCMP (2019) guidelines suggest that characters are shadowed to contrast better with the images and, thus, increase legibility, even on bright backgrounds. In order to emphasise the importance of the type of font for the success of a set of subtitles in conveying the message, Deryagin (2018) enumerates a list of factors to consider when choosing a font type: audiovisual medium, purpose (education,

entertainment, advertisement, etc.), type of subtitling, target language, presentation rate, background colour scheme, amount of action/detail, screen resolution, eye strain and technical limitations.

Letter spacing and the size of the font are two dimensions that also need to be considered carefully. Using a larger font for the sake of legibility may require more editing, as there will be less space to provide verbatim subtitles. Conversely, using a font type with narrower interspacing may allow the subtitler to write more characters, though this may lead to an increase in the reading speed and the amount of information to be processed by the audience, which may in turn complicate the reading.

Different font types are recommended in the various guidelines examined, though most of these (ITC, DCMP and CAB) do not specify a font to be used on analogue television. As for digital broadcast, Ofcom recommends the Tiresias (AaBbCc) font, which was specifically created by a team led by John Gill to meet the requirements of visually impaired people (Tiresias, 2007, in Matamala and Orero, 2010). The font is also endorsed by the UK Royal National Institute of Blind People and by Ofcom (Utray *et al.* 2010). In the BBC (2019: online) guidelines, Verdana is also recommended in addition to Tiresias to "minimise the risk of line wrapping" since most subtitle processors use a narrower font type like Arial. Although the DCMP Captioning Key (2019) does not specify a font type, it does indicate some of the features to be considered when selecting a font and advises that "the font must have a drop or rim shadow" and "must include upper- and lowercase letters with descenders that drop the baseline". The Netflix guidelines (2019) propose "Arial as a generic placeholder for proportional SansSerif".

On analogue TV, the size of the characters should be determined bearing in mind the recommended maximum number of characters per line, which, in the case of the CAB guidelines, for instance, is 32 characters. The ITC (1999) and the BBC (2019) guidelines advise that the characters be displayed on screen in double height for legibility reasons. This requires six or eight control characters (a special character that is used to change the colour of the text, graphics or

background, etc.) in a-character PAL teletext line, meaning that the maximum space available for the subtitles will include 32 or 34 characters per line. The BBC (2019: online) guidelines also suggest that the font size should be arranged to “fit within a line height of 8% of the active video height”. On platforms in which proportional fonts are used, 68% of the width of a 16:9 video and 90% of the width of a 4:3 video are suggested proportions. Letter spacing may affect the legibility of the subtitles and, for this reason, letters should be spaced so that the viewers can easily understand them. The Netflix guidelines allow 42 character per line and propose a font size depending on the video resolution that can fit 42 characters across the screen.

Punctuation is another dimension that affects comprehension and can be used as an important linguistic device to clarify meaning; it should therefore be used and displayed clearly. Contrary to standard practice in English, the ITC (1999:6) guidelines propose using a single space before some punctuation marks, like ‘?’ and ‘!’, in order to enhance their effectiveness:

Don’t let him take the cab !
How old did you say you were ?

The DCMP Captioning Key and BBC guidelines, on the other hand, do not recommend using spaces before and after punctuation marks. Although the CAB guidelines suggest following correct English conventions and standards of the print media, they also indicate that grammatically incorrect structures might rarely occur.

When it comes to the use of capital letters, as Neves (2005) points out, most European countries opt for mixed case, resorting to upper case for emphasis, sound effects and music. Similarly, all the analysed guidelines propose the use of mixed case rather than upper case, which is also used for emphasis, loud voice, stress, screaming, and the like.

5.2.2. Positioning of subtitles

Positioning refers to the horizontal and vertical placement of the subtitles on screen as well as their alignment. Subtitles tend to be centre-justified so as to reduce the amount of vertical distance that the eye needs to travel in order to read the text because most of the action tends to take place around the centre of the screen. Furthermore, the eye usually travels less from the end of the top line to the start of the bottom line when reading centre-justified subtitles.

Subtitles are generally positioned at the lower part of the screen "since this limits the obstruction of the image, and this part of the screen is usually of lesser importance to the action" (Díaz-Cintas and Remael 2007:82). The viewers' preference for bottom-placed subtitles was ascertained in a survey conducted by Bartoll and Tejerina (2010), in which prelingually and postlingually deaf subjects opted for mixed (dialogue at the bottom – contextual information at the top) or bottom subtitles for better legibility, comprehension and distinction between sounds and dialogue.

The first preference of the postlingually and prelingually deaf subjects was the bottom position with a rating of 9.6 and 8.8 (over a total of 10) respectively. This was followed by the mixed position, which was given a rating of 7.6 and 8 by the postlingually and prelingually deaf subjects respectively. This is one of the most universally accepted recommendations, and almost all guidelines follow the same conventions in this respect. The ITC (1990:10) guidelines, for example, state that "the normally accepted position for subtitles is towards the bottom of the screen". Brooks and Armstrong (2014: online) adopt an innovative approach to the position of the subtitles and propose placing them "relative to the primary area of interest in the image, in order to minimise both the eye travel distance from the area of interest to the subtitle and the number of repeat visits to it". The researchers endeavoured to place the subtitles as close as possible to where viewers are likely to be looking, in a specific image, so that the viewers' eyes did not need to travel much from the focus area to read the subtitles. The problem the researchers experienced with this approach is that,

although subtitles positioned in this manner may reduce the reading time and improve the viewing experience, they do not have spatial coherence, unlike traditional subtitles, since they always appear in different places on screen and this spatial unpredictability might be detrimental to the audience's overall experience. The reading speed of the viewers might be hindered by moving subtitles around unnecessarily since, as Díaz-Cintas and Remael (2007:83) note, "viewers expect the subtitles to appear at the bottom of the screen", and breaking that expectation may prove disconcerting.

Adopting an innovative approach, Fox (2018) rejects the traditional marginal, external and sometimes intrusive role of the subtitles and suggests that they should be considered part of the production process and integrated into the images by maintaining the intended shot composition and other aesthetic considerations. She points out that in order to create integrated subtitles that are a natural part of the cinematic whole, the subtitlers need to understand "filmmakers' intentions and basic film studies to interpret atmosphere and tone" (shot composition, emotion and story, rhythm, tools and rules, etc.) and "ability to read typographic identity of a film; understand design and layout choices" (*ibid*.:85). The author futher enumerates placement strategies for integrated subtitles:

- place titles as close as possible to the focus points,
- indicate speaker,
- indicate speaking direction,
- produce sufficient contrast,
- do not cover relevant image areas or elements.

Despite some very minor differences, all guidelines emphasise that the subtitles must not interfere with the visual, textual information that appears on screen such as names, graphics and the mouths of the speakers. The BBC, for instance, suggest moving the subtitles to the top of the screen on programmes which involve lots of information in the lower part of the screen. Respecting the latter is particularly important in the case of deaf viewers, as they may lip-read

in order to supplement their understanding of the subtitles and mouth movement can also provide them with clues about when the utterances begin or end. The CAB (2012:12) guidelines suggest that subtitles should be removed from the screen before changing their position and they also propose that all of the captions within a particular segment, scene or sports play should be moved together rather than changing their position within that segment, scene or play, which would make subtitles difficult or impossible to read.

SDH tends to maximise the placement of the subtitles in an attempt to help hearing-impaired viewers identify the source of the sound by placing the subtitles in the direction of the sound. This practice is followed by nearly all the guidelines analysed and, for instance, the DCMP Captioning Key (2019) proposes that when people on screen speak simultaneously, the captions should be placed underneath the respective speakers to aid recognition of who is saying what. CAB guidelines warn the subtitlers that very quick consecutive subtitles should be placed in the same area since moving them in a very short time might cause the viewers to miss the subtitles or the video action.

Finally, the ITC and the CAB guidelines recommend avoiding – as far as is possible – consecutive subtitles that have the same shape and size and propose resorting to a slightly different layout on these occasions so that the viewers clearly realise that a new subtitle has been projected on screen. The subtitles provided by FOX TV are placed at the bottom of the screen, horizontally and centre aligned. Displacing subtitles is not a strategy to identify speakers or sound sources in FOX TV subtitles.

5.2.3. Number of lines and line breaks

Whilst most subtitling guidelines for hearing viewers recommend two-line subtitles, those for hearing-impaired viewers occasionally permit using three- and even four–line subtitles. The reasoning behind this is that SDH might need to include some paralinguistic features which are not necessary for the hearing viewer, such as labels for speaker identification, sound effects and the like. For

instance, in the CAB (2012) guidelines, BBC guidelines and the DCMP Captioning Key (2019), the use of three-line subtitles is permitted on a slightly smaller, different part of the screen from their usual place (bottom of the screen) when one or two liners presented at the bottom of the screen interfere with pre-existing graphics such as maps, job titles, illustrations etc., or they can create confusion in terms of speaker identification.

Concerning preference for one or two-line subtitles, there is no clear consensus in the guidelines in cases in which there are no temporal or spatial restrictions. The ITC (1999:10) guidelines give priority to single long, thin subtitles over two-line captions by claiming that one-liners are easier to read than two-liners and less disruptive to the image, though the guidelines indicate that "the decision should be made on the basis of the background picture". Similarly, the BBC (2019: online) guidelines propose considering "line breaks, number of words, pace of speech and the image" when deciding on a one long or two short subtitles. The CAB (2012), on the other hand, prefers the use of two-line subtitles over long one-liners. For Praet *et al.* (1990:205), the dilemma of whether to present the information in one or two lines stems from the fact that, comparatively speaking, "more time is spent reading a one-line text than a two-line text", but then again less time is spent "in following a one-line text than a two-line text". When producing two-line subtitles, authors like Díaz-Cintas and Remael (2007:87) recommend keeping the top line shorter in the case of interlingual subtitles, whenever it is possible, in order not to "pollute the image", though the overriding factor is always to break the lines in a way that guarantees readability.

Reading is a complex process in which readers "decode a written text by accessing, identifying and holistically combining letters into words, words into phrases and phrases into sentences" (Perego 2008:213). In contrast to static text readers, this process is particularly complex for the readers of subtitles, as they need to divide their attention between visual (image and text) and acoustic channels in order to comprehend the information given in the AVP (d'Ydewalle *et al.* 1987). In addition, film viewers have to adapt their reading speed to the pre-determined in and out times of the subtitles on screen. When discussing

subtitling from a syntactic perspective, Perego (2008:214) argues that “subtitle reading may be particularly demanding when the line-break is arbitrary”, i.e. “unpredictable, illogical, inaccurate or implausible”. Considering that deaf and hard-of-hearing (HoH) viewers may not share the same level of reading ability as hearing viewers, inadequately divided subtitles risk spoiling their viewing experience to a great extent, hence the need for extra care on the part of the subtitlers. In this sense, nearly all the guidelines analysed put forward a similar approach for breaking the lines and recommend dividing them at logical points, making the breaks coincide with the natural ending of phrases and clauses. For instance, the DCMP Captioning Key (2019: online) rules out breaking a modifier and an auxiliary verb from the word they modify, an example of which is provided in the guidelines:

Inappropriate	**Appropriate**
Mom said I could have gone to the movies	Mom said I could have gone to the movies

When discussing interlingual subtitling, Karamitroglou (1998: online) also points out that each subtitle should ideally comprise a sentence, but as this is not always possible due to temporal and spatial constraints, he suggests that “subtitled text should appear segmented at the highest syntactic nodes possible”, both across lines and across subtitles. His argument for this way of processing the text is based on the fact that “the higher the node, the greater the grouping of the semantic load and the more complete the piece of information presented to the brain” (*ibid*.), thus facilitating comprehension. In his opinion, improperly divided subtitles may hamper the viewers’ reading process and cause them to re-read the subtitles, for the semantic load rendered is not grouped in a complete and proper manner. The BBC (2019) guidelines and the DCMP Captioning Key (2019) provide a list of rules aimed at properly dividing and grouping the textual information contained in the subtitles:

- Do not break a modifier from the word it modifies.
- Do not split a prepositional phrase.

- Do not split a person’s name and titles from a personal name.
- Do not split a conjunction and following phrase/clause.
- Do not split an auxiliary verb from the word it modifies.
- Do not split a pronoun and a verb.

5.2.4. Use of colours

The use of colour is one of the main differences between subtitling for the deaf and the HoH and subtitling for a hearing audience. Whilst colour in standard subtitling does not bear much weight beyond the aesthetic dimension, it can be a crucial factor in SDH, as different colours can be used to identify speakers and render sound effects, intonation, and music. The chromatic potential is also closely related to technological developments as, for instance, due to the limitations of analogue technology, SDH could only make use of five colours for the text: white, magenta, cyan, green and yellow. This tradition has been continued to some extent in the digital world, though now of course many more colours can be easily used.

White text on a black background seems to be recommended by all the guidelines analysed except for the Netflix guidelines in which the use of a colourful background is not recommended, as this combination offers the best contrast and legibility. The font colour adopted in the FOX TV subtitles is white, and a colourful background is not used in line with the Netflix guidelines. The ITC (1999:6) guidelines also point out that, besides white, yellow, cyan and green, in that order of importance, are the most legible colours over a black background, whilst at the same time discouraging the usage of other colours and stating that the “use of magenta, red and blue should be avoided”. The BBC (2019) guidelines rule out the use of a coloured background other than black. The DCMP Captioning Key (2019) states that explicit information is provided on the presentation of subtitles in white encased in a transculant box. However, no recommendation is given as to how to combine the different colours (text and background) or as to how to use them to signal speaker identification and to record acoustic effects. A rather unique case among those

examined, the CAB (2012:14) rules out the use of colour as the only strategy for speaker identification, stating that “colour captions can never be used as the sole indicator of who is speaking” and suggesting that “speaker identification [and] proper placement” are always resorted to in these cases (Section 4.1).

5.3. Temporal dimension

AVPs are texts of great complexity in which different semiotic channels converge to render information and where, as a later addition to the finished film, subtitles need to “interact with and rely on all the film’s different channels” (Díaz-Cintas and Remael 2007:45). In order to fulfil their communicative function as completely and clearly as possible, subtitles must synchronise with the other semiotic channels, which means that they are ultimately constrained by the rhythm and flow of the film. In addition, another time constraint with a direct impact on the rate at which subtitles are presented on screen is linked to the reading ability of the viewers (Section 2.2). Thus, as Neves (2005) points out, whilst synchronisation is bound to the rhythm of the film, reading speed is more about the assumed viewers’ reading ability and the actual duration of the subtitles on screen.

5.3.1. Synchronisation

Synchronisation, or synchrony, refers to the appearance of the subtitles with the onset of a speech or a sound effect and its disappearance at the end of the sound. In the case of interlingual subtitles, Karamitroglu (1998) states that subtitles should not be provided simultaneously with the utterance but should be presented a quarter of a second later since the brain needs this amount of time to realize the spoken utterance and guide the eye to the subtitles. He argues that presenting subtitles simultaneously with the advent of the utterance “surprises the eye with its flash and confuses the brain for about ½ a second” (*ibid.*: online). Similarly, Ivarsson and Carroll (1998:72) point out that “many people need a ‘fixation pause’ to locate a speaker”, and if the subtitles appear too early for the viewers, they may have difficulty in identifying the speaker and comprehending the subtitles.

Synchronisation is deemed to be one of the key factors which most affect the viewers' perception on the quality of the subtitles. Talking about interlingual subtitling, Díaz-Cintas and Remael (2007:90) note that, "poor timing, with subtitles that come in too early or too late, or leave the screen without following the original soundtrack are confusing, detract from enjoying a programme, and have the potential of ruining what may otherwise be an excellent linguistic transfer". Synchronisation between soundtrack and subtitles is also crucial for the deaf and HoH viewers because "impaired viewers make use of visual cues from the faces of television speakers" (BBC 2019: online), even though they may not comprehend the acoustic cues completely. This is, of course, particularly relevant in the case of those viewers who can lip read.

All the analysed guidelines propose that subtitles should ideally appear with the onset of speech and disappear with the end. This is also the convention adopted by FOX TV, where subtitles appear and disappear in synchrony with the dialogue. The absence of subtitles when the mouths of the speakers are moving frustrates viewers, as they feel they might be missing something. Similarly, if subtitles stay on screen too long, they may be re-read by viewers, which can also lead to frustration.

The BBC (2019) suggests that the same rules of synchronisation followed for on-screen dialogue exchanges should be applied to off-screen speakers or narrators since viewers with residual hearing may make use of the auditory cues to supplement the information contained in the subtitles. The guidelines are relatively flexible when it comes to asynchrony and, if there is a sequence of subtitles that belong to a single speaker, it is permissible to slip out of synchrony on the condition that "the subtitles are back in sync by the end of the sequence" (*ibid*.: online). Secondly, slipping out of synchrony is allowed if "the speech belongs to an out-of-shot speaker or is voice-over commentary" (*ibid.*). The other issues that need to be taken into consideration when aiming for proper synchrony are accuracy in leading and lagging times and respect of shot changes.

5.3.2. Leading and lagging times

In addition to having to match the rhythm of the speech as closely as possible, subtitles should ideally respect scene changes, i.e. they should ideally leave the screen just before a shot change occurs, and a new subtitle should appear with the new scene. This is really important since, as explained in the CAB (2012:18) guidelines, “this avoids the perceptual confusion that occurs when captions are out of sync with video editing”. However, it is not always possible or practical to realise these aims thoroughly. Therefore, SDH guidelines tend to show a certain degree of flexibility in terms of achieving synchrony between the subtitles and the images on screen and/or the soundtrack.

The lead time refers to the moment at which the subtitle appears on screen, and most guidelines allow the entrance of the subtitles before the actual onset of speech. For instance, the DCMP Captioning Key (2019: online) suggests that “borrowing 15 frames before and after the audio occurs… is hardly noticeable to the viewer” and advises the use of these times so as to slow the reading speed and provide easily readable subtitles. The other guidelines generally allow the subtitles to stay on screen for a certain amount of time after the speech has finished. In the case of the BBC (2019) guidelines, slipping out of synchrony before or after the speech for more than 1.5 seconds is not recommended, whilst Karamitroglou (1998: online) suggests that “subtitles should not be left on the image for more than two seconds after the end of the utterance, even if no other utterance is initiated in these two seconds”, as viewers may begin questioning the technical quality of the subtitles and start thinking that what they are receiving does not reflect the spoken utterance faithfully.

Although slipping out of synchrony is a strategy that can be implemented for the sake of readability, it should be used with extreme caution, as synchrony between subtitles and soundtrack is very important for those who lip-read or use residual hearing to assist their reading. As reported in the ITC (1999:12) guidelines, “it should still be recognised, however, that some viewers use subtitles to support heard speech and will require synchronisation. Therefore, the technique should not be over used”. Ivarsson and Carroll (1998:73) also

underline the importance of synchronisation by stating that “it is more difficult to understand subtitles if there is a discrepancy between what is registered by the senses, i.e., if the subtitles say something different from what is heard”. Hence, timing the subtitles to appear as close as possible to the utterances should always be the primary goal.

5.3.3. Shot changes

Another issue to be taken into consideration in order to achieve good synchronisation with the other semiotic channels of the AVP is to respect shot changes as far as possible. The AVMs consist of small, single units (shots), which come one after another in a specially designed order to create a continuous narrative. Thus, subtitles should follow the shot changes to harmonise with the rhythm and narrative of the AVM. Indeed, guidelines like those proposed by the BBC (2019) explain that it is likely to be easier for viewers to read subtitles when they are synchronised with the shot changes, and the ITC (1999:12) indicates that “subtitles that are allowed to over-run shot changes can cause considerable perceptual confusion and should be avoided”.

For this reason, most guidelines advise that subtitles should preferably appear on the first new frame after a shot change and disappear with the last frame of the relative shot. A certain degree of asynchrony is permitted by some providers. Thus, the CAB guidelines advise subtitlers to use the lag and lead time to accommodate an even pace when the dialogue is particularly fast. The ITC (*ibid.*) suggests that there should be a gap of one second between the occurrence of the shot change and the appearance of the subtitle so that the viewers can adjust themselves to the new images. Similarly, the BBC (2019) guidelines state that when a subtitler has to allow a subtitle to hang over a shot change, it should not be removed quickly after the cut and a minimum gap of one second, or ideally one and a half seconds, should be maintained. Thus, some of the guidelines propose a number of solutions for the temporal problems that subtitlers may encounter. In the case of long sentences that run over various shot changes, the ITC (1999) guidelines allow a single sentence segmented into more than one subtitle to be placed around a camera-cut,

depending on whether the sentence can be divided up naturally and whether enough presentation time can be allocated to each of the various subtitles that make up the long sentence.

In the case of several consecutive soft shot changes, the main recommendation is to avoid presenting the subtitle over them though, if necessary, the subtitle can cross over shot changes under certain conditions. The CAB (2012) guidelines permit the subtitle to stay on screen over several shot changes on the condition that the appearance and disappearance of the subtitle coincide with the first and the last frame of the first and last shot change respectively. The BBC (2019: online) guidelines suggest splitting "a sentence at an appropriate point" or delaying "the start of a sentence to coincide with the shot change", and they also propose that if a shot is too short for a subtitle, the subtitler can then combine the speech to appear over two shots as long as the subtitle ends at the second shot and does not reveal anything before it is presented on screen.

When dealing with hard changes, the BBC (*ibid.*) guidelines rule out carrying "a subtitle over into the next shot if this means crossing into another scene or if it is obvious that the speaker is no longer around". The CAB (2012:18) guidelines, on the other hand, allow for several shot changes to occur while one subtitle is on display, on the condition that "in-point and out-point of that caption coincide with the first frame of a shot change" for the sake of correct subtitle structure and segmentation if there is no other way of offering a subtitle that adheres to the appropriate presentation rate.

Traditionally, empirical research on the topic of shot changes has been rather limited, but nowadays more experiments are being conducted on the topic to assess the reading behaviour of the viewers. Indeed, according to Díaz-Cintas and Remael (2007:91), eye movement research on this issue shows that keeping a subtitle over a shot change may mislead the viewers, so that they think that the subtitle has also been changed and, therefore, start re-reading the same on-screen subtitle from the beginning. However, a more recent empirical study conducted by Krejtz *et al.* (2013) on the eye movement patterns of 71

participants (21 Deaf, 19 hard-of-hearing and 31 hearing) shows that, although shot changes have a small influence on watching subtitled material by triggering more gaze shifts from the subtitles to the image, they do not make the viewers re-read the subtitles from the beginning. This controversy shows that more research is needed to reach an agreement on the importance and impact of respecting both soft and hard shot changes.

5.3.4. Presentation rate

The presentation rate refers to the number of words (or characters) that are shown on screen per minute (or per second). When subtitling, it is crucial to allow viewers adequate time to read the subtitles, look at the image and cognitively integrate these two if they are to comprehend the message and enjoy the programme. Hearing-impaired viewers generally ask for verbatim subtitles which render everything uttered in the AVP (Neves 2008) since they want to have access to all the information open to hearing viewers. As indicated in the CAB (2012:18) guidelines, “when speaking, a person can put out 250 or more words per minute”. Presenting this output verbatim on screen, though technically possible in subtitles of three or four lines, makes them nearly impossible for viewers to read in a comfortable manner and in conjunction with the images. Subtitles that disappear before viewers can read and fully understand them risk frustrating and stressing the audience, as they feel they are forced to read at a very high rate and have little spare time, if any, to enjoy the images. On occasions like these, viewers feel that they “have ‘read’ rather than ‘watched’” the programme (Díaz-Cintas and Remael 2007:95). Giving rise to this feeling in the audience is definitely not a feature of good subtitling practice, which should aim to be as least distracting as possible and allow the viewers to enjoy the AVP in its entirety. In this respect, all guidelines propose presentation rates that depend on the research they have done and the experience they have accumulated over the years. Neves (2005:183) argues that, although most guidelines suggest some sort of reading speed, they can only be hypothetical formulations since there are too many variables involved in the creation of subtitles, for instance “the context (circumstances in which viewing is taking place), the media (image quality and subtitle legibility)” and the

audience's level of literacy among others. When recommending an average reading speed for interlingual subtitles, Díaz-Cintas and Remael (2007:95) also state that "it is always difficult to generalize and agree on a reading speed that is comfortable for 'all' viewers since the audience is very heterogeneous in factors like age and educational background".

According to D'Ydewalle *et al.* (1987) and Brondeel (1994) an average hearing viewer can read two full subtitle lines in six seconds, if each one contains a maximum of 37 characters, i.e. 74 characters in total. In the case of interlingual subtitling, Karamitroglou (1998) proposes a presentation rate of 150-180 words per minute, i.e. between two and a half to three words per second for 'average' hearing viewers (aged between 14-65, from an upper-middle socio-educational class) for a text of an average complexity (a combination of formal and informal language). The author therefore suggests that a full two-line subtitle containing between 14 and 16 words should stay on screen for a maximum of five and a half seconds, to which he also adds the time that the brain needs to start processing the subtitles it recognises and that the author stipulates to be around a quarter or half of a second, thus making it a total of six seconds to read 14-16 words. He emphasises the importance of not extending the permanence of a full two-line subtitle beyond the six seconds since this may cause viewers, especially fast readers, to re-read the subtitles. The DCMP Captioning Key (2019: online) proposes different limits for presentation rates depending on the type of the programme, as follows:

DCMP Captioning Key	
Programme types	**Words per minute (wpm)**
Lower-level educational videos	130
Middle-level educational videos	140
Upper-level educational videos	160

Table 5.1: Reading speeds proposed by DCMP Captioning Key

As can be seen in the table above, the proposal is that the presentation rate for lower-level educational level videos should not exceed 130 wpm and slightly above this limit for middle-level educational videos, i.e. 140 wpm. This is so

because much of the content presented in the latter is considered to be new to viewers. It proposes a maximum presentation rate of 160 wpm for upper-level educational videos.

As for the Netflix guidelines, 20 characters per second for adult programmes and 17 cps for children's programmes are the recommended presentation rates. The ITC and BBC guidelines also provide details on this issue and although they set the same upper limit of 180 wmp under necessary conditions, they differ in the recommended presentation rate they propose. In the ITC guidelines, it is suggested that the presentation rate should not exceed 140 wpm under normal conditions, while the BBC recommends a higher range for the presentation rate, between 160 and 180 wpm:

	Words per minute
BBC Guidelines	160-180
ITC Guidelines: Under normal conditions	140
ITC Guidelines: Under exceptional conditions	180

Table 5.2: Reading speeds proposed by ITC and BBC Guidelines

The ITC guidelines are rather elusive, as they do not explain what 'normal' or 'exceptional' conditions might be. They indicate that presentation rates depend on the content of the programmes, as chat shows have higher text density than dramas. Although they provide a set of recommended timings to guide the subtitlers, the BBC (2019: online) guidelines emphasise the fact that these figures should be taken with a pinch of salt, and the subtitler should be aware of the other semiotic dimensions:

> when assessing the amount of time that a subtitle needs to remain on the screen, think about much more than the number of characters on the screen; this would be an unacceptably crude approach.

The BBC guidelines (*ibid*.) also detailed six conditions under which giving less reading time is considered acceptable:

- To avoid clipping a shot or crossing into an empty shot,

- to avoid editing out words that can be clearly lip-read,
- to maintain catchwords that should not be edited out,
- to retain humour,
- to retain critical information, particularly in news or factual programmes,
- to maintain technical terminology and other vital information in a scientific or economic story.

On the other hand, the guidelines also recommend giving extra reading time when the subtitles contain unfamiliar words, several speakers, labels, long figures or shot changes and when the scene involves visuals and graphics.

The CAB (2012) suggest a maximum duration on screen of three seconds for every 32 characters of text and recommend verbatim subtitles as much as possible and editing down the content of the speech only as a last resort. A presentation rate of less than 200 wpm is considered as an acceptable reading pace for most adults. Even though for many providers it is always better to try to offer near verbatim subtitles for deaf and HoH viewers, subtitlers should evaluate each scene individually and decide on a presentation rate carefully, considering the various parameters that may have an impact on the viewers' reading speed, such as education levels and the average age of the audience, verbal density and the semiotic complexity of the AVP.

As for the minimum time that a subtitle should remain on the screen, the CAB (2012:18) guidelines recommend "a minimum of 1.5 seconds duration for up to 32 characters of text". They further detail that the last 32 characters of text should stay at least two seconds on the screen before moving or blanking subtitles. The DCMP Captioning Key (2019) indicates that no subtitles should stay on the screen for less than a second and 10 frames. The guidelines also set a maximum duration of six seconds for the subtitles, regardless of the type of programme. The BBC and ITC guidelines do not specify a minimum duration time for subtitles.

5.4. Linguistic Issues

Subtitles are a written text added to a finished, complex semiotic system of light and sound. This new, textual communicative addition is supposed to become part of a whole and be integrated as much as possible with the other semiotic channels. Delabastita (1989) distinguishes four communication channels that constitute the filmic sign:

1. visual presentation – verbal signs
2. visual presentation – nonverbal signs
3. acoustic presentation – verbal signs
4. acoustic presentation – nonverbal signs

Visually presented verbal signs include newspapers, street names, brand names, etc., whilst visually presented nonverbal signs include the image of the AVP: landscapes, clothing, stage props, gestures and the like. Acoustic verbal signs are dialogue exchanges, paralinguistic information, songs, etc., and lastly acoustically rendered nonverbal signs include instrumental music and background noises. All of these sign systems coalesce in the original programme to generate a coherent audiovisual text. As stated above, the added subtitles, whether in the same or in another language, need to blend in with these sign systems without jeopardising the coherence of the whole production. Given that deaf and HoH viewers have access to mostly visually presented signs, it is especially important that the written subtitles relay acoustically transmitted messages in order to complement the viewers' understanding of the whole audiovisual text. Despite the growth in research in media accessibility over the past decade, the reality is that subtitling and other accessibility services are still an afterthought in the filmmaking process, prompting scholars like Romero-Fresco (2013) to call for a more proactive, accessible filmmaking. Indeed, producers of AVMs do not generally create their productions by considering the special needs of deaf and HoH viewers, and this is one of the reasons why subtitlers should try and compensate for their lack of access to the acoustic component. It should be borne in mind that some deaf viewers who

use SiL as their main means of communication consider subtitles as a second language instead of renderings of a spoken sentence in their mother tongue. These viewers may very possibly not possess or share some of the features specific to a spoken language; subtitles should therefore be localised to the "lingua-culture" of these viewers so that they can enjoy the AVM as much as others do (Neves 2005).

To a great extent, subtitling is a unique type of translation, not only because it is added to the ST and must accord with the original dialogue, but it also renders spoken utterances in writing, in what Gottlieb (1994) refers to as a case of 'diagonal translation'. Rosa (2001) states that this change of medium generally causes a loss of expressive and phatic functions ('ouch', 'ugh', 'mhm', 'uh-huh'), intonation, informative signals, overlaps, repetitions, hesitations and expressive illocutionary acts (thanks, apologies or greetings), amongst other things. Despite this loss of some of the typical features of spoken language, due to the transfer of the mode from spoken to written, many of these features – e.g. intonation and dialect – may still be transferred through the subtitles so as to convey some of the narrative features of the characters, providing that they do not hamper the readability of the subtitles. Although the issue of transition from oral to written mode has been studied by a number of scholars (Mason 1989, Gottlieb 1994, de Linde and Kay 1999, Díaz-Cintas and Remael 2007, Guillot, 2010), special attention needs to be paid to the issues of implied meaning, non-standard language and paralinguistic codes when producing SDH since these dimensions are likely to cause trouble for hearing-impaired audiences. In addition to these three dimensions, the following sections will also focus on the role of editing in audiovisual texts, the use of punctuation marks in specific ways in an attempt to convey different meanings and the various conventions implemented when dealing with the codification of numbers.

5.4.1. Implied meaning

As previously mentioned, in the case of interlingual subtitling, the transition from speech to writing causes the loss of certain features of the spoken language, which to a certain degree are supposed to be compensated for by the image

and sound. In SDH there is also a difficulty in terms of transferring speech features to written subtitles; however, as hearing-impaired viewers cannot respond to the sound in the same manner as hearing viewers, and given that some belong to another language community, i.e. the Deaf community, special measures need to be taken so that they are able to comprehend the whole meaning. As long as the spoken utterances comply with the cooperative principle put forward by Grice (1975:45), which recommends "mak(ing) your contribution such as it is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged", viewers should not experience many problems while interpreting the aural text. Grice (*ibid*.) divides this cooperative principle into four maxims, which are followed by interlocutors to ensure successful communication:

1. quantity (providing the necessary information);
2. quality (truthfulness of the information);
3. relation (the information should be relevant to the topic); and
4. manner (providing the information as clearly as possible).

However, speakers may flout these maxims intentionally to lead the hearer(s) to infer another meaning beyond the sentence's literal meaning. For instance, by flouting the maxim of quality, interlocutors may mean the opposite when they tell someone overweight: "you look very skinny". The cooperation between the speaker and listener continues to exist as the speaker who deliberately flouts a maxim generally expects the listener to understand the underlying meaning. In order to understand the implied meaning the interlocutors should ideally share the same ground and common knowledge which some hearing-impaired viewers lack since they are part of a different community, i.e. the Deaf community, whose mother tongue is SiL. Hence, problems are likely to occur in comprehending the full meaning when some of the hearing-impaired viewers lack the same ground and common knowledge, which should then be compensated for by the subtitlers as much as possible to help deaf viewers understand complex forms and implied meanings. When conducting her empirical experiments, Neves (2005) points out that many hearing-impaired participants in Portugal encountered problems with understanding implied

meanings. She claims that metaphors especially create problems since "their inferential meaning is only achieved if the receivers are in possession of the notions that characterise the related topics" (*ibid*.:209) and goes on to propose the strategy that Baker *et al.* (1984:31) had put forward, namely, that when dealing with metaphors, similes and idioms, subtitlers should aim to convey the essence of the meaning rather than a literal, verbatim translation by resorting to "a free translation of what is meant even if not the exact words" (Neves 2005:209).

Only the DCMP Captioning Key (2019) recommends indicating puns or plays on words and suggests describing the puns on a separate line in square brackets:

Why do they call her "Ouisy"? ["Wheezy"]

Jokes also generally work because they flout maxims and use implied meanings to create the comic effect, which in turn may make them difficult for deaf viewers to fully understand. Neves (2005:210) also indicates that, although hearing-impaired viewers enjoy the jokes they tell each other, they do not often have the same reaction to jokes that they read because, in her opinion, they cannot understand the implied meanings. She shares the idea posited by Schröter (2004:90):

> instead of attempting a difficult transfer, the result of which would be liable to criticism [or misunderstandings], the subtitler might then consider an unpretentious translation of the hard-core meaning of the troublesome sequence to be the best solution.

5.4.2. Non-standard language

Another source of difficulty for deaf and HoH viewers is the use of non-standard language such as dialects, accents, unorthodox grammar and syntax, and specific lexical features, which rely heavily on the phonetic dimension and are difficult to represent in written form and which, apart from their denotative meaning, may also trigger a network of connotative readings.

According to Wales (1989), dialect refers to a variety of a language that is characteristic of a particular group of language users. It can be associated with the language used in a particular geographical area (regional dialect), the language used by a specific social class (sociolect) or "the speech habits of an individual in a speech community, as distinct from those of a group of people" (idiolect) (*ibid.*:230). The socio-cultural role played by a dialect, with its accent, grammar and lexicon, should be carefully gauged in an audiovisual programme before attempting its subtitling. The translator should evaluate its importance in the diegesis of the production, consider whether its use by all the characters or just by one specific one is important to the plot or the characterisation of the protagonists, and decide what potential functions the specific dialect fulfils, if any. As Díaz-Cintas and Remael (2007) note, if viewers do not have the appropriate knowledge of a particular dialect used in the audiovisual programme, they may not fully comprehend its intended function or meaning.

Nearly all of the analysed guidelines permit the rendering of non-standard language as long as it is essential to the full understanding of the AVMs. The DCMP Captioning Key (2019) adopts a very positive approach and advises both the use of a label at the beginning of the subtitles to indicate the provenance of the regional dialect as well as keeping a hint of the dialect in the linguistic textuality of the subtitles. It also recommends keeping the flavour of the speaker's language by including profanity and slang in the subtitles on the condition that they are necessary to portray a character's personality. Unlike the DCMP Captioning Key, the CAB (2012) guidelines take a very cautious approach to rendering non-standard language. They foreground the need to communicate the meaning and intent of the original speech as clearly as possible in the subtitles and consider spelling and punctuation as essential factors in reaching this objective, which needs to be upheld regardless of any imperfections in people's speech. The FOX TV conventions also give priority to well structured, standard language, regardless of the nature of the utterances. The BBC (2019) guidelines take an intermediate approach to the recreation of non-standard language. They warn that where it is essential to convey non-standard language in the subtitles so that viewers can fully enjoy the AVP, the

subtitler should bear in mind that “a phonetic representation of a speaker’s foreign or regional accent or dialect is likely to slow up the reading process and may ridicule the speaker” *(ibid.*). Therefore, it is advised that the subtitler should aim to give a flavour of the accent or dialect of the speaker by rendering only a few words phonetically and by using key vocabulary or expressions that are specific to that dialect instead of representing all the utterances phonetically. If the text used in the subtitles is not enough on its own to convey and portray the origin of the speaker, subtitlers are encouraged to resort to labels that will spell it out. Another piece of advice is that the subtitler should respect the linguistic idiosyncrasy of the speech and refrain from correcting any improper grammar that may be an essential part of the dialect in question. The Netflix guidelines advise respect for the word choice and sentence structure of the spoken dialogue and to transcribe it without changing the slang words or the dialect. An explicative label in brackets should be employed to describe the accent of the speaker, e.g. [in Spanish accent].

5.4.3. Editing

The issue of verbatim versus edited subtitles is a controversial one in the field of SDH. According to Neves (2007) and Romero-Fresco (2009), three groups of stakeholders are involved in this debate. The first group of stakeholders is made up of the hearing-impaired viewers and the deaf organisations that tend to ask for verbatim subtitles and consider any kind of editing as potential censorship. In the second group are the broadcasters, who on occasions support verbatim subtitles for financial considerations, as they are relatively cheap to produce. The last group includes researchers and scholars who support edited subtitles since some of their studies on the presentation rates of verbatim subtitles suggest that they are too high for viewers to follow comfortably (Gregory and Sancho-Aldridge 1996; Neves 2008). It would be worth exploring the latter argument further, particularly in the case of Turkey. Although it seems that a substantial number of deaf and HoH viewers would prefer verbatim subtitles, especially in the UK where a long tradition of SDH already exists, more research is necessary to ascertain the impact that edited and verbatim subtitles can have in the overall comprehension and enjoyment of the AVP in countries

where SDH is a novelty. Indeed, considering the relatively poor reading abilities of the Turkish target audience, due mainly to their educational and social background, it may be highly frustrating and stressful for viewers to have to read verbatim subtitles whilst at the same time enjoying the images.

This demand for verbatim subtitles is in sharp contrast with the practice carried out in interlingual subtitling, where editing seems to be the norm. Díaz-Cintas and Remael (2007), for instance, state that interlingual subtitles can never be, and should not be, a complete and detailed rendering of the original dialogue. Given that the subtitle interacts with the rest of the visual and oral signs and codes of the film, the two scholars suggest that the subtitler should leave the viewer enough time to read the subtitles, watch the action on the screen and listen to the soundtrack in order to comprehend the overall message and enjoy the experience. Díaz-Cintas and Remael (*ibid.*:148) suggest the application of the principle of relevance, whereby the subtitler should gauge the relevance of a particular dialogue fragment to a scene or to the whole production when deciding whether to translate the information in the subtitles. They also advocate the use of the 'mini-max effect', whereby the translator should aim to achieve the maximum effect with the minimum effort when deciding what to include in the subtitles and what to omit from them. In their own words, "it is the balance between the effort required by the viewer to process an item, and its relevance for the understanding of the film narrative that determines whether or not it is to be included in the translation" (*ibid.*). When discussing the challenges posed by verbatim subtitles, Neves (2005:150) argues that:

> Not having enough time to read subtitles; not having useful time to process information; not understanding the meaning of certain words; or not being able to follow the flow of speech, cannot be understood as being given equal opportunities.

Hence, after acknowledging the heterogeneous profile of television viewers, the author suggests the use of standardisation as a possible solution, positing that unusual language should be pruned and adjusted since deaf viewers find it easier to follow subtitles consisting of "short concise self-contained sentences using common vocabulary than sentences that use complex structures and

lexis" (*ibid.*:211-212). Szarkowska *et al.* (2011) used eye-tracking technology to study the ability of the hearing-impaired to read subtitles of varying lexical density. In their experiments with Polish viewers, they worked with three groups of viewers (deaf, HoH and hearing) as well as with three types of subtitle: (1) verbatim, which includes every single word from the dialogue, (2) edited, in which many elements of the oral discourse are omitted and complex utterances are simplified and (3) standard, which includes most of the dialogue apart from a few repetitions and elements of spoken language. They found that, for all participants, the proportion of dwell time devoted to reading edited and standard subtitles is shorter than the time devoted to reading verbatim subtitles. Although deaf viewers dwelt on the verbatim subtitles longer than hearing participants, no significant difference was found between the behaviour of the deaf and the HoH participants. Another of their findings involved the fact that all participants made more deflections (the number of times that the participants' eyes travel back to the subtitling area while watching the clip) to verbatim and standard subtitles than to edited subtitles. In the light of their results, they propose the use of standard subtitles as the optimum solution. In their opinion, although edited subtitles are read faster, "they do not render high comprehension, as their processing may be hampered by discrepancies between the dialogue and the subtitled text" (*ibid.*:375). Standard subtitles, on the other hand, let the viewers spend about 50% of their available time watching the clip and the other 50% reading the subtitles, and they seem to result in better comprehension than edited subtitles. The researchers (*ibid*.) define verbatim subtitles as "extreme gaze attractors, especially for the deaf and the hard of hearing, as confirmed by fixation count and dwell time". The research also revealed that verbatim subtitles did not always provide the participants with "ample time both to read the text and look at the image" (*ibid.*).

In stark contrast with this research, all the guidelines analysed are in favour of verbatim subtitles and they only allow editing as a last resort, clearly siding with the hearing-impaired viewers and some of the deaf organisations, which consider editing as an unwelcome manipulation of the original speech and a kind of censorship. For instance, the Netflix (2019: online) guidelines recommend providing verbatim subtitles by instructing subtitlers to "include as

much of the original content as possible" and "not simplify or water down the original dialogue". Editing is only permitted when sychronicity or reading speed is problematic. The CAB (2012:19) guidelines also state that "closed captions must, to the greatest extent possible, be verbatim representations of speech" and the dialogue can only be reduced when "technical limitations or limitations of duration and space will not accommodate all of the spoken words at an appropriate presentation rate". This is also the convention employed in the FOX TV subtitles, to achieve verbatim texts. Together with the DCMP Captioning Key (2019), the CAB guidelines do not permit editing text that comes from religious and published materials, direct quotes, the words of a well-known person talking on screen or the songs. The DCMP Camptioning Key (*ibid.*: online), on the other hand, recommends editing the subtitles to ensure that viewers have ample time to "read the captions, integrate the captions and picture, and internalize and comprehend the message". Some of the most detailed information on editing subtitles can be found in the BBC (2019) guidelines, where subtitlers are advised to think carefully about the function of a word or phrase in the audiovisual text before editing it out of the subtitles. The guidelines recommend verbatim subtitles and providing as much access to the soundtrack as possible within the constraints of time, space, shot changes, visuals on screen, etc. The guidelines warn about editing out words like 'you know', 'well', 'but', 'so', etc. since they "are often essential for meaning" or "add flavour to the text" (*ibid*.).

5.4.4. Punctuation

Punctuation aids the reading and understanding of written texts. Indeed, the meaning of a sentence or paragraph can change completely depending on the punctuation used, as in the following, well-known example: "woman, without her man, is nothing", which means something completely different from "woman: without her, man is nothing". Besides these semantic functions, punctuation is also used in SDH to convey some of the aspects peculiar to spoken language in the written mode. Although Guillot (2008:128) admits that "punctuation cannot *per se* match features of the human voice", she goes on to state that "the added value that punctuation derives from interaction with other cues of orality and

narrative features facilitate the triggering of commensurate audience response". Due to subtitling's multimodal nature and the various spatial and temporal constraints with an impact on it, subtitlers need to make the most of all their resources and, as Guillot emphasises, punctuation with its potential for expressivity can be effectively employed to re-create a feeling of orality on hearing viewers in general and the hearing-impaired in particular.

As one might expect, the guidelines analysed all propose that standard punctuation of written English is adhered to as much as possible. Thus, the CAB (2012:15) guidelines recommend "follow(ing) correct English sentence structure and the conventions and standards of normal print media to the greatest extent possible", highlighting the fact that "punctuation must above all else facilitate clarity and ease of reading" (*ibid.*). The CAB also provides some general rules, as follows:

- keep punctuation minimal and clean,
- do not string sentences together with commas, creating comma-spliced sentences that are difficult to read,
- find places to break run-on speech into simple sentences of four lines or less,
- if necessary for clarity and ease of reading, captioned sentences may start with words such as or, so, and, but, for, yet.
- make use of Canadian dictionaries and style guides to reach sound decisions about punctuation,
- document decisions and be consistent.

The DCMP Captioning Key provides some detailed conventions on the use of certain punctuation marks such as hyphens and dashes, ellipsis, quotation marks, acronyms and abbreviations. When discussing the use of quotation marks, it is proposed that each of the subtitles that belong to a section of quoted material should have opening quotation marks, except for the last subtitle of the passage, which should only have closing quotation marks. An example is provided in the DCMP Captioning Key (2019: online):

“Mother knelt down
and began thoughtfully fitting

“the ragged edges
of paper together.

The process was watched
with spellbound interest.”

Both the ITC (1999) and the BBC (2019) guidelines suggest the use of single quotes for identification of speech coming from an off-screen source (Section 4.1). Both sets of guidelines suggest using double quotes for mechanically produced speech such as loudspeakers or for quotations from a person or a book. In the Netflix guidelines, double quotation marks are recommended to indicate quoted material. When this material extends beyond one subtitle, an open quote is used at the beginning of the first subtitle and an end quote is used at the end of the last subtitle and no other quotation marks are used for the subtitles in between. The use of italics is proposed to identify out-of-vision speakers and to express unspoken thoughts of an onscreen character. In addition, both the DCMP Captioning Key (2019) and the BBC (2019) recommend using hyphens to indicate when a speaker stammers, as in “I’m w-w-writing a letter”. The DCMP Captioning Key (2019) suggests using hyphens when a word is being spelled out by one of the characters.

As for the use of ellipses, or suspension dots, the CAB guidelines propose using them to synchronise the subtitles with the speech when dialogue is exceptionally slow, there are long pauses or shots are extremely long, whilst the DCMP Captioning Key suggests using ellipses to mark a pause in the speech and to indicate the beginning or ending of audio relating to a graphic on the screen. An ellipsis is also used by FOX TV to render a pause and two hyphens are used to indicate an abrupt interruption to a sentence. Netflix guidelines propose using ellipsis to indicate a pause or dialogue trailing off. Use of an ellipsis with a space is also recommended to indicate a significant pause within a subtitle and without a space to signal a subtitle starting mid-sentence.

5.4.5. Numbers

All the analysed guidelines, except for the ITC, provide detailed guidance on the codification of numbers in the subtitles. The only recommendation put forward in the ITC guidelines refers to the use of numerical digits, instead of words, in subtitles created for children so that they are easier to read. All four other guidelines recommend spelling out all numbers from one to ten and using numerals for all figures over ten. One of the exceptions to this rule, proposed by the BBC and Netflix guidelines and the DCMP Captioning Key, suggests that numbers lower than ten should be spelled out when they begin a sentence. The other exception, proposed by BBC, DCMP and CAB guidelines, advises that the actual digits should be used if a sentence contains several numbers above and below ten. Two other conventions shared by these guidelines propose the use of Arabic numerals for sports, athletic and technical contexts and the spelling out of approximate, non-emphatic numbers.

Finally, the BBC recommends using commas for numerals over four digits (4,500) whilst the DCMP Captioning Key leaves the decision to the subtitler as to whether to use a comma or not, provided that the usage is consistent throughout the entire production. The CAB guidelines do not provide any information in this regard.

5.4.5.1. Dates and time

The DCMP and BBC guidelines propose using numerals followed by a lowercase ‘th’, ‘st’ or ‘nd’ if both the month and the day are spoken, as in the following example:

Bob went training on the 2nd.

The DCMP Captioning Key suggests using only numerals, without the endings, when the day, month and year are spoken:

Finally, it further recommends using only the numerals when the endings ('th', 'st' and 'nd') are not uttered by the person on screen. No information is provided in the Netflix guidelines regarding the identification of date.

As regards the representation of time, the guidelines suggest slightly different conventions. Thus, the DCMP Captioning Key and CAB guidelines propose using numerals to indicate the time of day (e.g. 5:17, 3:20 p.m., 4 o'clock). The BBC guidelines take a different approach from the others and suggest indicating the time in a way which reflects spoken language (e.g. 4:30, 4 o'clock). Netflix guidelines endorse the use of numerals when exact times are uttered in the dialogue, the spelling out of words/phrases that do not include exact numbers and the spelling out of numbers when used with o'clock in the dialogue. Subtitlers are recommended to use a lowercase a.m. and p.m. when mentioned in the dialogue.

5.4.5.2. Money

Numerals preceded by the corresponding currency sign are suggested in the BBC and DCMP guidelines so that monetary amounts and the origin of the currency are communicated to the viewer: £1.00, $6.12, $8. In the case of the BBC guidelines, the substantive 'pound' must be used instead of the symbol '£', when 'pound' is not used to refer to a specific amount. They also propose using the word 'pence', instead of the abbreviation 'p', for amounts under one pound. The DCMP Captioning Key adopts both techniques to indicate amounts under one dollar and also suggests spelling out 'million' or 'billion' for only whole-dollar amounts of one million or over: '$13 million – 13.656.000'.

5.4.5.3. Measurements

Both the DCMP Captioning Key and the BBC guidelines recommend spelling out the units of measurement. The use of symbols is permitted in the DCMP

guidelines if the units of measurement are spoken in shortened form. The BBC guidelines allow the use of abbreviations to fit the text in a line unless the unit of measurement is the subject of the sentence.

5.4.5.4. Fractions

The DCMP Captioning Key prefers to leave the decision to the subtitlers as to whether to use numerals (1 1/2) or words (one and one-half) for fractions, as long as they adopt a consistent approach throughout the whole programme and numerals and words are not mixed within the same sentence. The BBC guidelines do not make any specific mention of the topic of fractions.

5.4.6. Paralinguistic and kinetic codes

Meaning in communication is not only determined by the verbal messages as there are other meta-communicative signals which indicate how the verbal messages will be interpreted by the listener. Kussmaul (1995:61) notes that "tone of voice, facial expressions and gestures are important clues and we must rely on our interpretation of words within their contexts". Mozziconacci (2002:1) summarises the function of paralinguistic signs as follows:

> in addition to fulfilling a linguistic function such as to structure discourse and dialogue and signal focus, prosodic cues provide information such as a speaker's gender, age and physical condition, and the speaker's view, emotion and attitude towards the topic, the dialogue partner or the situation.

Indeed, the same verbal message can mean something completely different depending on a speaker's intonation and the way in which it is uttered. Linguistic, paralinguistic and non-linguistic signs co-operate to create the meaning of an utterance and, therefore, it may be impossible to understand a message thoroughly if the receptor does not have access to one or more of these signs, which is the case for deaf and the HoH viewers watching a subtitled programme as they mostly rely on visual signs to interpret the meaning behind the verbal signs.

As Neves (2005:221) also states, sound-based paralinguistic elements, such as variation in tone of voice, intonation, loudness, rhythm and speed, may change the meaning of an utterance entirely to such a degree that it may even mean the opposite. Therefore, subtitlers need to find a way to convey the paralinguistic features of spoken utterances to the deaf and the HoH viewers so that they can understand the meaning. However, conveying paralinguistic signs in written language can be challenging as written language is much more formal than speech, and it is difficult to represent some of the prosodic inflections characteristic of orality. When attempting to fix this information in written form, there is a risk that readers can misunderstand the right nature of the emotion being expressed. Indeed, as Yacoub *et al*. (2003:731) emphasise, this potential confusion is a common occurrence and "sadness is mostly confused for boredom, boredom is mostly confused for sadness, happy is mostly confused for hot anger, hot anger is mostly confused for happy, and neutral is mostly confused for sadness". Hence, to accurately convey the speakers' emotions in the subtitles is one of the main challenges in SDH.

In all the guidelines analysed, paralinguistic signs are conveyed through punctuation, explicative labels or the use of upper case or italics. For instance, the BBC (2019) guidelines propose using an exclamation mark or a question mark in brackets at the end of the sentence without a space – i.e. (!) or (?) – to signpost a sarcastic statement or a sarcastic question respectively:

What a lovely day(!)
Aren't you sweet(?)

Using caps is also suggested to indicate words that should receive special phonetic stress or when they are being shouted or screamed. Unlike the BBC guidelines, the DCMP Captioning Key (2019) proposes using italics to mark when a particular word is emphasised and all capital letters to indicate shouting or screaming. It also proposes using labels in brackets, in lower case and just above the subtitles, to indicate a speaker's emotions:

[angrily]
Well, whatever.

The CAB and Netflix guidelines also endorse using italics to indicate emphasis, while the ITC (1999) guidelines suggest using upper case to indicate an increase in volume and changing the colour of an individual word for emphasis.

In the BBC guidelines, the use of a question mark followed by an exclamation mark without a space is proposed to indicate an incredulous question. Conversely, in her study on the provision of SDH in the Portuguese context, Neves (2005:226) proposes a novel approach that consists in the use of emoticons to convey "some of the most meaningful paralinguistic or emotional features that were not easily perceived through visual signs":

Figure 5.1: Use of emoticons in Portuguese SDH (Neves 2005).

5.5. Non-linguistic Information

As mentioned before, the main role of SDH is to bridge the communicative gap which is caused by hearing-impaired viewers not being able to access the acoustic signs of the AVP in the same conditions as hearing viewers. SDH enables them to enjoy information which, otherwise, they would miss. Non-linguistic acoustic information forms part of a sign system independent of language and image, but with which it interacts to create a communicative context for the dialogue. Marshall (1988) divides the sound in AVPs into three

main categories, which all come together to create the desired effect: human voice, sound effects and music. Whilst the human voice and lyrics are linguistic elements of the acoustic sign, sound effects and instrumental music are non-linguistic elements.

Chion (1994:9) states that sound and image transform one another in the viewers' perception not because of a natural harmony but due to the "audio-visual contract" in which "these two perceptions mutually influence each other [by] lending each other their respective properties by contamination and projection". The author shows that the nature of synchronous sound causes viewers to interpret the meaning of an image differently by adding value to the image. He defines this functional interaction between the image and the sound as "synchresis", a blending of the words synchronisation and synthesis, which is defined as "the spontaneous and irresistible weld produced between a particular auditory phenomenon and visual phenomenon when they occur at the same time" (*ibid.*:63). Even though synchronous sound is not physically related to the image we are seeing, it stills affects and enhances the image by making it seem more real to the viewers.

According to Kerner (1989), sound effects have three functions as they simulate reality, create illusion and suggest mood. Including sound effects in an AVP makes it more realistic for viewers, whilst illusion can be created by means of sound effects, even if nothing is being shown on the screen, like in the example provided by Kerner (*ibid.*:12): "with the addition of a few sound effects it is possible to inform the audience that he has driven up to the house, parked his car, walked to the door and used his key to unlock the door". Finally, a few sound effects added to the soundtrack have the potential to change the mood of the scene completely as in the following illustration:

> Add an off-scene owl and it becomes lonesome. Add a wolf howling in the distance and it perhaps harkens danger.
> The sound of a distant train whistle makes it a lonesome scene. Replace the train whistle with the sound of kids playing outside, and the audience perceives an entirely different emotion. (*ibid.*)

These examples clearly show that sound is as invaluable as dialogue for the semiotic whole of an AVP. However, rendering sound in words is not a simple task. Although hearing people perceive sounds almost unconsciously, deaf and HoH viewers will need to read (about) them and process them in conjunction with the other semiotic channels in order to grasp the whole meaning, which obviously adds an extra cognitive burden to the reading effort. Speaker identification and location of sound, sound effects and instrumental music will be further elaborated in the following subsections.

5.5.1. Speaker identification and location of sound

When subtitling for the hearing audience, various ways of indicating the change of speakers on screen exist, such as using dashes in both lines or only in the bottom one. This strategy could also be employed in SDH though it risks proving unsatisfactory as the target audience would not be able to make use of all the semiotic channels available to a hearing viewer, so that subtitlers need to intervene in a more visible manner to help the deaf and the HoH to identify the speakers appropriately. The various solutions proposed in the analysed guidelines include the use of certain punctuation marks, using different colours, displacing subtitles appropriately and including descriptive labels.

The DCMP Captioning Key (2019) and the CAB (2012) guidelines propose placing the subtitles under the relevant on-screen speakers to identify who is talking in the first place. Hence, a person on the left would have left-justified subtitles while the one on the right would have right justified subtitles:

Figure 5.2: Speaker-dependent placement of subtitles (DCMP 2011)

Both sets of guidelines suggest using a label when it is not possible to identify the speakers through the placement of subtitles. The CAB (*ibid.*:20) guidelines propose using labels to identify speakers "when characters move around the screen, when faces are indistinct, when dialogue is very fast, or when the speaker is off screen or not visible" and volunteer advice on how speaker identification should be used, as follows:

- Editing speech should not be activated to make room for speaker identification.
- Wherever possible, the character should be identified on a separate line, ideally before the actual dialogue.
- Mixed case and a colon after the name should be used for speaker identification:

Elderly Freda:
VANILLA ICE CREAM
IS MY FAVOURITE DESSERT.

- The identification label should be descriptive when the priority is to boost clarity.
- Italics are recommended for the content of all disembodied voices, whether indicating the name of the speaker, providing a description or using a hybrid approach with both types of information, as in the example below:

Male Loudspeaker Voice:
MR. AZOULAY, PLEASE COME
TO THE INFORMATION DESK.

Similarly, the DCMP Captioning Key (2019) suggests using labels when identifying speakers when subtitle placement is not possible. It advises that, when a speaker's name is known, his/her name should be written in round brackets and it should always be presented on a separate line, above the dialogue, as shown in the following example:

(Marilyn) I’m finishing the report.

If the name of the character is not known, it then proposes that the speaker should be identified by using the same information that a hearing viewer has: male #1, female narrator, etc. Similarly, in FOX TV, if the name of the speaker is unknown, only the information available to the hearing audience is subtitled. If the speaker is out-of-vision, the subtitler places the subtitles to the far right or left, as close as possible to the out-of-vision speaker. Netflix guidelines suggest using a hyphen at the beginning of each subtitle (one speaker per line) without a space to indicate two speakers. When an extra identifier is necessary, such as the name of the character, if known to the audience, it should be inserted after the hyphen, without a space.

In FOX TV, the use of hyphens indicates that the speakers are both visible on screen. However, if they are not visible or cannot be identified clearly, then a descriptive label with the name of the speaker is inserted after the hyphen, without a space, as shown in Figure 5.3:

Figure 5.3: Speaker identification on FOX TV subtitles.

The BBC (2019) guidelines are substantially different from the DCMP and CAB guidelines and propose using various colours to distinguish speakers in the first place, and only resorting to positioning or the use of dashes, arrows and labels when the use of colours is not possible; for instance, when there are too many characters in a specific scene and it becomes impossible to identify them clearly

with different colours. On occasions like these, the BBC proposes putting each segment of speech on a separate subtitle line and placing them underneath the relevant speaker. The guidelines also advise that the two lines of the subtitle, placed right or left, are "joined at the hip" (*ibid.*:15) in order to facilitate their reading, as seen in the example below:

What is Jack doing here?
I don't know.

The use of dashes to distinguish between characters is also suggested with the proviso that "dashes only work as a clear indication of speakers when each speaker is in a separate consecutive shot" (*ibid.*). When it comes to indicating that the speech comes from an off-screen speaker, the BBC and ITC guidelines propose the use of single quotes. Single quotes are also recommended for the utterances of out-of-vision characters, for instance, in phone conversations between two speakers who share the same colour and one of them if off-screen. However, if the out-of-vision speaker has been assigned a different colour, then it is not necessary to use single quotes. Both guidelines also propose that double quotes be used to indicate speech emanating from a machine. In the case of an out-of-shot speaker who is on the right or left, a left (<) or right (>) arrow should be typed next to his/her speech and the subtitle should be positioned on the appropriate side of the screen, as shown in the example below:

When I find out where he is,
you will be the first to know. >

Finally, the BBC guidelines propose using nominative labels, with the name of the character in white caps regardless of the colour of the speaker's text, to identify speakers. Time permitting, the BBC advises placing these labels on a top, separate line as in the case of the two previous guidelines. If it is not possible to write a separate line for the label, then it suggests placing it on the same line as the subtitle.

As indicated in all the guidelines, a consistent approach in the application of the various strategies is crucial to guaranteeing the good quality of SDH and speaker identification is not an exception. Therefore, no matter which strategy is used to identify speakers, it is vital that subtitlers use it consistently so that viewers will know what to expect throughout the programme.

5.5.2. Sound effects

Sound effects may bring both denotative and connotative meanings with them. In the case of sounds with a denotative meaning, it is usually enough for the subtitlers to offer a description: 'siren wails', 'door slams'. However, when sounds come accompanied with a connotative meaning, i.e. they are used to evoke a certain emotion or to create atmosphere, then they need more consideration. As Neves (2005:243) notes, the same sound may mean something different in different contexts and "laughter in a terror film will always have a different meaning to that in a comedy". She adds that subtitlers need to "distinguish the traits that confer particular effects such as source, location, on-set, frequency, speed, duration, loudness and gradation, among others" (*ibid.*).

The guidelines generally state that, if sounds are relevant to the action and important for the understanding of the viewers, they should then be rendered in the subtitles by means of labels, alteration of the font or a change of colour. In the case of labels, these should be placed as close as possible to the source of the sound on screen. As for their linguistic configuration, the BBC (2019: online) guidelines recommend that "sound-effect labels should be as brief as possible and should have the following structure: subject + active, finite verb". This recommendation is important since addition of sound-effect labels adds extra burden to the reading process of viewers. However, no advice is provided as to how to indicate whether the sound is sudden, continuing, slow or fast. This information is covered in the DCMP Captioning Key (2019), where the present participle form of the verb is recommended for a sustained sound and the third person verb form for an abrupt sound:

Sustained Sound	Abrupt Sound
[dog barking] woof, woof…woof	[dog barks] woof!

Furthermore, the DCMP guidelines recommend using punctuation, commas and ellipses to distinguish between fast and slow paced sounds:

Slow	Fast
[clock chiming] dong…dong…dong	[gun firing] bang, bang, bang

In the Netflix guidelines, a label in brackets describing the sound effect, with the text in lower case, except for proper nouns, should be employed. The guidelines also advise to use hyphens so as to distinguish sounds emanating from different sources; however, if the sounds or the speech are from the same source, the use of a hyphen is not required. The idea that sounds that are relevant to the action and important for the understanding of the viewers must be subtitled is discussed by Neves (2005), who argues that the criteria used by the subtitlers to decide on which sound effects are relevant and important for the understanding of any given scene are subjective and dependent on the subtitler's interpretation. To overcome this limitation and minimise potential subjectivity, Neves proposes the compulsory subtitling of all non-synchronous sounds which occur independently of what is being shown in the images, and she goes on to give as an example the sound of an explosion which occurs far away off the screen while a family are having their dinner on screen. As these sounds do not tend to have any visual correlates, Neves's (*ibid*.) opinion is that they need always to be subtitled as, otherwise, they risk being completely lost to deaf viewers.

After some reception experiments with Portuguese deaf viewers, Neves came to the conclusion that a balanced combination of description and interpretation tend to render the acoustic messages more effectively. In her opinion, if the sound effects coalesce to create a certain atmosphere – i.e. the fact that tension is mounting in the scene –, "it may be more economical and relevant to

describe the resulting effect" (*ibid.*:245) with a label like 'tension mounts', rather than indicating the individual sound effect, 'ambulance siren'. This leads her to propose that, on certain occasions, it may be preferable to provide more details in the label rather than just giving brief descriptions of the sounds, even if this sort of explanation is considered fairly subjective. Thus, instead of rendering the sound effect as 'woman cries', adding some extra information on aspects such as 'how', 'when', or 'why' might be more beneficial for the hearing-impaired viewers, as in 'woman is sobbing loudly'.

The last topic within this subsection is that of the representation of onomatopoeia. Although onomatopoeia affects the way sound is pronounced, confusion may be created without a descriptive label, which in turn may result in the viewers' misinterpretation of the sounds. Zdenek (2015:266) also stresses that "onomatopoeia could probably not stand on their own in the closed captions without some help from more conventional nonspeech descriptions or a familiar visual context".

The DCMP guidelines recommend adding an imitation or onomatopoeia of the sound to the sound-effect label since a study by Gallaudet University in the USA showed that "a combination of description and onomatopoeia was the preference of more consumers (56%) than was description alone (31%) or onomatopoeia alone (13%)" (Harkins *et al.* 1995:18). On the other hand, the BBC (2019) and the ITC (1999) guidelines state that context and genre should be taken into consideration for the use of onomatopoeic expressions, for instance, using onomatopoeia in a highly emotional, dramatic scene is likely to ruin the atmosphere; on the other hand, using only descriptive labels in a cartoon or animation may not fit in well with the creative nature of the material.

The use of labels that describe sounds as objectively as possible, within round brackets, is recommended by FOX TV:

Figure 5.4: Identification of sound effects on FOX TV (Seagull sounds) – (Wave sounds)

5.5.3. Music

Music may comprise both linguistic (lyrics) and non-linguistic signs (instrumental sound), the latter being able to transmit strong connotative meanings and to induce emotions that may not be evoked by linguistic signs. On this issue, Gorbman (1987:2-3) notes that “music taps deeply into cultural codes, giving it rich cultural associations and potential meaning, a ‘veritable language’ that can contribute significantly to a film’s overall meaning”. Prendergast (1992:213-226) also emphasises the vitality and importance of music in film and, in his analysis, he resorts to the classification of functions fulfilled by music that had been previously proposed by Copland (1949). One of the main functions of music is its power to create a more convincing feeling of a specific time or place, e.g. bagpipes, which conjure up images of Scotland, and the use of an oud, which transmits a Middle Eastern feeling. Another function of music is to create psychological refinements and to communicate unseen feelings or action. To illustrate this function, Prendergast (1992) refers to an example taken from David Raskin’s score to the final scene of the film *Force of Evil* (Abraham Polonsky, 1948), in which the main character is seen running to the river bank where he is sure he will find his brother’s dead body. Raskin has opted for a kind of slow music that underpins the emotional rather than the physical nature of the scene as the main character has been in search of his brother throughout the movie and seems finally to find tranquillity. Music can also fill the gaps between the dialogue exchanges as “a kind of neutral background filler” (Prendergast 1992:217). Music as a background filler is not supposed to attract

the viewers' attention and only fill the spots between pauses and conversation. From the perspective of montage, music can serve as a connective component linking several unrelated images. Lastly, "music can provide the underpinning for the theatrical build-up of a scene" (*ibid.*:222) and is then used to resolve and finalise the scene. Prendergast is of the opinion that no other cinematic components can build the tension and drama in a scene at the same level of intensity as music does.

Given the great importance of music in the complex semiotic system of the film, subtitlers need to act with caution when conveying its effect on the deaf and the HoH viewers, who would otherwise miss a very crucial part of the meaning of a film. Despite the significance of music, Neves (2005:253) laments that it is frequently ignored or only briefly mentioned in the subtitles: "often, information about music is reduced to a minimum and most of the labels that were found in the programmes under analysis were simple references to rhythm or presence of the music".

All the guidelines recommend subtitling music that is part of the action or crucial to the plot. If providing detailed information is problematic, the ITC (1999) guidelines suggest that at least the title of the music or song should be given, a piece of advice also echoed in the DCMP Captioning Key (2019: online), where it is stated that "if known, the description should include the performer/composer and the title". All the guidelines recommend the use of a sign, either a musical note (♪) or a hash (#), to indicate music. The arbitrary use of the hash is rather historical and mostly limited to analogue TV since many teletext systems did not allow the inclusion of the musical note symbol. The Netflix guidelines similarly advise that song lyrics should be subtitled in italics on the condition that they do not interfere with the dialogue. The lyrics should be enclosed within a musical note and the first letter at the beginning of each line should appear in upper case. Use of an ellipsis is recommended when the song continues but is not subtitled anymore to give priority to the dialogue. Song titles (in quotes) and album titles (in italics) are to be identified with labels and in brackets.

When it is a matter of transmitting the connotations of instrumental music, the DCMP Captioning Key (2019) suggests that subtitlers should describe the mood of the music as objectively as possible, but it only advises not using subjective words in order to achieve objectivity without any further elaboration.

In the case of songs with lyrics, nearly all guidelines propose that they should be subtitled verbatim, with only the BBC (2019: online) guidelines pointing out two exceptions when verbatim transcription of the lyrics should be avoided:

(1) In cases where you consider the visual information on the screen to be more important than the song lyrics, leave the screen free of subtitles.
(2) Where snippets of a song are interspersed with any kind of speech, and it would be confusing to subtitle both the lyrics and the speech, it is better to put up a music label and to leave the lyrics unsubtitled.

The BBC guidelines emphasise the importance of synchrony when rendering the music, stating that song lyric subtitles should be synchronised with the soundtrack as closely as possible, e.g. if it takes 15 seconds to sing one line of a hymn, the subtitle should stay on the screen for that amount of time.

It is underlined in the ITC (1999) guidelines that, occasionally, scene changes are signalled by means of altering the incidental music rather than providing some visual cues, in which case the hearing-impaired viewers should be made aware of the scene change by presenting a subtitle like this one:

LIVELY DANCE BAND MUSIC

followed by another one in which the dramatic change of the tempo of the music is conveyed linguistically:

MOVES INTO SLOW DANCE MUSIC

Irrespective of how music is rendered and presented in the subtitles, it is crucial that the conventions applied are consistent throughout the whole programme in

order to facilitate the reading process of deaf and HoH viewers and to boost the enjoyment of the film.

In FOX TV, when describing the connotations of instrumental music, only the mood is identified by inserting a descriptive label like (Hareketli müzik)-(Lively music). When relevant to the plot and known, the names of the composer/performer and the title of the song are also indicated, enclosed in quotation marks and parentheses. The name of the composer/performer is followed by the title of the song, separated with a hyphen (“Beyoncé – Halo” plays):

Figure 5.5: Identification of name of the performer and title of song on FOX TV

The lyrics are subtitled verbatim when relevant and important for the plot. Unlike all other guidelines, FOX TV does not use a dash or musical note to denote lyrics and double quotation marks are used instead:

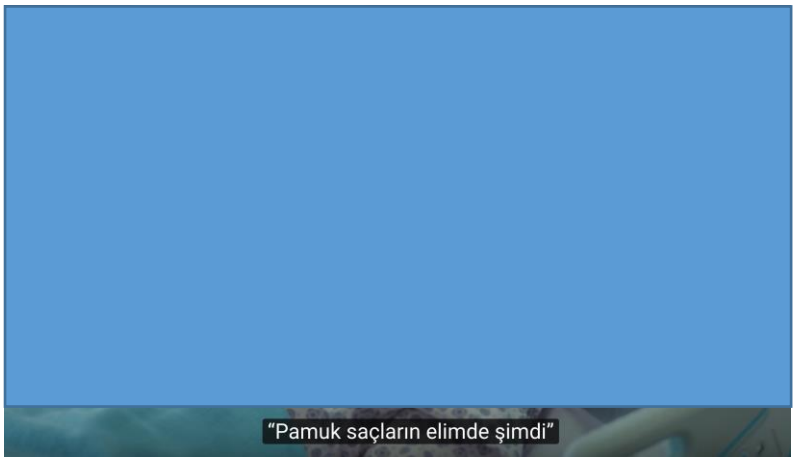

Figure 5.6: Transcription of song lyrics on FOX TV

Although all the guidelines seem to accept the importance of presenting legible and readable subtitles on screen, there seems to be less unanimity on other fronts, such as on the use of various colours to denote speakers, for instance. As mentioned previously, AVMs are multisemiotic by nature and, as such, they are texts of great complexity, which is one of the reasons why subtitles need to allow the target audience ample time to read the subtitles comfortably and enjoy the image at the same time. All the guidelines seem to recommend the synchronous presentation of the subtitles with the soundtrack and the images, highlighting the necessary respect for shot changes so as to support and facilitate the reading experience of the viewers. There does not seem to be a general consensus concerning presentation rates since the recommended reading speeds vary notably depending on their professional experience and the results obtained in various research projects. The change of medium in the subtitles, from spoken to written language, causes the loss of various features of spoken language such as intonation, dialectal inflections, overlaps, repetitions and other phonetic dimensions. This loss is especially detrimental in the case of deaf and HoH viewers as they cannot generally access the acoustic signs of the AVMs to supplement the message. Another downside caused by the viewers not being able to access the acoustic signs is the loss of non-linguistic information, which forms part of the audiovisual product and which has an impact on the meaning, such as sound effects, music, location of sounds, etc. All the guidelines suggest the use of various techniques to compensate for loss of meaning, such as assigning different colours to the various characters, displacing the subtitles, exploiting punctuation marks and resorting to descriptive labels.

In the light of the results of this analysis and comparisons established between the various sets of guidelines, and also the analysis of issues that are widely studied in reception studies (Chapter 2), especially in the DTV4ALL project, the author has decided to focus on the topics; *character identification, verbatim vs. edited subtitles, sound information and paralinguistic information* (Table 5.3) that show more divergence.

Character Identification	Using different colours	Placing subtitles under the character who is speaking	Using labels with the name of the character	Combining different colours with displacement of subtitles
Verbatim vs Edited	Verbatim transcription of the dialogue	Edited transcription of the dialogue		
Sound Information	Using labels to describe the sounds	Using icons to identify the sounds	Using onomatopoeia to reproduce the sounds	
Paralinguistic Information	Using labels to describe the paralinguistic information	Using emoticons to identify paralinguistic information		

Table 5.3: Parameters and strategies to be tested with Turkish deaf and HoH audiences

These aspects can be argued to constitute the main particularities of SDH, and they will be tested through an empirical reception study to investigate which techniques and conventions best suit the needs of Turkish deaf and HoH audiences.

CHAPTER 6
Materials and Tools

6.1. Introduction

As discussed in Chapter 3, no SDH was provided on TV in the Turkish context at the time this experiment was carried out – a fact with a significant impact on the research design. Although this situation is far from ideal as it means that audiovisual programmes on TV are inaccessible to deaf and hard-of-hearing viewers, thus leading to social inequality, it also opens up some possibilities for stakeholders. As most viewers have never experienced watching an AVP with SDH, experiments in this field can be conducted to ascertain the likes and dislikes of the viewers and to create subtitles from scratch that are standardised and actually cater to the needs and preferences of the Turkish deaf audience once this accessibility measure begins to be supplied. To obtain inspiration and a comprehensive overview of how this professional practice is carried out in other parts of the world, an analysis of the guidelines followed in different countries around the globe with more experience in SDH was carried out so as to learn from their mistakes and the problems they encountered as well as from their solutions to these problems.

The fact that Turkish deaf and hard-of-hearing viewers were not likely to have any knowledge or experience of SDH had a substantial impact on all the decisions related to the selection and creation of the materials used in this experiment. Their lack of knowledge of this practice made it imperative to ensure that the participants were exposed to SDH in a way that they could understand and so that they could eventually make their own decisions as to their preferences. Keeping the participants' attention focused on the clips being presented throughout the experiments was an important factor in ascertaining their preferences as genuinely as possible, which, among other things, required a use of AVM that was intriguing to them. Bearing this is mind, I looked into

material popular at the time the experiment was carried out and was therefore likely to be appreciated by most of the participants. Another feature of the participants' profile that affected the selection of the AVM was the fact that the subjects were likely to have reading difficulties. Thus, the selected material had to be simple and clear enough to allow the respondents to focus on the various strategies being tested rather than struggling when reading subtitles and understanding the content of the material.

This research project has a two-fold design which includes questionnaires containing quantitative data on demographic information and the respondents' preferences; these are then followed by interviews with randomly selected participants to acquire qualitative data and a deeper insight into their preferences. As Creswell (2014:4) notes, a combination of qualitative and quantitative research strategies "provides a more complete understanding of a research problem than either approach alone". The questionnaires were designed to take into account the profile of the participants, and steps were also taken to guarantee that the experiment process was as simple and straightforward for the respondents as possible. Close-ended questions were preferred over open ones, and the questionnaires, especially the questionnaire on the respondents' preferences, were made visually attractive so as to interest the participants and ease the reading process by visually supporting most of the items in the questionnaires (Appendices 1-4). Interviews are crucial as they reveal the genuine preferences of participants in a survey in a more targeted manner, particularly since the area researched in this project is heavily under-studied and very little is known about viewer preferences in a country like Turkey.

The following sections start with a discussion concerning the selection process of the audiovisual programme used for the creation of the various clips, followed by an explanation of the selection criteria and process employed in the choice of each of the clips. After this review, the software programs employed in the trimming and encoding of the clips are presented, including information on how they work. Thirdly, the parameters used in the preparation of the subtitles are detailed. In the next section, the main steps followed in the creation of the clips

for their use in the experiment are enumerated. After the presentation of these steps, the questionnaires, both on demographic information and on the participants' preferences, are presented, paying special attention to their layout and rating scales as well as the order, wording and structure of the questions. Section 7 focuses on the design of the interviews, on how the questions were prepared and on the schedule followed. Lastly, the ethical considerations surrounding this project are examined and the process initiated in order to acquire the ethical approval of the university.

6.2. Selection of Audiovisual Programme and Individual Clips

The programme selected for the creation of the short clips was the *Güldür Güldür Show* (Meltem Bozoflu 2013), a very popular comedy-theatre show recorded with real audiences and later broadcast on TV. Although its name has been changed three times and its format has been slightly modified, the show has been broadcast since 2011 with great success. Under the current name and format, the programme is now arguably enjoying its greatest popularity to date. It was one of the 15 highest-rated programmes among 100 national TV programmes, with an average rating of 3.45 (web 6.1). The show's success can also be seen by observing the rising fame of the actors/actresses taking part in it. Although some of these were already acclaimed before starring in it, e.g. Ali Sunal, İrem Sak, and Çağlar Çorumlu, many others have become very popular and have since been involved in an increasing number of movie projects.

As for the internal dynamics, each episode is composed of four or five sketches depicting events from people's daily lives in a humorous way. Considering the length of the experiment and the characteristics of the target population, I endeavoured to choose a programme that was familiar to most of the participants and would also be intriguing enough to keep them interested during the experiment. The real experiments proved that all the participants were familiar with and liked the *Güldür Güldür Show*, so that it kept the respondents interested in the experiment. However, even though the participants began the experiment with a high level of enthusiasm and showed a desire to watch the

subtitled clips from the show, their enthusiasm waned towards the end of the testing, even though they were watching something they enjoyed.

To help me decide on the materials for the experiment, I watched all 160 episodes attentively – each episode lasting approximately 90 minutes on average – in order to find the most suitable episodes and scenes to test the various SDH strategies. Three- to four-minute clips were cut from the episodes deemed appropriate and edited out to suit the requirements of the experiment. Although different criteria were employed in the selection of the clips, the main aim was to make sure that the chosen clip would allow the natural implementation of the strategy being tested as much as possible. This was particularly crucial for the current research since, as already noted, the potential participants had little or no experience or knowledge of SDH in general and the strategies being tested in particular.

Another important criterion in the selection of the material was that the final clips had to be idiosyncratic enough to enable the viewers to concentrate on one given strategy at a time rather than various. Thus, the clips would ideally test only one SDH strategy and ignore any other dimensions that might lead to uncertainty or confusion on the part of the subjects. The main objective here was to direct the participants' attention to the method being tested and avoid distracting or confusing them with the implementation of any other techniques. In the light of these considerations, the criteria employed in the selection of the clip used to test the strategy 'speaker identification' are presented in Table 6.1 below:

Speaker Identification	Three or more characters on screen Most subtitles below 16 cps[1]	As few sound effects as possible As few paralinguistic elements as possible

Table 6.1: Selection of clip to test speaker identification

[1] The standard reading speed employed for the subtitles in the experiment was 13 cps. Reading speeds of up to 17 cps were also allowed on exceptional occasions. The issue of reading speed is discussed in more detail in Section 6.4.

In this concrete case, I specifically made sure that the clip would involve three or more characters, so that speakers would need to be identified to give the hearing-impaired viewers a clear understanding of who was speaking at a given moment. The other aspect that needed to be taken into consideration was the fact that the reading speed of the clip should not impose much difficulty on the viewers so that they could follow the subtitles relatively easily and could then direct their attention to the different speaker identification strategies being tested. Lastly, I endeavoured to keep the number of paralinguistic elements and sound effects to a minimum so as not to distract the participants by not implementing any other SDH strategies with which they were not familiar. All in all, adhering to these parameters allowed participants to focus solely on the strategies being tested and, thus, to indicate their preferences.

When it came to the textual integrity of the subtitles, the following aspects in Table 6.2 were considered when choosing a clip to test verbatim versus edited subtitles:

Verbatim vs. Edited	Reading speed is above 15 cps in average reaching 25 cps in the case of verbatim subtitles	As few sound effects as possible As few paralinguistic elements as possible As few characters as possible

Table 6.2: Selection of clip to test verbatim vs. edited subtitles

When determining the clip to test whether the participants preferred edited or verbatim subtitles, I endeavoured to choose a scene which did not attract the participants' attention to unnecessary details and enabled them to focus on what they are watching and on their reading. In this clip, therefore, sound effects and paralinguistic features, which could not be understood or inferred from the scene, are scarce.

Deciding on the speed of delivery of the original dialogue was also an issue since, although a high speed rate might end up in subtitles that, when verbatim, ran the risk of frustrating the viewers' reading experience, it also meant a greater number of examples of text editing so that the participants could get a

better exposure to this strategy. On the other hand, employing a scene in which the dialogue turns are exchanged at a slow speed required verbatim subtitles that were relatively easy to read because they did not contain much text and the number of examples of edited subtitles might not have been enough for the participants to fully appreciate. Confronted with these two options, I resolved to employ a scene in which the actors spoke very fast so that the contrast between verbatim and edited subtitles would be sharper. As it turned out, even under these conditions, it was observed that the participants often failed to realise the difference between verbatim and edited subtitles and were normally unable to detect the editing.

The other strategy to be tested was the indication on screen of sound information, and the clip chosen adhered to the parameters specified in Table 6.3:

Sound Information	Ample number of examples of sound effects Most of the subtitles below 16 cps	As few characters as possible in the scene As few paralinguistic elements as possible in the scene

Table 6.3: Selection of clip to test sound information

When selecting a clip for testing various means of conveying sound information, I focused on the availability of a substantial number of sound effects in the scene so that viewers would then be exposed to a number of strategies before coming up with their own preferences. A standard reading speed of 16 cps was employed so as to allow the viewers to focus on the subtitles and the various strategies being tested rather than struggling to read them. In an attempt not to distract their attention unnecessarily, as in the case of all the other clips, I decided on a clip containing as few distracting elements as possible. Bearing in mind that one of the strategies I wanted to test was the use of icons, I decided to give priority to a clip which would involve simple sound effects, like the ringing of a phone, the sounds emitted by animals etc., and that could be reasonably easily conveyed through the use of a simple image. This was particularly important since, considering the participants' lack of familiarity with SDH, using a complex image to convey a sound might have been too difficult

for them to understand whilst reading the subtitles, which, in turn, would have run the risk of adversely affecting their preferences.

Finally, Table 6.4 summarises the conditions required for a clip to be used to test the various ways in which paralinguistic information could be recorded in the subtitles:

Paralinguistic Information	Ample example of paralinguistic elements Most of the subtitles below 16 cps	As few characters as possible in a shot As few sound effects as possible

Table 6.4: Selection of clip to test paralinguistic information

The main criterion for the selection of a clip to allow the efficient testing of the various strategies used to convey paralinguistic information was that it should contain as many instances of paralinguistic elements as possible so that participants could be then exposed to a large number of examples. I also endeavoured to select a clip in which the difficulty of the message and the delivery rate of the dialogue uttered by the actors were not too taxing, hoping that they would meet the expected low levels of the participants' reading skills. The overriding objective was not to put extra pressure on the subjects as they could then lose their motivation and refuse to participate in the experiment. As in the previous cases, the scene was to contain a minimum number of sound effects and characters speaking so that the subjects could then focus their attention solely on the method being tested.

6.3. Software Used in the Creation of Materials

In the preparation of the AVM for the experiment, a range of programs was used. The following subsections provide information about their nature and role.

6.3.1. Subtitling software

The OS, MacOS, used in the preparation of the experiment materials was the main factor governing the type of subtitling software used for the production of

the captions. Being Mac substantially limits the options of the commercial or free software that can be used since most popular commercial subtitling suites like Wincaps Q4 or freeware such as Subtitle Edit or Subtitle Workshop can only be used on Windows OS. I therefore searched for a piece of free software that would enable the user to control the main configurations of the subtitles, such as placement, timing, colour etc. and to work with several file formats. After some exploration and due consideration of various programs, Aegisub (version 3.2.2) was chosen as the freeware used to create the required subtitles (Figure 6.1), as it works in a Mac environment, is easy to manipulate, reliable and stable and provides most of the functions available in industry-standard subtitling software, including useful features such as an audio waveform display to assist with timing and an integrated 'merge' function that allows the user to insert the subtitles into the videos permanently.

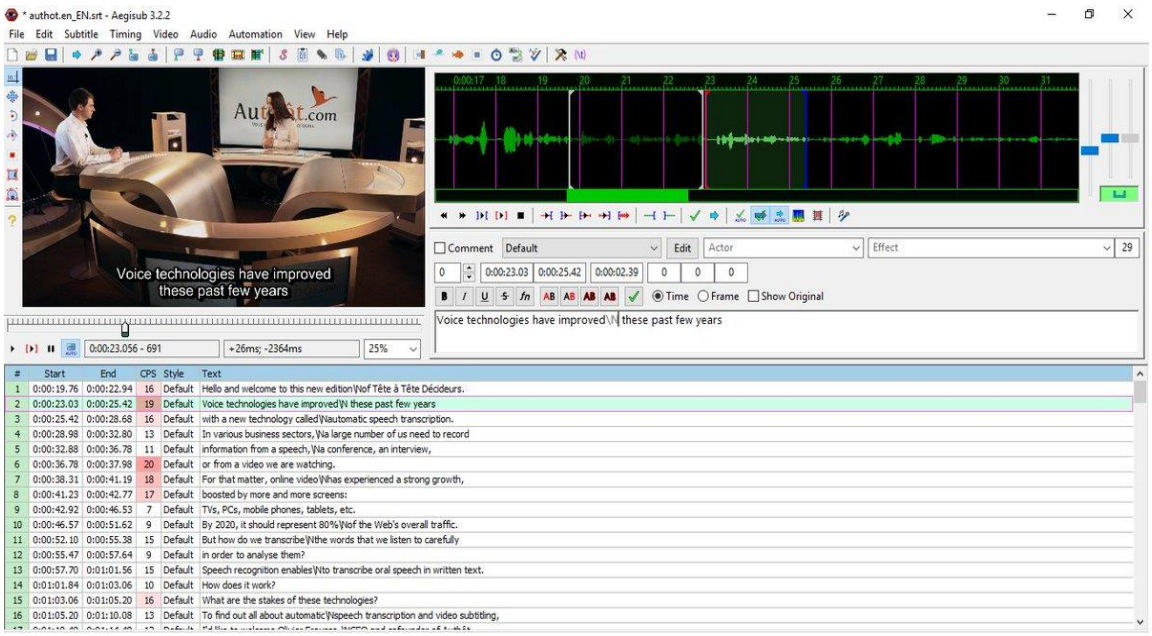

Figure 6.1: Interface of Aegisub 3.2.2

Before creating the final subtitles for the experiment, the software was trialled and the reliability and the properties of the subtitles it created were checked against Wincaps Q4, a piece of commercial subtitling software widely used in the industry. All the checks and controls proved that the freeware was adequate for use in the production of the subtitles destined to accompany the clips in the experiment.

6.3.2. Video editing software

Once again, the OS was the determining factor in the choice of video editing software. In addition to standard tasks like editing the length of the video clips and preparing them for the experiment, it was also essential that the program allowed for the insertion and editing of images and emoticons in a precise manner. This was necessary because, at the time when the materials were developed, no subtitling software existed, commercially or free, with the possibility of adding or timing emoticons or images. These typographic resources, therefore, needed to be inserted and timed with video editing software after the clips had been subtitled. Some testing took place and, eventually, the Mac video editing freeware, iMovie (version 10.1.19), was chosen.

6.3.3. Photo editing software

PicMonkey, an online photo editing service, was used to create images of texts with information about the strategies that the participants were going to watch and with indications of the beginning and end of the clips, as shown in Figure 6.2, below:

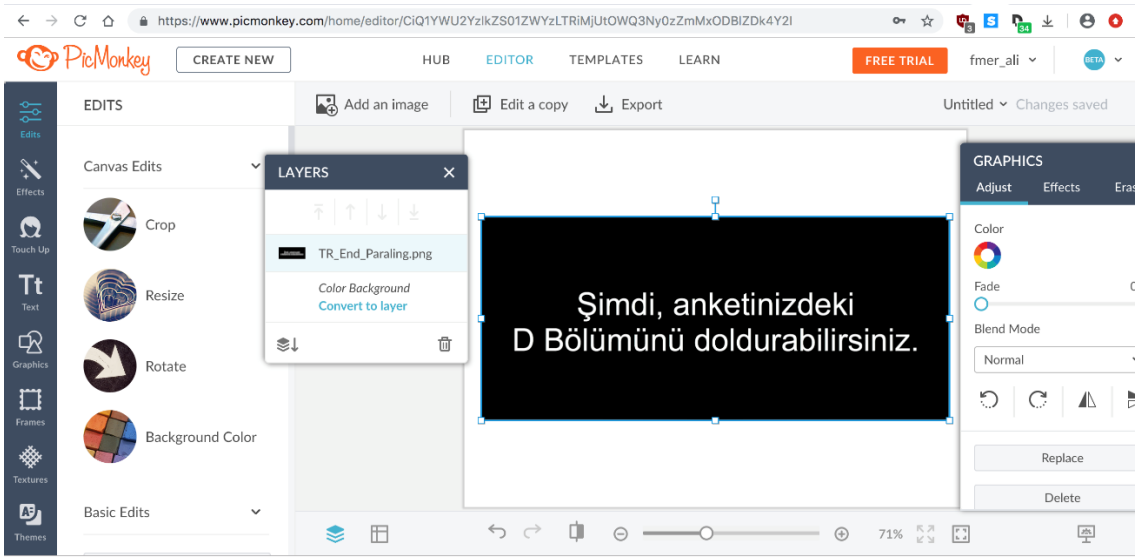

Figure 6.2: Interface of PicMonkey online photo editing service

This online service was also used to cut and prepare the images, i.e. the various emoticons and the phone image, which were to be incorporated into the subtitles to describe paralinguistic information and sound effects. This service was chosen over more advanced programs such as Adobe Photoshop owing to its user friendly interface and because it suited the tasks needed for the experiment, i.e. the trimming of images and removal of layers from the images, in an easy and yet professional manner.

6.4. Parameters Implemented in the Preparation of the Subtitles

After having compared various sets of subtitling guidelines from different companies and associations (Chapter 5), and having explored the parameters applied in the countries that took part in the DTV4ALL project, as presented by Iriarte (2017), as well as in the USA and Canada – illustrated in Table 6.5 below – the suggested maximum reading speeds observed vary between 12 cps and 21 cps. When the display rate is expressed in words per minute, the values are between 120 wpm and 230 wpm:

Europe	Denmark	10-12 cps
	France	144 wpm
	Germany	12-13 cps
	Italy	130 wpm
	Poland	12 cps
	Portugal	120-130 wpm
	Spain	15 cps
	UK	180 wpm / 15 cps
North America	USA – DCMP Captioning Key	130-160 wpm
	Canada – CAB	<200 wpm

Table 6.5: Maximum display rates in countries in Europe and North America

Within the framework of the DTV4ALL project, Romero-Fresco (2015) analysed the distribution of the participants' gaze between the subtitles and the images when the subtitles were presented on screen at different speeds. He focused on the viewing speed, which refers to the speed at which a given viewer reads the subtitles and accesses the images and the sound rather than concentrating solely on reading speed. By doing so, he examined the effect that the various subtitling display rates had not only on the viewers' verbal comprehension of

the message but also on their visual comprehension and/or the time allocated to the subtitles or images. After an analysis of 71,070 subtitles watched by 103 hearing, hard-of-hearing and deaf viewers, he came up with the following data regarding the distribution of time spent between the subtitles and the images (Figure 6.6):

Viewing speed	Time on subtitles	Time on images
120 wpm	±40%	±60%
150 wpm	±50%	±50%
180 wpm	±60%-±70%	±40%-±30%
200 wpm	±80%	±20%

Table 6.6: Viewing speeds and distribution of gaze between subtitles and image

A viewing speed of 150 wpm allowed the participants to divide their attention between the subtitles and the images equally. As the display rate of the subtitles increased, the time viewers spent on reading the subtitles also intensified in equal measure. According to Romero-Fresco (2015:338), “very slow subtitles (100wpm and slower)” caused the viewers’ gaze to move more frequently between the subtitles and the images. The researcher also indicates that, although these are preliminary data and further research is necessary to confirm or refute their validity, the findings seem to be supported by previous studies conducted using different AVMs and types of subtitle in countries like Italy (Perego *et al.* 2010), Poland (Szarkowska *et al.* 2011), South Africa (Hefer 2013) and the USA (Winke *et al.* 2013).

In the light of the above analysis of the subtitling display rates proposed by different guidelines and implemented in various countries around the globe, and given the Turkish viewers’ lack of familiarity with SDH and their anticipated relatively low level of reading skills, a subtitling display rate of 13 cps was set for the edited subtitles, which was closer to the lower end of the reading speed spectrum presented above. Even though they were above the ideal reading speed, display rates of up to 17cps in the edited subtitles were allowed in exceptional conditions. In terms of layout, the subtitles were centre aligned and positioned at the bottom of the screen. A maximum line length of 40 characters was chosen and only two lines per subtitle allowed. These parameters were

applied in the creation of all the clips except for the cases in which the strategy to be tested required different parameters (e.g. displacing subtitles differently for character identification).

6.5. Preparation of Videos

Although some of the technical steps were specific to the preparation of just a few clips (e.g. insertion of emoticons and images in the subtitles), the very same procedures were followed during the creation of most of the clips used in the experiment. These main procedures were as follows:

- The selected episodes were watched methodically and examined to identify the most suitable ±two-minute scenes from the programmes that met the testing criteria detailed above. In the selection of these clips, and to avoid any ambiguities, particular attention was paid to ensuring that each clip was self-contained and as meaningful as possible on its own.

- The selected ±two-minute sections were cut from the episodes with the help of iMovie and prepared for use in the subtitling software.

- The subtitles were created and timed with Aegisub. The same program was also used for embedding, or burning as it is known, the subtitles in the images.

- After each of the short clips had been subtitled, they were then combined and edited into one longer video for each of the various parameter categories, i.e. character identification (four clips combined), verbatim vs. edited subtitles (two clips combined), representation of sound information (three clips combined) and representation of paralinguistic information (two clips combined).

- Informational images were created with PicMonkey (Figure 6.2) and embedded at the beginning of the clips, introducing the participants to

the various strategies they were going to be exposed to. They also referred them to the relevant part of the questionnaire they were expected to fill out after having watched the clips.

- The informational images were inserted before and after the actual subtitled videos and timed with iMovie, giving the participants ample time to read the information and instructions. In this way, I did not need to intervene and disrupt the viewing experience unnecessarily except for starting the video and pausing it for the subjects to fill in the relevant part. Therefore, I kept a low profile during the experiment unless there was a glitch or any of the respondents needed some clarification about something they did not fully understand. This meant that the participants could enjoy an uninterrupted viewing experience and concentrate as much as possible on the actual SDH strategies being tested.

Finally, all four long videos were quality checked and watched on computer screens and bigger television screens in an attempt to guarantee that the subtitles and added images were clearly visible and perfectly legible.

In the following subsection, screenshots from each of the clips are presented so as to illustrate the various strategies that were tested and how they were created. Any extra steps taken in addition to the main ones highlighted above are duly discussed under the relevant category.

6.5.1. Character identification

All four clips were selected from the same clip, which was broadcast as a part of Episode 31, so as to provide thematic consistency between them. In the clips, an impossibly 18-month pregnant woman visits a new doctor with her husband to seek help for the delivery of their babies, who are twins. They manage to contact the twins with a newly invented device and try to persuade them to come out into the world. The scene starts with the presence of three actors on stage (Section 6.5.1.1), who are later joined by two more characters towards the end of the video, making it a rather busy scene with a total of five characters

(Section 6.5.1.4). There are frequent long shots and quick exchanges between the various actors, which makes it necessary to use a strategy to identify the speakers on screen. To gauge the preferred choices of the audience, the following four alternatives were offered: (1) changing the colour of the subtitles according to the different speakers, (2) positioning the white subtitles close to the actor speaking the lines, (3) creating identifying labels with the names of the speakers, which have then been timed simultaneously with the subtitles and (4) combining strategies (1) and (2). As the characters speak at a reasonable speed, the subtitles used in these scenes were provided verbatim.

6.5.1.1. Use of different colours

The first character identification method presented during the experiment was the use of different colours to identify the various speakers appearing on screen. This section of the video included three characters and three different colours were used in the scene to identify each different speaker: yellow for the father, green for the pregnant woman and cyan for the doctor. Figure 6.3 below shows an example of a subtitle in green, representing the female character on screen:

Figure 6.3: Different colours to identify speakers

The scene did not contain any sound effects and only a few paralinguistic elements were present, which could be easily inferred from the characters' gestures and facial expressions without the need for any subtitles.

6.5.1.2. Displacement of subtitles

The second method employed to identify characters made the most of positioning by displacing the subtitles and positioning them close to the relevant speaker on the screen, as shown in Figure 6.4 below. The subtitles used in this scene were all white and the only variable was the different position of the subtitles depending on the character speaking (Section 6.5.1.4):

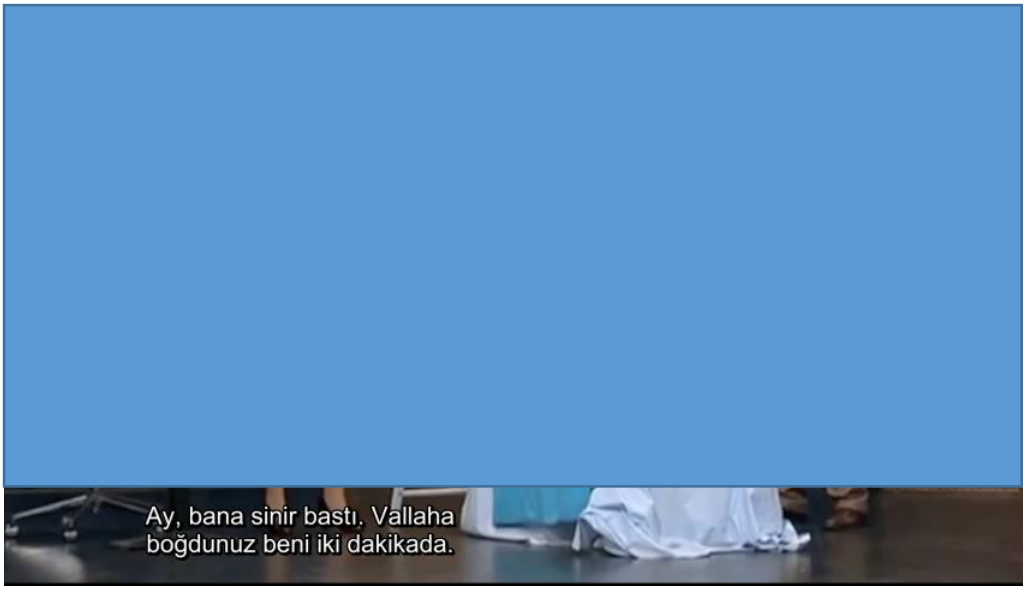

Figure 6.4: Displacement of subtitles to identify speakers

As in the previous excerpt, this clip also involves the appearance of three characters, who remain fairly stationary throughout the scene, making it a suitable clip for testing this method. Since the characters do not move much around the stage, it was reasonably easy for the viewers to follow and watch the moving subtitles.

From a technical perspective, this task was rather straightforward as the subtitling freeware enables the user to place the subtitles anywhere on the screen manually by clicking on the screen in the interface. Yet, the software does not align the subtitles automatically, and extra attention had to be paid

when manually aligning the subtitles so as not to distract the respondents' attention unnecessarily.

6.5.1.3. Use of labels

The third method tested to identify speakers was the use of identifying labels, in which the identity of the actor was presented in brackets. If the character's name had already been announced and was known to the viewers, their name was then written on the labels. However, when this information was not available to the viewers, a general label provided as in (woman), (teacher) or (doctor) was used so as not to anticipate any unrevealed information. An example of this latter strategy is shown in Figure 6.5:

Figure 6.5: Labels to identify speakers

Since the addition of labels ran the risk of placing an extra burden on the respondents' reading experience, I endeavoured to ensure that the reading speed would not exceed a maximum of 16 cps and proceeded to edit down the subtitles when necessary. As illustrated in Figure 6.5 above, labels were presented on the same line as the subtitles rather than on a separate line. When the same speaker continued speaking over several shots, the label identifying her/him was only used once in the first subtitle.

6.5.1.4 Displacement and use of colours

The final method tested under this category of speaker identification was the combination of two strategies, namely the use of different colours and textual displacement. Figure 6.6 displays an example of this dual strategy:

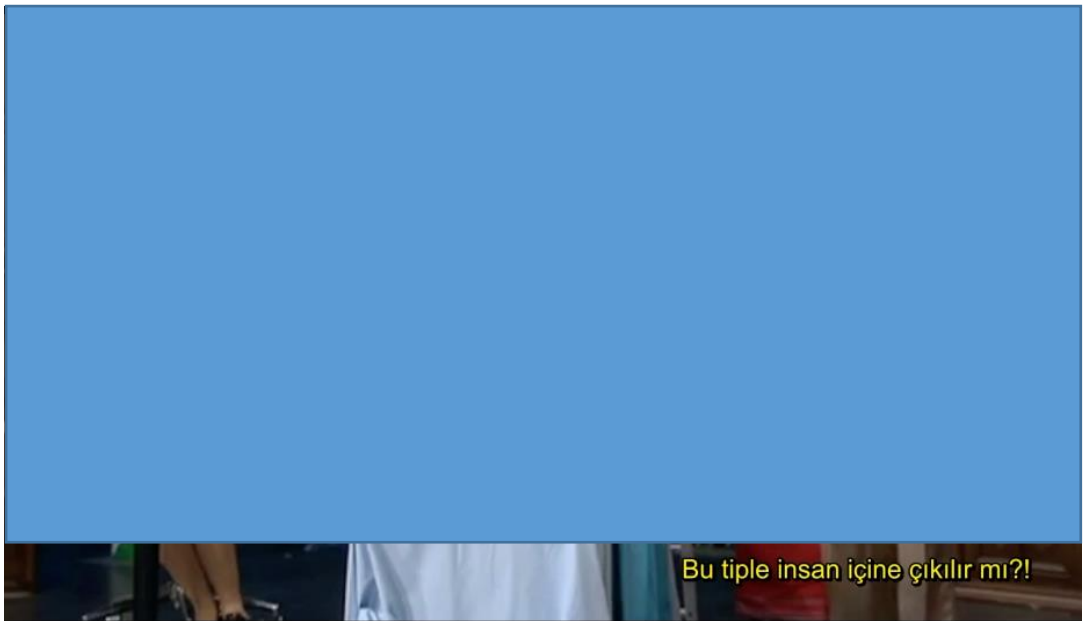

Figure 6.6: Combination of colours and displacement to identify speakers

Since the excerpt used for testing this last method involved the continuation of the scene used for the first method (Section 6.5.1.1), where different colours were used to identify the speakers, the colours assigned to the characters in the first clip were kept the same: yellow, green and cyan. The two new characters introduced towards the end of this scene were assigned magenta and white, in accordance with the colour palette normally used in the production of SDH. As in the rest of the scene, the characters on screen do not move around much, so that it was relatively easy for the participants to follow and concentrate on the subtitles.

6.5.2. Verbatim vs. edited subtitles

As already discussed, when preparing the clips to test whether verbatim or edited subtitles helped the respondents enjoy the clip more, extra attention was paid to the subtitle display rate, the number of actors on screen and the

potential instances of paralinguistic elements and sound effects that needed to be represented. After comparing scenes in which the actors spoke relatively slowly and the display rate hovered around a maximum of 13 cps or lower with other scenes in which the dialogue lines were exchanged in a faster manner and the subtitle display rate was above 13 cps and up to 25 cps, it was evident that clips with a slow delivery rate required less textual editing and the end subtitles were much more comfortable to read. The decision was thus taken to use a clip in which the actors spoke fast and where the display rate of verbatim subtitles would be high (i.e. most of the subtitles above 13 cps), so that the viewers would thus be exposed to a wide range of editing strategies. The objective was also to allow the participants to experience the potential difficulties that might be triggered by a set of verbatim subtitles with a very high reading speed. Figure 6.7 is a screenshot of the scene used for testing the validity of verbatim versus edited subtitles:

Figure 6.7: Clip used for the comparison of the verbatim and edited set of subtitles

Given the sociocultural background of the participants and their lack of familiarity with SDH, certain criteria were taken into consideration when selecting the video excerpt in an attempt to ease the participants' reading process and make sure that they could concentrate on the subtitles and on the strategy being tested. As can be seen in the screenshot above (Figure 6.7), only three characters appear in the selected clip, only two of whom maintain the

conversation with the third intervening only sporadically. When talking, they take discreet turns rather than speaking over each other and the actor uttering the sentences can be comfortably inferred from the screen most of the time, as the camera focuses on her/him. Furthermore, there are barely any sound effects in the clip that need to be indicated. Although few paralinguistic elements accompany the speech (e.g. shock), they can be readily understood from the actors' gestures since, as previously mentioned, the camera generally focuses on the speaker. All these features of the selected video were conducive to guaranteeing that the participants' attention would be directed to the reading process.

6.5.3. Sound information

To prepare the clips used to test the participants' preferences concerning strategies indicating sound information a new piece of software needed to be employed. To the best of my knowledge, no freeware or commercial subtitling programs offer the functionality of inserting and timing images as part of the subtitles. As these were the features that I wanted to test with the participants, a suitable technical alternative needed to be found. For this reason, PicMonkey was used to create and edit the images and icons (i.e. a phone with a label imitating the sound) and iMovie was used to insert them in the clips and time them so that they synchronised with the subtitles and the soundtrack.

The three clips selected come from different episodes and due attention was paid to guarantee that each clip would be as self-contained as possible. Sound effects contribute to the development of the plot and the creation of humour, which made it necessary for the participants to understand them easily so that they could follow the story and enjoy the humour.

In the first clip two men are trying to cook for their girlfriends and one of them decides to call his mother to get a recipe over the phone. His first introductory sentences after the mother picks up the phone are made up of self-loving and narcissistic adjectives about himself, without stating his own identity (like "your boy/son calling"), which ends up with his mother being confused as to the

identity of the caller and hanging up. The phone calls are reiterated several times, thus creating a fair number of opportunities in which to indicate the ringing of the telephone on screen.

In the second excerpt a man calls his mother to ask her to send him a file that he has forgotten to take with him. As the mother does not know how to use the new smartphone her son has bought her, the situation becomes a little short of surreal. As soon as the mother's mobile phone starts ringing, she tries to answer the call with the help of two of her friends but without success. The phone therefore continues to ring throughout much of the scene, opening the door for the implementation of some strategy to make sure that the deaf and hard-of-hearing also receive that information in the subtitles.

In the third and last clip, a nurse in a hospital becomes angry with the patient she is caring for and begins slapping him. Other characters on screen join her and start hitting the patient too. A lack of synchrony is wilfully created between the actions seen on screen and the sounds produced by the slapping, which have been purposely delayed by the sound technician to become a source of humour in this scene. In what follows, the process of creating the various clips used to test three different ways of conveying sound effects on screen are detailed.

6.5.3.1. Use of onomatopoeia

One of the three strategies relied on the use of onomatopoeia, presented in brackets, to reproduce the sound effects that could be heard in the soundtrack. Figure 6.8 illustrates the onomatopoeia of a phone ringing in Turkish:

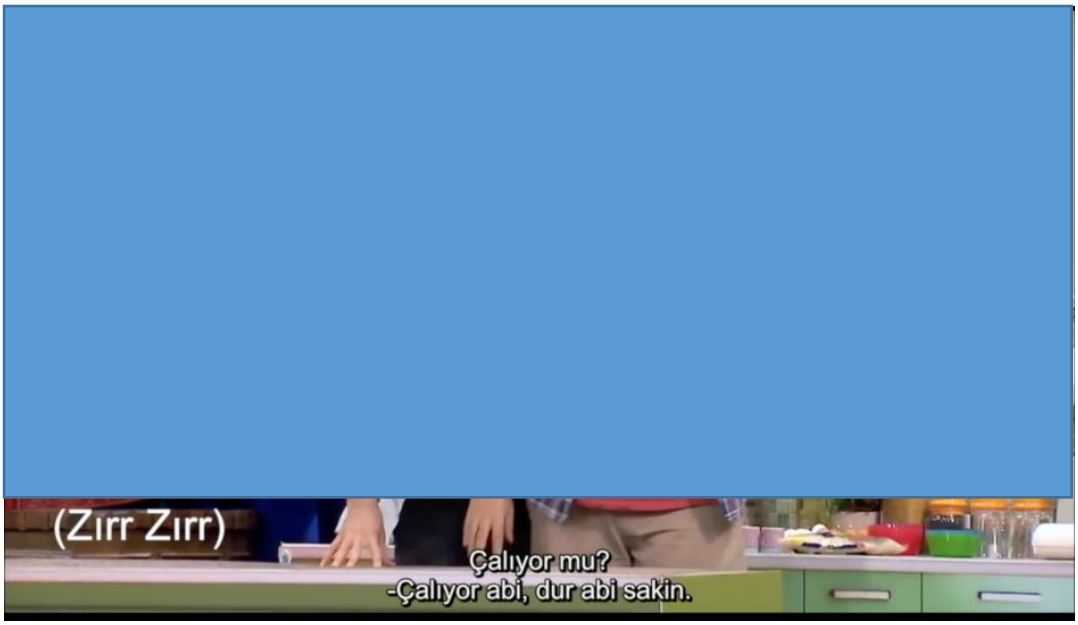

Figure 6.8: Onomatopoeia used to describe sound information

In this excerpt, the sound effect of the phone ringing was repeated six times throughout the clip, which provided ample opportunity for the participants to experience this strategy. In this clip, the three main characters are mostly stationary, with the camera moving and focusing on the relevant character, significantly reducing the need to identify the characters and paralinguistic elements since it is relatively obvious who is speaking and in what manner. The time at which the dialogue and the sound effects take place differs, which meant that to respect the parameter of synchrony subtitles and onomatopoeia needed to be separately timed. Furthermore, the labels containing the onomatopoeia were also placed separately from the subtitles and close to the source of the sound on screen.

in terms of the technical dimension, as already mentioned, these labels were created as images by using the program PicMonkey and then inserted into the images, timed and positioned on screen by using the picture-in-picture effect provided by iMovie. Since the labels were not inserted as text into the clips, it was not possible to arrange their font size and they were therefore sized manually in the video editing software as closely as possible to the font size of the subtitles. Although the same type of font as in the subtitles was used to create the labels (i.e. Arial), the actual size of the images was not the same as the one found in the subtitles. The size of the images was therefore

proportioned to fit the size of the screen and the font type of the subtitles and their size were kept the same throughout the clip. This aimed to attract the participants' attention to the labels and not to distract them from the subtitles and the clip at the same time.

6.5.3.2. Use of icons

The second method to display sound effects used icons, as in Figure 6.9 below, where the information was presented with the help of an icon representing a mobile phone:

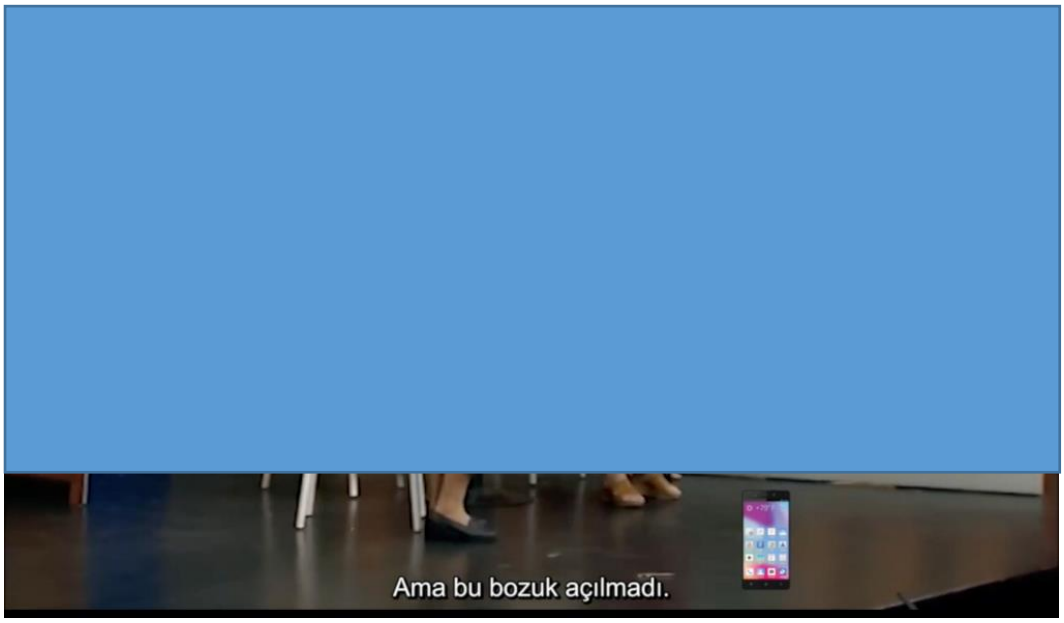

Figure 6.9: Icons to represent sound information

As mentioned above, in this clip the three characters on screen do not know how to answer an incoming call, which in turn means that the mobile phone keeps ringing for about 51 seconds throughout the scene. Although the clip involves the presence of five characters in total, one of them leaves the scene early and another remains silent throughout the video. All in all, only three characters are active in this scene and, with the camera favouring mid shots and medium close-ups, the need for character identification was significantly reduced since it was relatively easy to understand from the setup which actor is speaking.

The decision was made to opt for a smart phone as the icon being used to transmit the information, rather than a dial phone, which was more in keeping with the visuals and the content of the scene. Once again, the image, prepared with the help of PicMonkey, was inserted, timed and placed by using iMovie. The size of the icon was proportioned to suit the rest of the scene and the size of the subtitles, in a palpably straightforward manner. The colourful screen of the smartphone contributed to making it highly visible against the background.

6.5.3.3. Use of labels describing sound

The third strategy employed to give an account of the sound effects was the description of those sounds, inside brackets, as in the example shown in Figure 6.10 below, where the Turkish 'Tokat Sesi' back translates as 'Slapping Sound':

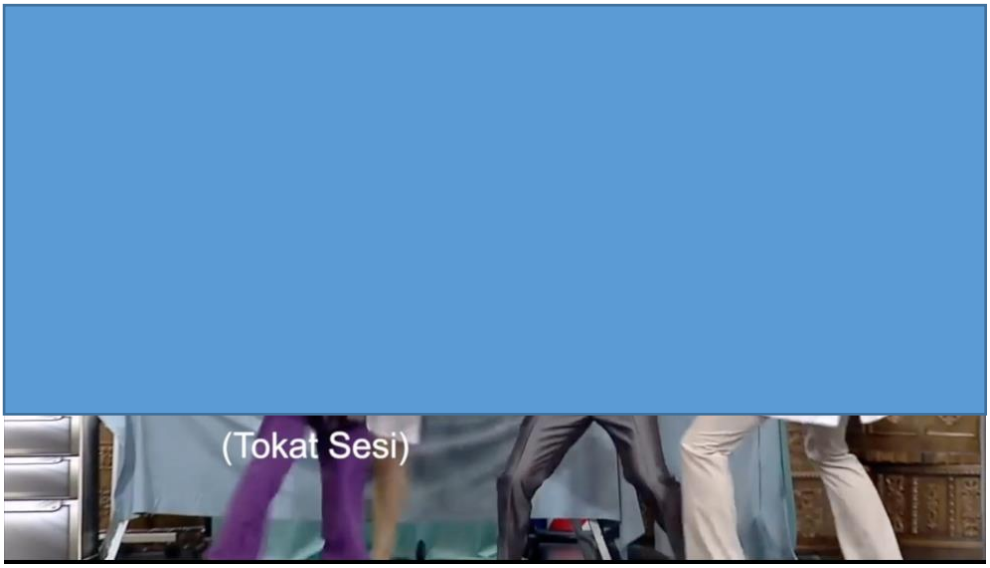

Figure 6.10: Descriptive labels to identify sound information

As in other clips, five actors appear on screen though only three are central to the verbal action, as they have conversations among themselves. There were only a few instances during the clip that required the identification of the characters in the subtitles but, on the whole, these instances were not crucial to the story and did not prevent the respondents from following the plot of the clip. As already discussed, sound effects are pivotal to the creation of humour in this excerpt owing to the forced asynchrony between the sounds heard and the actions seen on scene.

Since the sound effects occur independently of the appearance of the subtitles, the labels had to be timed separately from the subtitles. The same technical procedure explained in the creation of the labels for onomatopoeia (Section 6.5.3.1) was also followed here. The labels were created as images using PicMonkey and then inserted, timed and positioned with the help of iMovie.

6.5.4. Paralinguistic elements

In order to inform the hearing-impaired viewers of paralinguistic information that could not be inferred from the visual clues, two different strategies were adopted, namely the use of descriptive labels and emoticons. The two experimental clips were taken from the same episode and followed the same plot. In the sketch, two heterosexual couples are having a discussion about whether being a woman or a man is more difficult, and each group argues that being a member of their gender is more problematic and disadvantageous. To prove their point and to understand the difficulties that each gender experiences during a day, the two male characters dress up as women and the two female characters dress up as men for a day out. To accommodate their new 'personalities' their voices occasionally switch from male to female throughout the sketch – information that needs to be indicated on screen if the hearing-impaired audiences are to fully understand the humour involved in this scene. The preparation of the clips is detailed in the sections that follow.

6.5.4.1. Use of emoticons

As humour in this scene is triggered by the constant switch between male and female voices, the subtitles must somehow impart this information. One of the strategies tested was the use of a female or male emoticon (👩, 👨) to convey this paralinguistic information where appropriate. I endeavoured to find as simple emoticons as possible so that the viewers would be able to see them and comprehend their meaning easily, without being distracted. The emoticons were placed to the left of the subtitles, as illustrated in Figure 6.11, so that the

participants could obtain the information before starting to read the actual subtitles:

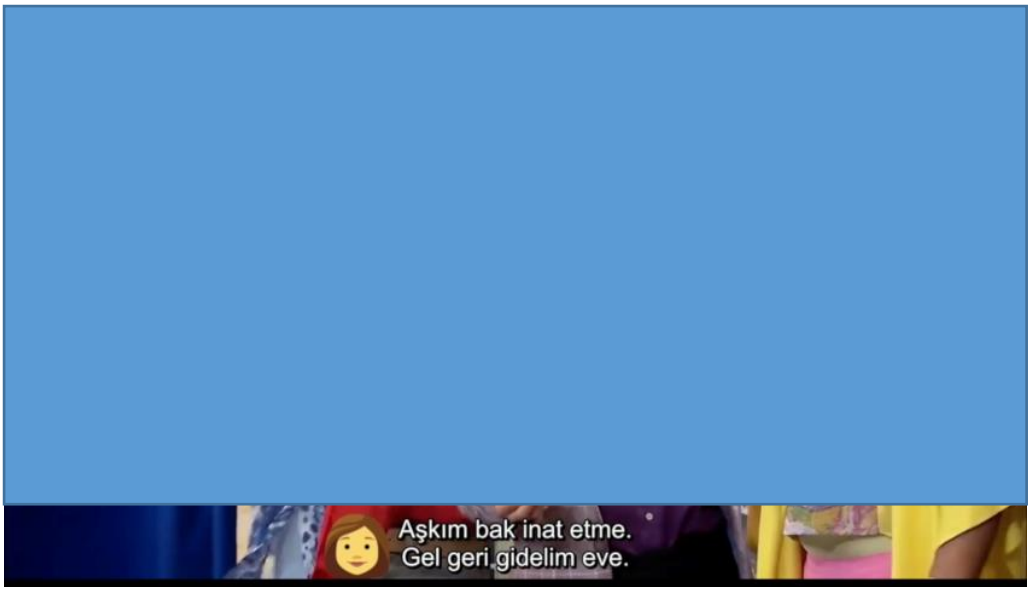

Figure 6.11: Emoticons representing paralinguistic information

As can be seen in the above screenshot, the dimensions of the emoticon were in proportion to the size of the subtitles and were kept the same throughout the clip for consistency's sake. If the actor continued to speak in the same manner, i.e. as a man or as a woman, over consecutive subtitles, the emoticon was only presented at the beginning of the series of subtitles and a new one only appeared when there was a switch in the way in which they were speaking. The clip involves the presence of four characters, and it is relatively obvious who is speaking because of the camera angles and the use of medium shots that focus on the speaker. Yet, on a few occasions when there was a need to distinguish between two speakers, as all the subtitles were white and centre-positioned, a dash was used before the relevant subtitle to indicate a change of speaker. There were barely any sound effects that needed to be indicated, which helped to keep the subtitles fairly straightforward and gave the respondents the opportunity to focus their attention on the strategy being tested.

As was the case of the use of icons to identify sound effects (Section 6.5.3.2), emoticons could not be produced or simulated with any subtitling software, whether commercial or freeware. The needed emoticons were therefore

downloaded from the internet and edited with PicMonkey to remove the dark background and make it transparent. Once this had been completed, the emoticons were then inserted into the clip as a new layer, timed and positioned in the right place with the help of iMovie. Finally, the clip was quality-checked to ensure that the emoticons were clearly visible on screen and that they appeared in a synchronous manner with the subtitles. The same set of technical parameters as indicated in Section 6.4 was also applied in the case of this clip, and the subtitles were presented verbatim unless they exceeded the 17 cps, which is the threshold allowed in exceptional conditions.

6.5.4.2. Use of labels

The second method explored to reflect paralinguistic information on screen took the form of descriptive labels, with the text in brackets, to indicate whether it was a *female voice* or a *male voice*. Labels were placed at the beginning of the relevant subtitles so as to let the viewers know the way in which the dialogue was being uttered right before they started reading the actual subtitles, as shown in Figure 6.12:

Figure 6.12: Labels to describe paralinguistic information

Because of the textual nature of these labels, which appeared synchronously with the subtitles and were always placed in front of them, the freeware Aegisub was used to create and timed them so that they appeared at the same time as the subtitles. In effect, they were an integral part of the subtitles and shared the same font properties. Rather than simply stating ‘male’ or ‘female’ in the labels, a more detailed explanation was given so as to increase the clarity of the information: e.g. ‘female voice’. The matter-of-fact implication of such an approach was that these more detailed, lengthier labels risked forcing the participants’ reading speed, which in turn might have required the editing down of the actual dialogue on occasions in which the subtitle display rates would otherwise have been too high.

6.6. Questionnaires

As part of this research project, two questionnaires were designed and developed. The first aimed to gather data on the respondents’ personal details, viewing habits and knowledge of, and experience with, accessibility in general, and subtitling in particular. The second questionnaire was to gauge the participants’ likes and dislikes vis-à-vis the various SDH strategies to which they had been exposed while watching the clips.

Online data collection was not an option on this occasion as the participants needed to be present in a room in order to watch the videos and experience the various strategies before submitting their preferences. For this reason, it was decided that both questionnaires were to be distributed as hard-copies before the presentation of the clips so that they would have ample time to read all the questions before the experiment. Owing to the potential difficulties that many hard-of-hearing participants might experience when filling out the questionnaires, extra attention was paid to the design of the questionnaires, their layout (type and size of font, use of pictures and emoticons etc.) and the structure of the questions, which were formulated as concisely and clearly as possible. The interviews were conducted with the help of a sign language interpreter who was constantly present during the whole course of interviews.

6.6.1. Questionnaire on personal details[2]

The questionnaire on the respondents' personal information was adapted from the questionnaire developed and employed in the DTV4ALL initiative (Romero-Fresco 2015). In this project, the questionnaire was mainly designed to investigate the participants' preferences and views on the subtitles they were accustomed to watch. The main objective was to evaluate their quality and detect any possible issues requiring further attention. However, since there was no SDH on Turkish TV at the time this research was being conducted and the participants taking part in the experiment did not have much experience of SDH at all, the DTV4ALL questions designed to ascertain the viewers' attitudes towards their previous exposure to SDH were deemed not to be relevant to the present project. The principal purpose of this project's personal questionnaire was to collect data on sociocultural factors that might possibly affect their preferences, such as their age or educational background. The questionnaire consisted of 30 questions grouped in three distinct parts: (1) personal details, (2) TV habits and (3) awareness of accessibility/subtitling.

The first section of the questionnaire contained 14 questions and focused on the participants' personal details such as their age, gender, educational background, occupation etc., as well as on their hearing impairment, e.g. level of hearing loss, age at which the impairment started, language of communication etc. All the questions in this section were close-ended and the respondents were required to answer them by ticking off one or more alternatives. Two of the questions, three (on the level of education) and 12 (on the membership of an association), were designed so as to give the participants the opportunity to formulate their own answers if none of the options provided was suitable. This first section of the questionnaire was pretty much the same as the one used in the DTV4ALL project.

The second part of the questionnaire was made up of six close-ended questions aimed to ascertain the participants' viewing habits such as when they

[2] A copy of the complete questionnaire in its original Turkish and its English translation can be found in Appendix 2 and Appendix 1 respectively.

usually watch TV, which types of programme, how many hours a day and the like. In addition to compiling data on the factors that might have had an impact on the participants' preferences, these questions were also important as they served to gather information on respondents' TV habits in Turkey in general, on which very few studies have been conducted to date. Furthermore, as logistically it is highly unlikely that SDH will be provided for every single audiovisual programme in Turkey once it begins to be offered, it was crucial at this stage to find out about the participants' viewing habits and preferences. With this information in hand, and anticipating a lack of financial resources that would allow the subtitling of all programmes broadcast on television, it will be easier to target the productions that should be given priority when SDH does become more visible in the Turkish mediascape. In the DTV4ALL project, these questions were followed by others centred on how respondents made use of the subtitles provided on TV, on whether SDH availability affected their choice of programmes etc. These questions were eliminated from this questionnaire for the reasons already explained.

The third and last part of the questionnaire dealt with the respondents' knowledge of accessibility to information and to subtitles in general, and to SDH in particular. It was composed of 10 questions, all of which, except for one, were close-ended and required the respondents to tick one option or more. The first two questions were intended to ascertain whether the respondents knew their rights to access information and any accessibility services, while the remaining questions focused on their experience with subtitles and SDH. Some of the questions enquired whether they had watched any programmes with subtitles, what kind of subtitles these were, how helpful they proved to be and the type of difficulties they experienced. Given the fact that, at the time this questionnaire was prepared, the only media accessibility services offered to the hearing-impaired were SDH and SLI on a couple of online TV channels, respondents were requested to rate and offer their views on these subtitles if they had watched any of these programmes.

6.6.2. Questionnaire on viewers' preferences[3]

The second questionnaire was developed to ascertain the respondents' preferences concerning the various SDH strategies that they had been exposed to during the experiment. The survey consisted of a total of 11 questions, divided into the following four parts: (1) four questions on speaker identification, (2) two questions on subtitle display rates and reading speeds, (3) three questions on the presentation of sound information and (4) two questions on the presentation of paralinguistic information on screen. As in the case of the questionnaire developed to ascertain the respondents' personal details, due attention was paid to the design of the questionnaire and the logical progression of the questions so as to facilitate the understanding of the questions and to allow respondents to express their preferences in an easy and unambiguous manner. At the beginning of the questionnaire, all the participants were presented with an introductory note including information about the aims and objectives of the study, its importance and the procedure to be followed during the experiment.

The answers to most questions were graded according to the Likert scale with a set of values ranging from 1 (I don't like at all) to 5 (I like a lot), thus enabling the participants to rate the solutions they had watched by simply ticking the number they considered appropriate. Given the respondents' expected relatively low level of reading skills, two emoticons representing a sad face ☹ and happy one ☺, positioned at the two ends of a cline, were also employed as visual aids, in an attempt to help them understand the scale as straightforwardly as possible and to indicate their preferences easily and swiftly. Another measure taken to help respondents in the process was to add colourful screenshots illustrating the relevant method they were evaluating, as shown in Figure 6.13:

[3] A copy of the complete questionnaire, in its original Turkish and its English translation, can be found in Appendix 4 and Appendix 3 respectively.

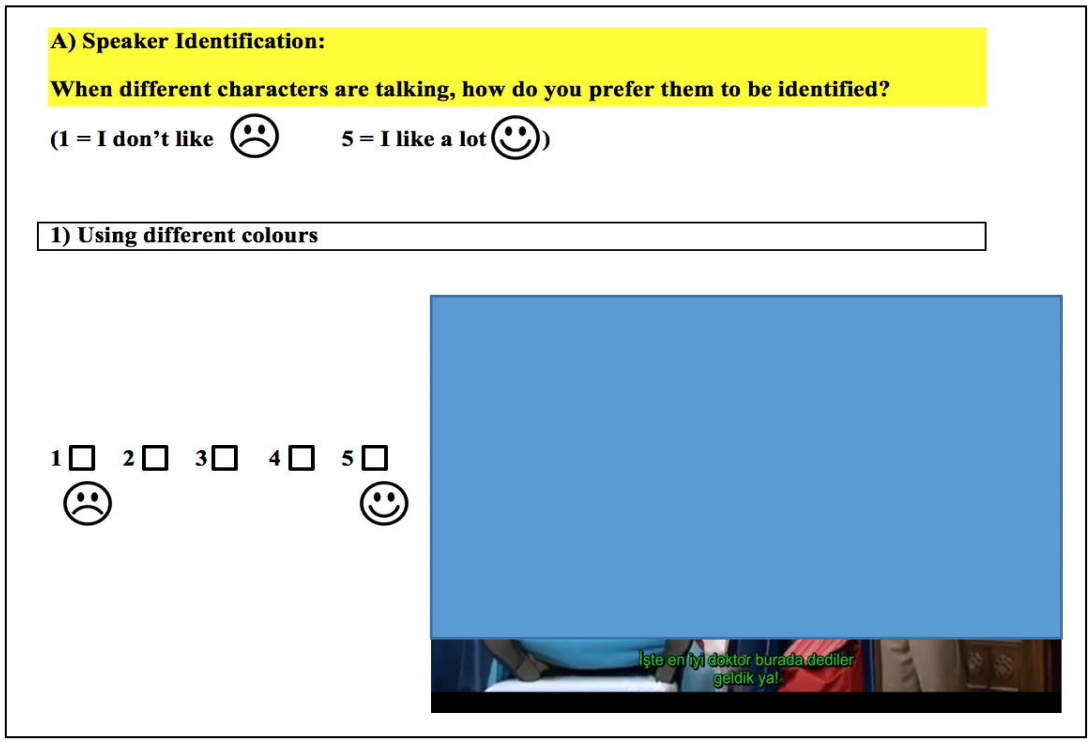

Figure 6.13: Questionnaire – preferences over speaker identification

The respondents were asked to indicate their preferences and rate the various solutions they had been exposed to only after they had watched all the strategies, that is to say, two to four strategies under each of the four categories being tested. Relevant screenshots from the different clips were incorporated and added to the questions, as shown in Figure 6.13 above, to provide the respondents with a visual reminder and to refresh their memory as to the strategy that they were being asked to evaluate. All these steps were taken so as to ease the process of reading and completing the questionnaire. The ultimate aim was to help the participants to concentrate fully on the strategy being assessed and to facilitate the way in which they provided their feedback, mitigating any potential struggle due to misunderstanding the questions or confusing layout.

Worthy of note are questions B-1 and B-2 regarding the enjoyment of verbatim versus edited subtitles. All strategies were clearly identified in the experimental videos and the questionnaire so that the participants knew exactly the method to which they were being exposed, except for the verbatim and edited sets of subtitles. In this case, participants were not informed of the variable being

tested as it was felt that adding such information – i.e. whether the subtitles were verbatim or edited – might impact negatively on their expectations concerning their level of reading difficulty, thus affecting their preferences. The two sets of subtitles were therefore only named as '1. Video' and '2. Video', as displayed in Figure 6.14, so that the participants would not have any preconceptions and could freely decide on which set of subtitles they found most helpful:

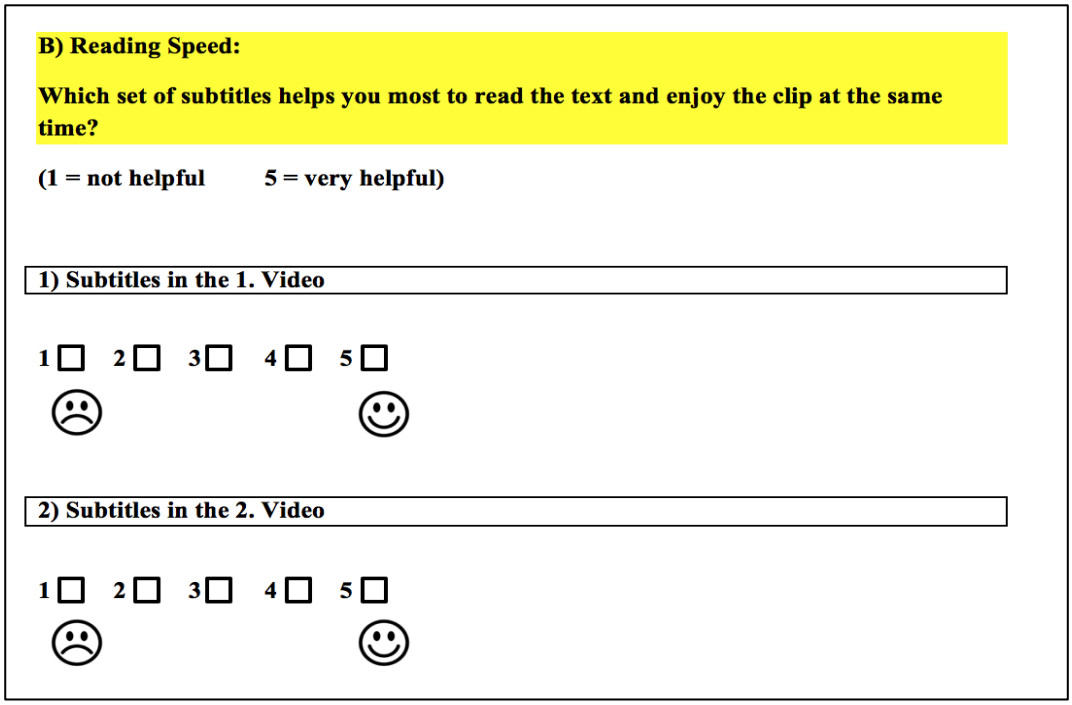

Figure 6.14: Question – preferences over verbatim vs. edited subtitles

6.7. Interviews

After the two questionnaires had been completed, semi-structured interviews were conducted with four participants randomly selected from among those who had shown an interest in taking part in these interviews. The main aim of this activity was to provide them with an opportunity to express themselves freely and in their own words. As the objective was to gain greater insight into the information already gathered through the questionnaires, the pre-prepared questions drafted to guide the interview process addressed virtually the same topics as the questionnaire.

The interviews consisted of 40 pre-prepared guiding questions divided into seven categories, namely (1) TV viewing habits, (2) previous knowledge of, and exposure to, SDH, (3) speaker identification, (4) preference for verbatim or edited subtitles, (5) sound information, (6) paralinguistic information and (7) general comments. The questions were not strictly followed and new questions were asked during the course of the interviews, depending on the answers provided by the participants.

The first cluster of questions dealt with the respondents' TV viewing habits and started by enquiring as to the importance of TV in their lives. The first three questions required the interviewees to rate the significance of TV in their lives and in the lives of other deaf and hard-of-hearing people by using a scale of seven points, where one is 'not very important' and seven is 'very important'. This scale was employed so that the answers given by the interviewees could easily be compared. Following these questions, the participants were asked to provide information on how often they watched TV and for how many hours, as well as on their favourite programmes. The questions that followed focused on accessibility matters such as how they generally watch TV and how difficult it is for them to watch TV programmes without accessibility services. Their opinion on programmes with TSL was also asked. These were the main pre-prepared questions addressed during the course of the interview, although some others were also prepared and were potentially ready to be used depending on the answers given by the respondents: e.g. What are the most difficult aspects of watching TV without accessibility measures? How do you feel when you do not understand the information?

The second category of questions aimed to reveal the participants' opinions about the SDH provided in this experiment. They were asked whether this had been the first time they had watched a programme with SDH and whether they knew the differences between standard subtitles and SDH. They also responded to questions centred on how much they had enjoyed watching the clips with SDH in the experiment and how helpful and instrumental the subtitles had been to their understanding of the message. The last topics covered under this category focused on the value of SDH as a service to gain greater access

to TV programmes and on the potential benefits of SDH for improving the reading skills of the hearing-impaired, and they were also asked whether they would be inclined to watch more TV if a greater number of audiovisual programmes were to be provided with SDH.

The next questions were designed to gauge the respondents' opinions on the various solutions they had been exposed to while testing different ways of indicating speaker identification, sound information and paralinguistic information, as well as when confronted with verbatim and edited subtitles. Since the interviews were conducted after all the questionnaires had been completed, the interviewees were provided with the answers they had given in the questionnaires so that they could elaborate further on their preferences and explain the reasons behind their choices. When appropriate, and as some participants requested, they were given the opportunity of watching a few seconds of some of the excerpts again so that they could refresh their memory. The same pre-prepared questions were asked in all of the categories and in the same order, apart from the variable 'verbatim vs. edited' subtitles.

In the case of the three categories (i.e. indication of character identification, sound information and paralinguistic information), the participants were first asked to provide more details on their choices and to spell out the features they liked most about their preferred solution. They were, then, prompted to elaborate further on the reasons why they had not enjoyed the other solutions. Immediately afterwards, they were asked to rate the importance of the relevant parameter for their understanding of the plot on a scale from one to 10, where one stood for 'not important at all' and 10 meant 'very important'. This was asked to investigate the respondents' opinions concerning which aspect of the SDH (speaker identification, sound information, etc.) they perceived as the most crucial to their understanding. By making use of these data, the subtitlers would be able to make informed decisions when the limitations (temporal/spatial) of the AV materials did not allow them to incorporate all the aspects in the subtitles. In the cases where the respondents had given the same rating to different solutions in the questionnaire, the interview was used as a means of pursuing the issue further and trying to gauge whether any of the options was in

fact the one they really preferred. On occasions, the respondents were encouraged to make a choice by selecting only one of the various options.

When it came to the category of verbatim vs. edited subtitles, the interviewees were also asked to elaborate on their preferences. Their opinion of the subtitle display rates implemented in the clips was recorded, and they were asked if they had struggled to read the subtitles and watch the images at the same time. As the nature of the subtitles had been withheld from them during the experiment, it was only during the interview that they were informed as to whether their choice was for the verbatim or for the edited subtitles. They were also asked if they had actually realised the difference between these two sets of subtitles by themselves. The discussion then centred on whether they considered edited subtitles to be a form of censorship or not, and their opinion was sought as to whether they preferred faster, verbatim subtitles or slower, edited subtitles.

At the end of the interview, the participants were requested to provide their overall opinion on the importance of SDH in society. Given that it is highly unlikely that all programmes will come accompanied with Turkish SDH in the near future, interviewees were given the opportunity to mention the audiovisual programmes they would like to see subtitled first and to indicate the times of the day at which they would prefer to see these programmes broadcast. Lastly, they were asked if there was anything else they wanted to add and had not been covered during their interview.

6.8. Ethical Approval

As a registered student at University College London, I was required to obtain ethical approval from UCL's Research Ethics Committee prior to conducting the experiment. Since the project did not involve any children or vulnerable adults, it did not require a Disclosure and Barring Service check, and the application was therefore submitted to action by the Chair rather than to a full research committee review. As the research did not gather any sensitive data from the

participants and the data were completely anonymised, data protection registration was not a requirement either. An application form, including a summary of the research details, information on the research protocol and methodology, an information sheet for PhD research, an informed consent form and a copy of the two questionnaires were submitted for review by the Chair in November 2016. Full approval for the research was granted in December 2016. The ethical approval number given to the project was 9987/001.

CHAPTER 7

Main Findings and Discussion of Questionnaires

7.1. Introduction

In this chapter, further insights regarding the implementation of the experiment and the challenges encountered during the process are discussed. After this, the data gathered from the experiments will be analysed and evaluated through frequencies. The data collected will be presented in three categories –personal information, viewing preferences and, lastly, preferences on subtitling strategies, the latter being the main focus of this study. The relationship between various independent variables (education, level of hearing loss, reading skills of the hearing-impaired, etc.) and dependent variables (the participants' preferences regarding the various SDH techniques tested) will be displayed and then analysed. Since the dependent variables in the study are of an ordinal nature and are not normally distributed, the association between the dependent and independent variables will be tested through non-parametric tests (Kendall's tau b, Spearman's rho), which measure the strength and direction of any significant relationship, and the use of which is also supported by Murray (2013) and Subedi (2016) for Likert data. The detected significant relationships between the dependent and independent variables will be highlighted and then this association will be examined qualitatively in more depth through cross tabulation.

Since the respondents wanted to show their appreciation that something was being done for them, they were generally very complimentary and tended to like all the proposals.

7.2. Implementation of the experiment

Since SDH in the Turkish mediascape was not present on TV at the time this experiment was implemented and the vast majority of Turkish deaf and HoH viewers did not have any experience of this kind of subtitle, it was therefore necessary first of all to expose the participants to different SDH techniques and give them the opportunity to experience various techniques in order to explore their preferences. This ruled out the possibility of gathering data by disseminating the questionnaires via emails or ordinary mail and compelled the researcher to implement the study by first presenting different videos incorporating different SDH strategies, and then collecting data on the participants' preferences with regard to the strategies they had been exposed to. This also dramatically increased the time required to implement the study and made the task of recruiting large numbers of participants very arduous. The contributors needed to spend a considerable amount of time to complete the experiment, which made arranging a suitable time for them particularly difficult. The fact this type of accessibility service was not available to them and their full access to TV was rather limited with only a couple of programmes presented with TSL affected their overall attitude to the strategies presented during the experiments in a positive way in that they were generally very complimentary and tended to like the strategies in general. Furthermore, they wanted to show appreciation that the researcher was trying to do something for their benefit by staying positive and avoiding negative remarks about the strategies. The researcher therefore reminded them that their true insights and preferences were required to build a set of guidelines that would hopefully lead to subtitles that really catered to their needs and preferences.

With the aim of recruiting participants, several deaf associations were visited personally by the researcher and contacted through their Facebook pages. It was soon realised that the associations did not generally reply to the messages posted on their Facebook accounts, and the researcher therefore focused more on personal visits to these associations to explain the research aims and convince them to take part in the study. However, personal visits did not initially

yield many results since hearing-impaired people were reluctant to participate. In the first visit to a deaf association in Konya, language and trust appeared as major barriers in the way of communication with the hearing-impaired individuals. They were unwilling to contribute and suspicious of the intent of the study, due largely to prior bad experiences with some other studies as well as a fear that their impairment might be exploited. So as to overcome these initial barriers, I learned TSL at a level that was sufficient to act as an ice-breaker and explain the aims of the study and its potentially beneficial outcome for the wellbeing of the hearing-impaired population. Furthermore, with the aim of building trust, potential participants and associations were contacted through a third person, generally a sign language interpreter, whom they knew and trusted, to initiate the collaboration. The lack of communication and cooperation among the various deaf associations in different cities, sometimes even in the same city, was another factor that hindered the recruitment process since it was not possible to reach all the associations at the same time and promote the study through emails or posts on social media.

In the end, the experiment was conducted in four cities in Turkey (Ankara, Antalya, Denizli and Konya), with the help of the associations in these cities. I visited all these cities personally, first to promote awareness of the project and then to conduct the actual experiment. A sign language interpreter, either a professional supplied by the association or a relative of one of the participants, was present and assisted throughout the experiments by explaining the questions and the procedure to follow.

7.3. Personal information

A total of 37 participants took part in the experiment, the majority of whom (70.3%) were male and 29.7% female (Figure 7.1):

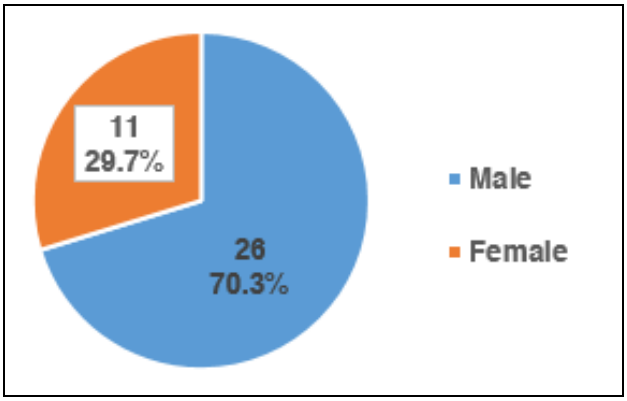

Figure 7.1: Participants by gender

It could be argued that the reason for this gender imbalance stemmed from the location – mostly the clubhouse of the associations – where the study was conducted. It was observed during the experiments that these places, probably due to cultural reasons, are generally male dominated, especially in two of the cities (Antalya and Konya), while deaf or HoH women typically spend their time at home with friends. Therefore, it was difficult to recruit more female participants to balance the numbers from a gender perspective. Although women sometimes come together in these clubhouses for special occasions, such occurrences did not help the researcher (male), since these are only-women events.

Most of the participants were in the 36-50 age bracket (43.2%), followed by the 18-35 age bracket (35.1%). There were only six participants between the ages of 51-65 and two above 66.

Age	Frequency	Percent
18-35	13	35.1
36-50	16	43.2
51-65	6	16.2
66+	2	5.4
Total	37	100.0

Table 7.1: Participants by age

Even though they were not equally distributed across all ages, it could be argued that the group most likely to consume AV productions – i.e. people between the ages of 18-50 – is adequately represented in the sample.

The distribution of the participants across education levels is in line with the distribution of the general deaf or HoH population living in Turkey, as shown in the Population and Housing Census (2011), in the sense that the number of hearing-impaired people falls dramatically at university level. As shown in Figure 7.2, the vast majority of the participants attended up to primary school level (35.1%) or high school (37.8%), while the percentage of university graduates decreased to a low 13.5% of the participants. In the category 'other', there were three junior high school graduates, one high school dropout and one associate degree graduate.

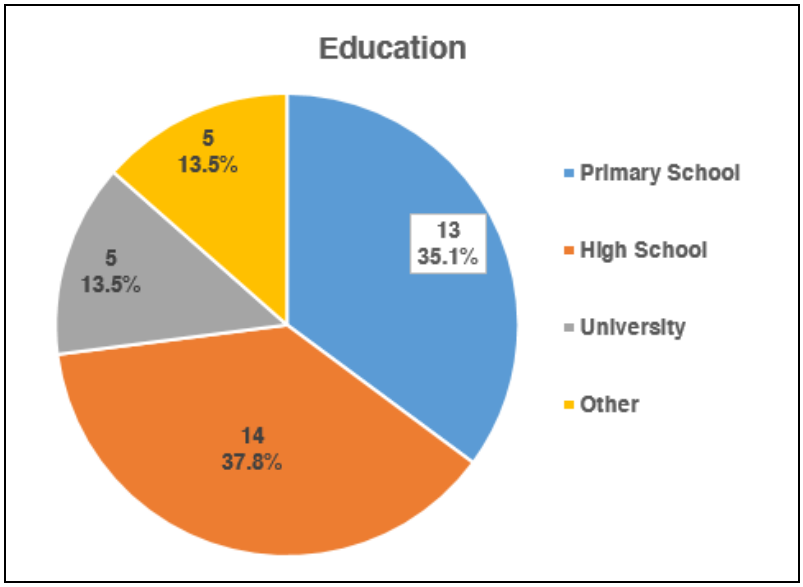

Figure 7.2: Participants by education

Concerning the type of school attended, 62.2% of the participants graduated from a deaf school and the rest completed a mainstream school.

With regard to work (Figure 7.3), only four (10.8%) out of all the participants were unemployed and the rest were either employed (45.9%) or retired (43.2%). This gives a positive image in terms of employment, which again is in line with the statistics given in the Population and Housing Census (2011).

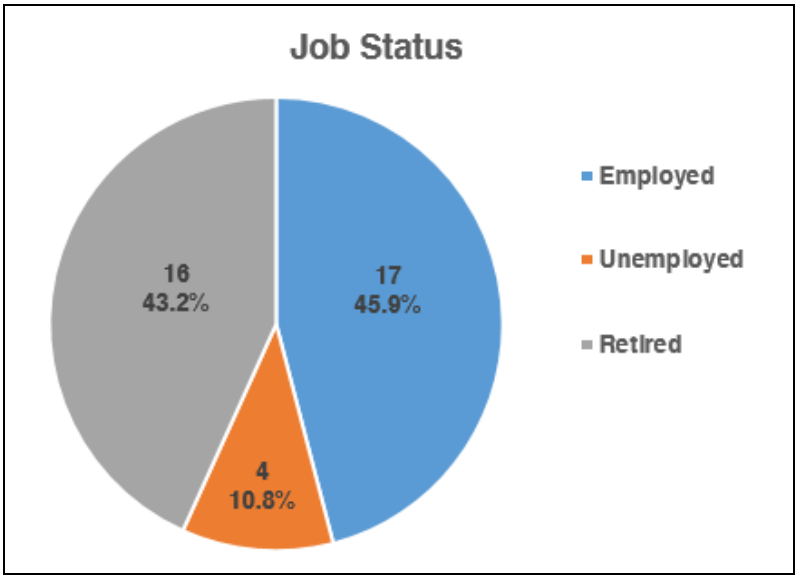

Figure 7.3: Job status of the participants

Concerning the degree of hearing impairment of the participants, there is an obvious imbalance between the number of self-declared deaf (31) and HoH (6) participants, as shown in Figure 7.4:

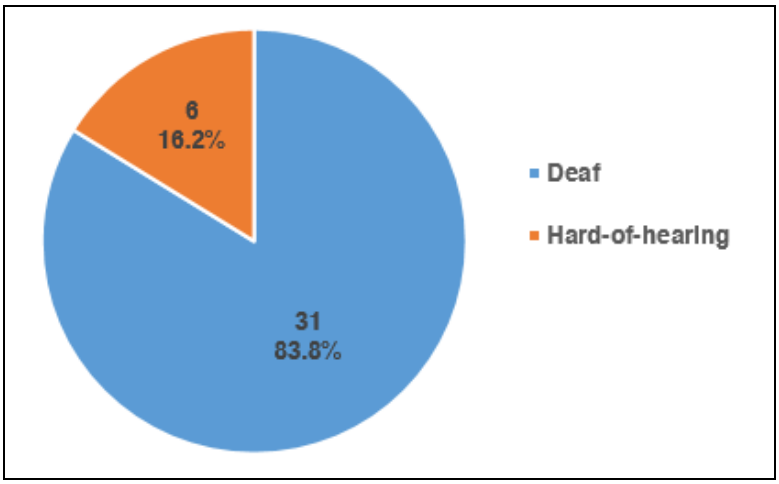

Figure 7.4: How they describe themselves – Deaf or HoH

The distinction between these two profiles was based on the participants' self-evaluation of themselves rather than on any objective criteria. In this sense, a few participants who considered themselves as deaf could easily have been evaluated as HoH since their level of hearing enabled them to communicate in the spoken language. It was observed, however, that the participants insisted on labelling themselves as deaf rather than HoH, a choice apparently based on economic rather than biological reasons. They did not seem to be particularly

aware of the biological distinction between the two conditions and insisted on declaring themselves deaf, arguably, for fear of losing their rights and benefits, and maybe even their jobs, as some of these social benefits are based on the degree and severity of the impairment.

Although this difference between the numbers of the deaf and the HoH groups made the analysis of the relationship between these two categories difficult, any seemingly significant relationship discovered between the two groups has been highlighted. In any case, this does not affect the main aim of the current study, which is to determine the deaf and HoH respondents' preferences regarding various SDH strategies rather than revealing the potential differences between them. Considering the fact that technology and the introduction of digital TV make the production of various types of SDH possible, the reality is that the industry has not taken advantage of this potential and, in countries where SDH is offered, only one set of subtitles is currently supplied to cater to the different profiles of hearing-impaired individuals. The same situation is expected to be replicated in Turkey, at least when SDH begins to be provided, and only one set of subtitles will be provided for both deaf and HoH individuals.

With regard to levels of hearing loss (Figure 7.5), a total of 62.1% of the respondents stated that they were either severely or profoundly deaf, followed by the participants who suffered from hearing loss at a moderate level (37.8%). None of the participants acknowledged that they were mildly deaf.

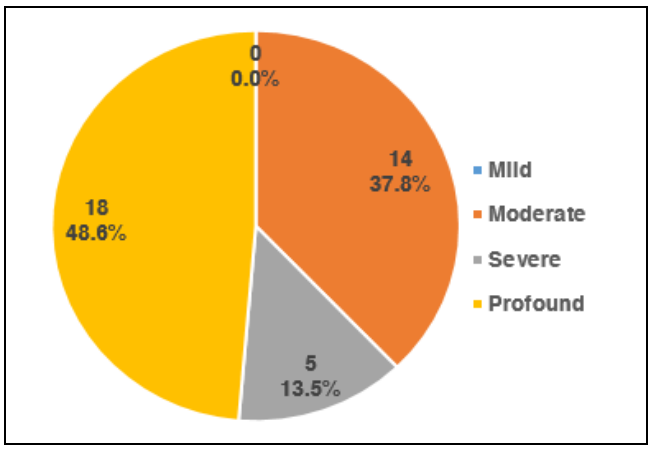

Figure 7.5: Participants by level of hearing loss

Although a considerable number of the participants (43.2%) had residual hearing, most of them stated that they did not have any residual hearing (56.8%) at all, as shown in Figure 7.6 below:

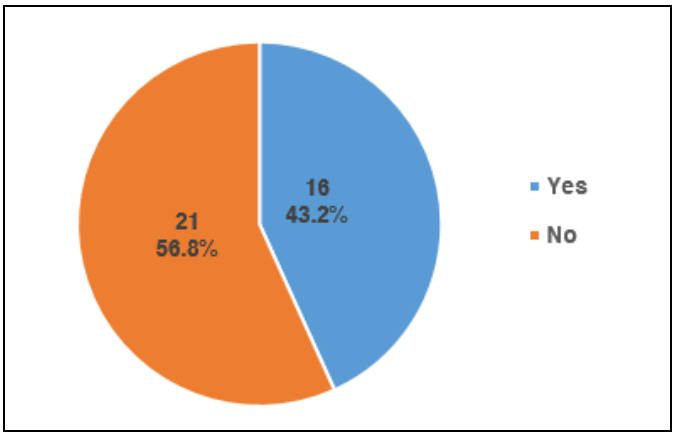

Figure 7.6: Residual hearing

As to the onset of hearing loss (Figure 7.7), 70% of the participants stated that they were prelingually deaf and either were born deaf (51.4%) or acquired their hearing loss before the critical age of two (18.9%), which prevented them from developing their language skills in Turkish. 24.3% of the participants acquired their hearing loss between the ages of two and 10 and only two participants (5.4%) developed their hearing loss after the age of 40. Lastly, none of the participants acquired a hearing loss between the ages of 11 and 40:

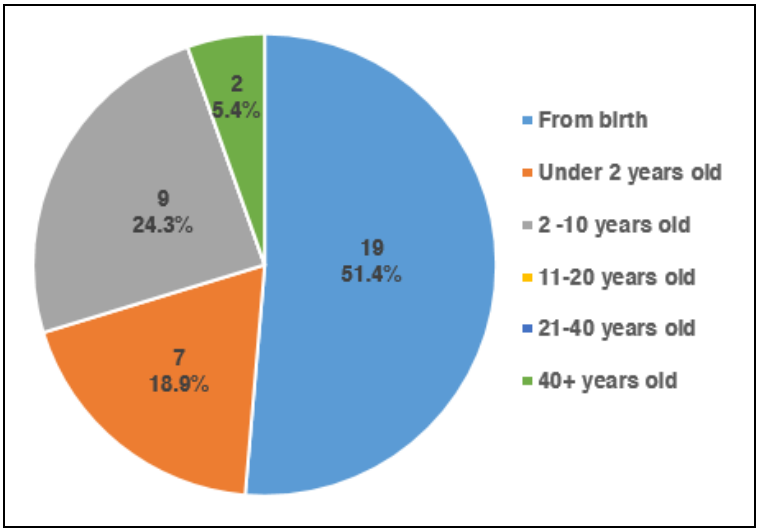

Figure 7.7: Onset of hearing loss

Given these figures, it is possible to demonstrate that in nearly all of the cases hearing loss was either from birth or caused by an illness or an accident, with only two participants' hearing loss being age-related. With regard to HAs, a large 70.3% of the participants affirmed that they did not use any HA and had not had a CI, as illustrated in Figure 7.8:

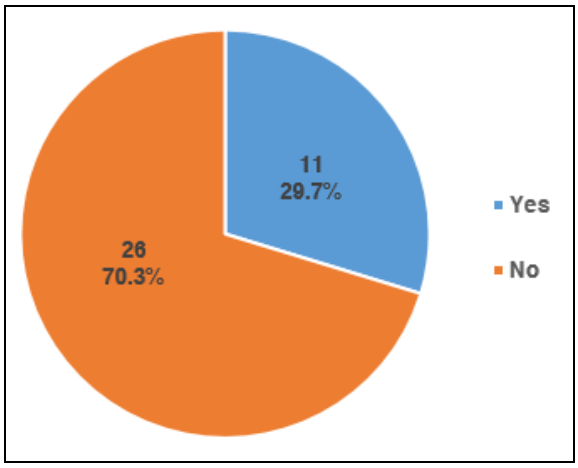

Figure 7.8: Hearing aids

Figure 7.9 below shows that a total of 83.8% of the participants knew TSL, of which 67.6% used it as their only way of communication, whilst 16.2% declared themselves to be bilingual. Only six participants stated their preferred way of communication to be spoken language:

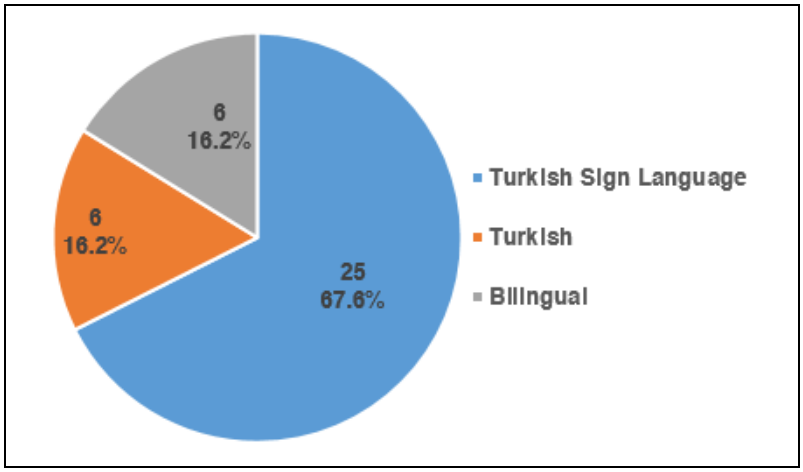

Figure 7.9: Preferred language of communication

The majority of the participants (56.7%) regarded their reading skills in Turkish either as fluent (24.3%) or very fluent (32.4%), whilst only 8.1% of the

participants indicated that their reading skills were inadequate. The remaining 35.1% described their reading skills as neither adequate nor fluent, as reflected in Figure 7.10:

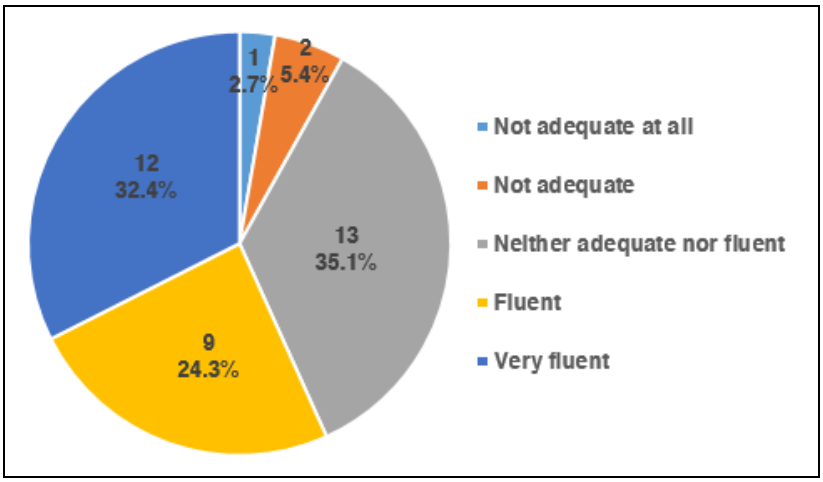

Figure 7.10: Reading skills in Turkish

Despite the majority being satisfied with their own level of reading, these indications were based on the respondents' personal evaluations. Nonetheless, during the implementation of the experiment it was observed that they generally needed the assistance of a sign language interpreter for at least some of the questions. When they were asked about how many hours a day they spent reading (Figure 7.11) – including newspapers, books, magazines, messages on phones etc. –, the vast majority of the respondents (86.4%) replied that they read less than two hours a day. Of those who read for under two hours a day, six participants declared not to read during the day at all. On the other hand, a small percentage of the participants (13.5%) spent three or more hours a day reading, as can be seen in Figure 7.11, below:

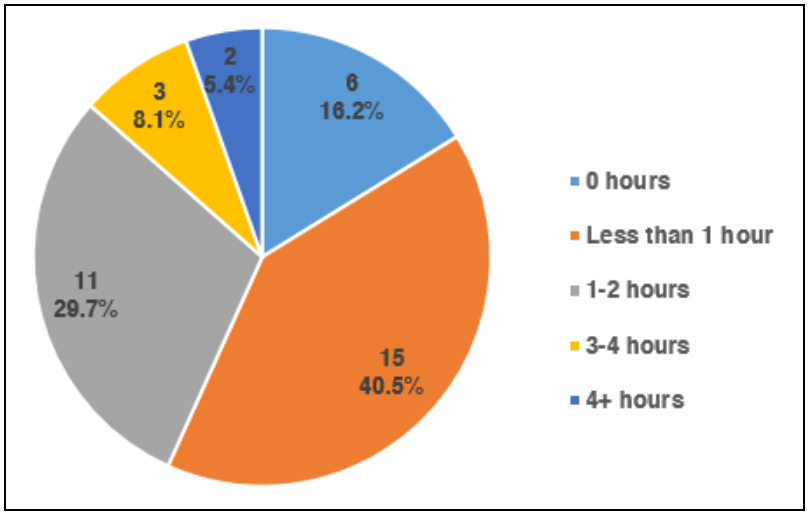

Figure 7.11: Hours spent reading per day

Considering the high figures of illiteracy (31.6%) and the low educational levels of hearing-impaired people in Turkey, as the Survey on Problems and Expectations of Disabled People (2010) shows, it would seem legitimate to assume that a large part of the hearing-impaired community is likely to experience problems in reading fleeting text on screen, and this should be taken into account when preparing SDH.

7.4. Viewing Preferences

Only 21.6% of the respondents stated that their daily TV watching consumption was less than an hour, with three of them (8.1%) claiming that they did not watch TV during the day. Most of the participants (62.1%), however, watched TV for between one and four hours a day. The remaining 16.2% indicated that they watched TV more than four hours a day, as illustrated in Figure 7.12 below. These numbers are well below the average daily viewing time provided by RTUK (2007) for the hearing-impaired: 4.5 hours on weekdays.

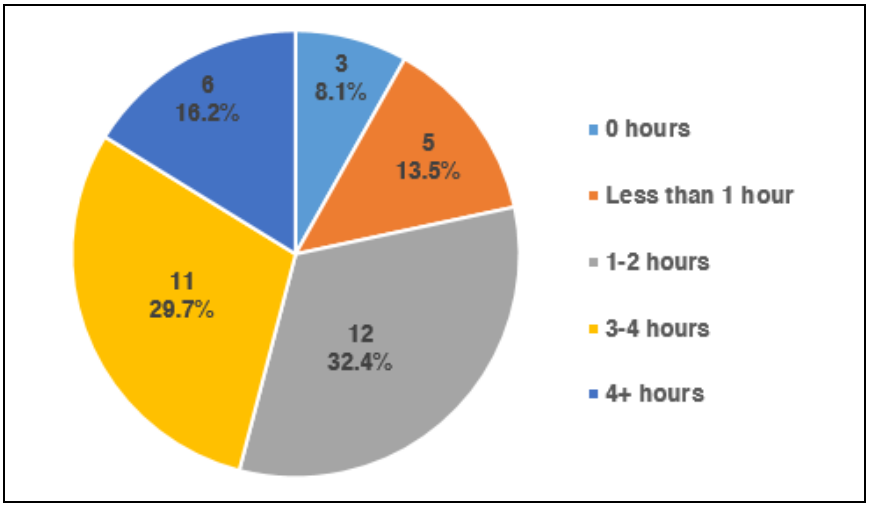

Figure 7.12: Hours spent watching TV per day

When asked about their preferred times when they usually watched TV during the day (Figure 7.13), the time bracket of 19:00-23:00, which is prime time in Turkey, was by far the most popular option (31 participants), followed by the 15:00-19:00 bracket, which was chosen by five respondents, as can be seen in Figure 7.13, below:

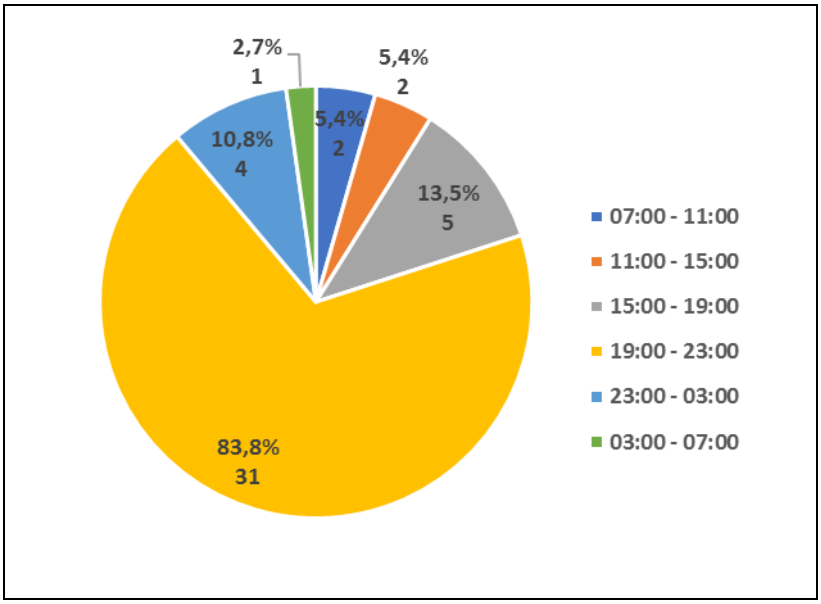

Figure 7.13: Times of the day the respondents usually watched TV

The results shown here are in line with the evidence provided by RTUK (2007), according to which people with disabilities tend to watch TV between 19:00 and 21:00 hours on weekdays. This is backed up by the demand of the participants that programmes broadcast during prime time should be accompanied by SDH.

As for the programmes they liked watching and wished were broadcast with SDH (Figure 7.14), the news was the most preferred option (31 participants), followed by movies and series (20 participants each) and sports programmes (19 participants). Documentaries (10 participants) and quiz shows (five participants) were at the bottom of their agenda, as can be seen in Figure 7.14, below:

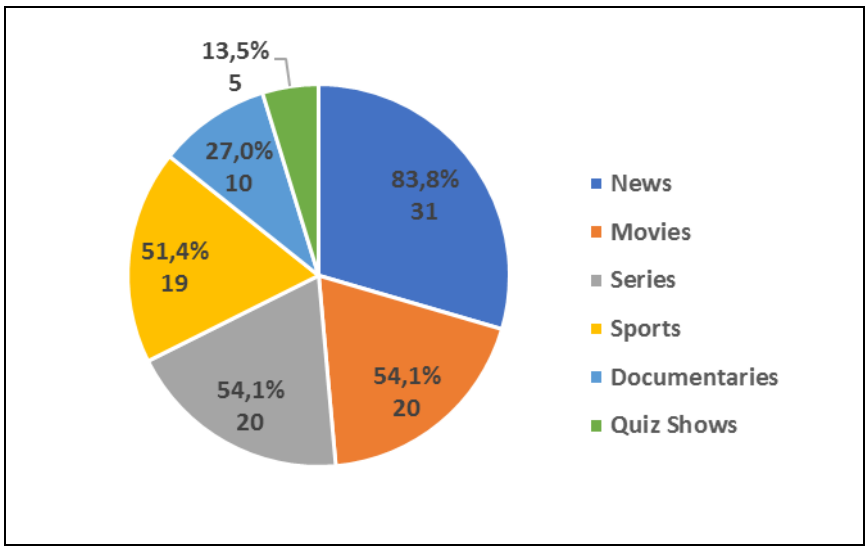

Figure 7.14: Programmes the respondents preferred watching

At the time this study was conducted, the only accessibility service provided in the country involved a few programmes with TSL offered on free TV by the channel TRT and FOX TV, of which many participants were not aware. Given the scarcity of accessible programmes, viewers have to make do with the inaccessible AVPs that are on offer on most TV stations and adopt their own strategies to enjoy them as they are.

As shown in Figure 7.15, the majority of respondents (27 individuals) stated that they tried to enjoy AV productions by only watching the visuals, while 14 of them asked their relatives or friends to translate the content of the programme in SiL for them and nine respondents stated that they only watched programmes with interlingual subtitles, i.e. foreign productions that have been subtitled into Turkish. The paradoxical outcome highlighted by this situation is that some Turkish hearing-impaired citizens are forced to watch only foreign programmes because of their disability and are totally excluded from national

productions because of the lack of accessible services. Yet, the scarcity of programmes provided with interlingual subtitles on free Turkish TV, in what is predominantly a dubbing country, and the inconvenience of constantly having to ask someone for help explain the inclination, confessed by most of the participants, to opt for only watching the visuals of the AVPs. The option only to watch programmes with SLI was only chosen three times, which can be justified by the distinctly small number of programmes that are broadcast with TSL. Only three individuals said that they used lip-reading to watch AV materials, so that it might be inferred that lip-reading is not generally used as an assistive strategy when in front of the TV set.

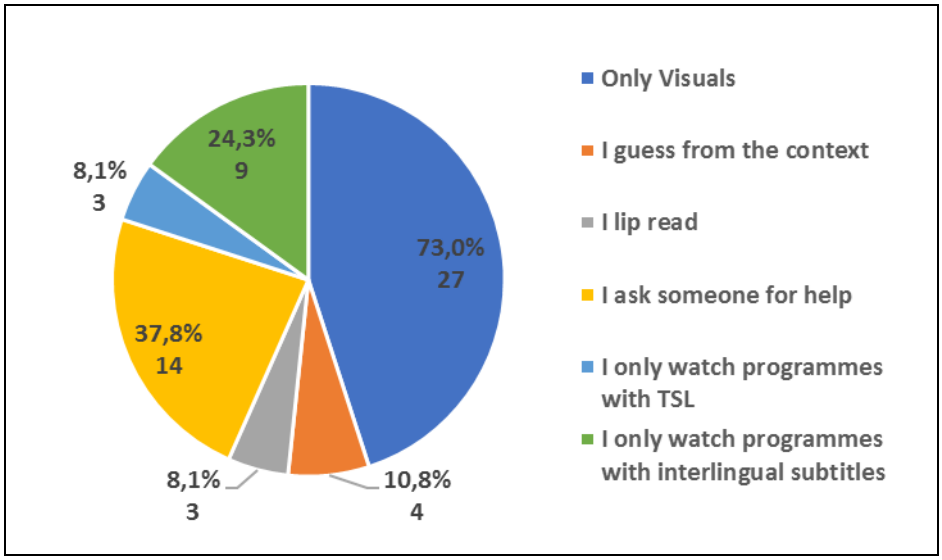

Figure 7.15: How respondents usually watch TV

When questioned about the technical devices they owned (Figure 7.16), almost all the participants confirmed that they received satellite TV (36), had access to the internet (33) and owned a mobile phone (30). Fewer people possessed a computer (19) or received terrestrial TV (8), while only six respondents stated that they subscribed to a paid broadcasting service like Tivibu or Digiturk, which indicates the respondents' difficulties (financial) in accessing paid broadcasting services despite their attraction to the provision of SDH. It is therefore crucial to provide SDH on free-to-air channels so as to obtain a truly egalitarian society.

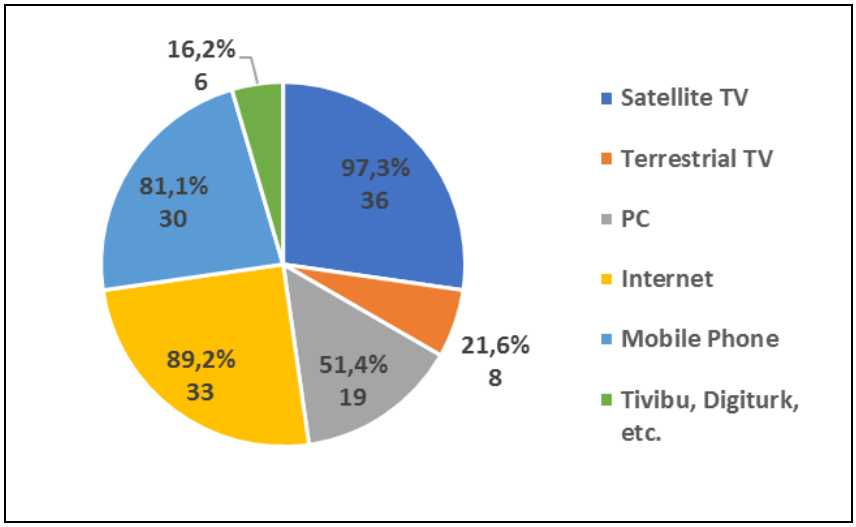

Figure 7.16: Technical devices respondents have at their disposal

When asked whether they knew how to turn on the subtitles/teletext on TV, most of the participants (62.2%) said that they did know how to activate the subtitles/teletext on their TV sets. Although the teletext system in Turkey is not used to providing SDH, it is generally known and used by most of the people in society for different purposes (accessing the weather forecast, news, etc.)

7.5. Accessibility and Subtitles

This section of the survey aims to explore the respondents' knowledge of accessibility services, particularly of SDH. As discussed in Chapter 3**,** accessibility in Turkey is generally understood from a physical perspective and associated with physical rather than a sensory disability. The respondents' answers to the question of whether they were familiar with their right to access information (Figure 7.17) corroborated this in that the majority of participants (67.6%) did not know their right to access information. Given the fact that SLI has traditionally been the only accessibility service available on public- and private-service Turkish TV, it was not surprising that SLI was the best known service among the participants (32 individuals), followed by SDH (10 individuals). Only one person in the study said that s/he was familiar with AD, and three respondents were unable to recognise any access service, as can be seen in Figure 7.17, below:

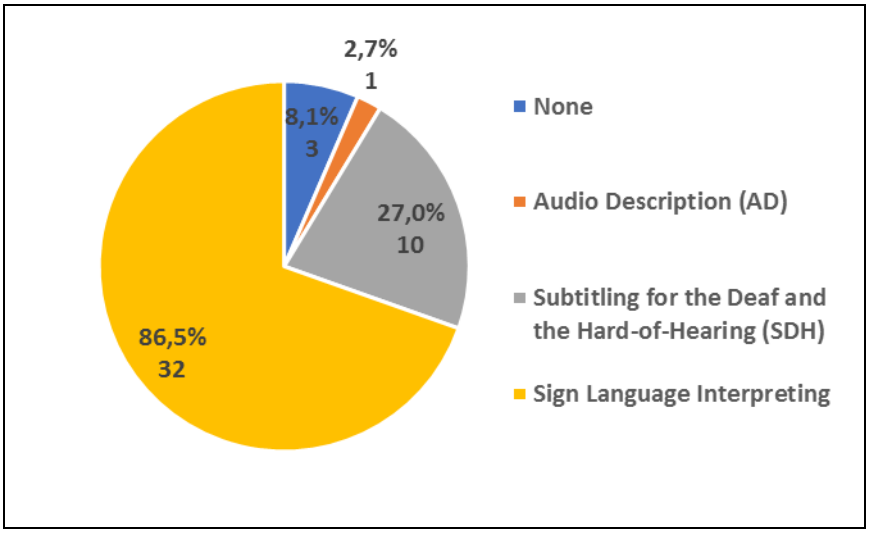

Figure 7.17: Accessibility services respondents were aware of

When asked about their exposure to subtitling, most of the participants (31) said that they had watched at least one subtitled programme in the past (Figure 7.18). Of these, three participants stated that they had never watched a subtitled programme but answered the following questions by focusing on the subtitles they had watched. For this reason, these three participants were also regarded as having watched programmes with subtitles and included in the overall total. Six respondents acknowledged that they had never watched a programme with subtitles.

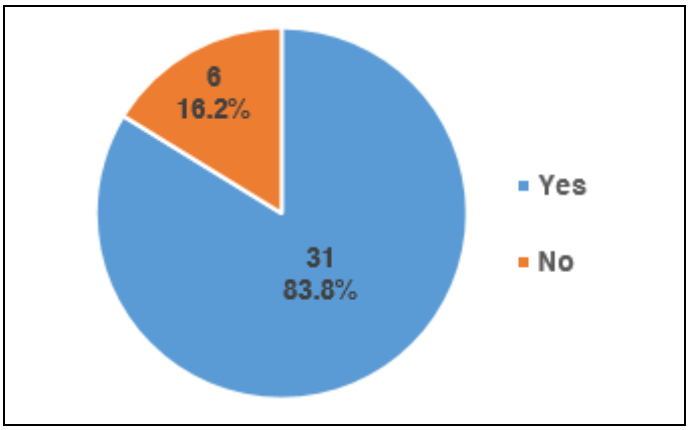

Figure 7.18: Respondents who had watched subtitled programmes before

Given that, at the time of writing, SDH is not yet being provided on free TV channels in Turkey, it is not surprising that the vast majority (87.1%) of respondents who had watched a subtitled programme indicated that the subtitles had been prepared for the hearing population rather than specifically

for the deaf and the HoH (Figure 7.19). Only five people claimed to have watched subtitles specially tailored for the hearing-impaired, which once again highlights the participants' overall lack of knowledge of SDH. This situation, in turn, underscores the importance of this study in terms of introducing SDH to the relevant communities as well as exploring their preferences.

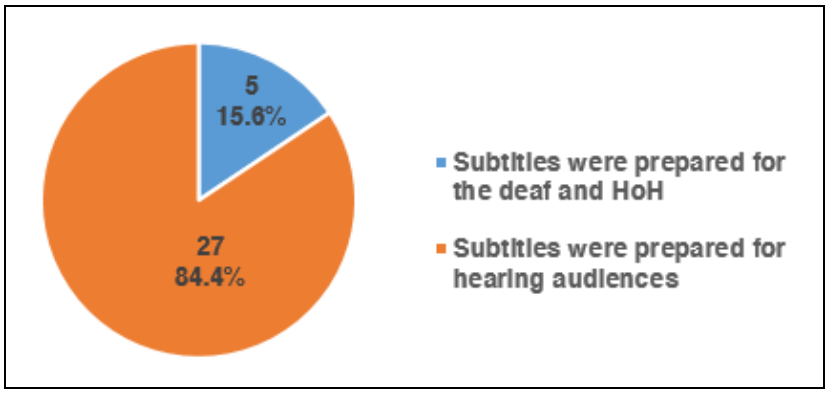

Figure 7.19: Type of subtitles respondents had watched

When asked to evaluate the helpfulness of the subtitles, 54.8% of the individuals who had watched subtitled programmes considered them helpful (29%) or very helpful (25.8%) for their understanding of the AVP, as shown in Figure 7.20 below. Only 9.7% of the respondents did not regard the subtitles as helpful, while 35.5% were neutral about the value of the subtitles.

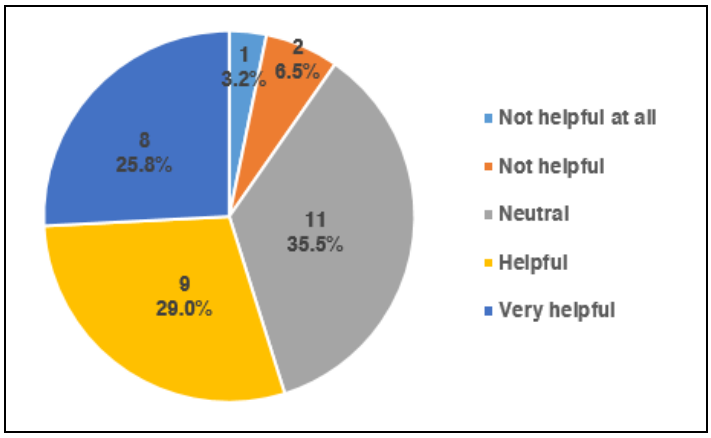

Figure 7.20: Level of helpfulness of the subtitles the respondents had watched

Although a small majority thought of subtitles as being helpful, the reality was that nearly half of the respondents did not have a positive attitude towards their use. As previously discussed, the reason for this might have been due to the

fact that, in most cases, the subtitles the participants had watched were the ones prepared for hearing audiences, which are clearly unsuitable for the communicative needs of the hearing-impaired. These results, thus, underscore both the potential helpfulness of subtitles, even interlingual ones, and the necessity to develop a new set of subtitles in Turkish which are specifically created to cater to the needs and preferences of the deaf and the HoH communities.

As depicted in Figure 7.21, most of the participants (21 out of 31) had experienced some degree of difficulty while watching subtitled AV productions, whilst only 10 of the respondents reported that they had never encountered any difficulties.

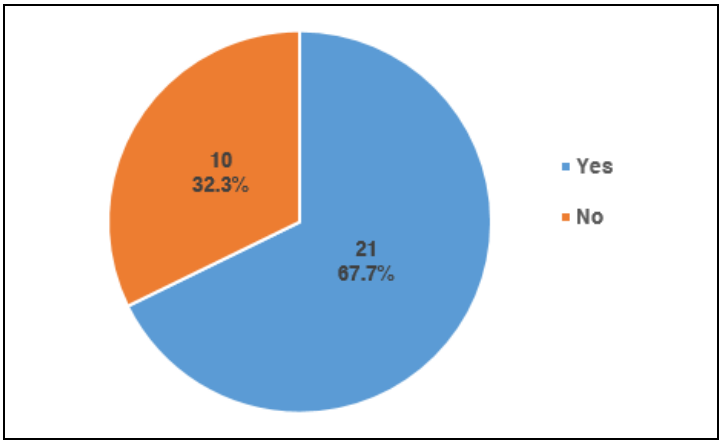

Figure 7.21: Difficulty in reading the subtitles the respondents had watched

All the respondents (21) who claimed to have experienced some difficulty (Figure 7.22) commented that this challenge stemmed from the fast display speed of the subtitles, followed by the difficult sentence structure (four times) and the illegibility of the text (twice):

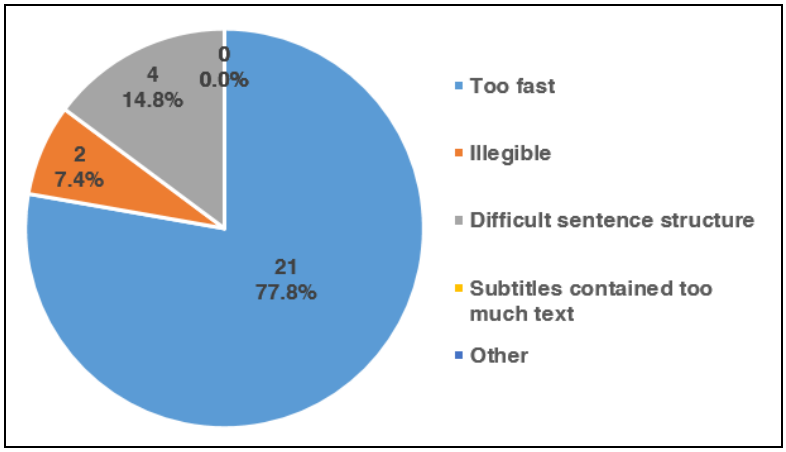

Figure 7.22: Reasons for having difficulty in reading subtitles

These results can be linked to the problems the deaf and the HoH people experience in reading text and also highlight the fact that special attention should be paid to the display rate and the sentence structure of the subtitles if they are to be communicated successfully for the Turkish deaf and HoH.

Lastly, although three channels (two private and one public) provide SDH, AD and SLI on the streaming programmes on their websites, the majority of the participants (61.1%) were not aware of these accessibility services (Figure 7.23). When considered together with the fact that nearly 40% of the respondents did not know how to activate teletext or subtitles, the importance of promoting and publicising the provision of SDH becomes evident, together with the need to teach the affected parties how to use the technology and activate closed subtitles.

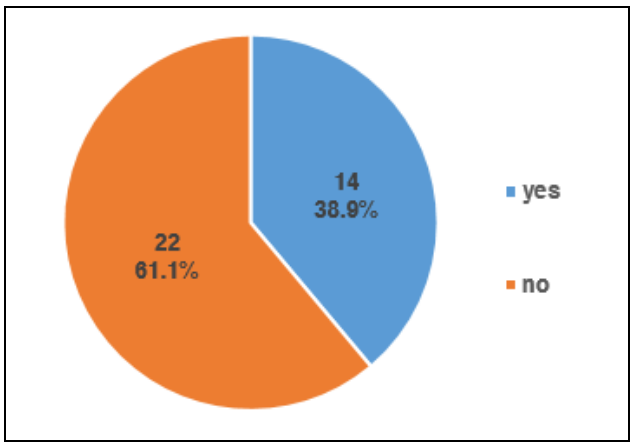

Figure 7.23: Knowledge of channels streaming programmes with accessibility measures

According to the 14 replies provided by the respondents who watch subtitles on the net, the most popular website is Kanal D [Channel D] visited by 11 people, followed by TRT (Turkish Radio and Television Corporation) and Star TV, both free and visited by three respondents, and Tivibu, a paid-for broadcasting service, visited by two participants. A total of 43% of the 14 individuals who watched subtitled programmes on these websites rated the subtitles as very helpful, while half of the respondents were neutral, and only one participant regarded the subtitles provided on these websites as not helpful at all (Figure 7.24):

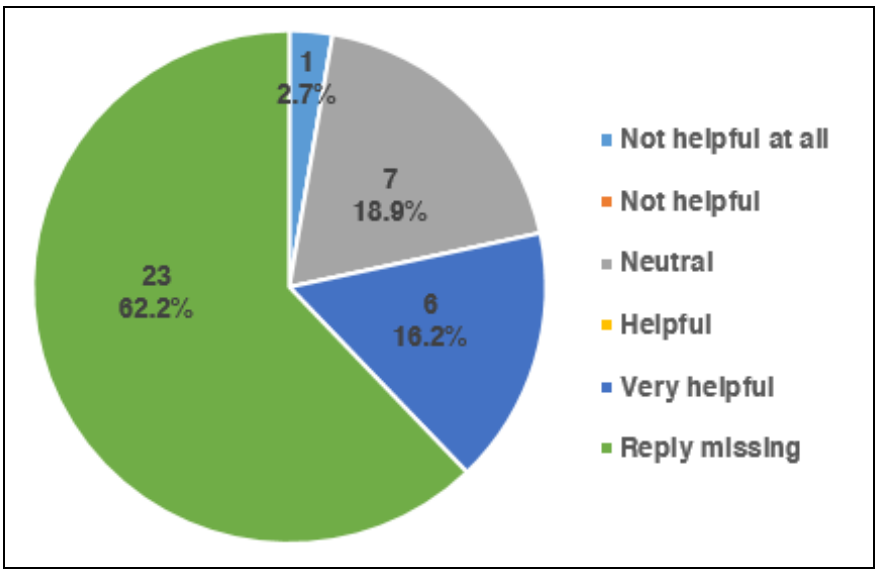

Figure 7.24: How helpful is SDH on the internet?

It can be inferred from these results that, although there was a mildly positive attitude towards these subtitles, there is still ample room for improvement if the subtitles are to earn the trust of this particular audience.

7.6. Viewers' Preferences Regarding SDH Strategies

In this section, the respondents' preferences are set out through frequencies, and all the tested SDH strategies are ranked in order of preference in line with the main aim of the study. The frequencies of the participants' preferences are displayed in clustered bar graphs so as to enable an easy comparison between the various strategies. After this discussion, any notable associations between

the independent variables (e.g. level of hearing impairment, reading skills, deaf or HoH, etc.) and the tested strategies are explored and illustrated through cross tabulation and bar graphs.

7.6.1. Character identification

Four different strategies to identify speakers were tested with the participants: (1) use of different colours, (2) placement of subtitles under the character who is speaking, (3) use of labels containing the names of the characters and (4) a combination of different colours and placing the subtitles under the relevant character.

Although the majority of the respondents liked all the strategies used to identify speakers, it is still possible to rank them in order of preference, as illustrated in Figure 7.25 below:

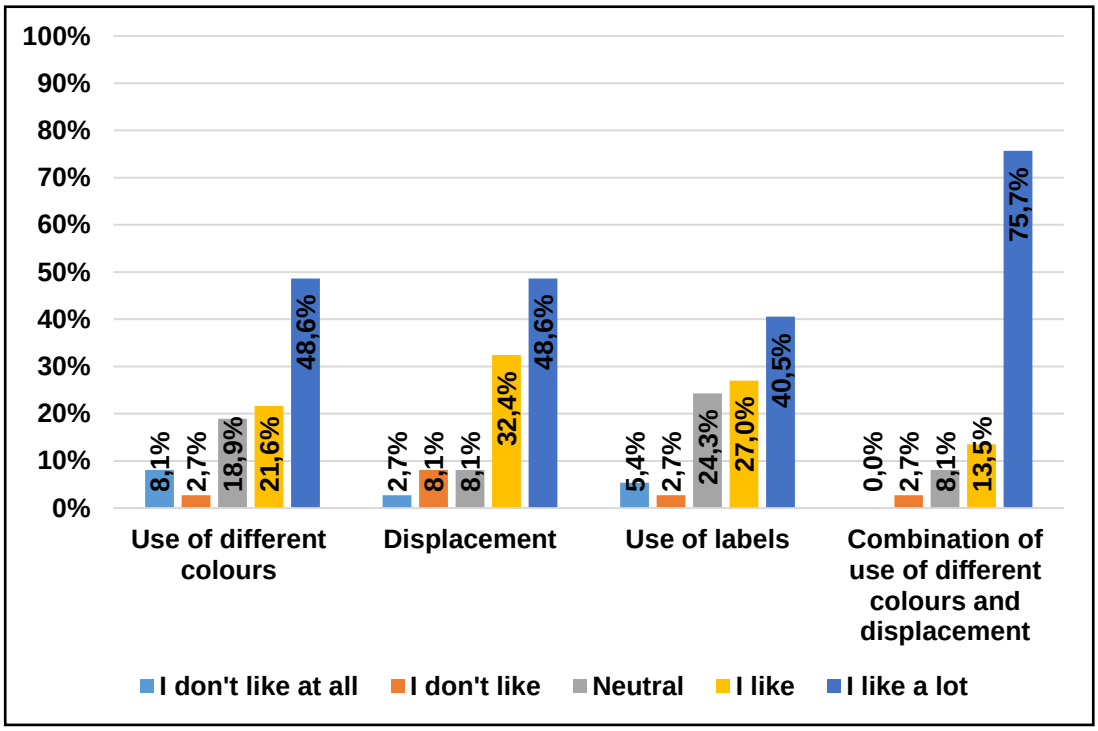

Figure 7.25: Respondents' preferences – character identification

The most preferred method of identifying the on-screen speakers was the combination of using different colours and displacing the subtitles, which was chosen by 89.2% of the participants. A low 8.1% of the respondents declared

themselves to be neutral and only one person claimed not to like the strategy. None of the participants chose the option ‘I don’t like at all’. This was also the strategy which was ‘liked a lot’ by the largest percentage of participants (75.7%). This strategy was closely followed by ‘placing subtitles close to the speaker’ which was liked by 81% of the respondents, of whom 48.6% claimed to ‘like a lot’. Only 10.8% did not like the strategy while 8.1% displayed a neutral attitude. The third and the fourth most preferred strategies were the ‘use of different colours’ (liked by 70.2%) and the ‘use of labels’ (liked by 67.5%) respectively.

It is therefore advised that, in order to identify characters, the use of a ‘combination of different colours and displacement of subtitles’ should be the first option employed by subtitlers. The remaining strategies could only be used under conditions which do not allow the use of the proposed approach (e.g. in a very crowded scene where characters speak rapidly, labels might be used to identify who is speaking). The order of strategies for character identification suggested is as follows:

1. a combination of the use of different colours and speaker-dependent placement of subtitles,
2. speaker-dependent placement of subtitles,
3. use of different colours,
4. use of labels.

As a result of the detailed analysis of the relationship between the independent variables and the respondents’ preferences, gender, education and whether the respondents had difficulty reading the subtitles or not exerted a significant influence over the participants’ preferences.

As shown in Table 7.2 with the various strategies tested, there appears to be a significant relationship between the gender of the participants and their evaluation of the strategy, ‘use of labels with the name of the characters’, as foregrounded by the calculations of both the Kendall rank correlation coefficient, or Kendall’s tau coefficient, and the Spearman's rank correlation coefficient, or

Spearman's rho, which show values of p<.010 and p<.008 respectively (highlighted in yellow). Given that gender is a categorical variable, the direction of the relationship is not meaningful.

			Use of different colours	Placement of subtitles under character speaking	Use of labels with name of character	Combination of different colours and displacement
Kendall's tau_b	Gender	Correlation Coefficient	-.146	.065	.400**	.089
		Sig. (2-tailed)	.345	.679	**.010**	.580
Spearman's rho	Gender	Correlation Coefficient	-.158	.069	.432**	.092
		Sig. (2-tailed)	.352	.685	**.008**	.587

Table 7.2: Relationship between gender and viewers' preferences – character identification

These results, displayed in Table 7.3 below, indicate that the preferred method for the male participants was a 'combination of the use of different colours and displacement', which was liked by 88.5% of the male respondents (in bold). The two strategies, 'use of labels' and 'combination of the use of different colours and displacement', were the strategies most preferred by the female respondents, both being chosen by 90.9% (in bold). Since a higher percentage of the female participants, 81.8% compared with 72.7%, stated that they 'liked a lot' the latter option, i.e. the combination of colours and placement, this appears to be the preferred strategy for this group of participants. A significant difference was detected between the males' and females' preferences regarding the 'use of labels' in that 90.9% of the females liked the strategy whilst the percentage decreased to 57.7% in the case of the male respondents.

	I don't like at all	**I don't like**	**Neutral**	**I like**	**I like a lot**
Use of different colours - Male	7.7%a	0.0%	19.2%	19.2%	53.8%
Use of different colours - Female	9.1%	9.1%	18.2%	27.3%	36.4%
Displacement of the subtitles - Male	3.8%	7.7%	7.7%	34.6%	46.2%
Displacement of the subtitles - Female	0.0%	9.1%	9.1%	27.3%	54.5%
Use of labels – Male	7.7%	3.8%	30.8%	30.8%	26.9%
Use of labels – Female	0.0%	0.0%	9.1%	**18.2%**	**72.7%**
Combination of use of different colours and displacement- Male	0.0%	3.8%	7.7%	**15.4%**	**73.1%**
Combination of use of different colours and displacement - Female	0.0%	0.0%	9.1%	**9.1%**	**81.8%**

Table 7.3: Viewers' preferences – character identification by gender

A meaningful relationship was also observed between the independent variable of ‘education’ and the ‘use of different colours’ to identify speakers, where a significance level below .05 could be discerned, as highlighted in Table 7.4 below. Since the independent variable can also be considered as ordinal, the negative direction of the relationship is also meaningful, which means that, as the level of education increases, the level of preference shown for the method decreases.

			Use of different colours	Placement of subtitles under character speaking	Use of labels with name of character	Combination of different colours and displacement
Kendall's tau_b	Education	Correlation Coefficient	-.318*	.096	.149	-.075
		Sig. (2-tailed)	**.027**	.508	.299	.618
Spearman's rho	Education	Correlation Coefficient	-.374*	.110	.175	-.086
		Sig. (2-tailed)	**.023**	.515	.300	.612

Table 7.4: Statistical analysis of the relationship between educational levels and strategies for character identification

As shown in Figure 7.26, the detailed examination of some of these relationships reveals that although the overall rate of preference for the ‘use of different colours’ does not decrease gradually, the percentage of those that chose the option ‘I like a lot’ interestingly decreases gradually, and sharply, from primary school (76.9%) to university level (0%). The participants’ choices in the ‘other’ group does not change the pattern.

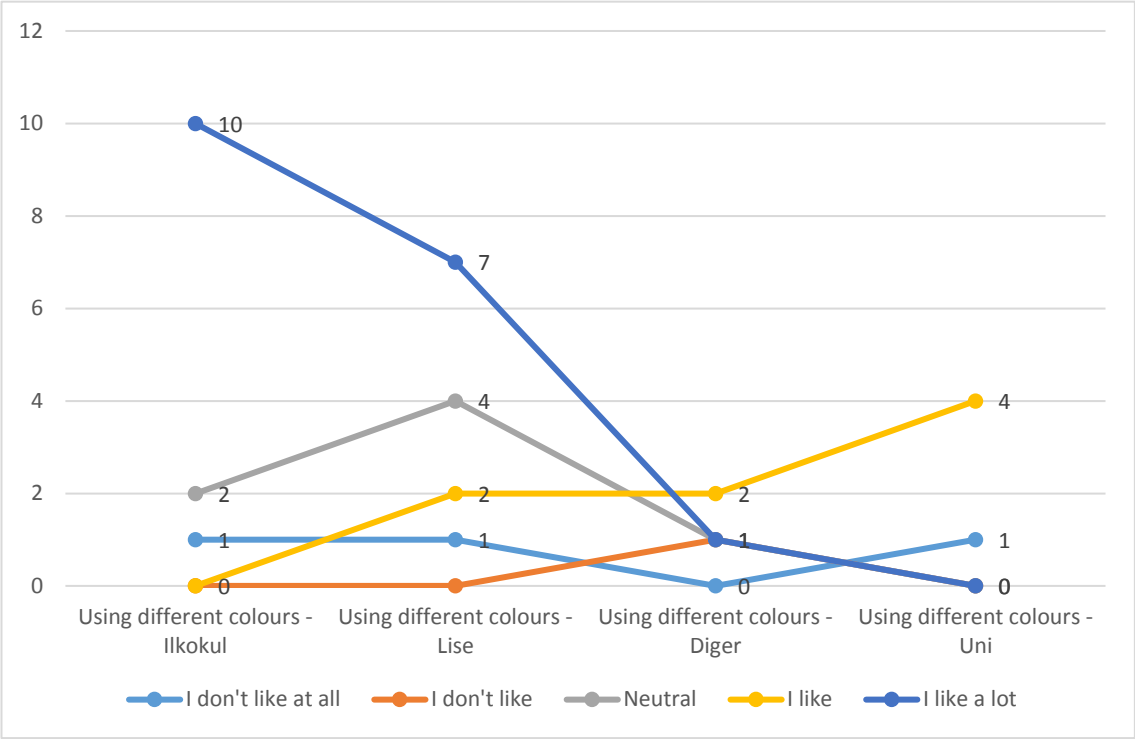

Figure 7.26: Viewers' preferences – use of colours, by educational levels

Concerning the respondents' preferences that depended on their educational level, the 'combination of the use of colours and displacement' was the preferred method (92.3%) for the primary school educated participants, whilst the 'use of labels' was the least favoured strategy (61.5%) for this group. High school graduates rated the strategies 'displacement' and 'combination of the use of colours and displacement' equally (92.9%) and the 'use of different colours' was their least preferred option. All the university graduates preferred the displaced subtitles to follow the speakers, whilst the other strategies were chosen by the same percentage of university graduates (80%).

Another relationship found to be significant, with a coefficient of $p<.050$, was that between the independent variable of the 'level of difficulty encountered by the participants when reading the subtitles' and the method based on the 'use of different colours'. Considering the nominal nature of the independent variable, the direction of the relationship is not meaningful, as shown in Table 7.5:

			Use of different colours	Placing subtitles under character speaking	Use of labels with name of character	Combination of different colours and displacement
Kendall's tau_b	Did you have difficulty reading the subtitles?	Correlation Coefficient	-.359*	.116	.319	.011
		Sig. (2-tailed)	**.036**	.507	.062	.951
		N	30	30	30	30
Spearman's rho	Did you have difficulty reading the subtitles?	Correlation Coefficient	-.390*	.123	.347	.011
		Sig. (2-tailed)	**.033**	.517	.061	.952
		N	30	30	30	30

Table 7.5: Respondents having difficulty reading the subtitles and their preferences regarding the strategies for character identification

Although statistically not significant, the above results appear to show a relatively weak relationship between the independent variable of 'difficulty in reading the subtitles' and the 'use of labels' to identify the speakers (significant coefficiency of .062 and .061).

As shown in Table 7.6 below, the 'combination of the use of different colours and displacement' was the preferred method chosen by both groups of participants, that is to say, 90.5% of those who had difficulty in reading the subtitles and 88.9% of those who did not. 71.4% of the participants who had difficulty reading the subtitles 'liked' and 'liked a lot' the 'use of different colours', whilst slightly over 50% of the participants who did not find any difficulty with reading the subtitles preferred this method. 77.8% of those who did not experience any difficulty reading the subtitles opted for 'the use of labels' with the name of the characters, although this percentage dropped to 52.3% of those who stated that they experienced difficulty reading. When these percentages were taken together with the result that the 'use of labels' was the least preferred option among those with a primary school education, and although 80% preferred the 'use of colour', none of the university graduates selected the option 'I like a lot', so that it can be inferred that participants with a lower level of education, and who had difficulty in reading, were more inclined towards the use of colours to identify speakers, as is shown in Table 7.6 below:

	I don't like at all	I don't like	Neutral	I like	I like a lot
Use of different colours - Y	4,8%	0,0%	23,8%	14,3%	57,1%
Use of different colours - N	22,2%	11,1%	11,1%	44,4%	11,1%
Displacement – Y	4,8%	4,8%	9,5%	38,1%	42,9%
Displacement – N	0,0%	11,1%	0,0%	33,3%	55,6%
Use of labels – Y	4,8%	4,8%	38,1%	33,3%	19,0%
Use of labels – N	11,1%	0,0%	11,1%	11,1%	66,7%
Combining use of different colours and displacement - Y	0,0%	0,0%	9,5%	14,3%	76,2%
Combining use of different colours and displacement - N	0,0%	0,0%	11,1%	11,1%	77,8%

Table 7.6: Viewers' preferences – character identification and whether there were difficulties in reading subtitles or not

7.6.2. Verbatim vs. edited

With regard to the participants' preferences regarding verbatim or edited subtitles, 24 participants (out of 35, since two respondents did not answer the questions) preferred edited subtitles, while 16 liked the verbatim set of subtitles. As can be seen in the line graph displayed in Figure 7.27 below, more participants (15) disliked the verbatim set of subtitles than the edited set (6):

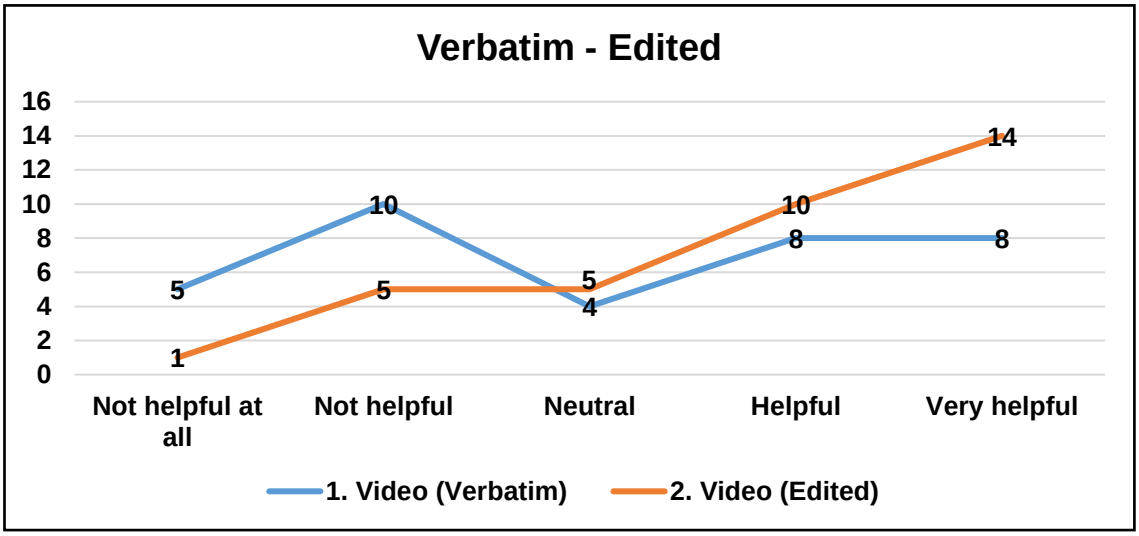

Figure 7.27: Viewers' preferences – verbatim or edited set of subtitles

This result is in line with previous findings which showed that the fast display rate of the subtitles is the most recurrent difficulty encountered by most respondents (21) and offers a justification as to why the participants seemed to be more inclined towards edited, slower paced subtitles. Although only three respondents self-evaluated their reading skills as inadequate, these results

clearly point to a larger number of individuals facing similar difficulties when reading the subtitles on screen. For this reason, subtitlers working in Turkish should take the reading skills of the deaf and the HoH into account when producing their subtitles, should edit them down to match their audience's relatively slow reading speed and create subtitles that help the reading process.

7.6.3. Describing sound information

When asked about the way in which they preferred sound information to be conveyed on screen, the majority of the participants liked all the strategies although the most preferred strategy, chosen by 29 respondents, was the 'use of labels' to describe the nature of the sounds, as shown in Figure 7.28, which also happened to be the most 'liked a lot' by the respondents. This strategy was followed by the 'use of icons' and 'onomatopoeia' to reproduce the sound, which 27 and 24 participants preferred respectively:

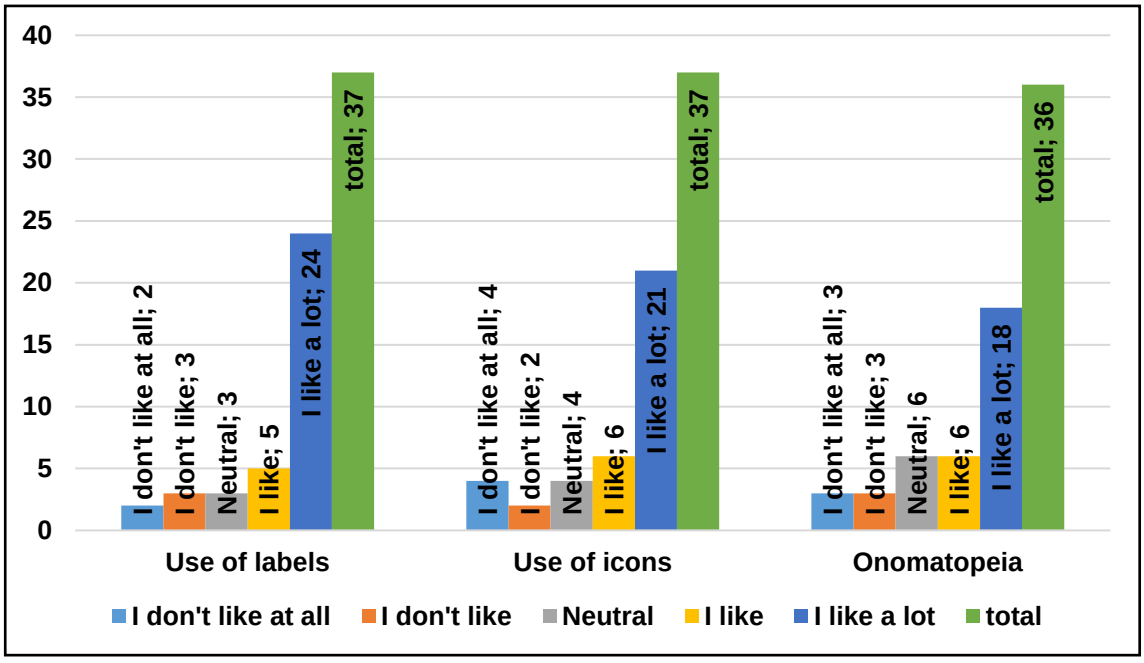

Figure 7.28: Viewers' preferences – identifying sound information

When asked why they preferred the 'use of labels' over the icons during the experiment, the participants said that, although the latter is a convenient way to convey sounds, it would not really be possible to display every sound through icons. Their evaluation of icons was therefore largely based on a biased opinion

concerning the limitations of the technological tools used to create these icons. Given that none of the participants had a specialist or general knowledge concerning the creation and broadcasting of subtitles, their perception of the 'use of icons' may change in the future after they become accustomed to more SDH. Most of the respondents claimed that the reason why the 'use of onomatopoeia' was the least preferred strategy was because the hearing-impaired do not know what sounds sound like so that the phonetic representation of onomatopoeia is not really meaningful to them and does not contribute much to their understanding of the programme. Hence, the order of the strategies used to convey sound is as follows:

1. use of labels,
2. use of icons,
3. use of onomatopoeia.

On the basis of the statistical analysis, the various independent variables considered in this study seem to have had a meaningful effect on the respondents' preferences, i.e. gender, education, being deaf or HoH, using a HA or having a CI, the preferred language of communication, the time they spend reading per day and the degree of difficulty that they encounter when reading subtitles.

On the one hand, the non-parametric correlation tests reveal an interesting and significant relationship between the gender of the participants and the strategy focusing on the 'use of labels' to describe sound effects. Since gender is a nominal variable, the direction of the relationship is not really meaningful. However, the correlation coefficient values and significance levels acquired in the tests demonstrate that this is a meaningful relationship as the values are $p<.050$ (Table 7.7). On the other hand, the results do not reveal any significance or meaningful relationship between gender and any of the other strategies:

			Gender	Use of labels	Use of icons	Use of onomatopoeias
Kendall's tau_b	Gender	Correlation Coefficient	1.000	.438**	-.171	.233
		Sig. (2-tailed)	,	.005	.268	.135
		N	37	37	37	36
Spearman's rho	Gender	Correlation Coefficient	1.000	.465**	-.185	.253
		Sig. (2-tailed)	,	.004	.274	.137
		N	37	37	37	36

Table 7.7: Viewers' gender and preferences regarding strategies of identifying sound information

A closer analysis (Figure 7.29) shows that all the female participants 'like a lot' the use of labels to describe sounds in the clips, while this rate drops to 69.2% (of whom 50% selected the option 'I like a lot') for the males. In this sense, the rate of preferences is more similarly distributed over the two gender groups for other strategies and a significant relationship is not detected. This result is particularly interesting considering that, as noted above, there is also a significant relationship between the gender of the participants and the 'use of labels' for speaker identification, i.e. over 90% of the female respondents reported that they liked the strategy whilst only 57.7% of the male group did. Furthermore, although it cannot be considered a meaningful relationship between two parameters, more female participants (81.8%, and all of them selected the option 'I like a lot') than males (73.1%) liked the 'use of labels' to describe paralinguistic information. Across all these three features of SDH, none of the female participants selected the options 'I don't like at all' or 'I don't like' in relation to the strategy centred on the 'use of labels'. A possible explanation for this might be the higher level of education among the female participants in that 72.7% of them were educated above primary level compared with 61.5% of the males.

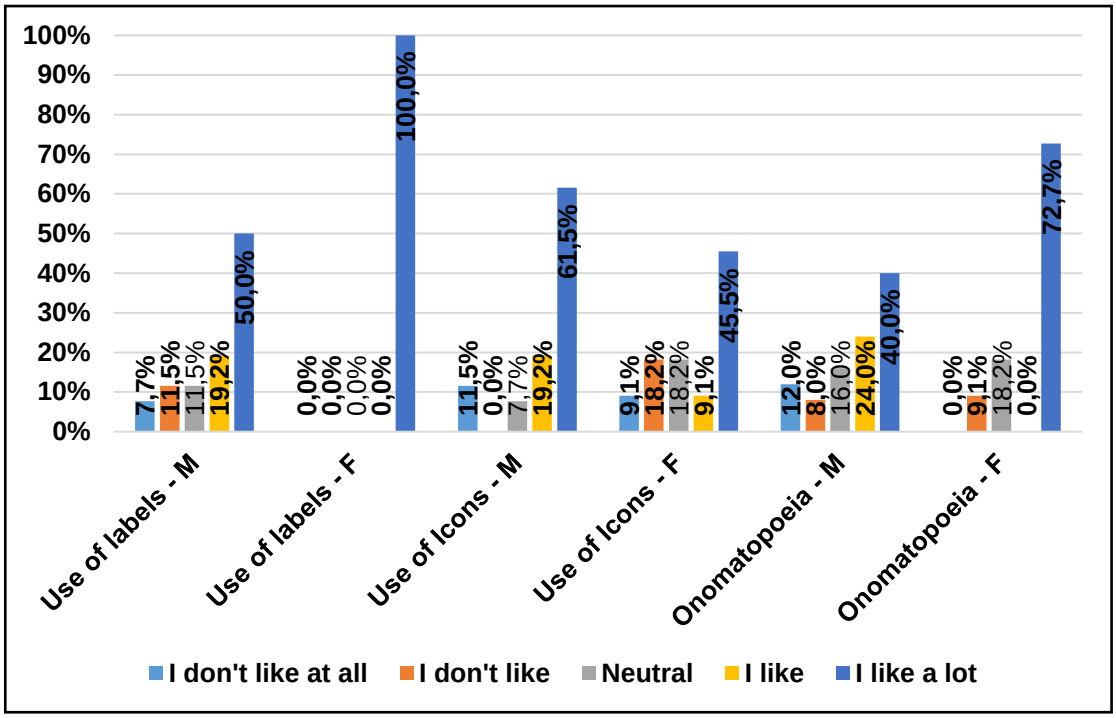

Figure 7.29: Viewers' preferences – identifying sound information by gender

As shown in Table 7.8 below, the results of the correlation tests between education and the participants' preferences indicate that the level of education did affect the respondents' preferences with regard to the 'use of icons' to describe sound information in the subtitles. Since both groups of variables are of an ordinal nature, the direction of the relationship can also be analysed to gauge whether it can be considered as meaningful. The tests reveal that the relationship between these two variables is indeed well below the 0.01 level, and the direction of the relationship is negative, which means that, as the level of education increased, the respondents' inclination towards the use of icons decreased, as is shown in Table 7.8 below:

			Education	Use of labels	Use of icons	Use of onomatopoeia
Kendall's tau_b	Education	Correlation Coefficient	1.000	.064	-.381**	.136
		Sig. (2-tailed)	,	.660	**.008**	.344
		N	37	37	37	36
Spearman's rho	Education	Correlation Coefficient	1.000	.074	-.453**	.162
		Sig. (2-tailed)	,	.662	**.005**	.344
		N	37	37	37	36

Table 7.8: Viewers' educational levels and their preferences regarding strategies for identifying sound information

As illustrated in Figure 7.30, a more detailed examination of the relationship between the level of education and the respondents' preferences demonstrates that the rate of the participants who liked the 'use of icons' is 92.3% at a primary level of education and gradually drops to 71.4% and 40% at high school and university levels respectively. The educational level of the participants in the group 'other' does not change this pattern, and they are therefore left out of the analysis. The extra burden of having to read the labels seemed to affect the decision of the participants who also mentioned that they experienced difficulties with reading. This correlation further supports the explanation for the relationship between gender and the strategy of the 'use of labels', and as the female participants were comparatively better educated than the males, they presumably did not experience much difficulty in reading the subtitles and labels and were more willing than the males to prefer the use of labels.

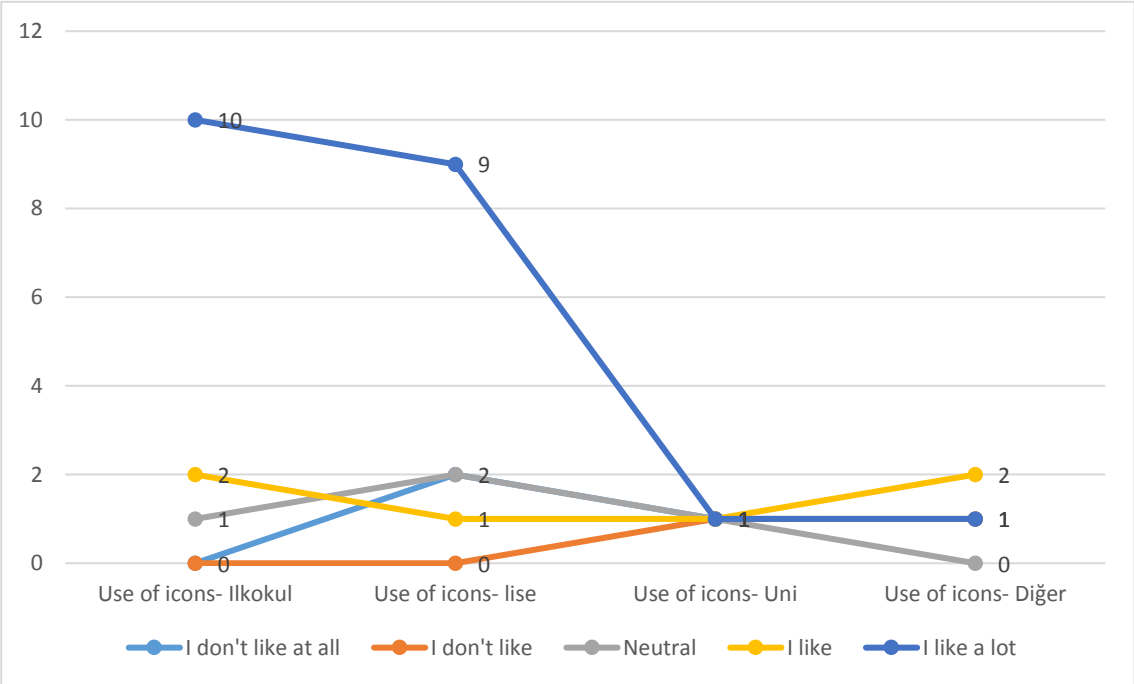

Figure 7.30: Respondents' preferences – use of icons by educational level

The relationship between the educational levels of the participants and the use of labels to describe sounds on screen provides further supportive evidence for the assertion that respondents with a lower level of education, and who have difficulties in reading, prefer strategies that are based on visual representation, and their inclination towards the use of labels occurs at a comparatively lower rate. Although a significant relationship cannot be statistically discovered

between these two variables, there is a clear, gradual increase in the rate of the participants who like the strategy based on the 'use of labels', from primary school to university level, as can be seen in the graph below (Figure 7.31). The most distinctive feature in Figure 7.31 is the fact that all the university graduates, without exception, 'like(d) a lot' the 'use of labels', whilst the rate of the respondents who liked the strategy is 92.3% (64.3% selected 'like(d) a lot') in the case of individuals who had been through high school and 61.5% (all of them 'like(d) a lot') in the case of participants that only reached primary school level:

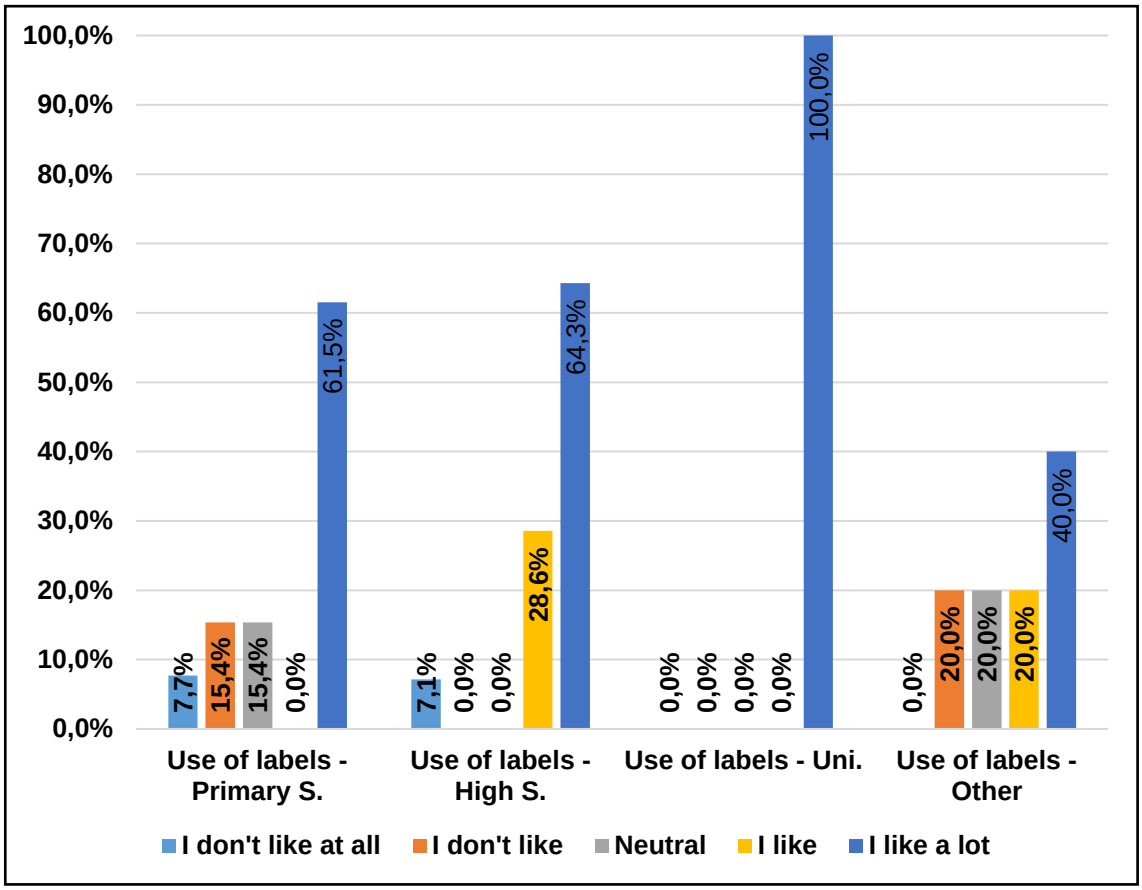

Figure 7.31: Respondents' preferences – use of labels by educational level

Another significant relationship to come out of the statistical analysis can be established between the independent variable of 'being deaf or HoH' and the dependent variable based on the 'use of labels' to convey sound information. As highlighted in Table 7.9 below, the significance levels calculated in both tests are .015 and .013 and, since the independent variable is of a nominal nature, the direction of the relationship is not deemed to be relevant:

			Use of labels	Use of icons	Use of onomatopoeia
Kendall's tau_b	Deaf - HoH	Correlation Coefficient	-.380*	-.156	.096
		Sig. (2-tailed)	.015	.314	.538
		N	37	37	36
Spearman's rho	Deaf - HoH	Correlation Coefficient	-.404*	-.168	.104
		Sig. (2-tailed)	.013	.321	.546
		N	37	37	36

Table 7.9: Respondents considering themselves as deaf or HoH and their preferences regarding strategies for identifying sound information

A more detailed analysis of all the potential relationships revealed that the rate of the participants who selected the options 'I like' or 'I like a lot' was the same (66.7%) in all the strategies where the HoH participants were concerned (Figure 7.32). The use of labels to indicate sound was liked by 80.7% of the deaf respondents, of whom 74.2% selected the option 'I like a lot'. This percentage dropped to 66.7% in the case of the HoH participants, with only 16.7% opting for 'I like a lot'. The percentage of deaf participants who liked the strategy of using icons to represent sounds was 74.2%, dropping to 66.6% among the HoH. Regarding the use of onomatopoeia, both groups claimed to like it in equal measure (66.7%), as can be seen in Figure 7.32, below:

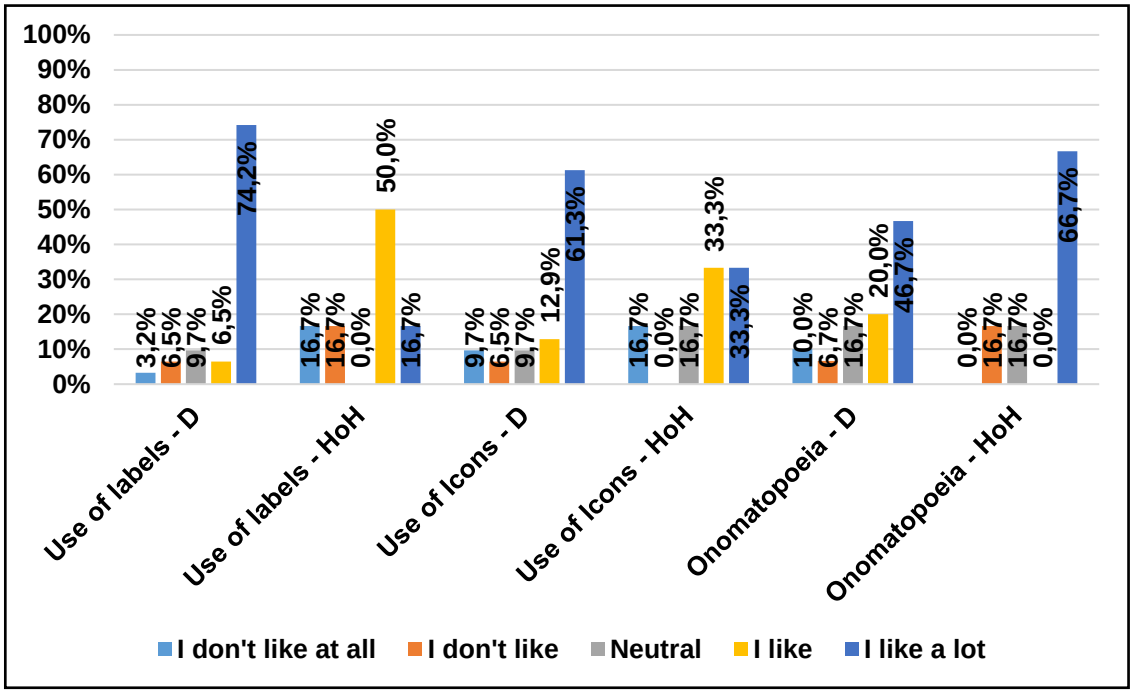

Figure 7.32: Viewers' preferences – identifying sound information by whether the respondents considered themselves as deaf or HoH

Table 7.10 proves that the statistical analysis of the relationship between the variable 'using a hearing aid or having a cochlear implant' and the representation of sound information on screen reveals the existence of a meaningful relationship between enjoying any type of HA and the respondents' inclination towards the strategy of making 'use of icons', as a significance level of .009 and .007 has been found in both tests:

			Use of labels	Use of icons	Use of onomatopoeia
Kendall's tau_b	Do you use a hearing aid or cochlear implant?	Correlation Coefficient	-.178	.406**	.034
		Sig. (2-tailed)	.257	**.009**	.825
		N	37	37	36
Spearman's rho	Do you use a hearing aid or cochlear implant?	Correlation Coefficient	-.189	.437**	.037
		Sig. (2-tailed)	.263	**.007**	.828
		N	37	37	36

Table 7.10: Use of hearing aids and respondents' preferences regarding strategies for identifying sound information

The detailed analysis of this relationship (Figure 7.33) shows that the 'use of labels' was the option preferred by the respondents who relied on HAs to help them, whereas those who did not use any kind of aid gave priority to the 'use of icons'. There was also a significant difference in participants' preferences when it involved the 'use of icons' in that 84.6% of the respondents who did not use any HA liked the strategy, while this percentage falls by nearly half, to 45.5%, for the ones who made use of HAs. This can also be explained by the fact that the respondents with the highest level of education – four out five university graduates – were among the participants who used HAs or had CIs. Furthermore, 81.8% of the respondents in this group considered themselves to be 'fluent' or 'very fluent' readers. This finding shows that the participants with a higher level of education and better reading skills were more likely to opt for strategies that relied on a written text, as we can see from Figure 7.33, below:

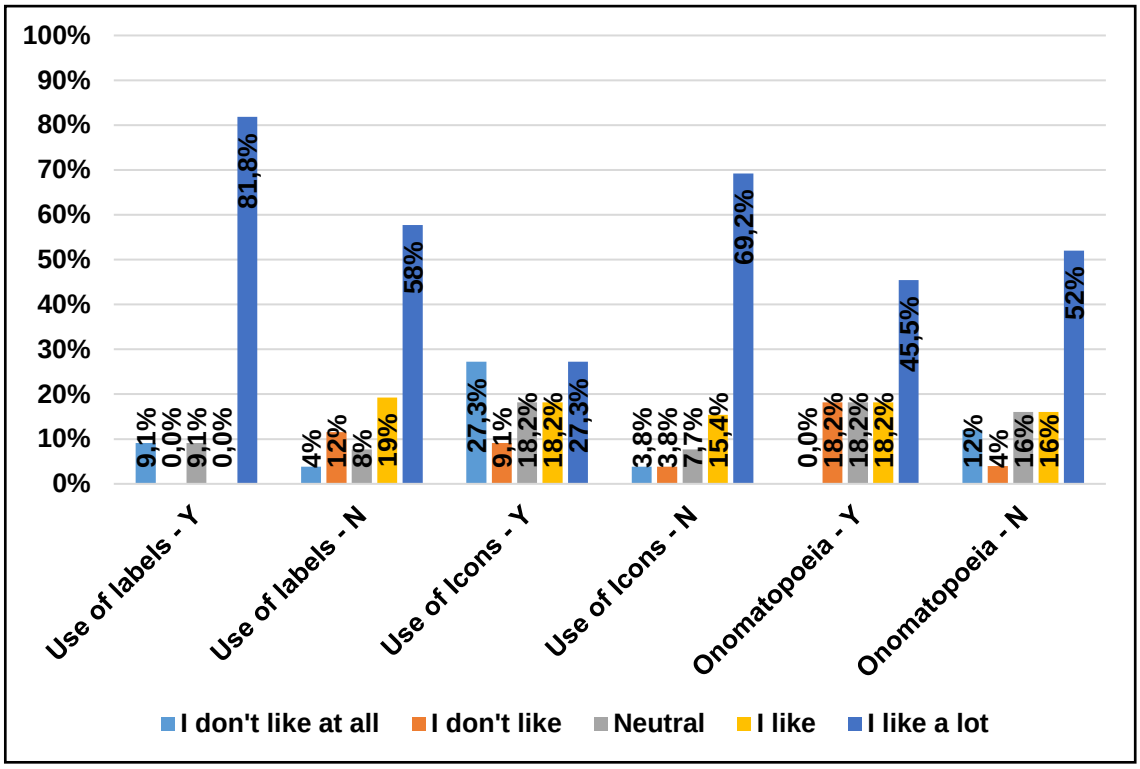

Figure 7.33: Viewers' preferences – identifying sound information by use of hearing aids

Table 7.11 shows the existence of a strong relationship between the participants' language of communication – be it Turkish, TSL or both – and the strategy based on the 'use of icons' to describe sound, reflected in the significance value below 0.01. Since the independent variable 'language of communication' is of a nominal nature, the direction of the relationship is not really meaningful in this case. Although statistically not significant, a relatively weak relationship can also be observed between the respondents' language of communication and the 'use of onomatopoeia'.

			Use of labels	Use of icons	Use of onomatopoeia
Kendall's tau_b	What is your language of communication?	Correlation Coefficient	.062	-.533**	.267
		Sig. (2-tailed)	.681	.000	.074
		N	37	37	36
Spearman's rho	What is your language of communication?	Correlation Coefficient	.064	-.592**	.300
		Sig. (2-tailed)	.705	.000	.075
		N	37	37	36

Table 7.11: Preferred language of communication and preferences regarding strategies for identifying sound information

As can be seen in Table 7.12 below, each group of participants showed different preferences regarding the way in which they liked the sound information to be expressed in the subtitles. The respondents whose main language of communication was TSL (88%) chose the use of icons as their preferred method to reflect sound on screen. The same percentage of participants (88.3%), who mainly communicated in Turkish, liked the following two strategies in equal measure: the 'use of labels' and the 'use of icons'. However, given that none of these respondents disliked the 'use of labels', whilst 16.7% of them selected 'I don't like at all' when asked about icons, it would seem that the former can be considered to be their preferred method to describe sound. On the other hand, all the bilingual respondents preferred sounds to be expressed through the 'use of onomatopoeia', once again foregrounding the main discrepancy between prelingually deaf people and those who have lost their hearing at a later stage in life. Another noteworthy result was that none of the bilingual respondents liked the 'use of icons' and 66.7% of them actively disliked this strategy:

	I don't like at all	I don't like	Neutral	I like	I like a lot	Total
Use of labels – TSL	4,0%	12,0%	8,0%	12,0%	64,0%	100,0%
Use of labels – Turkish	0,0%	0,0%	16,7%	**33,3%**	**50,0%**	100,0%
Use of labels – Bilingual	16,7%	0,0%	0,0%	0,0%	83,3%	100,0%
Use of Icons – TSL	0,0%	4,0%	8,0%	**16,0%**	**72,0%**	100,0%
Use of Icons – Turkish	16,7%	0,0%	0,0%	**33,3%**	**50,0%**	100,0%
Use of Icons – Bilingual	50,0%	16,7%	33,3%	0,0%	0,0%	100,0%
Onomatopoeia – TSL	12,5%	8,3%	20,8%	16,7%	41,7%	100,0%
Onomatopoeia – Turkish	0,0%	16,7%	16,7%	16,7%	50,0%	100,0%
Onomatopoeia - Bilingual	0,0%	0,0%	0,0%	**16,7%**	**83,3%**	100,0%

Table 7.12: Viewers' preferences – identifying sound information by viewers' preferred language of communication

Rather unsurprisingly, the amount of time per day that the participants spent reading seemed to have a significant effect on their preferences when it came to the 'use of icons' to represent sound. As can be seen in the graph given below, Figure 7.34, the percentage of respondents who liked the 'use of icons' gradually decreased as the number of hours they spent reading daily increased. While over 80% of the respondents who spent less than an hour a day reading liked the strategy, the percentage dramatically dropped to 0% for those who

read for four hours or more a day. Once again, this result shows that the participants with a higher level of education and reading skills were noticeably less likely to opt for strategies based on visual representation and showed a preference for written information.

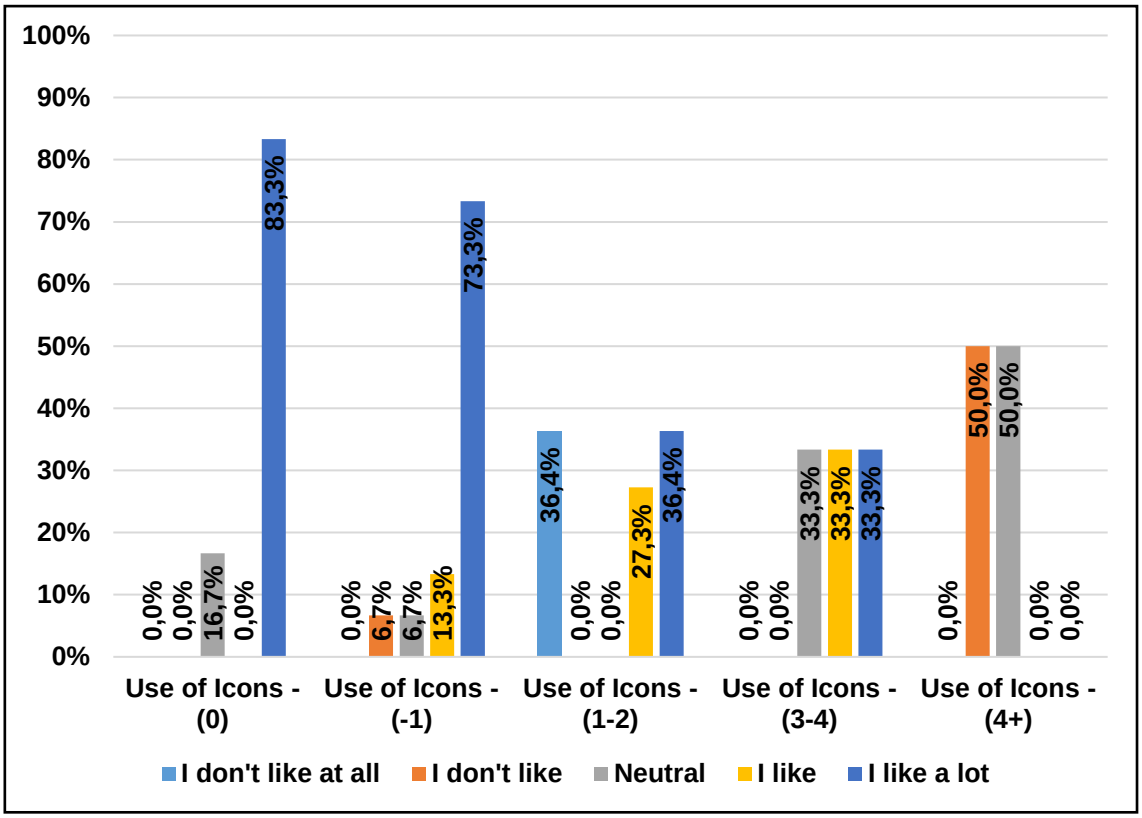

Figure 7.34: Viewers' preferences – use of icons by hours spent reading in a day

Two more meaningful relationships were found between the independent variable based on the difficulty experienced when reading the subtitles and the strategies that resorted to the 'use of icons' and 'onomatopoeia' (Table 7.13). In addition, though it is not proven to be statistically significant, as the p-value (Sig. 2-tailed) is above .05, there also appears to be a relationship between the same independent variable and the strategy based on the 'use of labels'. Since the independent variable is not ordinal, the direction of the relationships is not important. Irrespective of whether the participants experienced difficulties reading the subtitles or not, it is ultimately the independent variable which exerts an influence, to a varying extent, on all of the strategies used to convey sound.

			Use of labels	Use of icons	Use of onomatopoeia
Kendall's tau_b	Did you have difficulty reading the subtitles?	Correlation Coefficient	.316	-.553**	.339*
		Sig. (2-tailed)	.070	.001	.049
		N	30	30	29
Spearman's rho	Did you have difficulty reading the subtitles?	Correlation Coefficient	.337	-.593**	.373*
		Sig. (2-tailed)	.069	.001	.046
		N	30	30	29

Table 7.13: Difficulty in reading subtitles and viewers' preferences regarding strategies for identifying sound information

Among those stating that they had experienced difficulty reading the subtitles, the results show that the 'use of icons' was the top strategy as nearly all of them (95.2%) indicated that they liked (23.8%) and liked a lot (71.4%) the strategy. This percentage dropped radically to 33.3% in the case of those who stated that they had not experienced any difficulty reading the subtitles on screen. An equal percentage of participants in this group (88.9%) liked each of the other two strategies: the 'use of labels' and the 'use of onomatopoeia'. Among the respondents who acknowledged having experienced difficulties, 71.4% and 50% claimed to like the strategies based on the 'use of labels' and the 'use of onomatopoeia', respectively. Once again, this shows that the participants with a higher level of education, and who were more comfortable with reading, were also more likely to opt for written labels added to the subtitles.

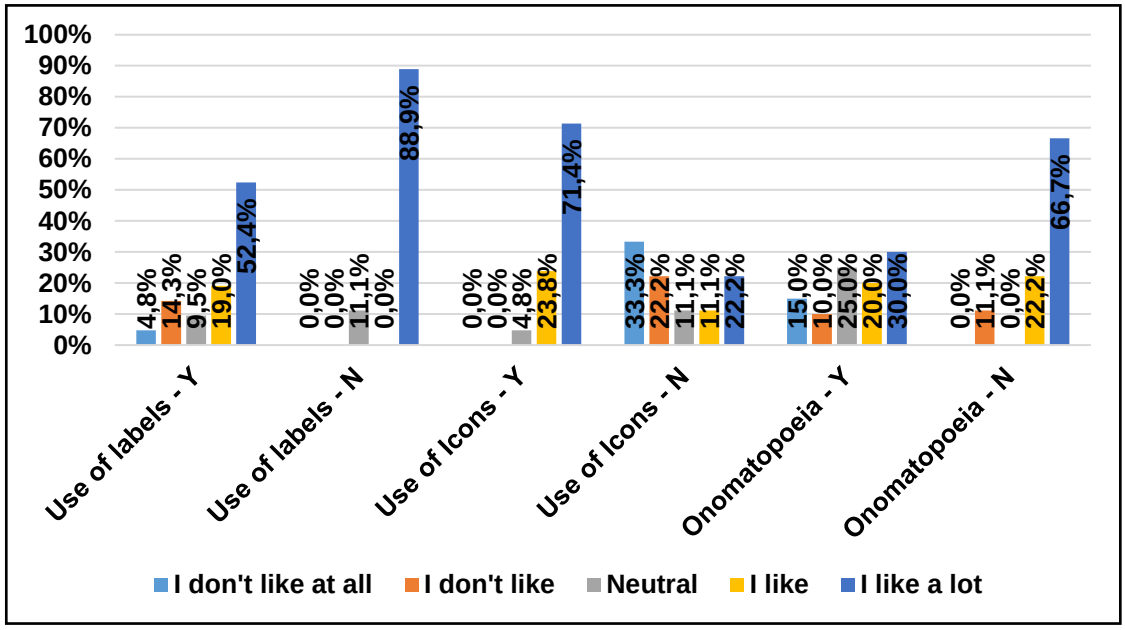

Figure 7.35: Viewers' preferences – identifying sound information by difficulty in reading subtitles

7.6.4. Paralinguistic Information

Regarding the description of paralinguistic information, as can be seen in Table 7.14 below and inferred from the similar shape of the bar graphs displayed in Figure 7.36, there is not much difference between the participants' preferences regarding the two strategies employed to convey this information. Both the 'use of labels' and 'use of emoticons' were liked by the majority of the participants: 28 out of 37 and 26 out of 33 (as four people did not reply to this question), respectively.

From the perspective of percentages, the situation was the reverse (due to the decrease in the number of the participants who replied to the second question) in that a slightly higher percentage of respondents (78.8%) preferred the use of emoticons, when compared with 75.7% who preferred the use of labels. Hence, although there is no clear inclination towards one or the other strategy, the 'use of emoticons' was arguably the preferred option used to describe paralinguistic information, as far as percentages are concerned, since the number of replies are not equal.

	I don't like at all	I don't like	Neutral	I like	I like a lot	Total
Use of labels	4	0	5	6	22	37
%	10.8	0	13.5	16.2	59.5	100
Use of emoticons	3	1	3	4	22	33
%	9.1	3	9.1	12.1	66.7	100

Table 7.14: Viewers' preferences – identifying paralinguistic information

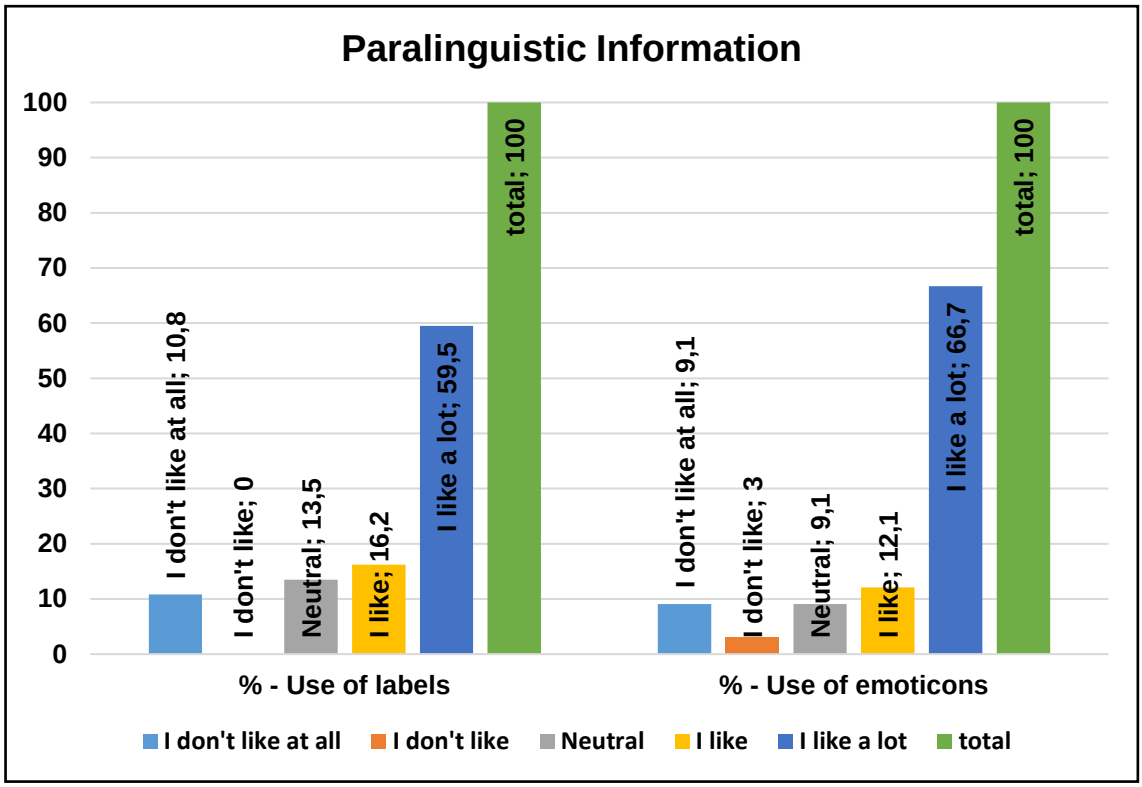

Figure 7.36: Viewers' preferences – identifying paralinguistic information

When looking at the details of the statistical analysis, the participants who did not use any type of HA differed significantly from those who used them when they stated their preferences regarding the 'use of emoticons', as illustrated in Table 7.15, with a Sig. (2-tailed) value of below 0.01:

			Use of labels	Use of emoticons
Kendall's tau_b	Do you use a hearing aid or cochlear implant?	Correlation Coefficient	-.032	.442**
		Sig. (2-tailed)	.836	.008
		N	37	33
Spearman's rho	Do you use a hearing aid or cochlear implant?	Correlation Coefficient	-.034	.468**
		Sig. (2-tailed)	.840	.006
		N	37	33

Table 7.15: Use of hearing aids and viewers' preferences regarding strategies for identifying paralinguistic information

Figure 7.37 below shows that slightly over 90% (20 out of 22) of those who did not have any type of HA stated that they liked the strategy, with 81.8% selecting that they liked it a lot, while for those who used HAs the percentage dropped to

54.5%. Again, this finding accords with their preference for the 'use of icons' to convey sound, when a significantly higher percentage of participants (84.6%) without HAs opted for the use of icons than those who relied on them (45.5%). These results confirm that the participants that did not have a HA or a CI opted for strategies based on visual representation rather than text.

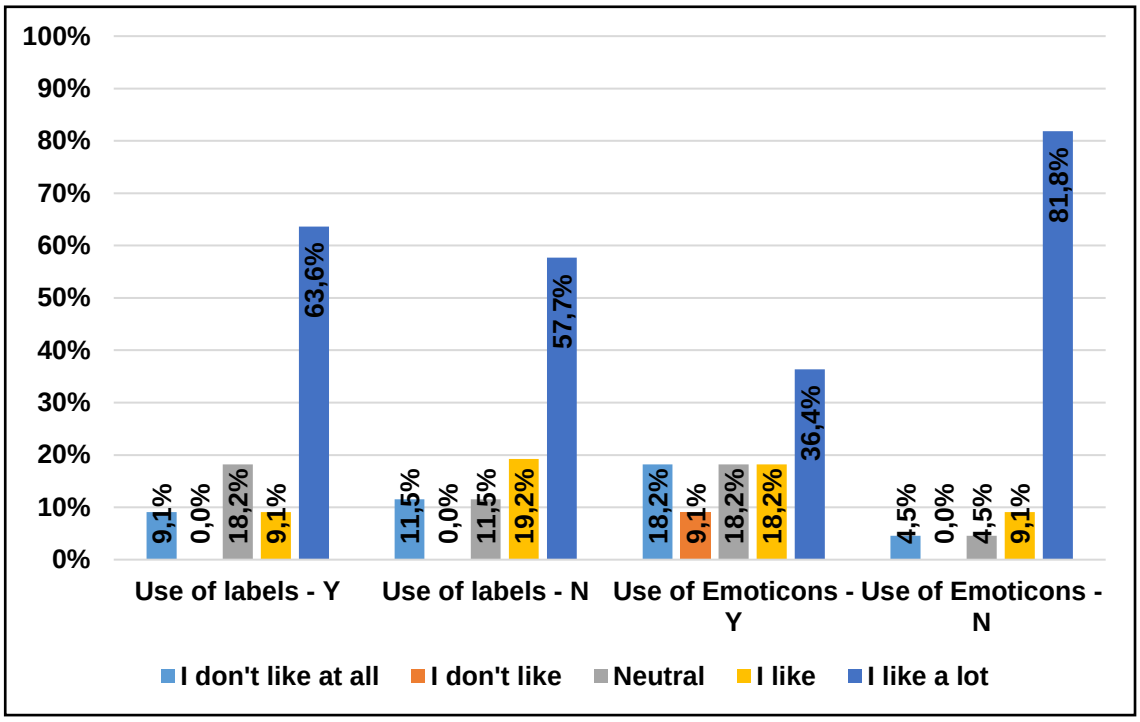

Figure 7.37: Respondents' preferences – identifying paralinguistic information by use of hearing aids

Another highly significant relationship between the participants' language of communication and the use of emoticons can be seen in Table 7.16, in which the P-value is below 0.01:

			Use of labels	Use of emoticons
Kendall's tau_b	What is your language of communication?	Correlation Coefficient	.130	-.590**
		Sig. (2-tailed)	.388	.000
		N	37	33
Spearman's rho	What is your language of communication?	Correlation Coefficient	.143	-.632**
		Sig. (2-tailed)	.400	.000
		N	37	33

Table 7.16: Respondents' preferred language of communication and preferences regarding strategies for identifying paralinguistic information

As displayed in Figure 7.38, a total of 95.2% and 83.3% of the respondents whose preferred way of communication was TSL and Turkish respectively liked the use of emoticons for the description of paralinguistic elements. These percentages dramatically and significantly fell to 16.7% for those who were bilingual, among whom half of them disliked this strategy. A similar result was observed in the case of the bilingual participants' preferences concerning the 'use of icons', as none of them liked the strategy, and 66.7% actively disliked it. This result, in conjunction with the bilingual respondents' preference for the expression of paralinguistic information through emoticons, as noted above, highlights their dislike of strategies based on visual representation. Their higher level of education, when compared with that of the participants in the TSL group, can go some way to explaining their predisposition towards strategies that make use of labels. Yet, the reason why the respondents' preferences were markedly different for the use of emoticons preferred by the other two groups with a similar educational background requires further research.

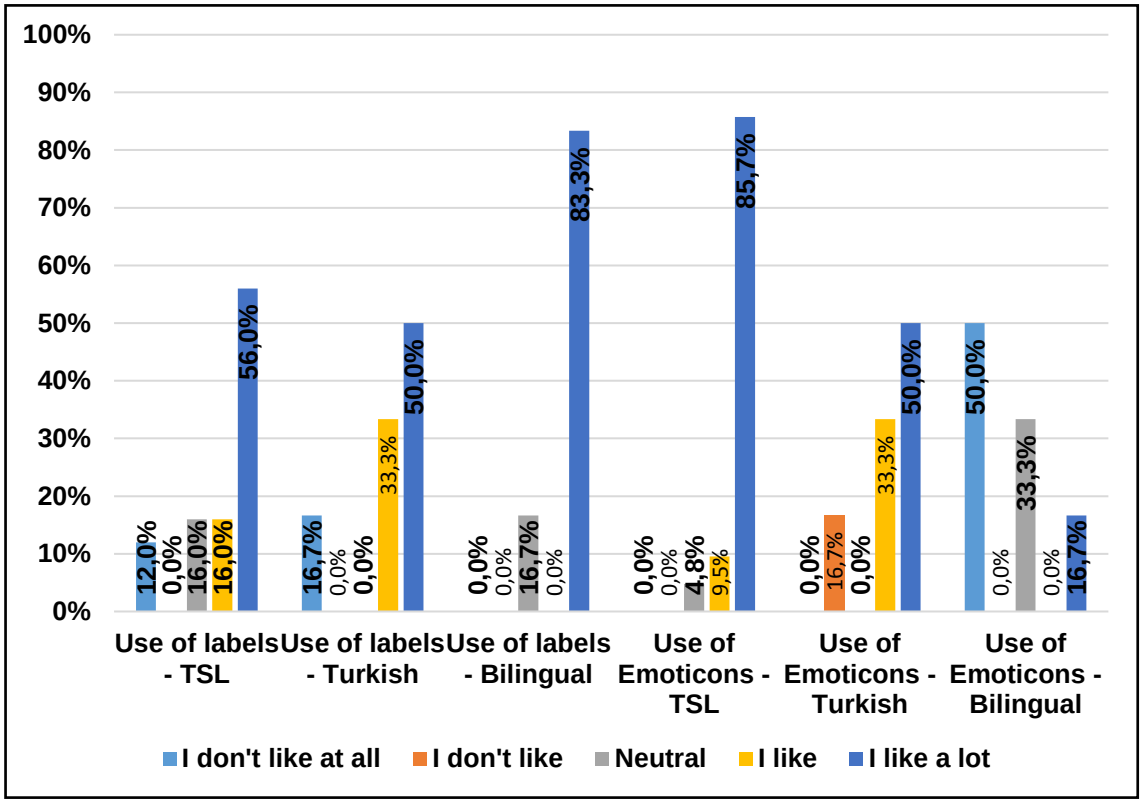

Figure 7.38: Respondents' preferences – identifying paralinguistic information by respondents' preferred language of communication

Another highly significant result on this front, with a P-value below 0.01 (Table 7.17), as illustrated in Figure 7.39, is the fact that 95% of the respondents (with no dislikes at all), who said that they had difficulty reading the subtitles, eventually opted for the use of emoticons, while this percentage dropped radically to 37% in the case of those who said that they did not have any difficulty. Although not as significant as the one mentioned above for the use of emoticons, the participants who experienced difficulty in reading subtitles and those who did not differed in terms of their preferences regarding the use of labels. As illustrated in Figure 7.39, 88.9% of the participants who did not have any difficulty in reading subtitles preferred the use of labels, whilst this percentage dropped to 66.7% for those who did.

			Use of labels	Use of emoticons
Kendall's tau_b	Did you have difficulty reading the subtitles?	Correlation Coefficient	.341*	-.685**
		Sig. (2-tailed)	**.050**	**.000**
Spearman's rho	Did you have difficulty reading the subtitles?	Correlation Coefficient	.364*	-.727**
		Sig. (2-tailed)	**.048**	**.000**

Table 7.17: Difficulty in reading subtitles and respondents' preferences regarding strategies for identifying paralinguistic information

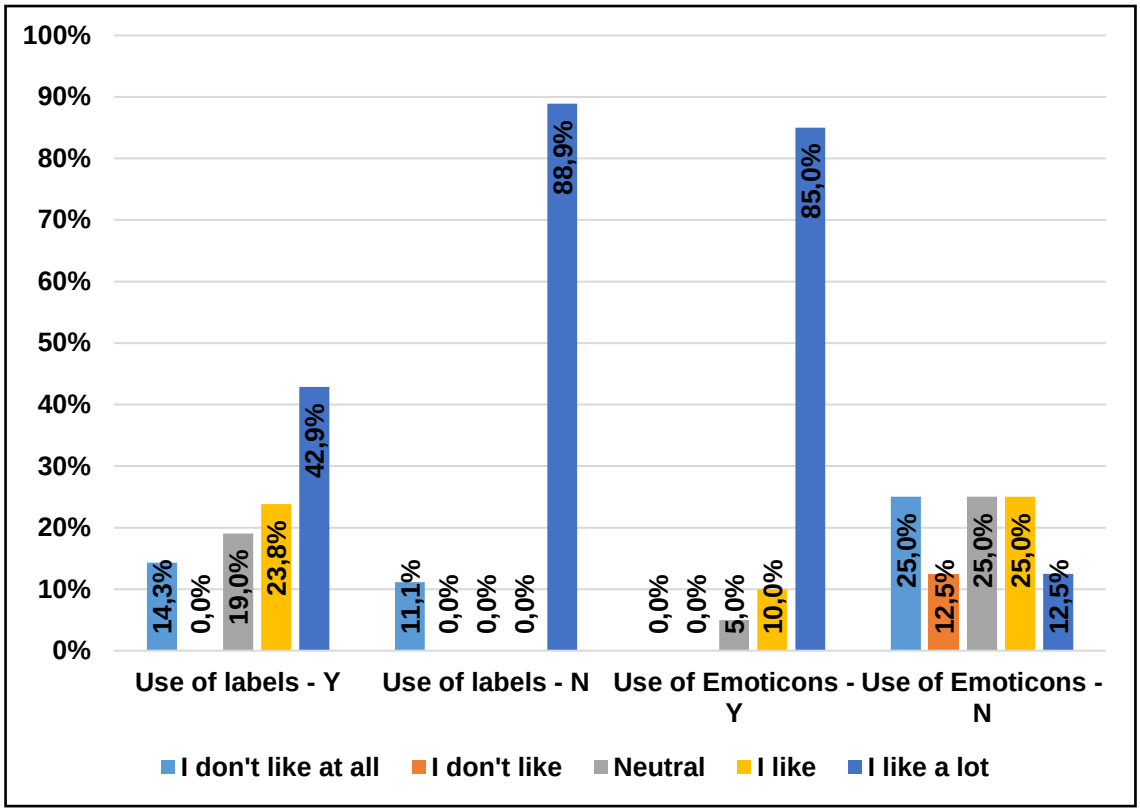

Figure 7.39: Respondents' preferences – identifying paralinguistic information by difficulty in reading subtitles

From this observation, and some of the previous ones, it would seem legitimate to conclude that the strategies based on visual representation were much preferred by participants with difficulties in reading and whose hearing ability was not at an adequate level to help them understand the information.

The following chapter will provide information on the qualitative analysis of the interviews and present and discuss the results of this analysis.

CHAPTER 8

Qualitative Analysis of the Interviews

8.1. Introduction

Since this is the first study ever to be conducted on SDH in the Turkish context, exploring the way in which the participants in the survey personally experienced TV viewing was considered crucial. Their opinions on the SDH techniques applied in the experiment are regarded as especially important as they relate directly to building a set of guidelines for the creation of SDH tailored to Turkish hearing-impaired viewers' needs and preferences. For this reason, after the questionnaires were conducted, randomly selected participants from the sample were invited to take part in a personal interview so as to gain more insight into their perceptions and preferences about SDH. The main objective was to allow them to express themselves freely, in depth and in their own words. Most of the individuals who were approached declined the invitation to attend the interviews and, after this recruitment process, a total of four participants consented to give an account of their choices and their experience of watching audiovisual programmes on Turkish television. Added to the low number of takers, the demographic characteristics of the respondents were in fact very similar, which constituted a limitation to the qualitative analysis, suggesting that further reception studies should be carried out in the future in order to gain a more accurate picture of viewers' profiles. Three of the participants were university graduates and one interviewee had completed junior high school, which indicates the comparatively high level of education of the interviewees. As for their sex, three of the participants were female and only one was male, which was particularly important since the quantitative analysis showed that there was a significant relationship between the gender of the respondents and their preferences; for instance the female participants were more inclined to prefer the 'use of labels' over other strategies based on visual representation.

Moreover, all the participants resided in Ankara and three of the respondents were in the 36-50 age bracket, with only one participant from the 18-35 age bracket.

Given the fact that the experiment was the participants' first opportunity to experience some of the SDH strategies being tested – or even to be exposed to SDH itself –, and that this is the first study to explore Turkish viewers' preferences, it was hard for the researcher to determine *a priori* the exact nature of the questions that were going to be asked. Therefore, semi-structured interviews were preferred over structured ones as they offer greater flexibility, giving the participants the "maximum opportunity to tell their own story" (Smith and Osborn 2008:59). They also allow for the introduction of new areas of information, in addition to those determined by the investigator prior to the implementation. As mentioned earlier, since the Turkish SDH context is extremely understudied, any potentially novel aspect introduced by the participants would help to cast more light on the viewing experience of Turkish TV, which would in turn be vital for the development of a set of guidelines catering to the needs of hearing-impaired viewers.

Although it was not, in fact, followed strictly, an interview schedule was drafted in advance in which the main topics of interest were logged together with any potential difficulties or sensitive topics that might be encountered and possible ways of overcoming them. Since the main objective of the interview was to gain a deeper insight into the issues already touched upon in the questionnaire (e.g. viewing habits, accessibility issues, preferences regarding SDH), in principle it was deemed appropriate to follow the order in which the questions were presented in the questionnaire. Thus, the first part of the interview investigated the social value of TV and the place it occupies in the lives of the hearing-impaired. This was followed by the analysis of the individuals' perceptions on accessibility, including the actual difficulties that they experienced when watching and understanding audiovisual programmes that were in essence inaccessible to them, as well as their feelings when they were unable to understand. In the last part, they were given the opportunity to explain their preferences concerning the various SDH strategies employed in the

experiment. However, as already mentioned, the flexible nature of semi-structured interviews allowed the researcher to alter this schedule and reorder the questions according to how the interview was proceeding and to accommodate any intriguing new areas raised by the respondents, which could then be explored further. The value of the initial schedule was therefore to enable the researcher not to forget any of the main issues while at the same time leaving a high degree of latitude in the way the interview was conducted. Three of the interviews were conducted with the help of a sign-language interpreter who also works as the interpreter for the association of which these three participants are members. One of these three respondents was interviewed in the office of the association of which she is a member and the rest were interviewed online in a video-chat through Skype since it was not possible to arrange a convenient time for a face-to-face interview due to the tight schedule of the participants. One female interviewee who was not familiar with SiL, wanted to provide her replies in written form rather than participating in an interview. She acquired her hearing loss when she was seven years old and uses spoken Turkish and lip-reading to understand others as her preferred ways of communication. She indicated, by also pointing out her tight schedule, that it would be easier and more convenient for her to reply to the questions in her own time in written form.

The interviews lasted between around 45 and 60 minutes and were all recorded, except for one case where the respondent requested that her replies shoule be given in writing as she considered that she was not proficient at SiL. In this particular case, the methodology was slightly different and, after her initial responses, further questions were asked in order to clarify any ambiguous points and to examine her choices further.

The interpretative phenomenological analysis (IPA) approach was adopted in the examination of qualitative data gathered during interviews. As Smith and Osborn (2008:53) show, the IPA aims to “explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings that particular experiences, events, states hold for participants”. In this sense, the IPA was preferred over other qualitative analysis

approaches for its specific focus on individuals and on how they make sense of the events they are experiencing. In an IPA study, the researcher focuses not only on the count or frequency of the occurrences of themes but also, and specifically, on the meaning units which provide a deep insight into the subject of the research. In this particular study, the respondents were considered as experiential experts and the IPA framework was used to understand, on the one hand, how they personally perceive issues pertaining to accessibility to audiovisual media in general and, on the other hand, to gauge their opinion on the various SDH techniques employed in the experiment so that the researcher can gain what Conrad (1987) calls an "insider's perspective". Given that there are barely no studies centred on the needs and preferences of the deaf regarding SDH in the Turkish context, eliciting the hearing-impaired's feelings about their personal experiences and their opinions of accessibility and SDH is of great importance for building a well-structured set of guidelines that can then cater to their specific needs.

The IPA's validity in the exploration of understudied, novel areas is emphasised by Smith and Osborn (2008:55), who state that this framework "is especially useful when one is concerned with complexity, process or novelty". The idiographic approach of the IPA to inquiry requires a painstakingly detailed analysis of each individual case so as to reveal any divergence or similarities among them. As this type of analysis demands a deep engagement, some scholars consider it as particularly fruitful when it is applied to a small sample size. In order to gain an insider's perspective and insight into how the respondents make sense of their surrounding world, a two-stage interpretation process was employed for there is no direct window into their world. As Smith and Osborn (*ibid*.:53) note, respondents try to make sense of their own world while, at the same time, researchers try to interpret and understand "the participants trying to make sense". To reach their objectives, researchers usually adopt two stances during the interpretation process: (1) either they endeavour to comprehend what it is like to perceive events from the point view of respondents or (2) they try to understand whether there is any other latent meaning which is not clear in the participants' speech but can nonetheless be inferred from the information that they volunteer. Thus, in the current study, the

researcher tried to understand what it means to be a hearing-impaired person in Turkey trying to watch audiovisual programmes that are essentially inaccessible. At the same time, by analysing their remarks and providing samples from their transcribed replies in a detailed manner, the researcher also tried to comprehend whether there were any underlying reasons that could explain their stated preferences.

For the examination of the interviews, the step-by-step guide proposed by Smith and Osborn (2008) was followed and adapted to the current study. The participants were simply named as A, B, C and D for anonymity. After the transcription (Appendices 5-8) in Turkish of all the interviews, the text was read several times in order to be as familiar as possible with the information provided and to reveal any potentially significant or interesting points in the respondents' answers. The process was repeated until new insights could not be generated from the transcript. Any extracted significant points were then freely noted down in a separate document. In this first phase, the researcher should log any comments, possible connections (similarities, contradictions) and preliminary interpretations that arise during the reading and noting process (*ibid*.:67).

After taking the notes, and following this relatively free analysis of the whole transcript, the investigator goes to the beginning and re-reads all the annotated observations, with the aim of transforming them into emerging theme titles which endeavour to "capture the essential quality that was found in the text" (*ibid*.:68). This second phase of the study elevates the analysis to a slightly higher level of abstraction. In these two phases, the transcript is treated as a whole and no specific part of the text is given a special focus. These two initial phases completed, the researcher then examines the emerging themes in greater detail so as to discover any striking connections between them. This is followed by the clustering of related themes into superordinate categories, thus helping the researcher to make sense of them. As the clustering process continues, the analyst constantly checks the connections and topics that are being clustered under superordinate themes and relates them to what the participants actually said so as to make sure that the connections are sensible.

The process is of an iterative nature and the role of the researcher is to interpret what the respondents have actually said and, at the same time, correlate that information with her/his own sense-making of the whole experience (*ibid*.:72). Parts from the respondents' answers supporting the clustered themes are also extracted and catalogued as examples, so that they can be of further assistance to the researcher, who can then easily contrast the themes with the source material that will be used later during the write-up process. These extracts are edited, condensed or moved as necessary while the clustering process continues. All the transcriptions were in Turkish, and during the write-up process these extracts were translated literally by the researcher by respecting the original statements as much as possible, causing various ungrammaticalities and non-standard language structures in the English renderings. After the read and re-read process, final thematic clusters which represent the most crucial and recurrent concerns expressed by the respondents are identified as superordinate themes.

The same process is replicated separately with the rest of the participants' interviews, one by one, from scratch. The themes revealed during the first analysis are also employed in the analysis of the other interviews so that consistency can be secured in the naming of the recurrent themes. In addition to the tracking of any recurrent themes, new emerging topics and issues are also profiled and grouped under the appropriate superordinate themes. As the analysis process progresses, the convergences and divergences are revealed and acknowledged across the different interviews. The initial superordinate themes are also reviewed and edited as necessary, in the light of any new potential themes and concerns revealed during this process.

Since the aim of this reception study was two-fold – i.e. to explore the viewing experience of hearing-impaired people watching AVPs on Turkish TV and to ascertain their preferences regarding the various techniques employed in SDH – the results of the analysis were also divided into two: viewing habits and SDH preferences, as illustrated in Tables 8.1 and 8.2 respectively. As a result of the IPA analysis, the structured superordinate themes with an impact on the viewers' viewing habits can be clustered as follows:

Viewing Habits
The effect of the lack of access services on viewing habits
Struggling to understand
TSL, beneficial though with some issues
More SDH, more accessibility and equality

Table 8.1: Superordinate themes – viewing habits of the participants

SDH Preferences
Implications of short-term memory among deaf and the HoH viewers
The fact that some viewers may have developed some tastes and expectations that stem from their exposure to standard subtitles rather than SDH
The existence of clear discrepancies between the preferences of the prelingual and the postlingual deaf respondents, especially when it concerns the issue of edited versus verbatim subtitles

Table 8.2: Superordinate themes – participants' preferences as regards SDH strategies

In addition to the two main goals mentioned above, the research project is also hoped ultimately to bear fruit in the compilation of a set of guidelines that can be used in the production of intralingual Turkish subtitles for the deaf and the hard-of-hearing, based on the preferences suggested by the subjects that have taken part in the experiment.

Experiencing the strategies for the first time and seeing that the researcher is trying to do something for the benefit of the respondents might have affected their evaluation of the strategies used and led them to evaluate the strategies in a more positive light than they would normally have done. Even though they criticised a certain aspect of a method, they tended to finish their criticism with a positive remark.

8.2. Viewing Habits

This section analyses hearing-impaired viewers' viewing experiences of mostly inaccessible Turkish TV, the struggles they experience and how they cope with

the problems created by inaccessibility. The subsections also provide insight on their viewing habits and how they are affected by all these problems personally and emotionally, as well as their desires and wishes as regards accessibility services and more equality.

8.2.1. Impact of the lack of access services on viewing habits

The lack of access services on Turkish TV seems to have a detrimental impact on the subjects' viewing habits as well as, more generally, on the importance and place that television has in the lives of hearing-impaired viewers. The following subsections explore the nature of these effects, while at the same time providing extracts from the interviews to substantiate the argument that follows.

8.2.1.1. The lack of accessibility decreases the importance of TV

All the participants stated that watching TV was moderately important for them. Participant A said that she only watched TV for between four and six hours per week and Participant B indicated that she watched TV for only one or two hours daily. Although C and D did not provide information about the number of hours they watched TV, we can infer from their remarks that TV did not hold a significant place in their daily lives. When they were asked to select a quantitative value for the importance of watching TV, only participants A and B graded the importance of TV as 5 and 4 on a scale of 1 to 7, where 1 was 'not important at all" and 7 was "very important". They also said that they were very selective in their choice of programmes, with only a few programme types being among the ones they generally watched, e.g. news, series and talk shows. The comments volunteered by participants B and C illustrate this point:[4]

> Interviewer: *How important is TV in your life?*
> B: *It changes, I am an average TV viewer, I begin at 9 or 10 and I don't watch for a long time. […]*
> *I definitely watch the news. For example, I like the news and documentaries a lot. In fact, I am not mad about TV; I am a normal viewer. It's like 4 as a level of*

[4] The interviews were conducted in Turkish with the help of a sign language interpreter, and the replies were conveyed by the interpreter. The translations in English are all mine unless otherwise indicated.

importance. (See the full transcript of Interviewee B's replies and remarks in Appendix 6).

I: *How big is TV's role in your life?*
C: *I think watching a lot of TV is unnecessary. For instance, I don't like things such as movies, where lives of other people that aren't like us are told, but there are old movies which are in fact about more 'real topics' from life; I like watching them. However, nowadays, it's all about sadness, war… I don't like any of the series' topics in general. And, yes, if there were subtitles, I would watch. If there aren't any subtitles, I don't watch at all.* (See the full transcript of Interviewee C's replies and remarks in Appendix 7)

B's emphasis on being a normal viewer shows the desire of deaf or hard-of-hearing people to be treated equally with the rest of the society, and that just being deaf or hard-of-hearing does not mean they behave or live any differently from other citizens. The last part of participant C's comment hints at a latent meaning, which seems to contradict the statement that TV is only moderately important to them. Although, at the beginning of the quotation, C considers watching TV as a rather unnecessary activity, at the end of the quotation, he states that he would watch it more often if the appropriate access services were in place. This would indicate that a moderate viewing of TV is not completely their personal choice, and it is rather the lack of accessibility on TV that causes them to watch less TV than they normally would do or they want to. The lack of access services therefore decreases the importance that TV has in their lives and the frequency with which they watch it. This interpretation is also clearly supported by the answers given when they were asked about their TV viewing habits:

A: *Unfortunately, there is not a single programme I can watch regularly because channels, in Turkey, do not broadcast subtitled programmes.*
(See the full transcript of Interviewee A's replies and remarks in Appendix 5)

B*: If there were subtitles, we could become addicted. Because, then, we would enjoy and understand everything but now it doesn't appeal to us but there must be subtitles. If there were subtitles, TV would become important for us.*

As these comments show, if the programmes were broadcast with accessibility measures in place, the respondents would watch much more TV than they currently do. What is intriguing here is the fact that, when they were asked about the importance of TV in their personal lives, they refrained from saying that they would watch and enjoy TV more if there were accessibility measures

in place, and they rather stated that TV did not assume much importance in their lives and described themselves as moderate, average and normal TV viewers. This might be explained on the grounds of their high level of education which, in turn, has allowed them to lead a more active social life when compared with other hearing-impaired individuals, as they were all employed and three of them, B, C and D, were important, active members of an association. They therefore had more of a chance to spending their spare time outside their homes, engaging in various professional and personal activities. Nevertheless, as indicated above, the consensus among them was that, if more programmes were broadcast with subtitles, they would spend significantly more time watching TV.

8.2.1.2. TV is important (for less affluent deaf and HoH people)

When questioned about whether they thought TV was more important for members of the deaf and HoH community who are less financially affluent and live in rural areas with fewer local services and facilities, their answers were in the affirmative. That is to say, they were of the opinion that TV is very important for these members of the community since, apart from watching television, they have significantly fewer options as to how to spend their free time. Yet, they are also aware that, given the lack of access services and their educational background, many of these people might not be able to understand much of what happens on the programmes, as illustrated by the following excerpts:

> C: *Yes, those people (who are more underprivileged) watch because they are more in need of watching TV. Their education is low; they can't understand (won't be able to understand) subtitles but this isn't important to them.*[5] *They watch the actors and the acting on screen, the war or any ongoing events on screen, the topic. Their choice of programmes varies to some extent depending on their gender. For instance, both genders try to watch and understand programmes close to their world because TV is a way of killing time.*
>
> D: *For that sort of person, TV is extremely important.*
> (See the full transcript of Interviewee D's replies and remarks in Appendix 7)

[5] The reference to subtitles in this quote is to those produced to translate audiovisual programmes in foreign languages into Turkish, rather than to intralingual SDH.

Yet, they were also aware that, given the lack of access services and their educational background, many of these people might not be able to understand much of what happens in the programmes.

The reason they stated that TV is more important for relatively less well-off deaf people is that, other than watching TV, they have limited opportunities as to how to spend their spare time. This therefore supports the argument that the importance of watching TV greatly depends on the availability of other opportunities and activities in which the members of the hearing-impaired community can engage, rather than on their own free will solely. Thus, if hearing-impaired viewers could access AVMs through other means, or if they could take part in activities other than watching audiovisual programmes that are not fully accessible, they would then be more inclined to consider TV as a less important part of their lives.

> D: *TV is important but if the education s/he (a deaf person) gets is not enough, subtitles might not be beneficial. Exciting and comic programmes would become favourite programmes.*

Participant D also raised the issue of education in understanding subtitles by stating that, given the fact that hearing-impaired people who are underprivileged are not generally well educated, they may not understand and enjoy the programmes even if the accessibility services are provided. However, considering the possible educational benefits of SDH, especially in improving literacy, SDH might in fact play a significant role especially in improving the literacy levels of less well-off hearing-impaired people.

8.2.1.3. The lack of accessibility promotes other activities

Another distinct theme, which is closely related to the previous point, is that hearing-impaired viewers who find it difficult to access programmes on TV tend to search for other ways in which to spend their time, rather than watching TV or searching for other options where AVMs are accessible (e.g. DVDs or some internet channels).

That said, given the absence of access services on television, some of the respondents confirmed their willingness to look for other alternatives to TV. In this respect, the internet was the most frequently cited alternative, and they seemed to be fully aware that a reasonable number of AVPs are available online with access services. They also said that they watched foreign programmes that have been subtitled for the hearing population:

> A: *I use the internet because I can understand better by reading the news on the internet and I also have the opportunity to access subtitled films.*
>
> B: *I generally watch programmes on the internet. I don't know what to do when there is a problem with the internet. TV is simpler but the internet gives me more…*

As we can see in both these excerpts, the participants seemed to be forced to turn to the internet due to a lack of accessible programmes on TV. Although, when questioned, the respondents said that TV was moderately important in their lives, B's confession that she does not know what to do when there is a problem with the internet vividly demonstrates the real importance for her of access to AVPs and communication. She furthermore emphasises the convenience of watching programmes on TV rather than on the internet, whilst still insisting on the wider choices offered by the internet. We can therefore see that, even though the respondents said that they would prefer watching AVPs on TV rather than on the internet, they are forced to watch subtitled programmes on the internet due to a lack of access services on the television. Although the respondents did not say as much, we might argue that one of the reasons why they regard TV as a more convenient way of watching audiovisual programmes is that the internet is still seen to be more for personal use than to be shared with the family or friends. Also, connecting to the internet may sometimes be erratic or slow, whereas glitches of this nature have been long overcome in the broadcast industry. The other obvious reason is that the number of accessible programmes they can watch on TV is very limited as opposed to the more generous amount they can find on the internet. The end result is that they tend to miss most of the programmes broadcast on TV, which in turn means that they risk not being able to stay up-to-date on certain topics and, thus, lag behind the rest of society.

Indeed, their desire to watch TV can be observed in participant D's answer when asked about her choice of programme:

> D: *I have watched all of the series on Channel D[6] because they are broadcast with subtitles on the internet and therefore I can't watch anything else (due to lack of accessibility). For example, there is even the Beyaz Show[7] on the internet and quiz shows as well; I watch them with subtitles.*

We can see from the above excerpt that, although they use the internet to watch some programmes, they still follow the programmes available and already broadcast on TV (on Channel D) rather than other productions such as movies, foreign TV shows or series that are only available on the internet. In other words, they use the internet to access programmes on TV rather than looking for other alternative programmes. Their preference for programmes broadcast on TV rather than programmes exclusive to the internet can be explained by their desire to be part of mainstream society, since only a relatively small fraction of society follows, and prefers internet-exclusive programmes to TV. Since the programmes can be found on the internet with access provision only after they have been previously broadcast on TV, internet viewers inevitably lag behind the rest of the population when watching these programmes. Their inclination towards TV might also be explained by the fact that, besides being a pass-time activity, TV is also a means of spending time with their families unlike watching a programme on the internet which is rather a personal activity.

As already discussed in Chapter 3, the number of channels which provide programmes with accessibility measures on their websites is rather limited, leading the respondents to complain about a lack of choice. In addition, there is also the difficulty that some viewers encounter when trying to find the right programmes on the internet, as mentioned by participant B:

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[6] Channel D is a private channel that provides all its series with SDH, SLI and audio description on its website after they are broadcast on TV.

[7] The *Beyaz Show* is a very popular talk show programme, which has been broadcast since 1996 in Turkey, and is the only talk show programme that is provided with accessibility measures on the channels' websites, since the other two channels (TRT and Show TV) only provide their series with accessibility measures on their websites.

> B: *There are subtitles on Channel D but I can't find the programme I want.* […] *There are programmes I never miss on Channel D and Star.* […] *I watch them on the internet. Yes, there are subtitles on the internet and there are programmes I watch eagerly. They are subtitled too.* […] *I rarely watch movies. I sometimes watch CNBC-E because it is subtitled [subtitles for the hearing audience].*

This once again supports the argument that the respondents use the internet as a means of watching the programmes that have been originally produced for broadcast on TV and that they could not enjoy at the time, as the programmes did not have any SDH. All these excerpts highlight the age-old importance of TV.

Another consequence of the lack of accessible programmes on TV is the deaf and HoH's inclination to take up other activities, rather than watching TV, as respondent B points out:

> B: *The priority of the deaf is to wander around and chat. TV has a charm of its own but on the other hand, it is boring because we can't understand it. We watch, but maybe we only understand half of what we see, and that is if we are able to draw conclusions from body language, or in programmes in which body language is easy, we can sometimes understand television. However, for this reason, the deaf rather try to socialise outside of their homes.*

Given that the opportunities for the hearing-impaired to socialise with other members of the wider society are limited, they normally prefer to meet up among themselves by attending events at the various associations where they can also chat and play card games. As participant B notes, the lack of programmes with access services ruins their viewing experience and prevents them from watching the television on their own, which is why they prefer to go out and spend time with their deaf friends rather than trying to watch something on TV that they will find very difficult to understand.

The last excerpt from participant B foregrounds the comprehension problems encountered by the deaf and brings us to the second superordinate theme in the interviews: 'the struggle to understand'.

8.2.2. The struggle to understand

The most frequently mentioned problem to ruin the participants' TV viewing experience is their struggle to properly understand the content of the programmes that they watch. Not being able to understand what is going on in a production that seems so simple for other viewers to follow is a source of frustration for them and diminishes their desire to watch TV considerably. This section explores the various challenges that hearing-impaired viewers face when it comes to understanding AVPs and discusses the way in which these hurdles affect their feelings as well as their viewing experience.

8.2.2.1. The struggle to understand programmes

It can be clearly observed from the participants' answers that the complex multimodal nature of audiovisual texts makes it particularly difficult for them to understand and enjoy these productions, especially when they do not have any access support. To fully understand and enjoy audiovisual programmes, viewers need, in the first instance, to be able to access all four signs that convey information simultaneously, namely: (1) audio verbal, (2) audio nonverbal, (3) visual verbal and (4) visual nonverbal. Without accessibility measures, hearing-impaired participants only have access to visual verbal and visual nonverbal codes, which puts them at a considerable disadvantage in terms of the meaning-making process and thus disrupts their viewing experience.

Considering that sometimes the loss of even the smallest audio or visual detail may cause a loss of meaning in a particular scene already gives us an idea of the difficulties encountered when trying to watch and understand a programme without the possibility of accessing any information conveyed through the soundtrack. Even though hearing-impaired viewers try various strategies to help them out, such as guessing the overall meaning from the body language or lip reading, the reality is that they can only partly understand what they are watching, as some of them readily admit:

I: *How difficult it is to watch TV without access services?*
A: *Since only visual information can be received, the information that needs to be received can't be taken in and is therefore not enjoyable at all.*

D: *Very difficult; for example, I try to understand from the lips; sometimes I can understand something, but I can't understand the overall meaning.*

All of the participants confirmed that they usually experience difficulties understanding the audiovisual texts, at least at some point, since they only have access to the information that is conveyed through the visual channel, and their efforts are simply not good enough to allow them to capture the overall meaning. However, on many occasions, they acknowledged that they still keep watching a programme, even if it does not have subtitles, and persevere in their attempts to understand what is happening on screen, rather than abandon watching television altogether. This determination can be explained by a lack of choice or other potential ways of enjoying AVPs in Turkish.

8.2.2.2. The reaction of the respondents

All the participants, without exception, expressed their frustration and disappointment at not being able to understand AVPs unless they come accompanied with access measures. This clearly demonstrates the importance of accessibility for hearing-impaired viewers since they cannot even understand the programmes, let alone enjoy them, when they are unsupported. They seemed to be unanimous in their reaction:

C: *We get upset. It is wrong, you watch up to a point. It comes to a point, the excitement climbs; you cannot understand it at that point and naturally you become upset; we become obsessed with it.*

D: *I become upset; I can't understand; the following day, I ask the ones who have watched the series, the film. I become obsessed with the key points. I make those who have watched it explain them to me.*

As we can see from these excerpts, the participants questioned devoted a good deal of effort and kept watching the productions in their attempts to try and understand the content, only abandoning them as their last resort. Not being able to understand a programme leaves deaf and HoH viewers with many unresolved questions that need to be answered before they can even start

enjoying the programme and, as some of the participants noted, they even become obsessed with them and reach out to other people for help. Participant D endeavours to find answers to her questions by asking others, most probably hearing colleagues or relatives, who have watched and understood the programmes; this is a situation that clearly highlights the social disparities that exist between hearing and deaf people when it comes to enjoying entertainment media, as well as the extent of the dependency of the latter with respect to the former.

When watching programmes in the company of others, the help the respondents receive from their family members or friends is not always enough or useful for them to understand the whole programme, as some of the interviewees lamented:

> B: *Nobody helps. I ask a question; they evade it by only describing the topic in brief. I even pray for this help.*
>
> C: *The sound is off; for example, if somebody is with us, s/he can explain briefly or we ask but still it can't be understood completely because the person with us naturally can't and doesn't interpret the whole programme; what they tell is brief especially at the very exciting moments. At some points, sometimes, yes, we can understand but we know that we still miss points.*

All these efforts to ask a hearing friend or family member for missing information, trying to lip-read, guessing from the visual information on screen and the like underscore the importance of accessible TV to grant a higher degree of autonomy to hearing-impaired viewers. What is evident is that, despite these efforts, the deaf and HoH can still only understand up to a certain level, and when asked about what they do when they cannot understand the programmes, their replies clearly reveal their despair and lack of options:

> B: *We try to understand as much as we can, we make guesses by ourselves. We have to; there is no other choice.*
>
> C: *We have to continue. If I don't like it, I change it, but if I can't understand a key point in a programme I like, I continue to watch, but for example* […]*, if I am still not able to understand, I say it isn't possible and change it.*

These comments show that getting help from friends or trying to lip-read are strategies that do not lead to an enjoyable viewing experience and clearly highlight the fact that they are woefully inadequate for the needs of the deaf. It therefore seems legitimate to conclude that, in order to guarantee equal access to AVPs on Turkish television, the only way forward is through the provision of SDH.

The expressions the participants used to describe what they do when they cannot comprehend the programmes (e.g. 'there is no other choice', 'we have to') highlight the desperate situation they find themselves in. As there are not many other choices open to them, they admit to trying really hard to understand the programmes they are watching and only when the situation becomes impossible do they change the channel or switch the TV off altogether. As discussed previously, this frustration has the knock-on effect of prompting them to spend more time outside, socialising with others. Yet, since the lack of accessibility measures is equally noticeable in other walks of life, they tend to be generally confined to their own deaf society and spend most of their time with their hearing-impaired friends and relatives at the cafes of the associations rather than blending in and socialising with other members of the wider society. This state of affairs can be detrimental in the sense that they continue to be excluded from society, living in a sort of self-enclosed ghetto that, ultimately, prevents them from making the most of the opportunities that society has to offer, and should offer, to all its citizens. In the interviews, it is clear that all the participants believe that SDH could help change this situation, by the mere fact that they have the potential to provide full access to AVPs and can thus enjoy TV programmes in the same way that hearing viewers do.

For some of the interviewees, like participant C, subtitles could also yield other benefits. When used in conjunction with all the other multimodal elements included in the AVPs, the transmission of the message could be easier for the viewer than, for instance, reading a book:

> C: *It will be beneficial; this is important. For example, we can read and understand books, but books and TV are different because subtitles on TV are*

combined with (acting), I mean, since it has also a visual aspect, it eases understanding and learning.

In addition, as hinted at at the end of the sentence, the combination of subtitles and TV programmes could play an important role in promoting the acquisition and improvement of the hearing-impaired viewers' language skills in Turkish and their further 'learning' of the world.

8.2.3. TSL, beneficial though with issues

The participants perceive the use of TSL as suitable for the translation of all kinds of programme, as well as being beneficial for the hearing-impaired viewers' comprehension. Even participant A, who became deaf after she had already acquired spoken language and later learned to lip-read rather than to use SiL as a way of communication, appreciates the value of TSL for the deaf and HoH. However, the activation of TSL is not without problems and needs to be improved on in several respects. As foregrounded in the following statement, the lack of standardisation of the language is a challenge, something that can be overcome if subtitles are used instead:

B: *Since my reading is good, yes, TSL is beneficial but along with its benefits, there is one thing, the signs are not common. For example, if the sign for brown is this (shows the sign) for us and another sign is used somewhere else, I will miss it. The lack of standardisation in TSL is a problem, but there is no such situation as deciding on which words to use in subtitles; yes, words are standard anyway. Since I can understand the sentence, I don't feel its absence.*

For participant C, the problem relates more to the dynamics and the positioning of the interpreter on screen:

C: *If we watch, TSL should be available for every programme without distinction. It is suitable for all programmes. We can't say it is not suitable for this programme…*
There are things I see as a problem or difficulty. For example, there are times when the interpreter does not follow the programme or the interpreter is there but the image of the film is absent. You can't move the interpreter depending on the images of the film; s/he needs to be fixed and, in this case, the image is left behind the interpreter. It makes it difficult to follow if the interpreter is moved depending on the actors. In this case s/he is more distracting.

As can be seen from the excerpts, the participants advocate the provision of SLI on all kinds of programme, regardless of the inherent challenges and difficulties of using TSL, since they believe that SLI can provide equal access to AVPs. The issue mentioned in the first excerpt by participant B – i.e. the lack of standardisation in TSL, which was also discussed in Chapter 3 – was also observed by the researcher during the implementation of the experiments. As indicated by participant B, the use of different signs for the same word across different regions in the country makes it difficult for the deaf to learn and understand TSL. Given the complex nature of audiovisual programmes, which require the viewers to follow multiple codes at the same time, even the smallest confusion created by the lack of standardisation in TSL has the potential to magnify the difficulty of understanding the programme being watched and diminish the enjoyment of deaf viewers considerably. Indeed, the use of a different and unexpected sign might distract the viewers' attention and break the illusion of the AVMs, by adding a layer of extra difficulty to the meaning-making process.

Participant C mentions an intriguing problem, namely, the placement of the interpreter on the screen. The addition of any extra visual items to a finished AVP, which is already characterised by its "great complexity in which different sign systems co-operate to create a coherent story" (Díaz-Cintas and Remael 2007:45), raises some problems and confusion as to where to place these items so that they can be as integrated as possible into the pre-prepared text and become a part of it without attracting undue attention and disturbing the viewing experience. Furthermore, the size of the box in which the interpreter appears is also an important factor as it needs to be big enough to allow for the proper definition and clarity of the signs being interpreted (Stone 2007).

In this respect, respondent C complains that the window with the interpreter sometimes obstructs the actual images of the original, which disrupts the viewing experience. The problem here is that once the position for the interpreter has been decided, usually in the bottom right hand corner of the screen, s/he remains in the same place for the length of the programme, irrespective of what is going on in the background. Another complaint raised by

the participants as regards SLI is that sometimes a mismatch occurs between information conveyed in the original images and the account provided by the interpreter.

These problems notwithstanding, all of the participants demanded more TSL on television as a way of guaranteeing accessibility.

8.2.4. Promoting accessibility and equality with SDH

The participants were unanimous in their opinion that SDH could provide full access to audiovisual programming and enable them to understand and enjoy the programmes in a similar way to their hearing counterparts. Even though the participants were aware that the low level of education among the deaf and HoH community might prevent equal access, they still fully supported the provision of subtitles and, as previously discussed, they also believed that continuous exposure to SDH would help them improve their language skills in Turkish. In their own words:

> A: *Absolutely, as an individual with profound deafness who lip-reads, I think I can follow TV programmes on an equal basis (with others) thanks to subtitles.*
>
> D: *Definitely. For example, we are both watching and you have laughed or cried but I have only stared (at the screen). I learn afterwards what was going on and can laugh or cry afterwards. So they should tell us at the same time by providing necessary accessibility through subtitles; then when we cry at the same time as you, we can talk about equality. When we experience the same feeling simultaneously, then we can talk about equality. Equality will then become reality.*

As can be seen from the excerpts, the participants wished to have a similar viewing experience as their hearing counterparts, strikingly described by participant D when she says she would like to be given the opportunity of being able not only to laugh and cry at the same time as other viewers but also in an independent manner, without having to depend on the help of others. SDH would allow deaf and HoH viewers to watch and enjoy AVPs independently and experience the same feelings simultaneously, thus enhancing accessibility and equality. This is particularly telling since, except for participant D, the respondents did not have an in-depth knowledge of SDH, nor did they watch

programmes with SDH regularly, and yet they could still discern the potential of SDH to provide equal access. As evidenced in participant B's comment, their experience of SDH might be rather unique and, thus, memorable:

> B: *I remember these (SDH); there were Turkish subtitles on a programme with Turkish speech. It was something like a sports programme.* […] *Apart from these, there were film screenings in the association with both SDH and a sign language interpreter.*

Similarly, spotting the difference between standard interlingual subtitles and SDH was not an easy task as the participants were not all that familiar with access services for the hearing-impaired:

> B: *On some programmes on CNBC-E, the names were also written but I didn't pay attention to others in Turkey.*

All in all, in their opinion, SDH, seemingly more than TSL, is a service that could enable all hearing-impaired viewers to enjoy audiovisual programmes independently; they thus demanded that more programmes should be accompanied by SDH.

8.3. SDH Preferences

This section explores the preferences of the viewers with regard to the SDH strategies tested in the experiment, paying special attention to their answers and remarks when explaining and justifying their choices.

During the interviews, the respondents were given the opportunity to reflect once again on their preferences as regards SDH and explain them in their own words. The superordinate themes that can be observed in the analysis of the respondents' remarks can be clustered in the following three groups: (1) implications of short-term memory among deaf and HoH viewers, (2) the fact that some viewers may have developed some tastes and expectations as a result of their exposure to standard subtitles rather than SDH, and (3) the existence of clear discrepancies between the preferences of the prelingual and the postlingual deaf respondents, especially regarding the issue of edited

versus verbatim subtitles. These superordinate themes were found to be closely linked with the respondents' responses, to varying degrees, depending on the particular strategy being tested in the experiment. These superordinate themes and their effect on the preferences are discussed under each of the parameters researched in the study, namely, speaker identification, reading speed, sound information and paralinguistic information.

8.3.1. Speaker identification

As revealed in the quantitative analysis, the responses to the survey indicate that the respondents prefer a combination of strategies in which the use of different colours and textual displacement are used to signal who the speaker is.

When asked to reflect on their choices during the interviews, it became apparent that the problem of short-term memory had a big impact on their preferences, which is one of the main reasons why the use of labels was rejected by most of them, as they put extra pressure on their reading process. The respondents opted, therefore, for strategies that were based on visual representation and did not seem to be bothered by the concurrent use of strategies that transmitted the same information (i.e. colours and displacement). This latter finding seems to corroborate Hamilton's (2011: 406) claim that deaf individuals are particularly successful in communicative situations where dual encoding is activated. The following comments by participant B, who preferred a combination of textual displacement and the use of colours, are illustrative of this situation:

> B: *It will be both displaced and we see the colour as well. We need to read the name first and then we read what s/he says but it is clear with colour.* […] *And colour can also be used for off-screen voices.*
>
> I: *You gave 2 points to the use of colours you liked least, can you explain why?*
> B: *Colour is a bit like, for example, s/he enters the scene and it is difficult to understand his/her colour is that one before s/he enters the scene.*
>
> I: *If information about the colours is provided beforehand, will it be effective?*
> B: *Then, it might become an effective method.* […] *I don't like having the name very much either.* […] *Instead of [thinking] is this that [person's name], the other*

> *method [is preferable]. Learning names or remembering them might be difficult [this seems to be a comment from the interpreter based on the speech of the participant rather than a direct translation] but when it's colourful, it is obvious what is what. With colours, we can code people according to colour.*

The results of the present study seem to be in line with the DCT since the participants prefer the same information to be presented in multiple ways, which may possibly enable them to dually encode the information regarding speaker identification. The discussion in Section 4.8 accounts for the participants' preferences for strategies based on visual representation, despite the fact that, as we have already noted, these strategies may potentially increase the viewers' cognitive load, split their attention and distract their viewing experience.

These memory shortcomings and strengths of hearing-impaired individuals help provide an explanation for the difficulties that they experienced on this front as well as for their inclination to prefer strategies based on visual representation. The highlighted memory shortcomings – e.g. the difficulties they had in recalling linguistic stimuli (sequential memory), the longer time spent encoding written sentences and constructing meaning and the increased cognitive load during the reading process –, all seem to justify the idea that the process of reading and understanding subtitles is relatively difficult for the deaf and HoH, even in the best of cases when they are structured and presented well on screen. Adding an extra item in the form of proper names has the potential to act as an extra burden to their cognitive load and, thus, to affect their viewing experience negatively. It is not surprising, therefore, that given their memory strengths, especially their visuospatial memory that allows them to remember visually arranged items better, they prefer strategies and solutions that are essentially more visual. This is also in line with the results revealed in the quantitative analysis, whereby 77.8% of the participants who did not have difficulty in reading preferred the use of labels whilst this percentage dropped to 52.3% in the case of those who acknowledged having difficulty with reading. Even though the participants interviewed were well educated when compared with the rest, and did not seem to have much difficulty in reading, memory issues still seemed to affect their reading process and predispose them to opt for more visual strategies, in line with the rest of the participants.

As previously mentioned, by preferring a combination of textual displacement and the use of colours, instead of only one of the two strategies, viewers received the same information twice, which reduced the risk of missing it altogether. Participant D explained why she opted for a combination of two strategies, the change of colours and displacement of text, instead of just displacement:

> D: *Being colourful is both a nice thing and immediate perception is more… We might not be able to follow a character, and colour is a helpful factor.*

One of the downsides of textual displacement is that placing the text under the character who is speaking requires the subtitles to be moved constantly depending on the speaker, which in turn makes it difficult for the viewers to follow. The respondents therefore preferred a combination of two strategies so as to make it easier for them to detect the character to whom the text belongs and, thus, reduce their cognitive effort.

One of the respondents, participant C, suggested combining all three strategies, i.e. use of labels, textual displacement and the use of colours. When prompted to reflect on his choice, he claimed that:

> C: *With the addition of names it would be better. With the name it would be more dignified. A combination of the three of them would be better.*

Considering the memory particularities of hearing-impaired individuals, providing some information before the actual broadcast of the programmes, as discussed in Chapter 4.8, might be a solution worth exploring. As with audio introductions prepared for the blind and partially sighted ahead of a performance (Weaver 2014), such an approach would give the hearing-impaired extra time to learn and memorise the names of the characters and the colours assigned to each of them, thus helping to decrease the viewers' cognitive load.

8.3.2. Reading speeds: edited vs. verbatim subtitles

On this front, the main theme revealed as a result of the qualitative analysis was the existing divide between the preferences of prelingual and postlingual deaf participants when it came to edited and verbatim subtitles. Participant A, who became deaf after the age of seven, opted for verbatim, literal subtitles and perceived the editing and condensation of the dialogue as an act of censorship:

> A: *I think there should be equal, verbatim subtitles. In time, the deaf will get used to and follow [the subtitles] more easily. I don't approve of the fact that others condense and edit by deciding on our behalf.*

However, the rest of the interviewees, who were all congenitally/prelingually deaf, showed a clear predilection for edited subtitles, as illustrated in the comment provided by participant D:

> D: *For example, there were unnecessary things we read. There were things omitted and those [sentences] were better. For example, there were condensed parts and those were good. Those were enough.*

They were quick to reject any form of patronising or censorship by emphasising that any editing of the original dialogue should not cause any loss of meaning:

> I: *Do you consider editing some words or changing sentence structures to reduce reading speed as a form of censorship?*
> D*: I think what is important is our being able to understand; yes, we can watch a difficult speech in a more summarised way. But summarising should not be simple, shouldn't simplify [the meaning].* […] *Simple but not childish.*

Differences in terms of the respondents' preferences can be easily gleaned from their respective remarks. Participant A was against any kind of condensation or editing of the subtitles and perceived such an act as an instance of censorship, which ultimately negates the deaf's equal access to audiovisual programmes. She added that any decision taken on their behalf as to what to include and exclude in the subtitles is an affront to their freedom to choose what information to absorb for themselves. In stark contrast to A, respondent D opted for edited subtitles and underscored the importance of understanding the original dialogue rather than trying to keep up with the pace

of subtitles that are too dense and contain a literal rendition of the exchanges. Nonetheless, her opinion was nuanced when she added a cautious note to the editing of subtitles, arguing that the condensation and editing of subtitles should not lead to the oversimplification of the original meaning.

Two other congenitally deaf interviewees raised the same concern, when they said that editing should not lead to an oversimplification of meaning. To avoid the risk of being patronised and treated like children, they repeatedly emphasised that the original should be edited in such a way that it allowed them to read and understand the subtitles easily while at the same time enjoying the visuals, but without manipulating the language register and converting it into 'baby language':

> C: *The meaning should not be narrowed and simplified; it shouldn't be turned into baby language in case the deaf can't understand it.*

From these statements, it can be observed that the interviewees were worried that their hearing impairment could be used as an excuse to treat them with condescension by giving them very simplistic subtitles. This degree of dependence felt by the hearing community is also very common in other countries, where there is considerable debate concerning edited vs. verbatim subtitles (Burnham *et al.* 2008; Neves 2008; Romero-Fresco 2009; Szarkowska *et al*. 2011).

The relationship that seems to exist between the onset of the impairment and the viewers' preferences regarding the use of verbatim or edited subtitles was not revealed in the statistical analysis. Although statistically not proven, a potential link between the onset of the impairment and the preferences of the viewers might be inferred indirectly from the survey, as the majority of the participants (70.3%) were prelingually deaf and most of the respondents (68.58%) admitted to preferring edited subtitles. However, to be able to confirm that this relationship is significant, further and more in-depth analyses are needed, both from a quantitative and a qualitative angle.

8.3.3. Sound information

Corroborating the findings revealed in the statistical analysis, the interviewees again reiterated their preference for the use of labels to describe sounds contained in the programmes, with none of them opting for the use of any of the other two alternatives: icons or onomatopoeia, as participant A put it:

> A: *The use of sound labels in a concise and clear manner is enough for me.*

The profile put forward by the interviewees supports the findings from the quantitative analysis which shows that people who are more educated tend to prefer the use of labels. Similarly, the preference shown for the use of labels can be explained by the fact that all the interviewees were relatively well educated and did not have much difficulty in reading.

One of the reasons that explains why they preferred the 'use of labels' over the 'use of icons' is related to preferences and expectations that stemmed from their exposure to standard interlingual subtitles. Although deaf viewers in Turkey have very limited knowledge and experience of SDH and therefore do not seem to have rigid preferences, they still have certain expectations that relate to the standard subtitles produced for hearing viewers. As they are not used to seeing additional icons, pictures or other visual nonverbal representations in the interlingual subtitles, they do not think they should be used in SDH either, as is evidenced by the interviewees' comments given below:

> B: *Things like little images, they are not good, there is no need for images.*

> C*: I didn't like the icon. I didn't like the emoji either. I didn't like placements like emojis or images. Subtitles are suitable for the visuals (they do not look awkward on the screen) but other visual things are not suitable.*

Thus, their previous exposure had a considerable impact on their preferences, making it difficult to change their habits with the introduction of new strategies that they had never seen before on screen. Thus, the exposure of deaf and HoH audiences to standard interlingual subtitles should be taken into

consideration when devising guidelines for the production of SDH on Turkish television. Having said that, some of the respondents did not rule out the use of emoticons outright but rather suggested that simpler ones could be used instead, as in the case of participant B:

> B: *Things like little images, they are not good, there is no need for images or it could be simpler, not like emojis, but for example a stickman like a phone symbol.* […] *simpler symbols, for example 'tık tık' [knock knock] door sound or a fist moving to and fro or only a finger pressing the doorbell.*

Another theme, emerging from the remarks put forward by participant C, is that the activation of such devices as emojis might be perceived as an infantile strategy with the undesired effect of looking down on the viewers and treating them as 'children':

> C: *The subtitles should be colourful at the very most. When there is an image, it is like reducing our educational level to the level of children; I mean it's a lot more, I mean, OK, the educational level of the community is low, but I don't like it to be reduced this much.*

This concern of theirs conjures up a bigger picture about how deaf and HoH people perceive their treatment in society and their desire to be respected and valued on equal terms to the rest of individuals. Subtitlers and broadcasters therefore need to be vigilant when deciding on the SDH conventions to be introduced and implemented and should promote a debate with users so as to explore their likes and dislikes, as well as explaining the reasons behind their actions and decisions to the target audience and giving them an opportunity to express their opinions. Such an approach would demonstrate the value and respect they have for their hearing-impaired audience, which is the ultimate *raison d'être* of any accessibility services.

Their rejection of onomatopoeia was down to the fact that they did not deem them really meaningful for the deaf, who find them difficult to relate to. Hence, their preference for the use of a description of the sound instead, even if this solution is textually longer:

> D: *I don't find providing onomatopoeia very right; there should be names of the onomatopoeia sounds; instead of 'meow', cat is a more general expression, 'cat*

sound' is understood but 'meow' might not be understood. Not everybody knows 'knock knock' but everybody knows 'door sound'. We might recognise the sounds but today, the number of the deaf who don't recognise sounds is higher; they don't recognise the sounds so this strategy isn't suitable for them.

A: *It [onomatopoeia] makes sense but onomatopoeia should not be applied to every sound. I think using labels describing sounds is the best.*

The remarks expressed by participant A show that her opinion concerning the use of onomatopoeia had been moulded by her understanding that this linguistic device is to some extent limited, as it cannot be employed to denote every sound effectively. This is particularly intriguing because, although she liked the onomatopoeia used in a particular example, her concern remained that such a strategy might not be appropriate for the rendition of all sounds, which in turn dissuaded her from showing a preference for the use of this particular method.

These concerns and way of reasoning can easily be extended to the interviewees' evaluation of some of the other strategies tested during the experiment. It could be argued that their apprehension originated from their lack of knowledge of the potential of each of these strategies. In this sense, their opinion and appreciation of the various strategies might well change in the future, as they become more familiar with them and start to realise their full potential.

8.3.4. Paralinguistic information

The information gleaned from the interviews about the interviewees' preferences regarding the description of paralinguistic information reveals the same results as the quantitative analysis. In short, the interviewees liked both strategies, the use of labels and the use of emoticons, and no significant difference can be established between their preferences for either technique. Their answers seem to show that, irrespective of the strategy being used, they were able to understand the paralinguistic elements contained in the clips and therefore did not mind which one was used, as participant B explains:

B: *I consider both of them useful strategies.* […] *But in terms of following…*

I: *If you had to choose one, or only one were to be used, would you choose emojis?*
B: *They [the broadcasters or producers] or you could choose.*

Once again, their occasional exposure to standard subtitles seemed to have had an impact on their preferences, particularly in the case of emojis. Although they perceived both strategies as a convenient way of identifying paralinguistic information, as they were not used to seeing emoticons on TV screens, they believed that these visual representations might attract unnecessary attention and should therefore be used sparingly:

D: *Both are possible; it is enough for us to realise the emotion that they intended to express or the thing that we need to realise.* […] *It [the emoji] might attract our attention too much inside the subtitles.* […] *We are not used to seeing that emoji there.* […] *It might partly be due to the fact that we are seeing it for the first time.*

Participant D seemed worried that the use of emojis might affect the hearing-impaired viewers' reading process adversely and aggravate their reading problems, thus highlighting the challenges they experience when reading, even in the case of comparatively well educated viewers such as the respondents who participated in the interviews.

Another concern raised by the respondents was the fact that emojis are not suitable for use in all types of audiovisual programme, as illustrated in the statement provided by interviewee C:

C: *I use them on the phone. But if it is something official, then I use both sentences and the thing… For example, it's like the thing I mentioned before; for example, if a film is about a more serious topic, emojis wouldn't be suitable in that case and in the same way… but for example in a programme which is for children, or is filled with more comic elements, emojis will be fairly suitable – In the same way that I use them in my communications, depending on the topic.*

As stated previously, the participants acknowledged that emojis are an effective way of conveying emotions, and they admitted making use of them in their personal communications, which supports the communicative potential that emojis can have on TV screens. Yet, these remarks are closely linked to those

put forward by respondent D in that emojis attract too much attention and risk unsettling the audience's viewing experience. Participant D contends that resorting to emojis in programmes dealing with serious topics can result in the breaking of the cinematic illusion and might, thus, affect the nature of the programme negatively. Arguably, the designing of new, ad hoc emojis with different colours and shapes to better suit certain scenes might be a possible solution. In any case, professional subtitlers and broadcasters should be careful about the emojis they choose for a given programme. Emojis, whether used independently or as part of the subtitles, would need to be fully integrated and in harmony with the other filmic sign systems.

Since participant D regularly watches programmes with SDH and TSL on the Channel D website, when it came to the representation of paralinguistic elements on screen, her opinion was markedly different from the other interviewees. Her views on SDH tended to be more elaborate than those of the others and will be briefly discussed here. Firstly, she complained about a lack of paralinguistic information with regards to how the characters speak on screen:

> D: *They write standard Turkish for the talks that have an accent; I want to know how that accented talk is.*

As Zárate (2010:115) argues, the representation of non-standard language in subtitles is a rather contentious issue. Reproducing these linguistic varieties in the subtitles would certainly provide the viewers with a taste of the colloquial and idiolectal use of language, but the danger is that it might compromise the readability of the subtitles and thus affect the viewers' understanding of the text negatively. Subtitlers therefore need to be careful not to undermine the readability of the message when representing non-standard language in the subtitles.

The complaint raised by participant D can be easily extended to the lack of representation of other paralinguistic information that marks the way in which the characters on screen speak. Part of her criticism is that she generally cannot get this sort of information directly from the subtitles and needs to look at

the interpreter in programmes where SDH is concurrently presented with SLI so as to deduce the emotions being conveyed from the gestures used by the interpreter:

> D: *Yes, it [emotion] isn't obvious in the subtitles, but at this point the interpreter steps in because the interpreter can shape his/her gestures according to the feeling. For example, there is an interpreter whose gestures don't move much and I don't like her/him at all. I told the interpreter that, yes, the subtitles are provided but when the interpreter expresses the feeling there, I can then get carried away with the feeling and cry.*

It is obvious from the excerpt that the subtitles, as they are currently produced for distribution on the website channel, do not suffice to convey the feelings and linguistic nuances being depicted in the scene. The participant's feedback shows that SDH should be improved to integrate more paralinguistic information so as to give the viewers a similar viewing experience to that of their hearing counterparts.

Another of her remarks underlines the importance of becoming familiar with the various strategies used in SDH. Indeed, she admits that in the beginning she had difficulty in understanding who was actually speaking but gradually became accustomed to the strategy employed – i.e. the use of labels – and then she could slowly overcome her initial difficulties:

> *D: Yes, I found it difficult in the beginning but then, I got used to this method* (use of labels to identify speakers). *And I still sometimes struggle with the method at the beginning of the film but, yes, with the strategies you presented, it became easier to tell them apart.*

As was also revealed in the results of the DTV4ALL project conducted in various countries across Europe (Romero-Fresco 2015), being accustomed to a particular method means that, once the viewers are familiar with the conventions implemented in their country, it is difficult to change them and introduce new strategies.

Given the little prior knowledge that the participants had about SDH, it is not surprising, therefore, that the techniques tested in the experiment – i.e.

displacement, use of colours, use of icons, etc. – were a total novelty for them. Indeed, they confirmed that this was the first time they had encountered them, and rather than being put off by them, they all stated that the various strategies helped them understand the contents of the clips used in the experiments, with comments like the following:

> C: *I liked them [subtitles], they were nice. I give them the thumbs-up…*
>
> *I really understood while watching the programmes with subtitles; I didn't have any problem in understanding.*

The participants had a positive approach to the experiment and the researcher since they saw the benefits of these accessibility services. The subtitles enabled them to comprehend and enjoy the clips in the experiment, and they were open to the use of new strategies in the subtitles.

CHAPTER 9

Conclusions

In a digital society, AVPs command a prominent position which is becoming more important day by day, consolidating their place in the lives of people and helping individuals obtain information pertaining to all domains of their lives. The prevalence of these productions in daily communication, together with the variety and importance of the information that they provide, make them an indispensable part of people's lives, whether for entertainment, education, general information or finance etc. We are constantly surrounded by screens everywhere in our daily lives and rely on them to obtain information that will impact and shape our daily routines. And, although it is true that these audiovisual sources of information create opportunities and facilitate the lives of people able to take full advantage of them, they can also lead to sharp inequalities and disadvantages for those who do not have proper access to them. In particular, those with a sensory disability run the risk of lagging behind in (the digital) society due to their inability to access a medium that targets and utilises the senses in order to receive and enjoy the information delivered. To make sure, then, that society is inclusive and offers the same opportunities to all its members, these individuals require special services if they are to access and enjoy AVMs in a similar way to other members without any sensory disabilities.

The equality of all Turkish citizens before the law, regardless of their language, colour, political opinion, religion, race, sex or philosophical beliefs, is protected and guaranteed by Article 10 of the Turkish Constitution, which also requires that necessary measures should be taken to cater for citizens' needs, so that they can participate fully in all spheres of life. An amendment to this article states that "measures taken for the children, the elderly and the disabled, as well as orphans and widows of the martyr and the veteran cannot be considered to be contrary to the principle of equality" (ILNET n.d: online).

Turkey furthermore signed the UN Convention on the Rights of Persons with Disabilities in 2007, which was ratified in 2009 and gained the power of a national law according to Article 90 of the Turkish Constitution.

In Turkey, people with sensory impairments are currently in a sorry state when it comes to accessing information, especially if it is supplied through audiovisual means. Attention is generally directed towards the physical needs of people with some kind of disability, and accessibility is generally understood as facilitating access to physical surroundings, such as buildings, public transportation and the like. Hence, the needs and rights of these citizens to access information for the purpose of making informed decisions or simply for entertainment or to pursue an education have traditionally been overlooked, and people with a hearing impairment are no different.

Until very recently, Turkish sign language interpreting (TSLI) has been the only assistive service provided to enable people with a hearing impairment to gain access to AVMs on free-of-charge broadcast TV. In addition, it is aired on a rather limited number of programmes and only on certain days of the week and at certain times. In 2018, the private channel FOX TV started offering SDH only on repeats of series' episodes, and, although this was a remarkable improvement in the Turkish mediascape, the reality is that this practice still ignores the rights and needs of the deaf and HoH, as they cannot enjoy these productions at the same time as hearing audiences and have to wait until a later broadcast.

Two of the main aims of this study were to draw attention to this unequal situation in the media industry and to raise awareness among all stakeholders about the rights of these members of society to have access to the same information as the rest of the citizens. Given that people with a hearing loss in Turkey still struggle to satisfy their more basic rights such as education, it is not surprising that they themselves are not really sensitive to, or even aware of, their rights when it comes to accessing information. The experiments also showed that, even in deaf associations, TVs are switched on without any accessibility measures in place in the associations' common rooms.

In order to carry out the experiments, participants were recruited with the help of associations in four different cities: Ankara, Antalya, Denizli and Konya. They were all informed about the aims and objectives of the project and were asked for their support. It is hoped that this collaboration will help the research project to increase awareness among the boards and members of these associations as to the rights of the deaf to access AVMs in general and to be offered SDH in particular.

Although the current state of affairs in Turkey is not optimal for the deaf and the HoH with regards to accessing AVPs, the future looks bright regarding the development of accessibility services. Indeed, a swift change is possible on the condition that the special needs and rights of people with a hearing loss are recognised, and that the necessary steps are taken in collaboration with all the parties involved, i.e. viewers, broadcasters, translators, interpreters and the government.

In the first instance, there is a need for a change of perspective with regards to people with sensory disabilities in general in that they should be perceived as valuable members of society who can contribute to the overall good of the community instead of being conceived of as a burden. Secondly, given the pivotal role that information and communication play in all aspects of life, it could be argued that the most important factor in this change of perspective is to realise that the hearing-impaired should have the same rights as hearers when it comes to accessing information, irrespective of the channels in which it is communicated. Once the realisation of these rights is achieved, both among the people with special requirements and among the remaining citizens, and once the nature of the obstacles that prevent them from enjoying these rights and attaining information is elucidated, collaboration among all stakeholders should be pursued. The main outcome of this process should be the implementation of accessibility services that can then be created in a collaborative manner and offered to those in need of them. Learning from the experiences of other countries with a greater history in this respect is vital in order to avoid encountering the same problems and committing the same

mistakes as they have done. Another key factor behind ensuring the success of these services is to make sure that they are created in a way that suits the specific needs and preferences of the deaf. Although hearing loss is a universal occurrence, the experiences, expectancies, needs and preferences of the people affected by it differ from country to country due to cultural differences, discrepancies in educational systems and the absence or presence of laws protecting the rights of people with sensory disabilities, etc.

The other main aim of this research project was to contribute to the provision of standardised SDH catering specifically to the needs and preferences of Turkish deaf and HoH audiences. In order to do so, the present study, within the framework of DTS, begun by examining the prevailing norms that govern the production of SDH in other countries with greater experience in the provision of SDH. This analysis of norms began with the exploration and comparison of the various guidelines used in different countries, which presumably reflected their accumulated experience in the production of SDH over the years, as well as of other studies published on the same topic. These guidelines and studies were examined and compared so as to reveal the common points implemented consistently in different countries such as the USA, Canada, the UK and other countries that took part in the DTV4ALL project in Europe. Special attention was also paid to some of the controversial issues that arose from these works. The results from this initial analysis became the starting point for the subsequent empirical experiment conducted with a group of Turkish hearing-impaired individuals. Having such a general overview was important because this was the first ever experimental study on SDH in the Turkish context, and no data were available in Turkish that could be of use for the current research on deaf viewers' preferences and requirements regarding SDH. As the topic seemed rather vast, and it would not have been feasible for a single study to cover all the aspects of SDH, special emphasis was placed on particular aspects of SDH that, according to the literature, seemed to cause much argument and controversy. In this sense, the analysis of the previous guidelines and studies revealed that the strategies employed in the indication of speakers, the representation of sound and paralinguistic information together with the issue of

verbatim and edited subtitles tended to be the most controversial and to change from country to country.

After a descriptive analysis and the systematisation of the various norms governing the production of SDH in other countries, the attention was turned to Turkish hearing-impaired viewers – the most crucial stakeholder in this whole process. Understanding the intended viewers' needs and preferences seemed extremely important since, ultimately, they are the raison d'être of these services and, if the provided set of subtitles does not cater to their needs and preferences, then the service runs the risk of being useless.

Translation being a form of communication between two different parties who do not understand each other means that translators must have a deep knowledge of their target audience so that the original message can be successfully communicated to the new recipients. Yet, as Gambier (2003:186) points out, "translators can only aim at a potential target audience whose profile they inevitably construct on the basis of their own stereotypes and prejudice", and, therefore, the more they are informed about their target population, the more likely they are to succeed in their enterprise. It is vital for translators to be able to close the gap between their own prejudices and stereotypes and the real profile of the target audience, so that they can produce texts that address the needs of the target population and meet the expectations of the receivers.

Audiovisual programmes are generally produced by hearing individuals for a hearing population, and SDH is usually produced by hearing agents who, without specialist training, are not likely to have enough knowledge about the receivers' hearing loss and what this means to their social interaction. In such a context, the gap between the hearing agents' prejudices and stereotypes and the reality of the target audience risks being too wide for an act of translation to be successful. The quest to gain a more substantial knowledge about the target audience is therefore well worth the effort in order to provide subtitles that cater to the needs and preferences of the deaf and the HoH receivers, especially in a context such as Turkey where hearing-impaired individuals are not very visible socially and where their needs are generally overlooked. As discussed in

Chapter 3, basic statistical data on the deaf and the HoH communities in Turkey (e.g. the actual number of people in these categories, their degree of hearing loss, the onset of the impairment, their educational levels, etc.) are not reliable or kept up to date, let alone with any consistent data on more subjective topics such as their level of satisfaction when it comes to education, social integration, promotion of their rights and so on.

To counteract this situation, this research has placed a great deal of importance on the profile of the deaf and the HoH people in Turkey, focusing on topics like access to education, the type of education they receive, their social and political rights, their TV viewing habits and their reading habits etc. By relying on the framework of ART, the present study has ultimately contributed to revealing some of the preferences of the hearing-impaired when it comes to the consumption of SDH. Such information is valuable for the agents producing SDH inasmuch as they can then make informed decisions based on the preferences of the target audience. This part of the research was investigated through two sets of questionnaires followed by semi-structured interviews with some of the participants in order to give them the opportunity to express themselves more elaborately and freely.

As mentioned above, the main SDH parameters extracted from the descriptive analysis were tested on a group of Turkish deaf and HoH viewers so as to gauge their preferences with regard to the different strategies employed. At the time when the experiment was conducted, SDH was only provided on the website of very few TV channels, and most of the Turkish deaf and HoH individuals had, and continue to have, very little knowledge of, or experience with, SDH. Given the situation, the current study was a great opportunity to introduce SDH to the participants, some of whom had never before been exposed to it, and to inform them about this form of accessibility and their rights to access information. Their exposure to various clips that had been purposely subtitled in different ways so as to ascertain their preferences proved instrumental. After the implementation of the questionnaires, further interviews were conducted with some of the participants to allow them to provide their insights regarding their preferences in a more detailed and freer manner.

The part of the questionnaire covering the personal details of the participants uncovered two realities that are bound to have an impact on the provision of SDH, namely their low educational level and their relatively poor reading skills. Out of the 37 hearing-impaired people that took part in the experiment only five were university graduates. Of the remaining respondents, 13 had only completed a primary school education and 14 had completed high school. Three had finished junior high school, which is equal to primary school in the current schooling system, whilst one was a high school dropout and one held an associate degree. Although the number of participants was rather small and not enough to be able to generalise about the whole population, these statistics mirror the data contained in the Population and Housing Census of 2011 on the educational levels of the whole population. Despite the majority of the participants (21 out of 37) indicating that they were satisfied with their level of reading skills, it was apparent during the implementation of the experiment that they needed the assistance of a sign language interpreter in order to complete the questionnaire. There was an apparent relationship between the challenges they encountered when reading and the little time they spend reading per day (including newspapers, magazines, books, messages on phones, etc.). Indeed, 32 of the 37 participants stated that they spent less than two hours reading during the day and six of these 32 participants indicated that they did not read anything at all during the day. Low levels of education and poor reading skills are two closely interconnected issues that affect the ability of the population with a hearing loss to engage with subtitles and that have to be taken into due consideration when designing, producing and providing SDH.

Adding to this complex situation was the fact that a large number of participants, 26 out of 37, acquired their hearing loss before the critical age of two, with 19 of them having been born deaf, thus complicating their language development and making it much harder for them to master the Turkish language. Unsurprisingly, 25 participants indicated that their preferred way of communication was TSL. As evidenced by these two sets of data, Turkish was usually their second language and it was common for them to experience difficulty in processing and producing spoken or written Turkish. These personal data strongly suggest that

when providing SDH in Turkish, subtitlers should be very careful in their approach and every precaution needs to be taken to ease the reading process of the subtitles, especially during the initial stages of provision of SDH. With time, and once the audience becomes more acquainted with reading subtitles on screen, further research should be conducted to ascertain whether any changes or modifications should be considered.

The experience of watching AVPs was found to be rather taxing on the viewers, as attested both by the answers provided in the survey and the interviews. When asked about the way in which they watched AVMs, 27 respondents indicated that they only watched the visuals and 14 admitting having to rely on help from their friends and relatives. Only three participants acknowledged that they only watched programmes with TSL, which is totally understandable considering the scarcity of productions provided with this accessibility service. Arguably, one of the most challenging issues that needs to be overcome in the early stages is that of keeping the interested parties informed of their rights, as the majority of the respondents (25 out of 37) were not aware of their rights to access information that is enshrined in Turkish national legislation. As the deaf community are unaware of their rights, they do not know what they are missing and naturally do not ask for any changes to take place either, which of course has a detrimental impact on the development of accessibility services in the country. The picture gleaned from these questionnaires was one of a country where access services can be vastly improved and where an intelligible and easy-to-implement accessibility strategy is urgently needed.

The main part of the experiment required the participants to watch several clips that had been subtitled according to different strategies so that various aspects of SDH could be tested. The respondents were asked to indicate the ones they liked best, which were then ranked in order of preference. To avoid being too prescriptive, by proposing the use of only one strategy, and bearing in mind the constraints and difficulties that subtitling entails, the various strategies were ranked in order of preference so as to provide the subtitlers with a variety of options for the cases when the preferred option might not bring a solution.

To identify speakers, when it was not obvious from the screen who was speaking, the preferred method was the combination of the use of different colours and the displacement of the subtitles towards the speaker, which was chosen by 89.2% of the respondents. This was closely followed by the method of placing the subtitles close to the speaker on screen, which was chosen by 81% of the participants. The third and fourth strategies in order of preference were the use of different colours (70.2%) and the use of identifying labels (67.5%). Concerning the dichotomy between verbatim and edited subtitles, the majority of the participants (68.6%) opted for edited subtitles and only 45.7% preferred verbatim subtitles, which might have been directly connected with their poor reading skills. When it came to the identification of sound information, most of the respondents (78.4%) preferred the use of labels, followed by the use of icons (73%) and the use of onomatopoeia (66.7%). When, after completing the questionnaires, they were asked during an interview about this specific topic, it became apparent that their inclination towards the use of labels instead of icons or emoticons, despite the less demanding nature of the latter in terms of reading skills, was due to their perception of the limitations of technology, as they did not believe that icons could be designed and used to represent all kinds of sounds.

As for the strategies used to identify paralinguistic information on screen, no significant difference was found between the preferences of the participants when exposed to the two strategies, that is to say, the use of emoticons and the use of identifying labels. If anything, the use of emoticons was preferred by a slightly higher number of participants, 78.8%, when compared with the 75.7% who leaned towards the use of labels. When analysing the association between the independent and dependent variables, one of the most significant results was the fact that the respondents who were more likely to experience difficulties in their reading were also more inclined to favour strategies based on visual representation, such as the use of icons or emoticons.

The interviews were analysed following the framework put forward by the IPA for its focus on the individuals and on how they make sense of their experiences. Adopting the IPA's idiographic approach allowed for greater focus

on each individual case, thus gaining a deeper insight into the topic under investigation and discovering any similarities and divergence among them rather than basing the analysis solely on the count or frequency of the occurrence of themes. After the analysis and clustering of emerging themes, the superordinate themes that represented the most crucial and recurrent points expressed by the respondents were clarified. One of these superordinate themes was that the lack of accessibility services had a profound effect on the viewing habits of the interviewees directly and ultimately affected their social lives indirectly.

The fact that it is considerably difficult, if not impossible, for the hearing-impaired to access AVPs on TV raises the question of the importance and place of TV in their lives. Although the respondents stated that TV was moderately important for them and that they were ordinary TV viewers, further questions and a deeper analysis of their replies revealed that, although most of them wanted to watch more TV, the inaccessibility of the programmes currently broadcast on TV put them off from watching it and forced them to look to other alternatives. Individuals with a hearing loss therefore turn to other personal or professional activities depending on the services and facilities that they are able to acces. If they are comparatively well educated, employed and members of an association, it is easier for them to be able to compensate for the lack of TV in their lives. However, for those living in rural areas where local facilities and services tend to be rather limited TV becomes much more important since they do not have many other choices as to ways in which to spend their spare time. Regardless of the facilities, services and activities that they can access, it was apparent from the interviews that watching less TV than the respondents would have liked was not their personal choice. The true reason behind this state of affairs is that it is impossible for the people with a hearing loss to watch programmes independently.

The most frequent problem raised by the interviewees was their struggle to understand AVPs. We can deduce from their remarks that, rather than abandoning the experience altogether, the respondents put a considerable amount of effort into trying to comprehend the programmes broadcast on TV,

even though they could only understand them to a very limited extent as most of them merely relied on the information received through the visual channel. Their sheer determination to try to understand the programmes, rather than giving up, can be explained because they simply did not have any other choice. They unanimously expressed the fact that they become frustrated and disappointed when they cannot understand the programme that they are watching independently, despite their best efforts. Some of them mentioned that they apply to their relatives and friends for assistance, although they do not generally receive enough help to allow them to grasp the overall meaning, and they resent having to depend on other people and not being able to enjoy their own independence. The desperate situation in which they find themselves was openly expressed when they commented that, on many occasions, they have to continue watching the programme because there is no other choice, until the point comes when it becomes impossible to follow what is going on on screen. This frustration creates a knock-on effect, forcing them to find other activities in which to spend their spare their time. However, since the lack of accessibility permeates all aspects of their lives, they end up being confined to their own deaf communities, spending time and socialising with their hearing-impaired friends. This, in turn, causes them to be excluded from society and makes it extremely difficult for them to realise their full potential and to take full advantage of the opportunities that society has to offer.

Although the respondents appreciated the use of TSLI as a valuable means of providing access to audiovisual programmes on TV, and they required the number of the programmes with TSLI to be increased, they also acknowledged that the implementation of this particular access service was not without its own problems. The lack of standardisation of the TSL is the biggest challenge they face, as it makes it difficult for them to understand the nuances of the interpreting. The other issue they raised was related to the multimodal nature of the audiovisual programmes and referred to the placement of the interpreter on screen as the figure of the interpreter can sometimes obscure visual information that is vital to the understanding of the message. Notwithstanding all the novelties to which they were exposed during the experiment, they expressed a belief that SDH could enable them both to understand and to enjoy the

programmes on TV on an equal footing with hearing individuals, without having to depend on the help of their friends or relatives.

When considering the interviewees' insights concerning their SDH preferences, three superordinate themes clearly emerged from the analysis, namely, (1) the implications of short-term memory among the deaf and the HoH viewers, (2) the fact that some viewers may have developed tastes and expectations that stem from their exposure to standard subtitles rather than SDH, and (3) the existence of notable discrepancies between the preferences of the prelingual and the postlingual deaf respondents, especially regarding the issue of edited versus verbatim subtitles.

Deaf and HoH individuals generally have difficulty in processing and encoding written text phonetically, which increases their cognitive load since they cannot restore the written content at sentential level in the short-term memory. They therefore adopt different strategies to encode the written text, which then increases their cognitive load and affects their reading process adversely. This means that the use of identifying labels for speaker identification or paralinguistic information tends to tax their reading process, which is the reason why most of the participants opted for more visualised strategies. The respondents' predilection for a combination of strategies – e.g. the use of different colours and the displacement of subtitles to identify speakers – can be explained by the activation of dual encoding. When the same information is presented in different ways it may enable the viewers to dually encode the message, thus easing their reading process. Their choices can then be explained on the grounds of their memory strengths (free recall, visuospatial recall, imagery and dual encoding) as well as their shortcomings (sequential memory, processing speed, attention and memory load). Since it takes them longer to process written text with an increased cognitive load and they find it difficult to recall linguistic stimuli (sequential memory), they are inclined to perceive the use of identifying labels as an extra burden on an already taxing reading process, hence their inclination for strategies more based on visual representations. Their memory strengths, especially their visuospatial memory

(i.e. their ability to remember items presented in some form of visual array), also support and explain their predilection for visualised strategies.

In the debate between verbatim versus editing subtitles, it is worth noting that the prelingually deaf interviewees did not necessarily consider the editing and condensation of the subtitles as a form of censorship. The respondent who acquired her hearing loss after the acquisition of spoken language was the only one to demand verbatim subtitles, as she perceived any cases of editing as clear instances of censorship. On the other hand, the congenitally deaf interviewees opted for edited subtitles and signalled a preference for understanding the overall meaning of the original dialogue rather than having to struggle to keep up with the speed of the verbatim subtitles. Nonetheless, they cautioned that editing should not be used to oversimplify the overall meaning or to manipulate the register, as they did not wish to be treated like children. In other parts of the interviews, the respondents also expressed their worry that their hearing impairment could be used to patronise them.

It can be inferred from some of the interviewees' remarks that their preference for the use of labels over the use of icons might be related to their relatively high level of education. Furthermore, since they were not familiar with visual nonverbal items like icons or emoticons on screen, they claimed that they were not a convenient method to use in SDH. Their past experiences with standard subtitles tended, to some extent, to mould their likes and dislikes. The other reason they indicated their preference for descriptive labels over icons was that they considered emoticons as not being 'serious' enough and found their use somewhat patronising, making them feel as though they were being 'treated as children'. Together with their concern about the potential oversimplification of edited subtitles, this points to a bigger picture about how they perceive their treatment in society and their desire to be valued as respected members.

Similar underlying reasons seemed to guide their choices regarding the representation of paralinguistic information on screen. Once again, as they were not used to seeing emoticons on screen, they were concerned that the smileys might attract unnecessary attention from the viewers and disrupt their

reading experience. They also argued that emoticons might not be convenient to use in all types of programme as their usage in more serious genres might result in the disruption of the cinematic illusion. Although they admitted using emoticons in their personal communications and acknowledged their value when expressing emotions, they also noted that smileys should be employed with great care so as not to unsettle their viewing experience by attracting unnecessary attention.

To the best of my knowledge, this research is the first study ever to analyse the needs and preferences of deaf and HoH individuals regarding their access to AVPs in general, and SDH in particular, in the Turkish context. The feedback obtained from the questionnaires and the interviews has provided the basis for the elaboration of a set of guidelines that can be used professionally in the production and provision of SDH. The situation is bound to change in the future as the number of hours of accessible programming increases on Turkish TV and the hearing-impaired become more accustomed to, and knowledgeable about, SDH and the strategies employed. Hence, the results of this study and the proposed recommendations should be constantly monitored and updated with research that focuses on ascertaining the preferences of this sector of the audience. Although this study proposes a set of comprehensive guidelines covering all the aspects of SDH, the aspects that have not been tested in the present research – e.g. type and size of font, use of boxes and varying reading speeds – should be analysed and tested at a later stage with a hearing-impaired audience in order to reveal their preferences and fine tune the guidelines.

The research conducted here has focused on the preferences and needs of the deaf and the HoH, but their preferences might not always necessarily contribute to their understanding of programmes since comprehension is only one aspect of their preferences. For this reason, their levels of comprehension of the content should also be tested in further studies to ascertain which strategies help them best to understand the programmes and to facilitate their understanding of the message. Another avenue for research might involve using technologies like eye-trackers and EEG sensors to gather more objective

data on the implementation of the various strategies discussed in these pages and also different ones.

The limited scope of this research with regard to the number of participants should be expanded through collaboration with associations from all over the country so that more participants can be reached. The ability to conduct such an encompassing research in the country would greatly increase the awareness of the hearing-impaired population as to their rights to access information. It would also act as a catalyst to attract more attention in Turkish society as a whole to the topic of accessibility to audiovisual media and to the needs of the hearing-impaired in Turkey.

Furthermore, the needs and preferences of different groups of the audience with regard to SDH should also be analysed and projects should be carried out with children above or below the school age, for instance. The potential value of SDH for the education of these groups of younger audiences in particular, and of the deaf community in general, should also be explored from a scholarly perspective, as it has already been done in other countries. So as to ensure the continuous development of SDH and other accessibility services in the country, efforts should be taken to guarantee that all the stakeholders are given an opportunity to be involved in the process. In this sense, an umbrella body could be created in which representatives of deaf associations, broadcasters and distributors, translation agencies, government bodies and subtitlers are all invited to take part and contribute. Finally, the training and education of subtitlers who are specialists in this field is an area of research and development worth pursuing in order to ensure that professionals working in this sector are well qualified and well prepared.

Despite the sorry state of affairs regarding accessibility in Turkey, as described above, and the desperate situation in which the deaf and the HoH occasionally find themselves, the situation seems to be progressively improving, even though too slowly for some. Legislation has been passed requiring the provision of SDH in the form of an amendment to RTÜK's Directive on Procedures and Principles regarding Broadcast Services. Some TV stations have started to

broadcast a limited number of programmes with SDH, and translation companies are embracing this new opening in the market. Indeed, although accessibility to audiovisual programmes is in its infancy in Turkey, two major developments have taken place in the country lately. Firstly, a few broadcasters, including the public service provider TRT, have started to provide SDH, TSLI and even AD with some of their previously broadcast programmes, albeit only on their website channels. Secondly, and very recently, the private broadcaster FOX TV has begun to broadcast repeat episodes of its main series with SDH, thus becoming the very first example of SDH provision on Turkish free TV. These positive changes provide reasons to be optimistic concerning a bright future in terms of accessibility in Turkey. In this respect, great strides towards media accessibility can be achieved in a relatively short period of time and the situation can be altered and improved radically if the right steps are taken and collaboration among all the stakeholders is strengthened.

This work will hopefully contribute to better the quality of life of millions of people with special requirements by helping them enjoy some of the opportunities provided by society to the fullest extent possible. As the first scholarly effort to raise awareness and visibility of SDH in Turkey, I truly hope that this study will also inspire others to conduct research on SDH and on other areas of accessibility that are still underdeveloped in the country.

9.1. Limitations

This study is not without its limitations, which should be considered in future studies. The first limitation concerns enlisting the participants and, although potential communication problems and trust issues were expected at the beginning of the project and potential solutions had been devised, the recruiting task proved more arduous than expected. The biggest challenge was the recruitment of female participants since they normally spend their time in secluded environments (generally at home) with other female deaf individuals. Therefore, it is very difficult to get in touch with them unless they are educated and employed or active members of an association, which is why the number of female respondents (11 of 37) was rather low.

The second limitation has to do with the effect caused by the order in which the clips were presented to the participants. All the participants watched the videos in the same order, which might have affected their preferences. The attitude they developed towards a particular method (e.g. use of labels) in a given category (e.g. speaker identification) might have also impacted their preference toward the use of the same method in other categories tested later in the experiment. Another issue stems from the fact that, towards the end of the experiment, some participants seemed to be tired and their concentration levels had began to decrease, which may have had an impact on their preferences.

Lastly, the influence that the respondents had on each other's preferences may be seen as another limitation. The experiment was generally conducted with groups of five or more participants in the same place. During the course of the experiment, whilst they were completing the questionnaires with their preferences, they had short exchanges about their dis/likes with each other, which seemed to affect their decisions with regards to the methods presented.

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Appendices

All the appendices can be found on the accompanying DVD.

Appendix 1: Questionnaire_PersonalDetails_EN

Appendix 2: Questionnaire_PersonalDetails_TR

Appendix 3: Questionnaire_SubtitlesPreferences_EN

Appendix 4: Questionnaire_SubtitlesPreferences_TR

Appendix 5: Transcription_Interviewee-A_TR

Appendix 6: Transcription_Interviewee-B_TR

Appendix 7: Transcription_Interviewee-C_TR

Appendix 8: Transcription_Interviewee-D_TR

Appendix 9: Guidelines for the Production of SDH in Turkish

Appendix 10: Clips on Speaker Identification

Appendix 11: Clips on Verbatim vs Edited Subtitles

Appendix 12: Clips on Sound Information

Appendix 13: Clips on Paralinguistic Information