

CREACTIVE SUBTITLES

Subtitling for ALL

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Als pilars fonamentals de la meva vida ♥

*Als que esperàveu el meu fracàs a cada pas
i als que pensàveu que em rendiria a mig camí.
Ja sabeu qui sou.*

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ABSTRACT

This thesis contributes to the theory and practice of subtitling for the deaf and the hard-of-hearing (SDH), especially for deaf children. After the analysis of current SDH practices, in which inconsistency has been found quite regularly in the conveyance of non-verbal elements (sound effects, paralinguistic features and music), the research in hand steps forward and suggests a completely newly designed subtitling code targeted at younger audiences: *creative* subtitles.

Creative subtitles present the non-verbal information visually, by means of comics' language conventions. They are an innovative proposal that changes the manner subtitles have been commonly conceived, since they are tailor-made according to the particular needs resulting from deaf children's sensory disability. In a case study, *creative* subtitles have been tested with their intended audience. As the results show, their intrinsic characteristics, i.e. dynamism, creativity and animated style, have contributed to the great reception they got not only from deaf children but also from their hearing peers. Therefore, *creative* subtitles are inclusive subtitles, subtitles for all.

RESUM

L'objectiu d'aquesta tesi és contribuir a la pràctica i la teoria de la subtitulació per a persones sordes (SPS), més concretament, per a nens i nenes sords. Després de l'anàlisi de les pràctiques de subtitulació actuals, en què es detecten força casos d'incoherència a l'hora de representar els elements no verbals (efectes sonors, informació paralingüística i música), aquesta recerca fa un pas endavant i proposa un nou codi de subtitulació accessible adreçat als més petits: els subtítols *creactius*.

Aquests subtítols presenten la informació no verbal de manera visual, mitjançant l'ús de les convencions del llenguatge dels còmics. Són una proposta innovadora que canvia, ja d'inici, la manera d'entendre la subtitulació i la concep com un vestit a mida confeccionat d'acord amb les necessitats específiques de la discapacitat sensorial dels nens i nenes sords. S'ha dut a terme un estudi de cas per provar-ne la seva eficàcia amb l'audiència i, segons els resultats obtinguts, les característiques intrínseques dels subtítols *creactius* —dinamisme, creativitat i animació— no només han afavorit una bona rebuda entre els nens i nenes sords, sinó també entre els oients. Per tant, els subtítols *creactius* són subtítols inclusius, subtítols per a tothom.

INTRODUCTION

Since the 1930s, film images have been accompanied by words and sound. With sound arose the need to account for all the information they transmit. Especially for deaf or hearing-impaired people, as they cannot access the auditory information. *Deafness*¹ is a disability that may go unnoticed, as it is not as evident as a physical disability. One of the main goals of the thesis in hand is to increase general awareness of sensory accessibility, so that it receives the attention it deserves.

Subtitling for the deaf and the hard-of-hearing (onwards SDH) is an essential tool for deaf and hearing-impaired viewers to access, and therefore to enjoy, all kinds of audiovisual programmes. The past few years have seen various pieces of legislation produced in relation to SDH, especially in Europe. The most significant legislation in force is the *Written Declaration on the subtitling of all public-service television programmes in the EU* (European Parliament, 12 November 2007), which ensures that all ‘citizens have equal access to information, education and culture’ and has contributed to devise various sets of guidelines on the way audiovisual materials should be accessible.

In addition, SDH has received attention from researchers during the last decades. Valuable research on SDH has been carried out in various countries, such as the UK, Spain or Portugal. Authors such as Díaz Cintas and Neves, among others, have led the research in accessibility to the media, and their works ‘are rapidly being complemented by more up-to-date ones’, such as Díaz Cintas *et al.* (2010), Matamala and Orero (2010), Cambra *et al.* (2010), Zárata (2014) and Tamayo (2015).

However, it is especially noteworthy the dearth of studies in how best to serve deaf audiences, which are heterogeneous, and in particular relating to the needs of deaf children. To date, very little consideration has been given to the research of subtitling for deaf children, and how their needs differ from adults due to their age, maturity, language appreciation and reading skills.

Three decades ago, Baker *et al.* (1984) and Baker (1985) studied some parameters such as deaf children’s reading speed and language comprehension, which have been

¹ And *hearing impairment*, too.

extended more recently by Zárata (2014), whose PhD thesis ‘explores the potential didactic role of subtitles for children with hearing impairments’ (*ibid.*: 24). Their studies focus on the linguistic part of SDH subtitles, which is conveying speech and how this is delivered (paralinguistic information). Also, Tamayo (2015) proposes an alternative subtitling, which is interesting as a departure point and that will be further discussed in the forthcoming chapters. What seems unarguable is that:

‘SDH is undoubtedly one of the forms of audiovisual communication which is developing most at present, thanks to the success achieved by pressure groups campaigning for the interests of this sector of the audience. The fruit of their work is evident from the announcement of new legislation in many countries obliging television channels to broadcast a certain percentage of their programmes with this type of subtitles’ (Díaz Cintas and Remael, 2007: 14).

Motivation

The increasing growth of both studies and SDH load on television is a reality, although it does not seem to be sufficient. In fact, discomfort is the main motivation for the present research. When completing my MA dissertation on subtitling for deaf children in 2011, I felt a desperate need to fill the gap I had found, both in existing literature and current practices. While other scholars that centred their research on the topic of SDH were paying attention to the linguistic part of subtitles, *Writing aural messages: sound, tone-mood, and music in children’s programmes broadcast in Spain and the UK* (Sala Robert, 2011) focused its attention on subtitling non-verbal elements, i.e. paralinguistic features, sound effects and music, for deaf children.

The reason why this topic appeared to be interesting to study, apart from the scarcity of existing literature, was twofold: on the one hand, television programmes are a tool of socialisation. Hence, children without access to them may fall in isolation, which is sometimes reinforced by their problems in communicating with others. On the other, as Zárata (2014) claims, subtitles are a didactic tool, by means of which children learn to read and acquire new vocabulary. Thus, it seemed valuable to investigate how deaf

children relate sounds, which they may not hear nor have ever heard, and their linguistic correlate —which could be in the shape of labels, i.e. linguistic description, or onomatopoeia, i.e. sound representation.

Precisely because children may have never heard the sounds conveyed by means of subtitles, it can be foreseen that the completion of this study will be a challenging, laborious and ambitious process. The particular audience of deaf children demand much more than a simple analysis of current practices and the provision of a new set of recommendations from a theoretical perspective. The discovery of their particularly special needs and abilities will challenge me to build a completely new subtitling code from scratch, tailored to fit their social and cognitive profiles.

Therefore, the thesis in hand will be devoted to the creation of *creative* subtitles. It will be such a laborious task, since it will not only be necessary to design them, but also make them become a reality to demonstrate their applications. This will entail learning to deal with different pieces of software that I had never used before, such as video editing and graphic design software.

Hence, and due to the lack of support from existing literature, it is possible to state that this is an ambitious project, because it needs quite a great amount of skill and effort to be achieved and because it has a strong wish to be successful. The researcher will struggle on with optimism and commitment to the completion of this project.

Aims and objectives

The main objective of the present study is contributing to the research and the good practice of SDH. It is hoped to become relevant to expand subtitling practices for children. Therefore, this research is conducted in two phases: a first one that will review the theoretical framework of SDH discipline and will analyse current SDH practices, and a second one that will step forward and will present a newly designed subtitling code targeted at children.

The first part is necessary to study in which context this discipline is established, as well as to learn from the existing literature on SDH in general and SDH for children

more in particular (Chapter Two). The studies currently available are rather limited in both number and scope, and quite outdated. Hence, the object of this study, i.e the conveyance of non-verbal elements in SDH for cartoons, has received little attention so far.

Most of the studies centre their attention in observing the behaviour of the receiver by means of surveys and case studies with the target audience and tackle the topic from a general and descriptive perspective, mostly accounting for the linguistic issues involved in current subtitling practices. Researchers such as Zárata (2014) and Tamayo (2015) study the non-verbal elements —paralinguistic features and/or sound effects—, although they mostly approach it in the traditional direction: labels.

In addition to the review of the academic literature, observational and descriptive analysis of current subtitling practices will be considered. Both a qualitative and quantitative analyses of current SDH for children will help to produce baseline measurements of current children's subtitled programmes. This descriptive approach will be completed with a corpus database that will be created to classify all the non-verbal information extracted from subtitled cartoons in Spain and the UK. The analysis, which will be presented in Chapter Three, will help to determine the degree of information provided and to identify the different strategies by which distinct messages are currently conveyed in visual terms.

Both the existing literature and the analysis of current practices will provide extremely valuable information. However, it will not be enough. In order to evaluate SDH it is essential to know in depth the audience subtitles are targeted at. In the present study, the intended audience are deaf children, particularly focusing on those children who were born profoundly deaf, as they are a minority within deaf children. They are the most special audience to please, since we are facing a great challenge as subtitlers: how can we describe a sound in a label or reproduce it by means of onomatopoeia for a child that has no previous reference of that sound?

Undoubtedly, it seems essential to investigate how deaf children can identify sounds, which they may not hear nor have ever heard. All this information will be provided in Chapter Four, which will be a detailed study on the different profiles existing within deaf children. Academic literature does not seem sufficient to learn about the

different profiles among deaf people, that is why contact with deaf people will be also made.

The thesis in hand takes action and creates a completely newly designed subtitling code: *creative* subtitles. They are an innovative subtitling proposal designed to convey both paralinguistic features and sound effects in audiovisual programmes targeted at children in a more visual way. Despite *creative* subtitles are presented as an innovative subtitling technique, they are not a new invention. They are the loan of strategies belonging to a different medium, i.e. comics. The language of comics is universally known and recognised by comic readers.

Therefore, a thorough study of the language used in comics, which is presented in Chapter Five, and the codes and standards shared by comic book artists and comic readers will be key to determine which of the strategies could be applied to SDH. Thus, why not using a visual language that is at our disposal to satisfy the audience's needs? Up until now, subtitlers did not share the same cultural context as that of their deaf receivers. However, in *creative* subtitles, subtitlers and audience will share the same code, they will speak the same language.

Creative subtitles are, without a doubt, the main contribution of this research. They are aimed at guiding future aural information conveyance alternatives, by establishing a completely different view of subtitling with the only goal to meet the needs of deaf children audiences. The strategies that will be adopted in *creative* subtitles are 100% visual, and they will be inserted as part of the image, attempting to alter the main image as little as possible. The fact that the only channel that will be involved is the visual will have an impact on viewers' attention, which will be focused at the centre of the action at all times.

The basis for *creative* subtitling is that subtitles will abandon their linguistic shape to stylistically adopt a more visual form, tailored according to deaf children's needs and abilities. The new appearance will add literary value to the narrative by visual means and it will have a direct impact on stylistic and narrative choices, which are non-canonical decisions. For instance, sounds are not written, but drawn. In other words, *creative* subtitles will be provided visually, as part of the image, avoiding having a block of text on screen or a foreign element inserted into the image. They will convey the auditory

information silently, for those whose life is silent. All the choices, strategies and techniques applied throughout the process of creative subtitles design will be detailed in Chapter Seven.

Furthermore, *creative* subtitles will take advantage of the technology so that subtitles match the aesthetics of the film and interact with the original image to provide a homogeneous product. They are an initial experiment that mixes two different media: comics and cartoons. They will allow the flexibility to create solutions every time non-verbal information needs to be rendered visually.

The *creative* subtitles proposal will be presented in video format (Appendix VI) to the intended audience. This procedure will be the empirical work of this research. It will be based on data collection by means of questionnaires that will allow statistical measurement of viewers' liking and understanding of *creative* subtitles, in comparison with conventional subtitles. Direct observation will also be employed. Results of the experiment and viewers' feedback and opinions will be reflected in Chapter Eight. It is hoped that *creative* subtitles are more visually engaging and conceptually clearer to deaf audiences.

Thesis structure

The remainder of the thesis is organised into eight chapters, a conclusion, a bibliography, a filmography and appendices in the manner that follows. *Chapter One* provides a broad view of different types of accessibility, focusing on sensory accessibility, which is the one related to SDH.

Chapter Two centres its attention to one type of sensory accessibility, which is SDH. This chapter is a review of the existing literature dealing with SDH in general and SDH for children in particular. It focuses on the limited research to date on the subject of SDH for children and the different sets of guidelines that apply to the countries under study: the UK and Spain. It includes not only research studies, but also professional and governmental projects, as well as conferences devoted to accessibility to the media.

Chapter Three includes the examination of the results extracted from the quantitative and qualitative analysis of current subtitling practices for deaf children in two

countries: Spain and the UK. It also includes the comparison between the recommendations established regarding non-verbal elements conveyance and current television subtitling practices.

Chapter Four provides a detailed view of the main types of deafness, as well as its impact on children's language and mental development, which will have an influence on children's subtitles reception. It also summarises the conversations with d/Deaf people that served as inspiration for the creation of a new subtitling code.

Chapter Five is an explanation of comics' visual language, which is the language borrowed in *creative* subtitles. It details the different strategies that comic book artists use to render non-verbal information in a visual media that embraces all the senses within it, which will be borrowed in the *creative* subtitling process.

Chapter Six presents the natural constraints found in the practice of conventional subtitling. These technical constraints will also have an impact on *creative* subtitles, as they take into account all subtitling technicalities established by scholars and professionals. The only rule that is broken in *creative* subtitling is the presentation of non-verbal information.

Chapter Seven is devoted to the main contribution of this thesis: the *creative* subtitles. It presents a detailed description of how, where and when *creative* subtitles appear on screen. It also justifies the different alternatives chosen throughout the designing process, by comparing it to conventional subtitles' choices.

Chapter Eight shows the result of the empirical analysis, which will count on the participation of both hearing and deaf children. The aim is to test the reception of *creative* subtitling from the point of view of its intended audience. It is important to know whether they would like the new proposal, would understand it, and would feel comfortable with it.

The conclusion contains the summary and results extracted from the observables. It also presents the pros and cons of the newly created subtitling system, together with some recommendations for future research. Finally, a bibliography with all the resources consulted, a filmography with all the programmes analysed and appendices have been included. The appendices containing the deep analysis of current subtitling practices, the

“colour of emotions” survey, the results extracted from the questionnaires in the experimental study and the video with the *creative* subtitles proposal have only been included in the electronic version, which will be more comfortable to consult.

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CHAPTER ONE

ACCESSIBILITY

The concept of accessibility has its origins in the movement of “independent life”, promoted by organizations of people with disabilities, experts and international organisms (UNICEF, 2007). They fight to defend the right of disabled people to have an active participation in the society, not as special people with different needs, but as people with special difficulties to satisfy their needs, which are the same as the rest of the population. Thus, emotional support is important, but the modification of the environment to eliminate the obstacles that hinder their full participation is key.

Accessibility is at the centre of European and national legislation. European countries have different rules for making products and services accessible to their citizens, therefore it is difficult for companies to provide accessibility across borders (European Commission, 2015). EU’s fundamental role is to coordinate the different policies of the individual Member States. With the aim of improving the functioning of the internal market, the European Commission proposed a new Directive that removes barriers created by divergent legislation to make it easier for companies ‘to provide accessible products and services across borders to all citizens’ (European Association of Service Providers for Persons with Disabilities, 2013).

This proposal sets common accessibility requirements for certain products and services, although the requirements imposed are of general character and based on functionality. That is, they specify what features of products and services need to be accessible, but do not explain the detailed technical solutions that should be used to achieve those accessible functionalities. This flexibility eases innovation, of which the research in hand has taken great advantage.

At a national level, on the other hand, more practicable environments without physical barriers for disabled people are requested by the Spanish law *Ley 51/2003, de 2 de diciembre de 2003, de igualdad de oportunidades, no discriminación y accesibilidad*

universal de las personas con discapacidad.² It developed to additionally demand *universal* accessibility, not only in physical environments, but also in the conditions to be met by products and services to be comprehensible, usable and practicable without discriminating people with different abilities. Hence, *accessibility* is ‘the quality or characteristic of something to make it possible to approach, enter or use it’ (Cambridge Dictionary, 2016). In other words, the quality of providing easy access so that any person, including those with limitations in their mobility, communication or understanding, can reach a place, an object or a service³ (Observatorio de la Accesibilidad, No Date). Thus, it can be inferred the fact that people with disabilities are not a homogeneous group. Therefore, different types of accessibility can be identified, depending mostly on the barriers or obstacles that should be eliminated:

- Architectural accessibility, which addresses the way public and private buildings have to be accessibly built.
- Urban accessibility, which refers to all elements to be found once outside home, including covering features like ramps, doors and toilets, issues related to acoustics and signalling —i.e. signals that could be perceived by people with any disability, such as voiced traffic lights for visually impaired people, noticeable signs for hearing impaired people, or clear signs for people with intellectual disabilities.
- Transport accessibility to make sure everyone can travel around, as accessible mobility is a fundamental human right. Transport accessibility does not only affect the transports themselves, but also their surrounding infrastructures, i.e. elevators to access the tube stations, etc.
- Communication accessibility, which, depending on its nature, may affect the person’s speaking, listening or understanding of what others are saying, reading or writing. Access to communication is a basic human right, since communication is the foundation of much of our lives. People with different abilities may have different ways to communicate, such as speech; body language and facial expressions; sign language; writing, typing or drawing; pointing to pictures, symbols and/or written words; or by using a communication device.

² Law 51/2003, of 2 December 2003, of equal opportunities, no discrimination and universal accessibility of people with disabilities (my own translation).

³ My own translation.

‘People with severe speech or language problems rely on augmentative and alternative communication (AAC) to supplement existing speech or replace speech that is not functional. Special augmentative aids, such as picture and symbol communication boards and electronic devices, are available to help people express themselves. This may increase social interaction, school performance and feelings of self-worth’ (ASHA, 2016).

The options for people who cannot use speech to communicate effectively in all situations are either *unaided communication systems*, which rely on the user’s body to convey messages, or *aided communication systems*, which require—besides the user’s body— tools or equipment that can range from only paper and pencil to devices that produce speech and/or written output.

- Electronic accessibility is committed to making electronic information and services accessible to all users, including: ‘software applications and operating systems; telecommunication products; video and multimedia products; self-contained closed products; desktop and portable computers; and procurement of these products’ (Stephen F. Austin State University, 2013). In order to consider them accessible products or services, they ‘should offer an alternate format or method for providing information to people with disabilities’ (*ibid.*).

The first three aforementioned points have always been included under the umbrella of accessibility. Accessibility to the physical environment means that physical spaces should be of a quality that allows any person, including those with mobility or communication disabilities, to reach all places and buildings with autonomy and no effort, as well as to have access to public use establishments and its services in secure and autonomous conditions. Physical access is the most visible form of accessibility and, for this reason, people are generally well aware of its importance. It is possible to find safe mobility ramps, vertical platform or wheelchair lifts, wheelchair accessible vehicles and even cars that can be driven without using the foot pedals.

Since the advent of the information society, however, the concept of *accessibility* has developed to consider new realities. Mobility, proximity and/or distance are no longer key elements in the definition of accessibility, since access to physical space is now

complemented by access to digital and virtual information spaces, in which there is no room for the principles of distance, proximity or physical interaction (Martínez Usero, 2006).

According to Norma ISO/TC 16027, accessibility should facilitate the efficient, effective and satisfactory use of a product, a service, a place or an instrument by people with different capabilities (*ibid.*). The fulfilment of equality of opportunity principle improves the life quality of all citizens. In fact, according to data collected by Observatorio de Accesibilidad, *accessibility* is fundamental for a 10% of the population, necessary for a 40% and comfortable for a 10% (No Date). Despite this, as seen previously, there are many barriers that are not visible to our eyes. They can be found everywhere, since the disability does not affect the person's mobility but his/her senses. It causes *sensory accessibility* to go unnoticed, as it is not as evident as physical accessibility. Consequently, it does not receive the attention it should deserve. The research in hand is carried out with the aim of contributing to increasing general awareness of sensory accessibility.

1.1 Sensory Disabilities

Sensory disabilities affect our senses: sight, hearing, smell, touch, taste or spatial awareness. Sensory impairment causes difficulties receiving and/or responding to information from these senses. Although sensory information is sensed by the person, the brain perceives and analyses this information in an unusual way. It may affect one sense alone or it may affect multiple senses. *Sensory Processing Disorder* (SPD) —formerly called *Sensory Integration Dysfunction* (SID)— is understood as:

‘a neurological disorder that causes difficulties with processing information from the five senses, the sense of movement, and/or the sense of position. People with SID sense normally, although their brain analyses the information in a way that causes distress or confusion’ (Disability Services Australia, 2016).

The most common disorders related to SPD are hypersensitivity or insensitivity to sensory stimuli, for example:

- *Hypersensitivity* is the inability to tolerate normal lighting, the dislike of being touched, and the discomfort with direct eye contact or the pain feeling from clothing rubbing against skin, among others.
- *Insensitivity* provokes unusual reactions, such as giggle when given an injection, lack of awareness when touching something very hot, restless appearance, insensitivity to pain, etc.

Despite the fact that *sensory disabilities* can involve any of the five senses, the term generally refers to a disability related to *vision, hearing*, or both vision and hearing. These two senses are of an utmost importance for humans, as these are the receptors that perceive 95% of information about the world around us. Thus, the inability to access to visual and/or auditory information can affect how a person gathers information (House with No Steps, 2016).

With a disorder in one of these two senses, communication also becomes a great challenge: we talk to each other, we read the newspaper, we listen to the radio, etc. Also, the environmental information we take for granted helps us to know what is going on: if we see tyres on a road, rain on the windows, people's body language or if we hear people chatting or birds singing. We rely heavily on our senses to interpret other people's behaviour and the world. With the loss of senses, communication is greatly inhibited, and, consequently, this can lead to increased isolation and loneliness (One to One Support Services, No Date).

1.1.1 Visual impairment, hearing impairment and deafblindness

Blindness or *visual impairment* is a diagnosed condition of the eye or the visual system that cannot be corrected within normal limits. In other words, it is the lack, deficiency, or decreased vision. Some eye conditions are congenital, i.e. present at birth, such as albinism.⁴ However, blindness or visual impairment can also appear later in life.

⁴ Albinism is the 'condition in which a person or animal lacks pigment, so that they have white skin and hair and pink eyes' (Cambridge Dictionary, 2016). This lack of pigmentation in the eye alters the structure of the eye and the optic nerve. Due to the fact that the eye develops differently, people with albinism always have problems with vision that cannot be corrected with conventional treatments, such as surgery or eyeglasses (Vision for Tomorrow Foundation, 2016).

It can occur as a result of a number of different diseases or accidents that damage any part of the visual system—the eye, the visual pathways to the brain or the visual centre of the brain—, due to injury, eye defects, (age-related) macular degeneration, diabetes, glaucoma, retinitis pigmentosa, cataracts, stroke and tumours, to name but a few (Disability Services Australia, 2016). Some forms of vision loss can be prevented and even reversed, although other forms may naturally develop as people age. Although vision loss can be found in people of all ages, it is more common to be found among people over the age of 65.

Deafness or hearing impairment is the inability to detect or receive at least some sound frequencies which can usually be heard by other people. It is either present at birth or it occurs before or after the language acquisition process has completed, when any part of the hearing pathway—external, middle or inner ear— or the complex auditory nerve pathway to the brain is damaged. Hearing loss can range from mild to profound. There are various factors that may affect people’s hearing, as will be detailed in Chapter Four Subsection 4.2.4, but the most common ones include problems with the ear bones, damage to the cochlea or its nerve, genetic disorders, exposure to diseases, or trauma.

Deafblindness implies a combination of vision and hearing loss, which is presented in varying degrees of vision and hearing losses. Deafblindness may appear at or around the time a child is born, due to prematurity, childbirth complications, numerous congenital (rare) syndromes are the main causes. It may also occur later, in childhood or even adulthood, because of meningitis, brain injury, or inherited conditions (National Center on Deaf-Blindness, No Date). Although it is a low incidence disability, deafblind people have specific communication, learning, and mobility challenges, due to the dual sensory loss (Disability Services Australia, 2016). In addition, deaf blindness may imply additional disabilities or health problems (National Center on Deaf-Blindness, No Date).

1.2 Eliminating sensory barriers

Sensory barriers can be eliminated. This section focuses on the modalities that are currently available to eliminate sensory barriers, especially those deriving from sight or audition impairment.

As stated earlier in this chapter, nowadays, information and communication technologies are essential to be informed, study, communicate with others, be entertained, and work. In addition, increasingly more services are provided online, as well as users are increasingly including new technologies in their daily lives. The vast majority of these new technologies are constituted by a screen a keyboard and speakers. Therefore, ensuring accessibility to technological means is a priority.

Accessibility to electronic or digital information, audiovisual media, web or the internet in general, refers to the elements that facilitate access to digital or web information to all people under equal conditions, regardless of the technology used (PC, PDA, phone, TV, etc.) or the disability of the user (physical, psychological, sensorial, etc.). Instead of a wheelchair, users count on accessible electronic tools, such as accessible computers, accessible computer programmes or accessible media or web contents.

Besides the physical tools to have access to digital communication and/or entertainment, additional services are included in websites, videogames or TV programmes in order to ensure contents are made 100% accessible to users. *Audio description*, on the one hand, and *sign language* interpretation and *subtitling*, on the other, are examples of the modalities most used when eliminating barriers caused by blindness and deafness, respectively.

1.2.1 Audio Description

Audio description (onwards AD) is popularly understood as ‘a commentary that describes body language, expressions and movements, making the programme clear through sound’ (RNIB, 2016). However, AD deserves a much more detailed definition, as the one provided by the AD experts Anna Matamala and Pilar Orero (2013: 149):

AD is ‘the descriptive technique of inserting audionarrations, explanations and descriptions of the settings, characters, and actions taking place in a variety of audiovisual media, when such information about these visual elements is not offered in the regular audio presentation.’

It is important here to highlight the meaning of *audiovisual media*. This term is commonly related to cinema or television, but the truth is that its definition includes ‘anything that involves seeing and hearing’ (Cambridge Dictionary, 2016). Therefore, the function of AD is to make audiovisual content available to all, to help people who struggle to see to access not only their favourite television programmes or movies, but also any other media representation, either dynamic or static, for which AD narrative has been created *ad hoc*. Thus, AD may serve to enjoy from a 3D film, to guided city tour of any city of the world or a Picasso painting (Matamala and Orero, 2013: 149).

Quality of AD scripts is provided by guidelines derived from access legislation all over the different EU countries. However, ‘every country which offers AD has drafted, or is currently drafting, their own guidelines’ (Orero, 2012: 195). Guidelines that can be found under the designation of *standards, protocols, and norms*. Regardless this variation in the designation, all these norms agree on providing objective information when audio describing, particularly in the use of adjectives, adverbs and nouns. They also recommend to avoid interpretation, and suggest that audio describers should only describe what they see, following the “what you see is what you say” (WYSIWYS) principle (Snyder, 2005: 195).

The guidelines are, in some cases, issued by public organisms, such as in the case of the UK, where ITC (Independent Television Commission⁵) devised the *ITC Guidelines* in 2000 and was in charge of regulating television programming in the UK until 2003. They pioneered the issue of AD standards in accordance with the Communications Act (2003) and the Broadcasting Act (1996, 1990). Also, in Spain, the departing point to devise accessibility guidelines was the *Ley 51/2003*,⁶ which came into force with the aim to guarantee the equal opportunity principle for disabled people.

A few years later, the Spanish Association for the Normalization and Certification (AENOR) drafted the *Norma UNE 153020:2005. Audiodescripción para personas con discapacidad visual. Requisitos para la audiodescripción y la elaboración de audioguías*⁷ (AENOR, 2005). It was written in 2005 by a specifically created commission composed

⁵ ‘ITC ceased to exist from 18 December 2003 and its duties have been assumed by Ofcom, the Office of Communications’, which is the new Communications sector regulator in the UK (<http://www.itc.org.uk/>).

⁶ Law 51/2003. BOE No. 289, of 03/12/2003. Text available online at: <https://www.boe.es/buscar/act.php?id=BOE-A-2003-22066>.

⁷ *Audio description for visually impaired people. Guidelines for audio description procedures and for the preparation of audio guides* (AENOR, 2005).

by members of the National Organization of Blind People (ONCE, for its acronym in Spanish), and the first professional audio describers of Spain.

Norma UNE 153020:2005 is based on the intuitive experience of the professionals dedicated to AD in Spain, as well as on the surveys from AUDESC project carried out by ONCE (Ramos Caro, 2013: 21). It is a general document and does not focus on linguistic particularities and neither provides illustrative examples for its recommendations (*ibid.*). This might be due to the fact that these standards were ‘officially drafted before taking into consideration any scientific research results’ (Orero, 2007: 164).

AD existed in Spain long before the first norm was devised. ONCE was the organisation in charge of developing the AD technique since the late 1980s. In addition, in the middle 1990s some regional TV channels, such as Canal Sur and Televisió de Catalunya (TVC), started to broadcast audio described films. Nonetheless, it was not until the late 2000s that a national state-owned TV channel started to broadcast audio described films (Ramos Caro, 2013: 16). Televisión Española (TVE) started the provision of AD in films, as soon as the *Ley General de la Comunicación Audiovisual*⁸ of 2010 was published. This new law included an article that stated that people with visual impairment should have, at least, two hours a week of audio described programmes in private TV channels and 10 weekly hours of AD in public TV channels. That same year, TVC provided more than 600 hours of AD, among films, fiction productions and animated series (CCMA, 2011).

In the UK, broadcasters ‘like the BBC, Channel 4 and Sky must add AD to 20 per cent of their programmes’ (RNIB, 2016). AD is only available in digital television. Therefore, to access audio described TV programmes, it is necessary to have digital TV via Freeview⁹, satellite or cable. This is either inherent in the TV or it is a set top box connected to it (RNIB, 2016).

Around half of the cinemas in the UK are all digital-equipped. This means that they have access facilities built-in and contain a system that delivers AD—in a separate

⁸ General Law on Audiovisual Communication. BOE No. 79, of 01/04/2010. Text available online at: <https://www.boe.es/buscar/act.php?id=BOE-A-2010-5292>

⁹ *Freeview* is digital TV delivered through your TV aerial. The equipment supports AD, but can only be used on products designed to work with UK broadcasts (RNIB, 2016).

soundtrack— through wireless headphones that are provided at the cinema box office. In addition, most popular cinema releases are now available with audio description tracks, by means of which a narrator’s voice will play through the headphones describing the on-screen action during the gaps in the film’s dialogues (Your Local Cinema, 2016). Meanwhile, the film’s original soundtrack plays through the cinema sound system. In this way, AD can run each time the film is shown and it is undetectable to anyone not wearing the headset, as only the wearer can hear the AD sound track.

Despite the growing AD presence in cinemas, television, and DVD products, ‘AD content has still a fairly low profile online’ (Media Access Australia, 2012). It is true that web based television catch up services offer AD on selected programmes; however, in the web, apart from TV content, there are many other resources that might not be accessible for partially sighted or blind people, such as videos, charts, etc. The World Wide Web Consortium (onwards W3C) is an international community that aims at developing web standards. It has devised the Web Content Accessibility Guidelines (WCAG), an internal multimedia accessibility policy to ensure that W3C’s work is accessible to all. Their goal is that ‘all multimedia (audio or video) produced or published by W3C must be accessible at the time of posting’ (W3C, 2016). However, most W3C will not need AD, as it will be required only for relevant visuals, which are not already covered in what is being said (W3C, 2016).

1.2.2 Sign language

Sign language interpretation is an audiovisual accessibility modality that satisfies the needs of Deaf people. Deaf people —with capital *D*— belong to a particular community with its own rules and social behaviours, and they share a particular form of communication: sign language (onwards SL) (O’Neill, 2003). SLs have been naturally developed within Deaf communities to respond creatively to the sensory limitation produced by deafness. SLs are natural languages with a visual, spatial, gestural and manual character (*Ley 27/2007*). Hence, SLs are not a translation of the oral language into signs, but a language in their own right (Perlmutter, No Date). Moreover, SLs are not only broad arm and hand movements, but also include subtle clues and features involving fingers and lip and face movements and expressions that help to fully grasp every nuance. They count on all the formal characteristics of human language, as SLs have their own visual grammatical structure and syntax and they are not dependant nor strongly related

to oral languages (British Sign Language, 2016). This means that, for example, we can refer to Catalan Sign Language (LSC for its acronym in Catalan), which is a separate language, independent of Catalan.

Some of the world's SLs are legally recognised in national laws or constitutions, or are, at least, mentioned in the laws of different countries, such as the ones related to education, among others (World Federation of the Deaf, 2015). In Europe, for instance, the *Directive 2010/13/EU*¹⁰ of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member states concerning the provision of audiovisual media services is in force.

In the Spanish context, the *Ley 27/2007*,¹¹ of 23 October, was the first to recognise the SLs of Spain and regulate the means of support for oral communication of deaf, hearing-impaired and deaf-blind people. In 2010, appeared the *Ley General de la Comunicación Audiovisual*,¹² of 31 March, which established the number of accessible hours on TV. Three years later, in 2013, the Real Decreto Legislativo 1/2013,¹³ of 29 November, was devised to consolidate the rights of people with disabilities and to ensure their inclusion in the society. On the other hand, some other regulations were proposed to defend the cultural character and the linguistic enrichment of SL as a means of communication, such as the Unesco Convention on the Protection and Promotion of the Diversity of Cultural Expressions¹⁴ (2005) or the United Nations Convention on the Rights of Persons with Disabilities¹⁵ (2006).

Furthermore, and despite 'many hearing people have the false impression that SL is a worldwide universal language' (Kelly and Lonergan, 2009: 4), there are as many different SLs as different spoken languages all over the world. Actually, there is not a SL

¹⁰ Text available online at: <http://www.british-sign.co.uk/what-is-british-sign-language/>
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:095:0001:0024:en:PDF>

¹¹ Law 27/2007. BOE No. 255, of 24/10/2007. Text available online at:
https://www.boe.es/diario_boe/txt.php?id=BOE-A-2007-18476

¹² General Law on Audiovisual Communication. BOE No. 79, of 01/04/2010. Text available online at:
<https://www.boe.es/buscar/act.php?id=BOE-A-2010-5292>

¹³ Royal Legislative Decree 1/2013. BOE No. 289, of 03/12/2013. Text available online at:
https://www.boe.es/diario_boe/txt.php?id=BOE-A-2013-12632

¹⁴ Text available online at:
http://portal.unesco.org/en/ev.php-URL_ID=31038&URL_DO=DO_TOPIC&URL_SECTION=201.html

¹⁵ Text available online at: <http://www.un.org/disabilities/convention/conventionfull.shtml>

for each oral language, as SLs have evolved naturally in contact with Deaf people. There are countries in which there is only one spoken language, but different SLs are used within their borders (CNSE, 2013). In addition, and because of the nature of SLs, there is even significant variation from city to city within a country. This is known as regional variation and can be compared to regional accents and colloquialisms found in spoken languages (British Sign Language, 2016), and it is due to the fact that SLs have been developed in communities of Deaf people, in the same way spoken languages have been developed in communities of hearing people. ‘The human drive for language is so strong that when deafness makes speech inaccessible, it finds another channel, creating language in sign’ (Perlmutter, No Date).

As minority languages, SLs have been discriminated and relegated to personal use for a long time. Despite the obstacles and prohibitions, SLs have survived and have been protected by their users, who have passed down their linguistic patrimony from generation to generation. Efforts have been also made by institutions. The Council of Europe ‘refers to sign language in the general framework of Recommendation 492, of 2001, on the rights of national minorities’ (*Ley 7/2010*). It requested to ‘give the various sign languages used in Europe a protection’ similar to that established in the Universal Declaration of Linguistic Rights, which states that ‘all languages must be able to enjoy the conditions required for their development in all functions’ (*ibid.*).

In Spain, SLs were restricted to domestic uses, although at present all barriers have been transcended and SLs are present in all social contexts (CNSE, 2013). In addition, there is not only one official SL, but two, as it is established in *Ley 27/2007*, of 23 October: Spanish SL and Catalan SL. The former is regulated by the *Ley 11/2011*,¹⁶ of 5 December, that regulates the use of Spanish SL and oral communication support means by deaf people, people with impaired hearing and deaf-blind people in Andalusia. ‘It lays down a series of measures to guarantee the rights of deaf people whether or not they use sign language’ (CERMI, 2013: 14). It signified, thus, an enormous legislative advance, which is used throughout the country and appears in the statutes of different autonomous communities, such as Andalusia, Aragon, Balearic Islands, Castile-León, Extremadura, and the autonomous community of Valencia.

¹⁶ Law 11/2011. Text available online at: <https://www.boe.es/boe/dias/2011/12/28/pdfs/BOE-A-2011-20375.pdf>

The latter, on the other hand, is recognised by the Catalan law *Llei 17/2010*,¹⁷ of 3 June, of Catalan Sign Language (*ibid.*). The basis for its standardisation came from ‘the publication of a basic grammar of Catalan Sign Language in June 2005, together with existing lexicographical material and research works in linguistics’ that marked the beginning of the description of the corpus of Catalan Sign Language (*Llei 17/2010*).

In the UK, the government did not recognise British Sign Language (BSL) as an official minority language until 2003. BSL is the preferred language of around 145,000¹⁸ people within the UK (British Sign Language, 2016). This approval ‘has led to increased funding for the needs of communication of people who are Deaf, and an increased awareness of the language which now has similar status to that of other minority national languages such as Gaelic and Welsh’ (*ibid.*).

Also by law, SL usage in television has been recognised from a cultural and linguistic right perspective, in addition to the more conventional and essential perspective of accessibility (Gil Sabroso, 2015: 6). This new accessibility modality has been implemented in most public television channels since the 90s, according to Neves (2007b: 3), ‘perhaps due to the status of sign language in different countries and the acceptance (or otherwise) of the various Deaf groups as minorities with an identity and a language of their own.’

For those people who communicate primarily in SL, it is sometimes less preferable—or even sometimes not possible for them—to read and understand subtitles—the other major accessibility modality for deaf people—at the rate they are presented. Thus, presenting the audio information by means of SL interpreting it is essential for a part of the Deaf population and it is as simple as embedding a video of the sign language interpreter in the video stream, as seen in the figure that follows:

¹⁷ Law 17/2010. Text available online at: <http://www.parlament.cat/document/nom/TL118.pdf>

¹⁸ Figures of 2011, according to British Sign Language (2016). Text available online at: <http://www.british-sign.co.uk/what-is-british-sign-language/>



Figure 1: Sign language interpreting embedded video. Source: *Signes dels temps* (TVC, 2015).

As seen above, SL interpreting is provided in a small screen located at the bottom right or left sides of the main screen. The SL interpreter provides communication access to transmit all that is being said in the programme, ‘using a language that is “modulated” to fit the specific medium’ and ‘adapted to the constraints that the medium imposes on it’ (*ibid.*). In fact, ‘the signing becomes confined to the space provided and takes on a screen format, removing amplitude to arm and hand movement and placing all signing at an unnatural chest level’ (*ibid.*).

In Spain, the origin of SL interpretation as an accessible solution took place in 1977, when Radio Televisión Española (RTVE) —the national public TV channel— broadcasted a programme called *Hablamos*. It was a weekly informative programme that contained different educative and cultural sections, which informed about associations of d/Deaf people. However, after its cessation in 1982, SL interpreting was not included in any of the broadcast contents until the 1990s, when RTVE broadcast a daily informative programme, which remained on air until 1994. Regarding the regional TV channels, in 1993 the Federación Andaluza de Asociaciones de Personas Sordas (FAAS) —Andalusian Federation of Associations of Deaf People— had the idea to create *Telesigno*. It was an informative programme that started to be broadcasted in the Basque TV channel Telebista and migrated to the Andalusian Canal Sur, where it remained on air until 2012. Private TV channels incorporated SL interpreting in 2010, coinciding with the

requirements of SL interpreting in all channels, both public and private, established by the *Ley General de la Comunicación Audiovisual*¹⁹ of 2010 (Gil Sabroso, 2015: 6).

TVC includes this accessibility service from January 2011, providing SL interpretation from Monday to Friday in the evening news, in addition to the services already provided in the morning news. It has been the first TV channel in Spain to broadcast the news entirely in SL. With this initiative, therefore, Televisió de Catalunya counts on more than three hours a week with SL interpretation, which is more than the two weekly hours required by law in the *Ley General de la Comunicación Audiovisual* of 2010. By providing access for people who are Deaf, ‘the majority hearing culture welcomes Deaf individuals to participate in the humour, drama, and shared memories that television and movies help to create’ (LC Interpreting Services, 2016). Therefore, SL interpreters have the responsibility to faithfully transmit the *message*—not providing signs equivalent to words—and to bridge the cultural gap between hearing and Deaf cultures, adapting the message for a receiver with a different language and culture (Santos and Lara, 1999: 47). The message, in addition, needs to include the non-verbal nuances that affect it directly, such as the intonation, the non-verbal behaviour, the pauses, etc. Messages have to reflect all the discursive elements that are part of the discourse scene (Gil Sabroso, 2015: 6).

1.2.3 Subtitling for the d/Deaf and the Hard-of-Hearing

Deaf people are a heterogeneous group (see Chapter Four). The concept of auditory disability considered any type of limitation to perceive any sound and/or speech. It is estimated that 1,064,600 auditory disabled people in Spain. Out of them, only a total of 13,300 are SL users, according to the last official reference about Spanish SL users and deaf population, which is the Encuesta de Discapacidad, Autonomía personal y situaciones de Dependencia²⁰ (INE, 2008), carried out in 2008 by the Spanish National Statistics Institute (Gil Sabroso, 2015: 7).

Hence, Deaf people are in the minority. In fact, the vast majority of deaf people communicate by means of oral language and does not have any knowledge of SL at all.

¹⁹ General Law on Audiovisual Communication. BOE No. 79, of 01/04/2010. Available online at: <https://www.boe.es/buscar/act.php?id=BOE-A-2010-5292>

²⁰ Survey of Disability, Personal Autonomy and Dependent Situations. Text available online at: <http://www.msssi.gob.es/ssi/discapacidad/informacion/encuestaEdad2008.htm> and <http://www.ine.es/prensa/np524.pdf>

For this reason, media communication counts on an accessibility modality targeted at ‘two groups of people simultaneously, namely the d/Deaf and the hard of hearing’ (Neves, 2007b: 11), who perceive and interact with the world differently: subtitling for the d/Deaf and the hard-of-hearing (onwards SDH). *Subtitling* is understood as the ‘translation practice that consists of presenting a written text, generally on the lower part of the screen, that endeavours to recount the original dialogue of the speakers, as well as the discursive elements that appear in the image (letters, inserts, graffiti, inscriptions, placards, and the like), and the information that is contained on the soundtrack (songs, voices off)’ (Díaz Cintas and Remael, 2007: 8).

It is possible to distinguish different forms of subtitling. From a linguistic point of view, there are *interlingual*²¹ and *intralingual*²² subtitles. In the former, there is a language conversion between two languages, a source language and a target language. In the language transfer process there is also a transformation from oral speech into written words presented—usually—at the bottom of the screen. Hence, it ‘involves a shift from one language to another along with a change of mode, oral to written’ (*ibid.*: 17). Interlingual subtitles are ‘mainly used to translate films for hearers’ (Neves, 2005: 18). In the latter case, the transfer from oral speech to written text also takes place but stays within the same language.

Technically speaking, subtitles can be either *open*; that means that subtitles are shown with the film; or *closed*, optional subtitles. In the first case, ‘the subtitles are burned or projected onto the image and cannot be removed or turned off’ (Díaz Cintas and Remael, 2007: 21). In the second case, ‘the subtitles are hidden and can only be seen with an appropriate decoder’ (*ibid.*) and are only added at the spectator’s will. When looking at subtitles from the preparation time perspective, it is possible to distinguish between *pre-prepared* subtitles and *live* or *real-time* subtitles. The former can be prepared after the programme is shot and before it is broadcast or released, whereas the latter is performed ‘at the same time as the original programme is taking place or being broadcast’ (*ibid.*: 19). Live subtitling is mostly performed intralingually, to provide access for the d/Deaf, and it is only used in the case of live interviews, sports or news bulletins, as there is no time to prepare them in advance.

²¹ Also called *diagonal* subtitles, as per Gottlieb’s terminology (1998: 247).

²² Also called *vertical* subtitles, as per Gottlieb’s terminology (1998: 247).

Subtitles' text appears in synchrony with dialogue and image. This is actually a key issue for people with residual hearing, as they reported asynchrony between text and sound to be annoying and attention distracting. Subtitles must also provide a semantic equivalence of the dialogues and 'remain displayed on screen long enough for the viewers to be able to read them' (*ibid.*: 9).

Both subtitling and SDH's nature is both multimodal and multisemiotic, since it conveys information acoustically —dialogues, songs, sound effects, tone, intonation, among others—, visually —kinesics, such as facial expressions, signs or graphics, background, to name but a few— and verbally —subtitles written on screen. However, it is not as simple as the mere sum of all these parts. *Subtitling for the Deaf and the Hard-of-Hearing* (SDH) implies all the previous requirements. However, the auditory and the visual channels become the focus of the verbal information. Thus, further to conveying oral speech, SDH subtitles also provide complementary information to help deaf viewers experience the audiovisual programme as a whole. Prosodic features —such as tone, mood, or word stress—, and sound effects and music are crucial for the understanding of the audiovisual programme.

Therefore, they account for all paralinguistic features —vocal features including intonation, volume, tone and colour of voice, or intention of the uttered words, which 'cannot be interpreted except in relation to the language they are accompanying' (Neves, 2005: 148)—, sound effects and music contained in the soundtrack that contribute to the development of the action or to the creation of atmosphere and that to which deaf people cannot access through the auditory channel. SDH also needs to provide information about which character is speaking at all times. It can be done by means of labels containing the name of the character in brackets or allocating a different colour to each character. The latter seems to be the trend nowadays, although the pallet of colours available is not broad enough to allow for a different colour for each character in audiovisual productions with many characters (*ibid.*: 137).

SDH is, most of the times, an intralingual translation process, as it is a written rendering of speech for the benefit of the deaf or hearing impaired. This means that the language of the soundtrack and the one contained in the subtitles are the same. There is no need to bridge the gap between languages, but to fill the gaps that an auditory impairment prevents people from having access to the whole story.

According to the *Ley General de la Comunicación Audiovisual* of 2010, 75 percent of TV programmes were required to be accessible by means of SDH by 2013 in private TV channels. This percentage was up to 90 when applied to public TV channels. In 2010, TVC provided more than 16,000 accessible hours in all their channels, of which 3,100 corresponded to live subtitling.

Apart from this general legislation regulating the amount of accessible programmes to be provided by both private and public TV channels in Spain, SDH users, the administration, subtitling companies and broadcasters reached a consensus and devised the *Norma UNE 153010:2012 Subtitulado para personas sordas y personas con discapacidad auditiva* and its former version *Norma UNE 153010. Subtitulado para personas sordas y personas con discapacidad auditiva. Subtitulado a través del teletexto*²³ (Asociación Española de Normalización y Certificación 2003-2012). The main aim of this norm is to establish a quality standard and a minimum degree of homogeneity in SDH practices in Spain.

In the UK, the first piece of subtitle legislation was approved in 1990 by the British parliament. It is known as the Broadcasting Act. In its Section 35, it required public broadcasting stations to ‘provide minimum amounts of subtitling for deaf and hard-of-hearing people and to attain such technical standards in the provision of subtitling as the ITC —Independent Television Commission— specified’ (Broadcasting Act, 1990) and governed technical standards for subtitles. In 2003, the Communications Act expanded requirements for UK broadcasters to provide television access services, such as SDH, SL and AD. These provisions are specified, reviewed and enforced by Ofcom, the Office of Communications, which was consolidated as the regulatory authority of telecommunications and media in the UK. All TV and radio broadcasts in the UK are licensed by Ofcom and are, therefore, subject to its regulations. Section 303 of the Communications Act is the *code relating to provision for the deaf and visually impaired*. It provides an official code that outlines accessibility requirements for broadcasters and gives very specific parameters for recommended subtitle formatting, display, and quality for British television. It also highlights the importance of subtitling for its target audience, which is not a homogeneous group.

²³ *Subtitling for deaf and hard-of-hearing people. Subtitling by teletext* (AENOR, 2003).

1.2.4 Two modalities for one sensory impairment

As seen in the two previous subsections, deafness prevents access to the auditory channel of television and media services. Access, according to Neves (2007: 2), may be offered in three different modalities: SL programmes, spoken language programmes with SL interpreting and subtitled programmes. The first form takes ‘hearing people to the Deaf world’, the second ‘excludes hearing impaired viewers who do not know a SL’, and the third option ‘represents the “neutral” or “middle-of-the-road” solution’ (*ibid.*). On television, spoken language programmes with SL interpreting and subtitled programmes are the most common forms of accessibility for the d/Deaf and the hearing impaired. However, there is a bit of controversy between users of one and another.

According to a research carried out by The National Deaf Children’s Society in 2005, subtitles keep children too busy reading them, especially in the case of young children or less proficient readers, who ‘find reading difficult, tiring or even boring at times’ (NDCS, 2005: 34). Actually, families suggested that ‘current subtitles were not useful for children under 8 years of age’ (*ibid.*: 31). Particularly, parents of severely and profoundly deaf children find the language used in subtitles too difficult to understand and that ‘the length of presentation of subtitles on screen was insufficient’ (*ibid.*: 5). In addition, they state that subtitles are sometimes too quick.

However, the needs in terms of level of language used and speed vary for each child. The younger the deaf child is, the more simplified language s/he needs and the longer subtitles should be presented on screen (*ibid.*). Despite this, schools felt that watching subtitles had a positive impact on literacy skills, for both deaf and hearing children, as it was ‘particularly beneficial for reinforcing vocabulary, especially new words on a certain topic’ (*ibid.*: 6), since words are seen in context with pictures. Nonetheless, both schools and parents agree that synchronisation is a key factor to identify the spoken word, since it allows deaf children not only to use their residual hearing to match spoken with written words, but also to extract meaning from words from clues in the pictures (*ibid.*: 5).

SL interpreting, on the other hand, is the preferred option for Deaf people, who claim that they want to have more programmes broadcast with this type of access. However, the fact that movement and facial expressions have to be seen clearly, implies

that the SL interpreter should be proportionally large on the screen. The main consequence —and complaint about access provision, which affects both deaf and hearing viewers— is that the presence of the SL interpreter inevitably obstructs the screen. For this reason, most of the times SL interpreting is provided in “kick back” format, where the image is shrunk on screen. In this way, SL interpreters can be displayed in an area of the screen without obstructing too much the main action. Although this may seem to improve the presentation of access provision, SL interpretation would be difficult to follow, as the appreciation of movements and facial expressions is not as clear as in a larger scale. Another major problem with SL is that many deaf people do not use and have any knowledge of SL, which restricts their access to the contents being interpreted.

What seems unarguable is the major complaint about both modalities: image obstruction. Either SL or SDH become distracting when they obstruct the action on the screen. Hence, they provide access to the information coming from the auditory channel, but they impair the information coming from the visual channel. However, location on the screen is not the only feature that constraints SL or SDH. Speed and language comprehension also affect the modalities that provide access to auditory information. Thus, access provision to the media seems not to be as effective as expected. So far we have learnt that accessibility is key for disabled people to participate socially. Accessibility is a fundamental right in our society.

Therefore, this thesis aims at bringing innovation to the field of accessibility, trying to avoid all the constraints that currently exist in SDH. Thanks to technology, it will be possible to create a new access modality that merges subtitles into the action, without invading the screen but making them part of the main action.

CHAPTER TWO

SDH HISTORY

Subtitling existed for the first time not long after the invention of film. ‘In fact, the very first “subtitles” in the modern sense saw the light of day already during the silent film era’ (Ivarsson, 2004). They were used to convey the dialogue of the actors to the audience with what we now call *intertitles*: ‘texts, drawn or printed on paper, filmed and placed between sequences of the film’ (*ibid.*).

The first intertitles appeared in *Uncle Tom’s Cabin*, by Edwin S. Porter in 1903. From 1909 on, they started to be called “sub-titles”, as they were used in the same way as subtitles in a newspaper. However, subtitles were not the only strategy used to render the dialogues of the action on the screen. They were sometimes combined with live actors speaking the dialogues behind the projection screen. And back to those early days of subtitling, it is possible to find some instances in which subtitles were placed *in the moving image*, such as in Porter’s *College Chums* (1907), or the French films *Judex* (1916) or *Mireille* (1922). Nonetheless, films did not include many subtitles. A 45-minute film could include around 20 subtitles. However, some other directors used more, such as Eisenstein (1928), who included 270 subtitles in his film *October* (Bartoll, 2012: 71).



Figure 2: Example of old creative subtitles in *College Chums* (1907).²⁴

²⁴ Video available online at: <https://www.youtube.com/watch?v=kJbbdccE-r4>

Figure 2 above shows the creativity that was used in subtitling in the past. During cinema's silent era, intertitles designers had to have an evident artistry, similar to that of a current graphic designer. They used 'curved lines of text, decorative borders and simple animations' (McClarty, 2012: 136). Creative subtitles were pleasingly decorative and aided in interpreting the mood of the play, as well as helped the characterization. Moreover, 'the skilful word pictures aided and completed the scene' (Harris, 1916, in McClarty, 2012: 136). However, 'increasing commercialisation of the film industry meant that reproducing creative intertitles in different languages became too expensive' (McClarty, 2012: 136). That is the reason why they were so ephemeral.

In 1909, a patent for a 'device for the rapid showing of titles for moving pictures other than those on the film strip' was registered by M. N. Topp. The projectionist had to use a sciopticon (a type of slide projector) to show subtitles on the screen below the intertitles (Bartoll, 2012: 71). However, with the invention of sound film, around 1927, the audience had access to the dialogues played by the actors, for this reason, the titles inserted between scenes disappeared. This did not suppose the end of subtitling, as several language versions could be presented thanks to subtitles. Dubbing was the other option to provide films from foreign producers, although it was a complex and expensive technique. In contrast, subtitling presented reduced costs compared to dubbing — subtitling only costs between a tenth and a twentieth of a dubbing production (Ivarsson, 2004).

According to Izard (2001: 196), the first subtitles were produced in the US in three main languages: French, German and Spanish. These language copies were distributed not only to the countries to which they corresponded, but to other countries. Thus, French subtitles were displayed in France, Turkey, Romania or Greece. German subtitled films were shown in Germany, the Netherlands and Poland, while Spanish subtitles were not only useful for Spanish spectators, but for Portuguese as well. Hence, subtitling remained.

The first rudimentary SDH appeared in the late 1940s, when Emerson Romero, a deaf²⁵ man who had lost his job as silent film actor with the advent of sound cinema, tried to adapt sound films for deaf people alternating text and image. After Romero's attempts, Arthur Rank subtitled a film sliding pieces of glass with etched words in and out of a

²⁵ He was 'deafened by a fever from whooping cough at the age of six' (Lang and Meath-Lang, 1995: 302).

projector. Although subtitles were synchronised with dialogues, they did not co-exist on the screen with the images, as they were projected on a smaller screen located at the bottom left of the bigger one. Therefore, viewers' attention was disturbed as they had to look away from the action to read the subtitles (Neves, 2005: 106).

SDH, as we understand it today, was born in the late seventies²⁶ in the United Kingdom, with the aim to provide all non-linguistic information to people with any degree or type of hearing impairment. It was introduced on television in 1979 and it was only available to those interested viewers that accessed Ceefax, 'the first teletext²⁷ service in the world originally designed by BBC engineers to provide subtitles for the deaf' (BBC, No Date). Ceefax created a newly developed subtitling facility, in which a few words could be typed and transmitted by pressing ENTER, which became impractical, as they had difficulties in typing 'fast enough to keep up with speech' (*ibid.*). That is why Robson, who worked as part of the first editorial team of Ceefax from 1974, 'produced the subtitles in advance and stored them on yellow punched paper tape' and loaded the subtitles by means of a tape reader (Robson, No Date).

This system was updated after visiting the subtitling (or *closed caption*, as they are called in North America) unit of the Boston's WGBH TV station in 1975, where they were using a similar technology to Ceefax's, but devoted to producing captions for the deaf. It took a whole day for the subtitling team to prepare the subtitles for one news bulletin (Robson, No Date), and subtitles were transmitted as invisible data embedded in analogue video on line 21²⁸, a service inaugurated in 1981 (Captions INC, No Date).

Thus, *teletext subtitling* or *closed captioning* started to determine most of the 'SDH solutions and strategies' that were used 'throughout the world' (Neves, 2005: 107). UK's teletext subtitling became a model for the rest of European countries and, soon after its appearance, Belgium, France, Italy and the Netherlands started providing SDH (Díaz Cintas and Remael, 2007). In Spain, in contrast, the advent of SDH did not take place until 1990, when Televisió de Catalunya²⁹, a state-owned regional channel, provided

²⁶ The first transmission of a TV programme with subtitles was in 1979 (Zárate, 2014: 39).

²⁷ The first television information retrieval (teletext) service was developed in the UK in 1971, and continued to exist until the switch-over from analogue to digital television, in 2012. Ceefax was followed by Oracle, another teletext service, used by Channel 4 and ITV from 1974 (Zárate, 2014: 40).

²⁸ Line 21 was the old standard for closed captioning of analog television (Captions INC, No Date).

²⁹ Televisió de Catalunya has also recently pioneered the provision of subtitling via HbbTV, as will be explained in subsection 3.2.3.

subtitles for the d/Deaf and hard-of-hearing in a feature film for the first time (Orero, 2005: 176). Despite this, subtitles were broadcast occasionally, thus, accessibility to audiovisual media was intermittent.

Given the need to eliminate communication barriers and to promote the accessibility to the media for people with hearing impairment, in 1993, the first *Simposio Internacional sobre la Eliminación de Barreras de Comunicación*³⁰ in Spain was organised by the *Confederación Española de Familias de Personas Sordas*³¹ (FIAPAS). It counted with the participation of an expert coming from the subtitling department of the BBC in the UK that became key for the development of Spanish TV subtitling (*Observatorio de la Accesibilidad*, No Date). In 2004, the Spanish government, the audiovisual industry and the disability entities (FIAPAS, CNSE³² and CERMI³³) signed a protocol for the creation of the Spanish Centre for the Subtitling and Audio description —CESyA for its acronym in Spanish (*ibid.*).

In a European scale, the emergence of these newer forms of language transfer within the audiovisual context was boosted with the European Year of People with Disabilities (2003), which contributed towards the reinforcement of accessibility to the media. Finally, on the 12 November 2007, the *Written Declaration on the subtitling of all public-service television programmes in the EU* —the most significant legislation in force— was signed in the European Parliament. The aim was to ensure that all ‘citizens have equal access to information, education and culture’ and it has actually contributed to devise various sets of guidelines (see Chapter Three, Section 3.2) on the way audiovisual materials should be accessible.

Not a long time ago, some of the strategies and solutions initially devised for the simultaneously developed teletext /closed captioning systems, as well as ‘old subtitle files produced for transmission in analogue television (using Teletext), were still commonly

³⁰ International Symposium for the Elimination of Communication Barriers (my own translation).

³¹ Spanish Confederation of Deaf People’s Families (my own translation).

³² The *Confederación Estatal de Personas Sordas* [Spanish National Confederation of Deaf People] was founded in 1936, as an NGO that fights for the equality of opportunities of deaf people and ensures that communication barriers are eliminated. It is integrated by 17 autonomous federations, one per each autonomous community of Spain (CNSE, 2013).

³³ *Comité Español de Representantes de Personas con Discapacidad* [Spanish Committee of Representatives of Persons with Disabilities], whose mission is to guarantee equal opportunities of persons with disabilities and to protect their human rights, ensuring they are fully included in society. It represents the interests of more than 3.8 million women and men with disabilities in Spain (CERMI, No Date).

used, possibly due to financial reasons' (Zárate, 2014: 40). However, with the beginning of the digital age and the switch-over from analogue to digital technology, both *teletext subtitling* and *closed captioning* had to be transformed.

Digital technology has had a great impact both in the provision and the layout of SDH, as it is propelling the audiovisual industry towards limits never imagined before, bringing a myriad of new opportunities for creators, producers and distributors of audiovisual content (Guerrero, Diego and Pardo, 2012). While analogue TV transmissions produced 'a lower-quality picture than the original and sound suffered from noise and a reduced frequency response', digital TV 'reproduces crystal-clear picture and sound without fading or interference' (Miller, 2009).

Moreover, digital TV allows greater flexibility, patent in the new audiovisual content distribution scenario it has created that not only accounts for TV, but also for tablets, smartphones, PCs, videogames, DVDs, etc. Although 'the television channel continues to occupy a prevalent position' (Guerrero, Diego and Pardo, 2012), multiplatform strategies and personalised user access to television viewing have become the centre of the audiovisual industry.

Thus, as part of this industry, subtitlers have to face up the challenges of this emergent scenario and provide subtitles to make all multimedia platforms accessible. However, 'the medium used for the distribution of the programme' —cinema, TV, DVD, Internet, videogames— may affect the way subtitles are produced (Díaz Cintas and Remael, 2007: 23). Likewise the key 'to develop successful contents is related to their capability to be multiplatform distributed and customized by the consumer' (Guerrero, Diego and Pardo, 2012), SDH should have interactive actions, as well as capacity to tell an original "transmedia" story.

One of the objectives of this research is to establish a new subtitling methodology that can fit in different media and/or audiovisual platforms, adapting them to the requirements of digital technology and taking advantage of it. It is true that the conventions applied when subtitling will 'ultimately depend on individual companies, on the instructions given by the client or on the subtitling program being used' (Díaz Cintas and Remael, 2007: 23). Nonetheless, digital technology allows many flexible

options/alternatives, such as ‘the use of a wider range of colours and multitude of complex fonts’ (Zárate, 2014: 40), that invite to play and experiment with them.

The way audiovisual fiction and entertainment contents are developed is changing, as they are starting to be conceived as multimedia and interactive products in order to be enjoyed by the audience on a wide range of platforms. Consequently, we can start conceiving a different way to adapt and develop subtitles, according to this new scenario.

2.1 SDH research

At its origins, SDH was not understood as a form of translation.³⁴ Due to its technical implications, it was conceived as a mechanical process that required technical experts instead of linguists or translators (Neves, 2005: 103). Thus, SDH was refused to be considered a translation process, due to ‘all the spatial and temporal limitations imposed by the medium itself which constrain the end result’ (Díaz Cintas and Remael, 2007: 9). Only the technical requirements of subtitling were taken into account, but not the linguistic process involved when converting the oral content of the actors’ dialogues into written speech.

In this regard, Jakobson (1959) established *intra-lingual translation* as a type of translation that involved rewording, definition in which subtitling might be included. Reiss (1977) also underpinned this idea by updating her theoretical framework with a newly created ‘additional hyper-text type which she calls “audio-medial” text type’ (Díaz Cintas and Remael, 2007: 10). In this way, she pointed out the special attention ‘deserved by written texts co-existing with other sign systems with which they must maintain a constant link’ (*ibid.*). Delabastita (1989) claimed that a more dynamic definition of translation was required in order to avoid applying it only to ‘very few, well-selected cases’ (*ibid.*). Gottlieb defined *subtitling* as a written, additive³⁵, immediate, synchronous, and polymedial³⁶ form of translation (1992: 162). Díaz Cintas and Remael (2007)

³⁴ In fact, audiovisual translation has also been ‘considered inferior to (written) literary translation, probably because of the lack of cultural prestige in audiovisual mass-media, compared to canonized literature’ (Ballester, 1995: 159).

³⁵ New verbal material is added in the form of subtitles.

³⁶ At least two communication channels are at play (visual and auditory).

consider that translation should be approached in a ‘more flexible, heterogeneous and less static’ way (*ibid.*).

Once it seemed that subtitling could be included under the umbrella of Translation Studies, other scholars, such as Nir (1984: 91 in Neves, 2005: 151) considered the language transfer that occurs in subtitling not a translation but an adaptation process. Díaz Cintas totally disagrees with the previous statement, as he reckons that the ‘term *translation* should be ample enough to subsume new and potential translation activities within its boundaries’ (2003: 194 in Neves, 2005: 151).

Due to this controversy in terminology, Neves steps forward and polishes the definition of the term *adaptation* by exploring its nuances. She suggests the term *transadaptation*, which refers to a subtitled text which has been adjusted to the needs of a special public ‘to guarantee readability and thus greater accessibility’ (Neves, 2005: 154). In SDH, whichever the language transfer (intra-lingual or inter-lingual) is, ‘special care is taken to adjust subtitling, in more than purely linguistic terms, to the needs of its particular audience, more than translation is required’ (*ibid.*: 151).

Thus, although SDH does not always imply the transfer from a source to a target language—which is the defining feature of *translation*—, it always provides access. SDH subtitlers bridge the *sensorial* barrier between the audiovisual programme and d/Deaf people. And so do translators: they bridge the *language* barrier between the source text and the target audience. Both facilitate access to information or entertainment that would otherwise be hermetic. Therefore, both *accessibility* and *translation* share a similar social function, despite their different intended audiences.

That might be the reason why scholars finally embraced accessibility as an integral part of AVT (audiovisual translation), within Translation Studies. The first studies appeared in the early 1980s, which inevitably affected the small amount of work done in the research field of SDH up until now. Even though SDH has not been the main topic of AVT studies, a special reference to accessible subtitles started to be made by, on the one hand, professionals³⁷ of the subtitling industry such as Baker (1984, 1985), and, on the other, scholars such as Ivarsson (1992) or Ivarsson and Carroll (1998). These (small)

³⁷ People connected to the industry of subtitling share a valuable experience and become testimonials of every day issues that scholars may not be aware of. Providing an ‘inside view of the makings of subtitling’ throws light on practical issues that researchers may take into account (Neves, 2005: 104).

contributions have shed light on a research area to discover and have promoted the interest of the subject among other scholars or researchers (Neves, 2005) to carry out further research on the field.

As a result, the past years have witnessed a gradual increase in both the amount of SDH offered by television channels, as well as studies based on this issue. Broadcasters have devised their own conventions to carry out SDH —more details will be provided in the next section—, while many interesting works providing knowledge about this new discipline and its intended audience have been published by scholars from many different disciplines, which include Psychology (Cambra *et al.*, 2008-2014), Law (Pérez-Ugena, 2010), Deaf Studies (Jensema *et al.*, 2000) or even Engineering (Martín *et al.*, 2007 and 2008), to name but a few (Arnáiz Uzquiza, 2012: 35).

Some of these reference works have focused on the effectiveness of broadcasters' conventions through a careful analysis of the programmes currently being subtitled. However, general theoretical literature in subtitling for deaf children's programmes, such as cartoons, is rather limited —and/or dated back to three decades. Only Cambra's (2008-2014), Lorenzo's (2010), Zárate's (2014) and Tamayo's (2015) recent research focus on deaf children as a target of subtitling. Lorenzo (2010) devoted a case study to the observation of the communicative efficiency of subtitles. The goal of her study was 'to verify the functionality of the existing criteria in use in Spain and published by AENOR' (2010: 115). Her contribution concludes with 'a proposal to complete the existing criteria and to focus on the areas for which the standard did not provide solutions' (*ibid.*), which were linguistic issues mainly.

Cambra (2010) and her team at Universitat Autònoma de Barcelona were also interested in testing the efficiency of subtitles targeted at children and teenagers. They conducted an innovative series of studies (2006, 2008, 2009, and 2013) that focus on deaf children's viewing and reading habits, as well as on the comprehension of accessible TV subtitles targeted at deaf children. Their starting point was their concern about the great investment to improve TV subtitling, while viewers' opinion on the reception of subtitles was not taken into account. They based their research on reception studies to demonstrate that deaf viewers spend a long time reading subtitles and, consequently, miss a considerable part of the images shown on screen. Due to the nature of the audiovisual programmes analysed —cartoons—, in which images play an important storytelling role,

they suggested that some information contained in the subtitles could be removed without detriment to the understanding of the story.

They prepared a set of subtitles adapted to the needs of deaf children for a series of videos, in which subtitles display speed and the complexity of the vocabulary included in subtitles are gradually increased. After carrying out an experimental study with eye-tracking technology, they concluded that deaf children have to make compatible the reception of the information from oral language, subtitles and images. Considering the audience are deaf children, whose reading abilities are not comparable to those of their hearing peers—as will be further explained in Chapter Four—they put deaf children's reading abilities at the centre of their research. They provided a detailed study on the participants' language command, identified the difficulties that deaf children may have to understand subtitled cartoons and elaborated a set of adapted subtitles to facilitate its reading, and, consequently, the access to the plot (Cambra, Silvestre and Leal, 2009).

These enhanced subtitles avoided conveying information that could be inferred from the image, as cartoons are, most of the time, expressive enough. Their goal is that the videos used in their experimental study become an educational tool that will help to enhance deaf children's reading skills when consuming subtitles. The video series start at a very low level of difficulty and reading speed, which are gradually increased, according to the age and the language command of the viewer (*ibid.*).

Zárate (2014) pioneered the completion of a PhD thesis on subtitling for deaf children. It became the first research to include word recognition as a variable in the context of subtitling for deaf children, in which the practice of subtitling children's programmes on British television was discussed. Cartoons from various television channels were under analysis, examining features such as segmentation, editing, reading speed, typographical cues and use of non-standard language. Deaf children's 'current realities' focusing on their reading habits and their hearing aids were also determinant for the results of her empirical study (*ibid.*: 263), through which she tested two major variables: word recognition and content comprehension. She provided enhanced subtitles against broadcast subtitles to a group of school deaf children. They performed quite similarly regarding comprehension, although they achieved slightly higher scores when recognising words in enhanced subtitles (*ibid.*: 264). She concluded that the lack of

specific and exhaustive guidelines on SDH for children directs providers and broadcasters not to make a distinction between SDH for adults and for children.

Tamayo (2015) provided a descriptive and experimental study on TV subtitling for deaf children in Spain. She suggests an alternative approach based on the needs of deaf children audiences and proposes accessible subtitling quality standards specifically tailored for younger audiences. She concludes that there is a lack of homogeneity regarding some parameters of SDH, such as sounds uttered by characters (mood) and sound effects. She conducted an experimental study in which she presented enhanced subtitles³⁸ to deaf children. Enhanced subtitles suffered changes in reading speed, character identification, vocabulary and plot music, which have proved to ‘allow for a better comprehension of the audiovisual subtitled text as a whole’ (*ibid.*: 378).

Prior to Zárate’s innovative study, the first research to include a short section on subtitling for children was *Handbook for Television Subtitlers* (Baker *et al.* 1984). It consisted of a study on the effectiveness of subtitling through testing deaf children’s comprehension skills at various language levels and reading speeds. One of the main findings of this study was the low level of comprehension of subtitles. Baker *et al.* established different strategies to make subtitles more accessible for their intended audience, such as establishing the subtitle’s reading speed at a rate of 60 wpm³⁹ or simplify syntactic structures to make subtitles easier and faster to read. They added the recommendation to use Teletext information pages to provide definitions of unusual vocabulary and contextualise the programmes.

D’Ydewalle published various studies with regard to SDH. In 1987, together with Verfaillie, conducted research on pre-lingually deaf teenagers’ preferences when watching TV. The different accessibility modes, such as sign language and/or subtitles were tested with eye movement tools, which demonstrated participants’ preference for subtitles, together with spoken language. Moreover, he also showed interest in studying the impact of subtitling on vocabulary recognition in d’Ydewalle and Van de Poel (1999).

³⁸ It will be further discussed in Chapter Seven.

³⁹ Adherence to this maximum was discussed in detail by Baker (1985), although it is not applicable nowadays. Deaf people’s screen exposure has increased thanks to the myriad of platforms available (TV, computers, tablets, mobile phones, etc.), and, consequently, it has affected younger audiences’ abilities and reading speed on screen (Zárate, 2014: 60).

In 1997, Gregory and Sancho-Aldridge conducted an experimental viewing study to assess deaf children's comprehension of subtitles. Three different age groups⁴⁰ of deaf children were presented subtitled material at different levels of complexity: complex/broadcast —subtitles rendered the dialogues entirely, as they were broadcast—, simple/simplified —subtitles presented an edited version of the broadcast dialogues—, and basic subtitles, which only provided the most relevant information to follow the programme. The study consisted of two parts. The first one, which was based on interviews with deaf children from different geographical locations, was centred on their television viewing habits and use of subtitles. The second part focused on a detailed examination of the effect of the aforementioned different levels of subtitling on the different age groups and for different programme genres. It is mainly a statistical study, however, it leads to a set of conclusions that invite reflection. According to Gregory and Sancho-Aldridge, the more complex the subtitles are, the less effective they become for the average deaf child; although the provision of basic subtitles will be detrimental to deaf children with better reading skills. The simplified subtitles seem to be 'the greatest source of information, whereas complex subtitles proved to be suitable for the participants of the 12-16 year old group' (1996:7). The youngest group (5-7) could only understand isolated words. Thus, these findings are extremely useful to the research in hand, as they suggest providing different sets of subtitles depending on the viewers' age to serve the requirements of deaf children and allow total access to programmes.

Also in 1997, Koolstra *et al.* claimed that subtitles may promote the development of decoding skills after conducting a study with primary school pupils. They concluded that reading subtitles on television enhances new word identification, and, therefore, it improves children's linguistic and cognitive development. As a conclusion, they defend subtitling as the perfect setting for second language acquisition.

Two years later, a chapter devoted to subtitling for deaf children was included in *The Semiotics of Subtitling* (de Linde and Kay, 1999), in which a variation of subtitles display in inverse proportion to the age of viewers was suggested. The linguistic judgements implied in the transfer between spoken dialogue and written text was under study throughout a thorough analysis of different children's programmes broadcast by British television, which led to the provision of figures related to variation between

⁴⁰ Five to seven, eight to eleven and twelve to sixteen years old, respectively.

speech and subtitles. They highlighted the importance of synchronicity between subtitles and sound and images, on lowering the reading speed at a rate of 90 wpm, as well as on the amount of editing required, which was recommended to be proportionally related to the pace of subtitles display and the type of programme. They extended their research with eye movement studies, due to the importance given to the interplay between linguistic and visual elements, which is also given in this research.

Due to the scarcity of theoretical works on SDH for children, this study is also based on general SDH theories, which have been adapted to the needs of this particular research. Neves' study (2005) was taken as a reference, as she presented a descriptive analysis of conventions in SDH in various European countries with the intention of improving SDH standards in Portugal. She took a step beyond simply accounting for the current subtitling practices, and suggested a set of guidelines for the provision of SDH on Portuguese television. Of special relevance for the study in hand is the section 4.3.6 on *Non-verbal component*. As she stated, SDH requires, by definition, the 'inclusion of information about sound effects and music on the premise that, otherwise, people with deafness would miss out on important aural information' (2005: 232). This section does not specialise in children's subtitling, although it goes in depth into important specific issues which may be also applicable to children subtitling practices. Therefore, her work has inspired the analysis of current television subtitling presented in Chapter Three.

In *Parámetros de análisis en la subtitulación accesible*⁴¹ (2007), Sánchez *et al.* compiled schematically, but exhaustively, all relevant non-linguistic aspects to be included in accessible subtitles, such as linguistic information —dialogues—, external information —background noises, silence, music—internal information —tone, mood— and character identification. This interesting piece of work was completed after observation of the different tendencies of the SDH industry in Spain, and took into consideration the different needs of the miscellaneous audience. A remarkable and innovative point of their study was the importance of adjusting the subtitles to the particularities of sign language, by using the word vocalised when signing, paraphrasing adverbial subordinate clauses with adverbs or by following the chronological order of the propositional sequence, to name but a few.

⁴¹ This paper was presented in the first International Conference on Accessibility to the Media (Congreso Internacional sobre Accesibilidad en los Medios Audiovisuales-AMADIS), which took place in Madrid in 2006.

Last but not least, it is worth mentioning in this review the reference work *Listening to subtitles* (Matamala and Orero, 2010). This book could be seen as a point of departure for drafting new subtitling guidelines in digital television. Although all the papers in the compilation are of great interest, the chapters on subtitling for deaf and hard of hearing children in Spain by Lourdes Lorenzo are of special relevance to this research, since they include a short section in which some suggestions are made on how to subtitle sound effects in children's programmes.

The first chapter considered is a case study based on an episode of the *Shin Chan* television series, while in the second Lorenzo demonstrates the extent to which the current subtitles following the criteria in use in Spain (UNE 153010) are communicatively efficient. Although she centres her attention mainly on linguistic issues, such as metaphors or the preference for affirmative sentences to the detriment of negative sentences, and so forth, she also briefly covers the non-verbal elements. For instance, she favours the employment of sound description rather than the onomatopoeia recommended by the UNE norm. On the other hand, she focuses in some depth on typographical issues, such as the preference for red instead of blue colour, the top-right location or the presentation of the information without brackets in lower-case letters with an initial capital letter (*ibid.*: 131), in order to clearly differentiate dialogue from background noises. In addition, her attempt to converge common elements between sign and oral languages, as Sánchez *et al.*, is especially remarkable.

2.1.1 SDH conferences

As part of an emerging discipline, scholars had the need to gather and share findings, thoughts and new ideas to develop. This gave way to different conferences that tackle the accessibility issue, such as Languages and the Media (Berlin, 1996 – present), Media for All (2005 – present), Fun for All (Barcelona, 2010 – present). In the former, topics related to AVT in general, whereas the latter are dedicated to the accessibility to the media on the one hand, and to videogames and virtual worlds, on the other.

All these conferences share a particular interest in the social, cultural, political and technological changes that affect AVT in general, and media accessibility in particular. It is true that a huge progress is being made toward 'turning today's information society into an information society "for all"' (Media for All, 2010). However, this cannot be done

only from the academic perspective. Researchers have to take also into account the producing and distributing processes of the audiovisual industry.

That is why the aforementioned conferences have become a “meeting point” for academia and industry to meet and discuss consumers’ needs and market demands. Research input is a useful tool for the business of AVT —among them technology developers and audiovisual content producers, broadcasters and distributors. They are inevitably intertwined, although most of the times their interests seem not to be as well connected. Endless debates on the social and economic implications of implementing appropriate quality standards take place in these conferences, which usually sharpen other professional issues, such as working conditions, productivity or costs, to name but a few.

Among the wide range of topics discussed within AVT studies —dubbing, interpreting, narration, opera and theatre surtitling, subtitling, voice-over, localization, fandubbing, fansubbing— and accessibility —SDH, live subtitling, respeaking, AD, audiosubtitling, sign language interpreting—, the aim of both industry and academia is to continuously improve and increase media accessibility.

2.2 SDH practice

The volume of SDH in television broadcasting has suffered a growth in recent years, most likely due to the efforts done by the European Union, in order to ensure deaf people’s access to programmes broadcast on TV. New legislation (see Chapter One) in many countries obliged television channels to broadcast a certain percentage of their programmes with accessible subtitles, even though only a few Member states have applied it to their main TV channels. Only the UK, the Netherlands and France are ‘setting standards in EU with 100% subtitling provision on their main TV channels’ (EFHOH, 2011: 2), while most European countries are implementing the subtitling targets more slowly.

By law, according to the *Written Declaration on the subtitling of all public-service television programmes in the EU* (European Parliament, 12 November 2007), everyone with any degree of hearing loss must have complete access to audiovisual materials, although this seems not to apply to younger audiences. Current SDH guidelines —and

research works, as seen in the previous section— do not address the issue of SDH for children in detail. With the express purpose of the research in hand to fill this gap in both theory and practice, three main sets of guidelines and codes of good practice will be discussed in the subsections that follow.

2.2.1 The case of British television

In the UK context, two main sets of guidelines are relevant to this study: on the one hand, the former *ITC Guidance on Standards for Subtitling* (1999), which is now known as *Ofcom's Code on Television Access Services* (2012, updated in 2015); and, on the other hand, the *BBC Online Subtitling Editorial Guidelines VI.1* (Ford 2009) have been devised.

Both the former ITC and the BBC guidelines contain a section specifically devoted to deaf children, although they only touch upon the linguistic issues, and, surprisingly, their suggestions are quite contradictory. While the ITC recommends reducing long sentences, omitting difficult words or simplifying grammatical structures, the BBC opts for avoiding sentence and vocabulary simplification and splitting sentences across subtitles. However, they agree on the importance of synchronising the subtitles in time with the utterance. Regarding non-verbal elements, they only touch upon formatting specifications, such as the colour and background of the subtitles, the typography or their position on the screen.

Sound effects (SEs), according to ITC guidelines (1999: 16), should be rendered by using white capital letters on red background, as well as subtitles conveying SEs should be displaced towards the sound source to ensure the distinction between SEs and speech. BBC guidelines (2009: 34), on the other hand, advise that SE labels should be 'typed in white caps', placed to the left of screen—unless the sound source is clearly to the right—and brief—subject + active, finite verb. Both ITC and BBC guidelines suggest a great range of strategies to account for different attitudes taken before an utterance, that is, for *paralinguistic features* (PFs). Capital letters, change in colour, punctuation —(), (!), (?), ?!, ...—, to name but a few, are the recommended strategies.

While the BBC guidelines (2009) have remained unchanged, the *ITC Guidance on Standards for Subtitling* (1999) has been reviewed and updated recently (2012 and 2015), as it was based almost entirely on the findings and recommendations from the

Handbook for Television Subtitlers (Baker *et al.*, 1984). Nonetheless, they provided clear guidance on how to provide accessibility. Despite the fact that examples of both good and bad practices were not presented as prescriptive standards, it became a great source of information for subtitlers and broadcasters.

ITC,⁴² the Independent Television Commission, ceased to exist in 2003 and Ofcom⁴³ assumed the responsibility of promoting television access services and regulating the UK communications industries. Instead of proposing updated standards for SDH, the first step taken by the new communications sector regulator was conducting various pieces of research to know the situation of current subtitling and its intended audience. Different features of SDH were under study, such as the speed at which subtitles were displayed, for instance.

The 1999 guidelines recommended not to exceed the 140 wpm, whereas this new study concluded that subtitles could go up to 160-180 wpm. In the case of children's programmes, *ITC Guidance* recommended providing slower subtitles (at a 70-80 wpm rate), due to the lower reading abilities of deaf children. Ofcom (2005), however, made no specification regarding speed in subtitles targeted at younger audiences. Their justification argument is that deaf children's needs vary considerably due to the heterogeneity of deaf children's community. This justification argument does not seem to convince scholars, such as Zárte (2014: 67):

‘Considering that reading speed is a matter of paramount importance in any type of subtitling, and that guidance is actually provided for adult programmes, it is quite worrying that in the case of children Ofcom has opted for a very vague approach by leaving it to the broadcasters' common sense, unlikely to be experts on the needs of deaf children. [...] The repercussions of an unsuitable reading speed are very noticeable and can have detrimental effects on the viewers and their appreciation of the audiovisual programme and, ultimately, of their perception and enjoyment of subtitles at an age when they are learning to read and discovering the world of subtitling.’

⁴² More information available online at: <http://www.itc.org.uk/>

⁴³ More information available online at: www.ofcom.org.uk

The *Code on Television Access Services* (2012, 2015) provides recommendations on the technical standards regarding verbal and non-verbal SDH issues. It is based on the former *ITC Guidance on Standards for Subtitling* (1999) and it urges to take special care of the language and the pace of subtitles with regard to the age and background of the target audience (Ofcom, 2015: 22). Their recommendation is, thus, providing ‘heavily edited subtitles’ —although accurate and grammatical— at a slower speed for young children (*ibid.*, 2015: 19). It also tackles a few of the many issues involved in SDH, such as 1) presentation of subtitles (font), 2) character identification by means of colours, 3) lay-out or subtitles position within the screen, 4) non-verbal information —music, louder speech, sound effects, emphasis, speechless pauses, ...—, 5) synchronisation between speech and subtitles, 6) subtitling speed and lines per subtitle, and 7) accuracy. In addition, Ofcom is also focused on regulating the percentage of services that each broadcaster has to meet.

2.2.2 The case of Spanish television

In the Spanish context, there is the *Norma UNE 153010:2012 Subtitulado para personas sordas y personas con discapacidad auditiva* and its former version *Norma UNE 153010. Subtitulado para personas sordas y personas con discapacidad auditiva. Subtitulado a través del teletexto* (Asociación Española de Normalización y Certificación 2003-2012). They were devised through a consensus between SDH users, the administration, subtitling companies and broadcasters to establish a quality standard and a minimum degree of homogeneity in SDH practices.

Apparently, *Norma UNE 153010:2012* provides more detailed information on how accessible subtitles should be rendered, although it does not take into account the heterogeneity of deaf audiences. However, unlike its updated version, *Norma UNE 153010* (2003) provided only a limited amount of advice related to subtitling for children, mainly in the section dealing with sound effects (SEs), which is particularly relevant to this study.

Regarding the SDH features under study in this research, both *Norma UNE* (2003: 13 and 2012: 8) detail how to make sound effects visible by locating them at the top right hand side of the screen to be distinguished clearly from verbal utterances. However, while the former *Norma UNE* (2003: 8) establishes that as many sound effects as possible

should be subtitled and recommends that both sound description and onomatopoeia — when subtitling children’s programmes— in red or blue⁴⁴ on white background should be used (*ibid.*: 13); current *Norma UNE* suggests that only necessary sound effects or sound effects not evident from the action need to be included in the subtitles (2012: 13), although they do not recommend the use of colour, but brackets instead. Although it still is insufficient, the latter focused on subtitles’ *readability*, i.e. subtitles’ comprehension (Gambier 2003: 179), the other major SDH feature.

Its update (2012) recommends to only subtitle nominatively⁴⁵ those SEs that are essential for the understanding of the story (2012: 13-14), except when they could be understood from the image. It also requires SEs subtitles to be adequate to the pace of the audiovisual programme and synchronised with the action originating the sound or the sound source. At this point, little flexibility is allowed to play with the time in and out of subtitles, in order to reproduce visually the effect the sound is producing on hearing viewers (*ibid.*).

Concerning PFs both *Norma UNE* recognise the need for providing information about utterance’s characteristics to help the audience to have the right access to the contents as long as it cannot be deduced from the actor’s performance. They also recommend that paralinguistic information should be provided in the same colour allocated for the character, in brackets and capital letters, as well as placing it in the same line preceding the utterance (2003-2012: 14). Italics should be used for the narrator (2012: 15), while the use of three dots renders doubt, insecurity or interruption in speech (2012: 17).

As will be seen in Chapter Three, the sample chosen for the analysis of current SDH practices in Spain also includes children’s programmes broadcast by Televisió de Catalunya, in Catalan. These programmes do not follow the recommendations established in *Norma UNE*, since TVC devised their own in-house SDH style guide. It is called *Subtitulació per a persones sordes de programes enregistrats*,⁴⁶ and it contains a chapter devoted to the non-verbal features of PFs and SEs (1993: 12). They recommend only

⁴⁴ According to *Norma UNE* (2003: 7), both blue and red colours on white background have equal visual characteristics. Therefore, there is no preference for one or another.

⁴⁵ Statements that have the shape of a noun, sometimes by means of verbs functioning as nouns, like gerunds.

⁴⁶ Subtitling of prerecorded programmes for deaf people (my own translation).

subtitling the information that is essential for the understanding of the programme and avoiding redundancy between subtitles and the image. Either *nominative* or *explanatory* labels⁴⁷ with a description of the PF or SE are the strategy suggested for documentaries and adults' programmes (*ibid.*: 16). However, in children's programmes they opt for the use of onomatopoeia to render SE (*ibid.*: 15).

2.2.3 Multidisciplinary projects around Europe

Apart from broadcasters' particular guidelines, there are projects that work together to ensure accessibility is a reality that reaches as many areas as possible. The pioneer of these projects was DTV4All,⁴⁸ 'funded by the European Commission, under the CIP ICT Policy Support Programme, to facilitate the provision of access services on digital television across the European Union' (European Commission, No Date), both for hard of hearing or deaf people —subtitles or deaf signing— and partially sighted or blind people —audio description.

This project was carried out between 2008 and 2012, when analogue television switched off in Europe. That date represented an opportunity to take advantage of the different options offered by digital television to spread accessibility. DTV4All was meant to contribute to 'identify the enablers that would allow a core set of access services to be offered in all EU member countries in the near future' (*ibid.*).

To continue supporting inclusivity, DTV4All has been superseded by HBB4ALL.⁴⁹ The Hybrid Broadcast Broadband For ALL is also 'a European project, co-founded by the European Commission under the Competitiveness and Innovation Framework Program (CIP) and by 12 partners' (HBB4ALL, 2016), such as universities —Universitat Autònoma de Barcelona (UAB) and Universidad Politécnica de Madrid (UPM)—, TV channels/broadcasters —Televisió de Catalunya, RBB, RTP and SWISS TXT—, research institutes —IRT and Vicomtech— and SMEs —Vsonix, Screen Subtitling Systems, People's Playground and Holken Consultors&Partners—, whose expertise in media accessibility and/or multi-device environment was united in December 2013 for the duration of 36 months.

⁴⁷ Labels that include statements conveyed by means of a verb, which is most of the times accompanied by its subject.

⁴⁸ More information available online at: <http://www.psp-dtv4all.org/>

⁴⁹ More information available online at: <http://www.hbb4all.eu/>

The main objective is to provide accessible multi-platform audiovisual content in any device, and give viewers the chance to choose from all the options available. In this way, each target group —people with or without disabilities, children, adults, etc.— would have their customised accessibility service in their hybrid TV, PC, tablet or smartphone. Not only the users will be able to choose which accessibility service⁵⁰ suits their needs best, but they will also be able to customise the service chosen: the language, the font size, the location within the screen, to name but a few, would be the different options available that would be integrated seamlessly with the regular TV programme.

As stated previously, Televisió de Catalunya pioneered the implementation of SDH in Spain in the 1990s. Again, in July 2015, it was the first TV channel in Spain to offer a subtitling service via HbbTV to respond to audience's demands. The project consists of two phases. The first one is the creation of a personalised subtitling multiplatform, whereas the second involves the production and distribution of alternative audio files for each of the videos available on their website, adding clearer or louder audio channels for the hard of hearing, audio description for blind or partially-sighted people, and multilingual audio for the rest of the users. This is being currently tested for TV contents, although future testing with mobiles and tablets is not dismissed (CCMA, 2015).

The future is here to make media accessible for all. Therefore, it is necessary to analyse what is being done in the field of SDH and progress beyond current practices taking advantage of the new era of digital technology. The chapters that follow will demonstrate how the use of the technology available can have a great impact on the way SDH is provided, as in *creative* subtitles, which are the greatest contribution of the thesis in hand to the field of subtitling for deaf children.

⁵⁰ Apart from accessibility services, HBB4ALL will also offer the three translation modes: dubbing, subtitling and voice-over (HBB4ALL, 2016).

CHAPTER THREE

TECHNICALITIES OF CONVENTIONAL SDH

‘Audiovisual translation (AVT) in general, and subtitling in particular, has an umbilical relationship with technology, which to a large degree determines it. The technical advances taking place in the area of subtitling can have an immediate and considerable impact both on the subtitling practice from the practitioner’s perspective, and also on the perception of subtitling we have as spectators and consumers’ (Díaz Cintas, 2005: 1).

Since the late seventies, when SDH as we understand it today was born, a great amount of computer programs designed exclusively for subtitling tasks exist in the subtitling market. Actually, the first subtitling equipment was launched ‘in the second half of the 1970s’ (Díaz Cintas, 2008: 5), which has been perfected over time to the programs that are available at present. To name but a few, among the most popular subtitling software that are commercialised in the market, we can find EZTitles,⁵¹ Fab,⁵² Poliscrypt,⁵³ Spot,⁵⁴ STWin Pro,⁵⁵ Swift,⁵⁶ Titlevision⁵⁷ and WinCAPS⁵⁸ (Díaz Cintas, 2008: 6).

These are professional, yet expensive subtitling software that have found competitors in free software available online. Subtitle Workshop⁵⁹ or Aegisub⁶⁰ are free cross-platform open source tools for creating and editing subtitles. Providing a built-in real-time video preview, they make it quick and easy for the user to time subtitles, and include tools for styling them colours, fonts, etc.).

⁵¹ Available online at: www.eztitles.com

⁵² Available online at: www.fab-online.com

⁵³ Available online at: www.screen.subtitling.com

⁵⁴ Available online at: www.spotsoftware.nl

⁵⁵ Available online at: www.caravena.com

⁵⁶ Available online at: www.softel.co.uk/intro.php

⁵⁷ Available online at: www.titlevision.dk/index.htm

⁵⁸ Available online at: www.sysmedia.com

⁵⁹ Available online at: www.urusoft.net

⁶⁰ Available online at: www.aegisub.org

Despite this wide range of available products, none of the subtitling software mentioned in the previous paragraphs has been used to create the innovative *creative* subtitles. The reason is simple: they did not offer as much flexibility as it was needed for the purpose of this study. It is true that they allow having different colours, fonts, sizes or even styles, although they do not allow inserting pictorial elements or positioning subtitles around the screen, as will be illustrated in the next chapter.

Due to the special particularities of *creative* subtitles, two different software have been required: on the one hand, the graphic design software Adobe Illustrator CC⁶¹, and, on the other, the video editing software Adobe Premiere.⁶² I had to attend graphic design and video editing lessons in order to acquire a sufficiently good command to be able to create the subtitles on my own. It was of an utmost importance for me to be able to create the dynamic subtitles from scratch, to shape them according to how I had imagined them in my mind. I could have relied on the work of a professional graphic designer or video editor, as it would have reduced the great amount of time invested in the creation of the subtitles. However, I doubted whether s/he would have been able to grasp all the nuances I had drawn in mind. Despite this, I have counted on the inestimably help and patience of Jordi, an IT specialist and multimedia technician that has resolved all my doubts and has contributed to the quality of the results shown in Appendix VI.

3.1 Specificities (or constraints) of subtitling

This subsection presents all the specificities, which are, in turn, constraints, of subtitling. All these peculiarities that make of subtitling an artistic activity. Common specificities of current subtitling will be described. Some of them will be applied to the process of *creative* subtitling, although in most occasions more innovative and rule-breaking options will be needed.

The technical aspects of subtitling, mentioned in the previous subsection, were not the only difficulty to bear in mind in the process of designing *creative* subtitles. Subtitling does not only consist of inserting text into the image. According to Díaz Cintas and Remael (2007: 9):

⁶¹ Available online at: www.adobe.com/products/illustrator.html

⁶² Available online at: www.adobe.com/es/products/premiere.html

‘All subtitled programmes are made up of three main components: the image, the spoken word, and the subtitles. The interaction of these three components, along with the viewer’s ability to read both the images and the written text at a particular speed, and the actual size of the screen, determine the basic characteristics of the audiovisual medium.’

The original image remains unchanged in the process of subtitling. Despite the fact that subtitles may present different languages to facilitate access to the spoken words to spectators, image will always remain the same. However, image in film is not static. The visual discourse will have a direct impact on the subtitles. According to Bartoll (2012: 130) the filmic structure of audiovisual products consists of scenes, sequences, and shots. Therefore, subtitles are never confined to static frames or shots, which has to be taken into account when subtitling.

There is a general rule in subtitling that states that subtitles should not be displayed over a shot change. A shot change, or camera cut, occurs when the image on screen changes from one frame to the next. Subtitles should appear in exact synchronicity with shot changes, as ‘it is likely to be less tiring for the viewer if shot changes and subtitle changes occur at the same time’ (Ofcom 2012: 14). The reason why subtitles should change together with the shot is explained by Robson (2004: 184):

‘Research has shown that if a caption remains on the screen when the scene changes behind it, viewers will automatically start reading the caption over again, assuming that the caption changed with the scene.’

In order to confirm that subtitles displayed over a shot change induce re-reading, some researchers, such as Gunter (1988), Woll (1991), d’Ydewalle *et al.* (1987, 1988, 1989, 1992), Baker (1982), Gottlieb (1995), Lomheim (1995), de Linde and Kay (1999), and Perego *et al.* (2014) have studied the eye movements and spectators’ reactions in front of subtitled programmes (Bartoll, 2012: 130-131). Their eye-tracking⁶³ experiments

⁶³ *Eye-tracking* is a technology that allows researchers to monitor and register the way in which a person looks at a particular scene or image (Bartoll, 2012: 131). It is a complex process of interpretation of the presence or absence of eye data points in different screen areas that helps to measure the eye activity.

show the degree in which the viewers' behaviour is affected by visual elements and demonstrate that the visual component of the film, i.e. the image, is as important as subtitles in order to get all the information provided (*ibid.*). Particularly de Linde and Kay concluded that 'when watching the clip with more cuts per subtitle, participants had a higher number of deflections, i.e. gaze shifts between the image and the text' (1999: 61).

Subtitles, therefore, are recommended to start on the first or second frame of the shot and end on the one before last or on the last frame. This rule has been totally respected in the design of *creative* subtitles, thus, all subtitles' timecode-in time coincides with a shot change and so does its timecode-out time (see Appendix VII). However, there are cases in which it is not possible to have the subtitles coincide with the shot change. Then, the subtitle should appear at least 12-15 frames before a shot change and disappear at least 12-15 frames after it to allow the eye to realise that a shot change has taken place. An alternative strategy to avoid maintaining a subtitle over a cut is merging it with another subtitle, although this may entail disobeying the rhythm of the performance.

In addition, a gap of four frames should also be inserted between two consecutive subtitles to avoid the effect of a subtitle overlay. In accordance with Karamitroglou (2000):

'This time break is necessary to signal to the brain the disappearance of one subtitle as a piece of linguistic information, and the appearance of another. If no such gap is maintained, the viewers' eye cannot perceive the change of the new subtitled text, especially if it is of the same length as the antecedent one.'

Human eye is sensitive enough to notice when a subtitle break does not coincide precisely with a cut. For this reason, subtitles should disappear at least four frames before the cut and, to avoid a flashing effect, they should be inserted no earlier than three frames

However, eye tracking recordings would only show where the eye had been looking, meaning that eye tracking would not necessarily point where attention was focused, as it does not indicate cognitive processing (Orero and Vilaró, 2012: 312).

after the cut. In cases where ‘it is unavoidable for a subtitle to go over a cut, it should stay on for at least one full second after the cut’ (Sponholz, 2003: 24).

3.1.1 Formal constraints

Image will constraint the translation of the spoken words provided in subtitles, as they are one of the informative components of the audiovisual media. Therefore, the visual context will dictate the verbal component provided in the target text. On the one hand, it may help to minimise redundancy, as the visual information contained in the image could be useful to reduce the amount of text to be conveyed in the subtitles. On the other hand, the target text will need to match the visual component and be consistent with the image. The audience needs to receive a message that is consistent with the image they see on screen. This concept was defined by Gottlieb (1992) as *formal constraints* of subtitles.

Subtitling is vastly considered a form of “constrained translation”. The ‘semiotic switch from spoken to written language, which brings with it thorough editing of (spontaneous) speech’ (Pedersen, 2011: 18) seems to be the most recognisable constraint. The change of the communication channel —auditory vs. visual— cannot be found in any other translation type. Written discourse does not share the same conventions with oral discourse. Linguistic differences exist and they imply adaptations in the semantic and pragmatic content of the verbal message (Bartoll, 2012: 127). Written discourse is rather limited, compared to oral discourse.

In addition, it has to be taken into account that oral discourse in films is not spontaneous at all, although they are an attempt to reproduce orality. Screenwriters create ‘fictional dialogues that sound natural and believable’ that do not try to ‘imitate spontaneous conversations’, but to ‘select specific features of this mode of discourse that are widely accepted and recognised as such by the audience’ (Baños and Chaume, 2009). Chaume terms it *oralidad prefabricada*⁶⁴ (2004: 168) and it is common to most audiovisual fictional texts, regardless of their linguistic origin.⁶⁵ Fictional dialogues consist of a balanced combination of linguistic features used in both spoken and written texts, in speech and writing. Hence, fictional dialogues contain ‘an orality which may

⁶⁴ In English, *prefabricated orality* (Baños and Chaume, 2009).

⁶⁵ *Prefabricated orality* is even common in literary texts, although then the term is referred to as *oralidad fingida* [feigned orality] (Brumme, 2008).

seem spontaneous and natural, but which is actually planned’, ‘written to be spoken as if not written’ (Gregory and Carroll, 1978: 42). And so do audiovisual translators —and subtitlers.

As per Gottlieb’s words (1997: 112-113 in Bartoll, 2012: 128), *prefabricated orality* may include pauses, false starts, self-corrections and interruptions; unfinished sentences and grammatically unacceptable constructions; *lapsus linguae*, self-contradictions, ambiguities and nonsense; overlapping speech, as well as dialectal, idiolectal and sociolectal features. The pivotal role of fictional dialogues in audiovisual texts and their translations —and, in our case, subtitles—, in which multiple semiotic codes operate simultaneously, force translators and subtitlers to succeed in resembling oral language by ‘recreating spontaneous-sounding conversations’ (*ibid.*). However, *prefabricated orality* often ‘erases or tones down some of the features of spontaneous colloquial language’ (Fernández, Matamala and Vilaró, 2014: 65-66) to depict apparently spontaneous dialogues. Particularly in subtitles, ‘many of these aspects disappear’ (*ibid.*), and the written version of speech is presented in subtitles as a reduced form from the oral ST (Díaz Cintas and Remael, 2007: 145).

3.1.2 Textual constraints

Apart from the *formal* constraints described above, Gottlieb (1992) also suggested another category of constraints present in subtitles: *textual constraints*. These are imposed by time and space factors; two major factors that are closely related and have a great impact on subtitling strategies.

Spatial constraints are due to the fact that only a certain number of characters⁶⁶ can be fitted into a line, and that more than two lines are rarely used in each subtitle (Pedersen, 2011: 19). The exact number of characters to be included per line varies from 20 to 40, but the most common rule applied is not exceeding the 36⁶⁷ characters per line, or the 72 characters in a two-liner. Besides the aesthetic recommendation of keeping the top line shorter, in order to avoid invading the screen and polluting the action (*ibid.*: 87), it has also to be taken into account the distribution of text within two-liners. *Segmentation*,

⁶⁶ *Characters*, and not words, are the basic unit in subtitling. They are ‘any visible result produced by pressing a keyboard key’ (Pedersen, 2011: 19). Therefore, commas, full stops, dashes or even blank spaces are characters that count in subtitling.

⁶⁷ Depending on the medium, subtitles can also be limited to a maximum of 37 (BBC, 2016) or 42 characters per line (Channel 4, No Date).

as this procedure is known, is not done arbitrarily. In order to offer an agile reading, it is recommended that subtitles contain one single sentence. According to Karamitroglou (2000):

‘No more than two sentences are allowed on the same subtitle. Following the principle of “segmentation at the highest nodes”; they should occupy one line each, no matter whether they correspond to utterances produced by the same speaker (monologue) or by different speakers (dialogue).’

Furthermore, he advises to segment the subtitled text in ‘a compromise between syntax and geometry’ and to follow the sense of the sentence. In cases where it is not possible to maintain a balance between geometric and syntactic distribution, it is more preferable to keep the syntactic one. This is not a fix rule, as it all depends on the text to subtitle. For instance, ‘long subtitles might have to be split over several subtitles, whereas short sentences might have to be combined to avoid telegraphic style’ (Díaz Cintas and Remael, 2007: 88).

Regarding spatial position within the screen, subtitles are usually centred at the bottom of the screen. This is due to the fact that action usually tends to take place at the centre of the screen, and, consequently, the eye travelling from the image to the text is avoided.

Temporal constraints mark the time a subtitle needs to be displayed in order for the viewer to be able to read it. The time subtitles should remain on screen is considered, broadly speaking, ‘three seconds for a full one-liner’ (de Linde and Kay, 1999: 7) and ‘six seconds for a two liner’ (Ivarsson and Carroll, 1998: 64), to allow spectators to read all the information conveyed through subtitles. In fact, allowing more time than the necessary can even be counterproductive. According to Díaz Cintas and Remael (2007: 89):

‘Studies show that when a subtitle remains on screen longer than the time the viewer actually needs to read it, there is a tendency to read it again. To avoid this unnecessary second reading, six seconds is the recommended maximum exposure time to

keep a full two-liner on screen. Thus, since the limit of what can be written on screen is dictated by the physical length of the lines —i.e. two lines of some 37 to 39 characters— keeping 74 to 78 characters’ worth of information beyond six seconds is never recommended in subtitling because it can lead to re-reading.’

This 6-second rule mainly applies to interlingual subtitling. On the contrary, ‘d’Ydewalle considers that the 6-second rule should be replaced by a 9-second rule as deaf viewers are typically slow readers’ (1987 in Neves, 2008). Therefore, in cases where dialogues last longer than six —or nine— seconds, subtitlers should consider splitting them into smaller units. It does not matter if it is a dialogue uttered by the same character. In those cases, it is necessary to choose the most appropriate moment, which can be a natural pause ‘either to breathe or to signal grammatical or logical units’ (Ivarsson and Carroll, 1998: 82). Thus, it should be avoided splitting a phrase in two different lines. For example, a noun and its adjective will be presented in the same line. In this way, the division of the utterance will occur without breaking the rhythm and the syntactic and geometric distribution of the subtitle.

The “viewer’s ability to read both the images and the written text” can be determined by the process hidden behind the appearance of subtitles on screen. *Spotting* or *time-cueing*,⁶⁸ for instance, is ‘the process of defining the in and out times of individual subtitles’ (Díaz Cintas and Remael, 2007: 246). The subtitling equipment is given the instruction of the exact time to insert or clear a specific subtitle, which coincides with the start and the end of the utterances. It is based on the *timecode*, i.e. ‘the 8- digit time code that locates with exact precision the hour, minute, second and frame’ and ‘helps to time the exact length of the scene’ (*ibid.*: 253). This task is not as simple as it may seem.

The time-cueing must be carried out in such a way that mirrors ‘the rhythm of the film and the performance of the actors, and be mindful of pauses, interruptions, and other prosodic features that characterise the original speech. (*ibid.*: 88). At once, spotting needs to keep temporal synchrony with the utterances. This means that, whenever possible, the subtitle should appear at the same precise moment the character starts speaking. Likewise, it should disappear from screen at the moment the person stops speaking (*ibid.*: 89). In

⁶⁸ Also called *timing*.

SDH, synchrony is particularly important for people with residual hearing or people who wear technical hearing aids, as they ‘rely on synchrony between sound and lip movement to aid comprehension’ (Pereira, 2010: 91).

Time and *space* are, therefore, marked inherent constraints of subtitling. They deeply determine the strategy used to convey the messages within subtitles. The fact that we hear faster than we read has also a great impact on the way subtitles are presented. Inevitably, subtitles cannot, most of the times, contain the full dialogue that is heard. Thus, subtitlers use a wide range of strategies to reduce speech into subtitles, which has been classified by Gottlieb (1992: 166) as follows:

- *Expansion*, which is used when an explanation of the original is required, due to some cultural nuance that is not retrievable in the target language. Supplementary information is provided in the translation to make it more comprehensible and acceptable in the target language.
- *Paraphrasing*, used when the reconstruction of original phraseology is not possible in the same syntactic way in the target language.
- *Transfer* is a faithful transmission of the source text into acceptable target language equivalent. Both form and content are transmitted completely, correctly and accurately.
- *Imitation* preserves the original forms; it even adopts foreign expressions in the translation. It is typically used with names of people and places.
- *Transcription* is necessary in cases where a word is unusual, because it belongs to a third language or nonsense language. It maintains irregularities, and peculiarities of source language elements in the target text.
- *Dislocation* is needed when the original employs some sort of special effect that is more important for its effect than for its content. In this way, the translation will produce the same effect on the target audience.

- *Condensation* shortens the text in the least obtrusive way possible, and usually the typical strategy used. It reduces the message without reducing its meaningful content.
- *Decimation* omits potentially important elements, due to discourse speed. It could be understood as an extreme form of condensation, which reduces important expression and parts of the original text.
- *Deletion* refers to a deliberate total elimination of parts of a text, especially less important aspects without verbal content.
- *Resignation* takes place when the original meaning is inevitably lost as no translation solution can be found. It results in no translation.

With strategies 1-7 (expansion, paraphrasing, transfer, imitation, transcription, dislocation, and condensation) the target audience gets a ‘more or less adequate rendering of the source text material into the target language’ (Gottlieb, 1992: 166-167). Strategies 8-10 (decimation, deletion, and resignation), in contrast, ‘involve some degree of semantic and stylistic loss’ (*ibid.*). Ivarsson and Carroll (1998: 91-92) prefer *deletion* — they call it *omission*— to reformulation, as it is a less intrusive technique. They understand that omissions may also require paraphrasing to a certain extent, although they recommend paraphrasing only when none of the source information items can be disregarded. The selection of these two strategies shorten subtitles enough for the space available.

Nonetheless, the strategy that is often understood as the essence of subtitling is *condensation*,⁶⁹ as it entails a condensation of expression and a concise dialogues conveyance. The key task of a subtitler is finding a balance between linguistic and semantic reductions. A quantitative linguistic reduction does not necessarily imply a significant semantic reduction. However, in terms of quality both space and time restrictions become a complex task to face while subtitling. They may also have a

⁶⁹ Also called *reduction*, although it is considered a slightly more negative denomination.

detrimental effect when trying to preserve stylistic effects or nuances that would be important for the whole understanding of the story.

The aforementioned spatio-temporal constraints, which are inherent to the audiovisual medium, make inevitable the editing and reduction of the source text. 'Editing down the content of the original dialogue is strictly related to the assumed reading speed ability of the audience' (Zárate, 2014: 92). However, the linguistic content of subtitles can also be more or less affected depending on the audience they are targeted at. ITC guidelines (1999) recommend providing simplified subtitles for children below the age of 11 years old. Therefore, difficult words and expressions should be omitted. As a consequence of this omission, the length of sentences is reduced and, 'commensurately the reading speed can be lowered as viewers have more time to read the text' (Zárate, 2014: 94).

As seen above, 'limitations of space and time, the particularity of rendering speech in writing, the presence of the image and the presence of the ST are some of the challenges that subtitlers must face, but all forms of translation pose challenges and all translated texts are the result of reading, interpretation and choice' (Díaz Cintas and Remael, 2007: 145). *Creative* subtitles have interpreted the non-verbal elements of the film and have made a choice in how rendering them by non-linguistic but visual means. As will be shown in the chapters that follow, the choice has been a deviation of the current norm. By innovating, the aim is to increase the conveyance of the nuances present in the non-verbal elements conveyance.

CHAPTER FOUR

CHILDREN'S DEAFNESS

The aim of this chapter is, on the one hand, to explain how the human ear works. On the other, it will focus on the cases in which the ear does not work 100% efficiently; that is on *deafness*. It will provide a broad view of the main types and causes of deafness, as well as the methods or treatments for hearing loss. The remainder of the chapter will consider the impact of deafness in children, how it affects their language and mental development. In addition, the different choices for deaf children's education will be covered.

4.1 How does the hearing system work?

The structure of the human ear can be divided into three main parts: the outer ear, the middle ear and the inner ear. The outer ear is responsible for capturing sounds from the outside world and for helping sound waves enter through the auditory canal (*external auditory meatus*⁷⁰), which increases the loudness of the pitches and makes speech more understandable. Sounds are funnelled down to meet the eardrum (*tympanic membrane*), a flexible, circular membrane which vibrates—slower with low tones or faster with high tones—when it is hit by sound waves (New Zealand Audiological Society, 2011).

⁷⁰ In brackets and italics there are the corresponding medical terms.

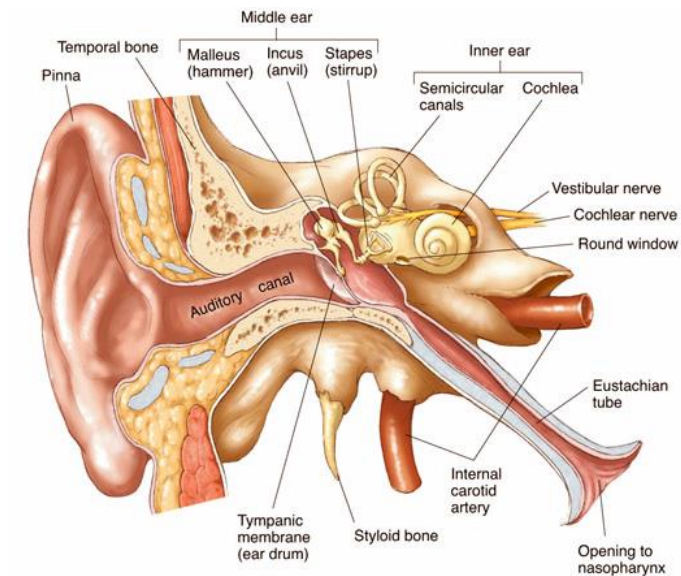


Figure 3: Anatomy of the human ear.
Source: biographixmedia.com (2006).

Sound vibrations continue into the middle ear; a cavity about 1.3 cm across that is filled with air and contains three tiny bones or ossicles: the hammer (*malleus*), the anvil (*incus*) and the stirrup (*stapes*). They form a flexible bridge from the eardrum into a fluid-filled structure in the inner ear, the cochlea. Any movement of the eardrum will move the hammer that will cause the anvil to move the stirrup. The function of the ossicles is, therefore, to conduct sound from the outer ear to the inner ear, at the same time they increase and amplify the sound vibrations to provide the inner ear with the clearest message possible (New Zealand Audiological Society, 2011).

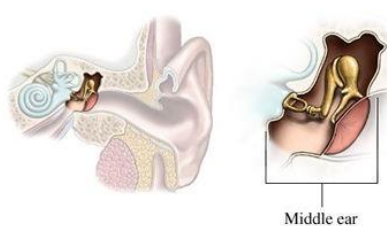


Figure 4: Anatomy of the middle ear.

Source: Your Medical Source⁷¹ (2003)

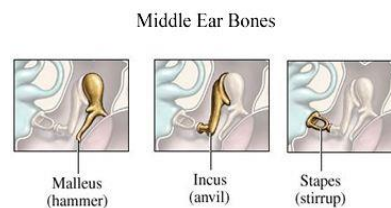


Figure 5: The ossicular chain.

⁷¹ Available online at URL: <http://dltmedwriting.com/portfolio/What%20Is%20Hearing%20Loss.html>

The loudness of sounds is increased as they move across the ossicular chain. The ossicles' vibration causes the fluid in the inner ear to move. Beyond the stirrup, which is attached to a small flexible membrane called oval window, there is the inner ear, where the cochlea is found. The cochlea is a coiled spiral tube about 3.5 cm long directly responsible for hearing. It is filled with fluid and contains a system of thousands of sound-sensitive cells (hair cells). As these cells move, they create a system of nerves that transform energy vibrations within the inner ear fluid into electrical nervous impulses. These impulses travel up the auditory nerve to the auditory projection areas of the brain, i.e. the parts that make sense of what we hear (New Zealand Audiological Society, 2011).

4.2 When the hearing system does not work effectively

Deafness can be defined as an alteration or damage either in the auditory organ or in the auditory nerve (Basil, 2003: 113). In other words, hearing impairment arises when a problem occurs at any point in the hearing mechanism, which impedes the conduction or interpretation of sound waves (Neves, 2005: 77). It may be partial or total, transitory or permanent, curable or irreversible depending on its nature. According to ACAPPS (No Date), the different types of hearing loss can be classified according to three parameters:

- i. the location of the alteration within the ear;
- ii. the degree of hearing loss caused by this alteration;
- iii. the onset of hearing loss.

4.2.1 Types of hearing loss according to the location of the alteration

In cases where the alteration is produced in the outer or middle ear —ear drum or ossicles—, people face *conductive hearing loss*. It is the result of sounds not being able to pass efficiently to the inner ear. There is something —from an easily syringed out build-up of excess ear wax or fluid from ear infection to a heavy cold blocking the Eustachian tube— that impedes ‘the passage of sounds down the canal to the tympanum and mechanical transmission by the ossicles, across to the inner ear’ (Goldstein, 1989: 20) and, therefore, interferes with the correct analysis of sound. Conductive hearing loss

produces an alteration in the hearing quantity, although it does not affect hearing quality. That is, sounds become quieter, but they are not distorted. Conductive deafness is usually temporary and most of the times can be corrected with minor surgery.

On the other hand, *sensorineural hearing loss* —also *nerve hearing loss*— is due to a ‘damage to the nerves in the inner ear or at some other neural part of the auditory pathway, possibly in the brain itself’ (*ibid.*: 22). In other words, it is the result of a malfunction of the cochlea, the sensory hearing organ. Despite this, it is not always possible to exactly tell which part is damaged. It causes progressive hearing loss that can lead to permanent deafness, as the damage to the cochlea occurs naturally —by the ageing process— and it is not accessible for medical treatment. This type of hearing loss affects the ability to hear sounds, besides reducing the quality of the sound heard. Children with sensorineural hearing loss are able to detect sounds normally, but it is extremely difficult for them to make any sense of what they hear. For this reason, many of sensorineural deaf children appear to be *aphasic*,⁷² i.e. they are unable to ‘understand or produce speech, as a result of brain damage’ (Oxford Dictionary of English, 2016).

Both *conductive* and *sensorineural hearing losses* may, sometimes, occur together. There may be damage in the outer or middle ear and in the inner ear (cochlea) or, sometimes, it may be ‘the result of the outer and inner ear being malformed’ (Hearing Planet, 2008). That is what experts call *mixed hearing loss*. In these cases, the conductive hearing loss can be treated, whereas the sensorineural loss remains irreversible. A factor that has a bearing on this is that *conductive hearing loss* is ‘never greater than 60 dB’ (Goldstein, 1989: 22), while *sensorineural hearing loss* ‘can range from slight to virtually total loss’ (*ibid.*). Therefore, a careful check of the type of hearing loss is essential, since the *mixed hearing loss* may make a child profoundly deaf.⁷³

Another type of hearing loss is *unilateral hearing loss*, in which hearing is normal in one ear, but the other has a hearing impairment. People with unilateral hearing loss may have difficulties in hearing distant conversations —especially if the speaker is closer to the weaker ear—, localising sound or understanding speech surrounded by background

⁷² From Greek, *aphatos* ‘speechless’ (Oxford Dictionary of English, 2016).

⁷³ It is especially noteworthy the distinction between “deafness” and “hypoacusia”. The residual hearing of a deaf person prevents him/her to understand speech through audible means, with or without hearing aids. In contrast, the residual hearing remaining in hypoacusia makes speech understanding difficult through audible means (Eunate, No Date).

noise. This type is not usually a major problem to a young child, although sometimes it may delay speech and language development.

4.2.2 Degree of hearing loss

According to the standards of the Bureau International d'Audiophonologie (BIAP, No Date), there are four types of deafness depending on the degree of hearing loss. *Mild deafness* comprises hearing losses between 20-40 dB⁷⁴ of the speech signal. Mild deafness directly affects clarity and produces some difficulty following speech in noisy situations or when the speaker is in a middle distance —about 12 feet away—from the hearing impaired person. Despite this, the brain still receives and identifies sounds; that is why they are not suspected of poor hearing, but to be “slow” until they reach the first grade, as they cannot understand what the teacher speaks from a distance (EPIC, 2016).

Moderate deafness entails between 41-70 dB⁷⁵ of hearing loss. A person with moderate deafness has problems in hearing normal conversations and consonants in words, which, sometimes, make speech unintelligible. S/he, however, will not have difficulties in short distance conversations —less than two feet away— or understanding people talking face-to-face. Children with this type of hearing loss need to lip-read or use hearing aids (HAs) in order to follow the speech. If HAs are provided ‘before four years of age, they usually progress rapidly learning speech’ (*ibid.*).

Severe deafness comprises between 71-90 dB of hearing loss, causing difficulties in perceiving speech, unless the speaker talks loudly and close to the receiver. Children with severe hearing loss require special help, as they only receive part of the clues available in speech sounds. They tend to lip-read, which will help them to detect about 25 percent of the consonant sounds, and to make use of sign language (onwards SL). HAs in this degree of hearing loss will help the deaf child ‘to detect vowel sounds, pitch, some consonants, and stress clues from speech’ (*ibid.*). The sooner the aid is provided, the greater chances the deaf child will have to acquire speech. It is estimated that if aid does not appear until after age six, a severe deaf child ‘may never develop clear speech or the ability to easily understand spoken words’ (*ibid.*).

⁷⁴ The intensity (volume or loudness) of a sound is measured in decibels (dB), while the tone of sound is measured in cycles per second; that is Hertz (Hz) (McCracken and Sutherland, 1991: 12).

⁷⁵ Normal speech is around 50 and 60 dB (ACAPPS, No Date).

Profound deafness is a degree of hearing loss above 90 dB. It makes people unable to hear any speech at all, even if delivered loudly. Profoundly deaf people need to rely on visual cues (signing and lip-reading) to maintain communication. In cases of profoundly deaf children, the younger they are fitted with HAs or cochlear implants, the greater likelihood they will have to develop improved speech. (*ibid.*).

Some scholars, though, add an extra type: *kopemia* or *word deafness*, which can be defined as the most extreme and complete hearing loss (above 120 dB). That is the absence of residual hearing; in other words, the amount of hearing a person has left after a hearing loss. It can be considered a rare type of aphasia due to damage to language-specific auditory areas of the brain, such as Wernicke's area, which is located on the temporal lobe, on the left side of the brain, and whose major function is to facilitate access to word meaning. Thus, it is responsible for the comprehension of speech (Scott *et al.*, 2000). It consequently causes a disorder that has a great impact on the comprehension and the production of language, since word deafened people cannot hear a person speaking in a loud voice, although they have no trouble hearing other sounds. In addition, people with "pure" word deafness present difficulties in writing (Auerbach *et al.*, 1982).

4.2.3 Onset of hearing loss

The onset of hearing loss is an important aspect to be considered, since it becomes of special importance in terms of communication and intellectual development in deaf children. Three are the main categories depending on the stage at which the hearing loss appears.

Prelocutive or *prelingual hearing loss* is understood as the hearing loss that appears during the gestation or within the first two years of life. The lack of auditory stimuli perception will have a negative impact on the cognitive, communicative, linguistic, affective and social development of the deaf child. Help should be provided in order to establish a new form of receiving and delivering information. However, attention should not only be focused in language and communication, but also in the intellectual development of the child in his/her natural environment (Jiménez Romero, 2011: 17).

Perilocutive hearing loss is likely to appear between the ages of 2 and 4 years old, the period in which children's language acquisition process —mainly phonological and lexical aspects— has started. Children with perilocutive hearing loss have better

expectations to acquire oral language, however, the earlier the loss is produced, the worse the consequences will be (Löwe, 1981).

Finally, *postlocutive* or *postlingual hearing loss* comprises any hearing loss developed at later stage in life, especially after language development has been completed. In other words, a *postlocutive deaf person* is a hearing person who, for many different reasons, has lost totally or partially his/her audition (Eunate, No Date).

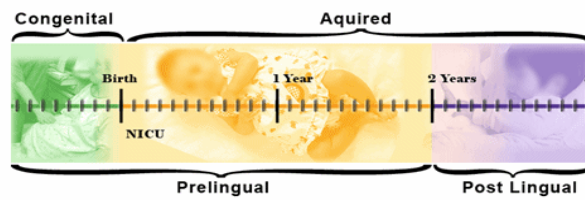


Figure 6: Hearing loss timeline. Source: MDH (No Date).

4.2.4 Causes of deafness

There are many reasons for which a child can be born deaf or become deaf early in life. The causes of hearing loss can be broadly divided into those that are congenital (present at birth) or those that are acquired at birth or afterwards.

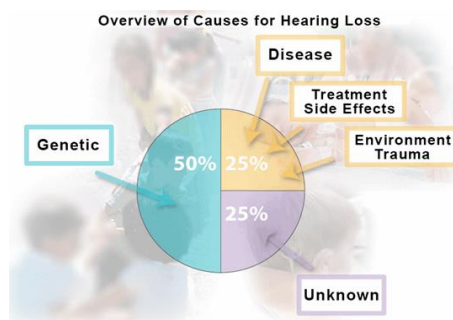


Figure 7: Causes of hearing loss. Source: MDH (No Date).

The term *congenital* implies that the hearing loss is already present at birth, which counts for the 80% of cases in childhood deafness (Jáudenes Casaubón, No Date). Deafness in new-borns is due to genetic factors in a 60% of the cases, while congenital causes are mostly of a hereditary nature (10%) or due to congenital malformations (18%) (EFE Salud, 2013). However, it is possible to consider congenital causes of hearing loss all

non-hereditary factors, such as complications during pregnancy, present either in the foetus or at the time of birth (ASHA, 2016).

Hereditary conditions, also known as genetic factors, appear to be more than 50% of all incidents of congenital hearing loss in children (Canalis and Lambert, 2000), even though there appears to be no family history of deafness. It might be due to the presence of ‘one or various abnormal gene(s) in one of the forty-six chromosomes that make up each of our cells’ (Neves, 2005: 78). This alteration in genes might be inherited from one or both parents or it might have been developed in the foetus during gestation (*ibid.*). Genetic (or inherit) hearing loss can be divided into three different types (McCracken and Sutherland, 1991): autosomal dominant, autosomal recessive and X-linked hearing loss.

In *autosomal*⁷⁶ *dominant hearing loss*, only one parent, who may or may not have any degree of hearing loss (ASHA, 2016), carries the gene responsible for deafness. In this case, there is at least a 50% probability that the child will develop hearing loss. When a child is affected by *autosomal recessive hearing loss*, both parents carry a recessive gene, although they usually have normal hearing. However, if at conception a recessive gene carrying the deafness of one parent meets the matching recessive gene from the other, the baby will be born with a hearing loss. In this way, the probability of the child having a hearing loss is reduced to 25%. Finally, in *X*⁷⁷-*linked hearing loss*, the mother carries the recessive trait for hearing loss in her sex chromosome. This abnormality within the chromosomes results in deafness.

⁷⁶ ‘Pertaining to a chromosome that is not a sex chromosome’ (Webster’s New World Medical Dictionary, 2008).

⁷⁷ The X chromosome is a sex chromosome found in both females and males. Males, however, have one X along with a Y chromosome. The complete chromosome complement consisting of 46 chromosomes is conventionally written as 46, XX for females and 46, XY for males (Webster’s New World Medical Dictionary, 2008).

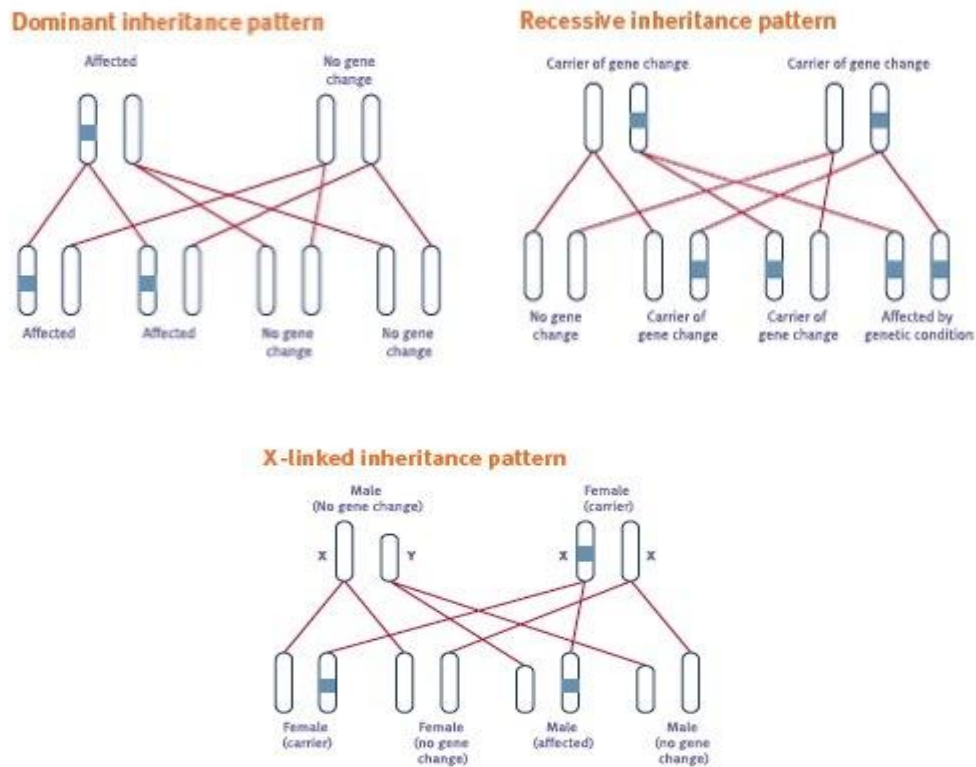


Figure 8: Representation of the genetic patterns.
Source: NDCS.

It is especially remarkable that in 30% of the cases, deafness is part of other physical abnormalities, forming a genetic syndrome. It is the case of Down syndrome, Waardenburg syndrome, Usher syndrome, Pendred's syndrome and CHARGE association (Edwards and Crocker, 2008: 20).

After genetic (inherited) causes, one of the commonest causes of permanent deafness in children is **cytomegalavirus** (onwards CMV). About 3% of babies are born with this virus (MDH, No Date) that can cause cold or flu-like symptoms, despite the fact it can cause illness in anyone with a weak immune system, such as an unborn baby (congenital CMV). In fact, it is the most common infection passed from a mother to an unborn baby in about 40% of the cases.

Two types of congenital CMV exist. The first one includes children who present symptoms at birth, whereas the second one comprises children who do not have symptoms. The former have generally higher predisposition to have more problems than the latter, including deafness as a long-term effect, while one in ten children born without

CMV symptoms will develop a degree of deafness as they grow up (NDCS, 2016). Most of these children, though, will develop sensorineural deafness during the first three years of life, and their hearing will get worse progressively. CMV may also cause unilateral deafness,⁷⁸ although it may develop deafness in the other ear later.

Another congenital cause can be **maternal rubella**. Rubella —also known as German measles— is a contagious viral infection that causes red rash and low fever. When the infection occurs during pregnancy, particularly during the first six months — that is during the central nervous system development—, it can damage ears, eyes, heart, digestive system and motor control, besides it can also entail gross intellectual retardation (Goldstein, 1989: 13). However, it has to be said that, since a vaccine against this viral infection is available, rubella is a relatively rare cause of hearing loss. Apart from rubella, other viruses contracted by pregnant women that, among others, produce hearing problems to the unborn child are *herpes simplex*, *syphilis*, *toxoplasmosis*⁷⁹ and/or *varicella*, to name but a few (MDH, No Date).

Prematurity is a common factor for acquired hearing loss. *Preterm infants* —all neonates born before the thirty-seventh completed week of gestation (Mosby's Medical Dictionary, 2013)— or infants born with less than 1,500 grams are likely to develop sensorineural hearing loss early in life. In fact, about 5% of children born before the thirty-second week, that is eight months of pregnancy, have hearing loss by the time they are five years old. This is due to the fact that the period between twenty and thirty-three weeks of gestation is 'one of rapid foetal audiological development' (Marlow *et al.*, 2000: 141), and babies born before this period is completed are born with an auditory system that is not yet mature. Moreover, it is especially remarkable the fact that the auditory experience starts in the womb, where sounds are heard. Prematurity, therefore, is likely to deprive the child of some pre-birth sound experiences.

In addition, prematurity entails other deficiencies in the baby's organism. On the one hand, due to the low weight birth, some preterm infants may contract persistent pulmonary hypertension (PPHN); that is, difficulties to breath normally. The disease itself does not produce hearing loss, but its treatments, which include intubation, ventilation,

⁷⁸ See Section 4.2.1.

⁷⁹ A parasite infection transmitted from mother to baby during pregnancy that can lead to epilepsy, brain damage and deafness, which is developed in about 10% of affected babies (MDH, No Date).

or oxygen treatment, are usually associated with hearing loss (MDH, No Date). On the other, high bilirubin levels in preterm infants increase the risk of the appearance of sensorineural hearing loss. According to neonatal studies, ‘bilirubin levels appear to cause delay in auditory brainstem response latencies, indicating changes in upper auditory pathways, which return to normal as bilirubin levels fall’ (Marlow *et al.*, 2000: 143).

Ototoxicity is also a common cause of hearing loss. It seems to appear when mothers have to take or are given medication during pregnancy. Sometimes, this kind of drugs —such as antibiotics, chemotherapy or anti-inflammatory drugs, to name but a few— cannot be avoided and, although they are known to risk the auditory health of the child, are needed to save lives. The drug-induced hearing loss is usually temporary, although it may become permanent.

Otosclerosis is another common cause of children’s hearing loss. It is a hereditary disease which produces ‘a kind of osteo-arthritis of the third little bone in the ossicular chain which causes the stapes to fuse with the oval window’ (Goldstein, 1989: 21). The abnormal growth of the middle ear bone interferes with sound passing waves to the inner ear. It usually develops conductive hearing loss, although in some cases it may develop sensorineural hearing loss of varying degrees, depending on which structure within the ear is affected (NIDCD, No Date). On some occasions it has been cured by surgery, but is almost certain to recur after some time (Goldstein, 1989: 21).

Acquired deafness during childhood has many different causes. The most likely factors to be responsible for children’s hearing loss are **diseases, treatment side effects** or **environmental factors**. There are many factors in our world that have an influence on our hearing sensitivity that could mean just a temporary threshold shift or, in some cases, a permanent threshold shift (Neves, 2005: 78).

One of the most well-known is sound pollution. Occasionally, children’s hearing loss is caused by exposure to loud noise or by an injury to the head. In cases of being exposed to a sudden loud noise, such as an explosion, can cause an acoustic trauma with a consequent hearing loss. On the other hand, repeated exposure of our hearing system to loud⁸⁰ noises —including music— may result in a permanent change in our sensitivity to sounds. However, this cause of hearing loss is more associated with age, known as

⁸⁰ Above 90 dB.

presbycusis, which is the loss of hearing —usually greater for high-pitched sounds— that gradually occurs in most individuals as they grow older’ (NIDCD, No Date).

Among the numerous diseases that can be contracted after birth, **infections** are one of the commonest causes of hearing loss. Infections, though, can be of a very different nature. In this work, we distinguish ear infections from viral infections. Ear infection is an inflammation of the middle ear caused by bacteria when fluid or mucus builds up behind the eardrum (NIDCD, No Date), often during a cold, as the poor Eustachian tube function prevents the ventilation of the middle ear space. The middle ear needs to be full of air for the ears to work properly. If the Eustachian tube, i.e. the tube that links the middle ear to the throat, becomes blocked, air cannot enter the middle ear. When this occurs, the cells that line the middle ear begin to produce fluid. If this fluid becomes thicker and blocks the middle ear, sound cannot pass through the inner ear effectively (NDCS, 2016).

Once the ear is healed, fluids drain out of the ear. Some hearing may be lost during the infection and it may or may not return once it is healed. Therefore, it is a very common cause of hearing loss, especially among children, since they are very prone⁸¹ to ear infections, also known as *otitis media* (OM). There are three main types of OM:

- *Acute otitis* is due to the infection of parts of the middle ear and the fluid trapped behind the eardrum.
- In cases where this fluid remains trapped behind the eardrum after an ear infection, experts refer to *otitis media with effusion* (OME).
- If the remaining of the fluid is for a long time or returns over and over again, it is termed *chronic otitis media with effusion* (COME).

Despite the fact that just COME can affect children’s hearing, an ear infection like OM may develop a condition called *glue ear*, which fills the middle ear with a thick and sticky secretion that prevents the normal mobility of the drum and ossicles (Goldstein, 1989: 21). The cochlea receives only dampened vibrations, which can make sounds

⁸¹ ‘Three out of four children will have at least one ear infection by their third birthday’ (NIDCD, No Date).

quieter and difficult to hear.⁸² It is usually a temporary condition and, in most cases, it clears up spontaneously, as structural changes in growing improve the drainage of the middle ear (Goldstein, 1989: 13). However, a prolonged period of time with reduced hearing due to glue ear can affect children's hearing and, consequently, speech development and their ability to learn, since it affects children at the time when the most rapid language development is taking place.⁸³ In cases where secretion persists, it can be removed with a surgery (*myringotomy*) that consists on a small incision made in the eardrum.

Ear infections can also affect the outer ear. *Otitis externa* and commonly known as “swimmer's ear” (The Nemours Foundation, 2016), can also decrease the sense of hearing. One of the main reasons for its appearance is children's long exposure to water. Moisture in the ear can irritate and break down the skin in the canal, i.e. the passage that carries sounds from the outside of the body to the eardrum, allowing bacteria or fungi to penetrate. An ear pain, which becomes severer when the outer part of the ear is pulled or pressed or when chewing, is the primary symptom of *otitis externa* (AAO-HNS, 2016).

Cholesteatoma is ‘an abnormal skin growth in the middle ear behind the eardrum’ (*ibid.*) that may be caused by repeated infections and the consequent poor Eustachian tube function. In cases where cholesteatoma persists and develops as cysts or pouches that shed layers of old skin. In cases where, over time, these layers increase in size, they destroy the (delicate) bones of the middle ear causing a permanent hearing loss — dizziness and, even, though rarely, facial muscle paralysis— that surgery can (often) improve. Although it is not so common, cholesteatoma can be congenital, i.e. present at birth. In these instances it can occur not only in the middle ear, but elsewhere, such as in the nearby skull bones.

Within the group of viral infections **meningitis** is found. It is an inflammation of the membrane that surrounds and protects the brain and the spinal column (also called meninges). It is usually a result of a bacterial or viral infection, and, less commonly due to a fungal infection. Meningitis itself does not cause deafness, but since the brain is so close to the ears, the infection may spread into the inner ear and it can actually damage

⁸² As NDCS exemplifies, the feeling is like listening to the world with both fingers stuck in your ears (NDCS, 2016).

⁸³ Children under the age of five are the largest group affected (NDCS, 2016).

the cochlea. It can also be in shape of an inflammation of the auditory nerve. Therefore, it becomes one of the most common causes of children acquiring sensorineural hearing loss after birth, although not all children who suffered meningitis will become deaf since the availability of a vaccine (NDCS, 2016).

Some babies are very sick at birth. They may suffer from lack of oxygen or contract serious illnesses like cancer. Consequently, they require special treatment, which usually includes **ototoxic medication**, to save their lives. As the word itself implies, *ototoxic* stands for “toxic to the ear”, hence, a potential side effect of this kind of treatments is hearing loss.

Environmental factors are any event that may occur in the baby’s “living space”. They include from **prolonged exposures to loud noises**, which make the hair cells in the cochlea become less sensitive, to damage or **injuries**. Accidental injuries in head or ears are the most common. Accidental head injuries may fracture any of the bones in the ossicular chain that can disrupt the nerves of the auditory system. Trauma can also cause a perforation of the eardrum that affects its function of capturing sound vibrations. Differences in pressure between the inside and outside of the eardrum may entail discomfort and possible ear damage, which can cause deafness, as well as excessive pressure behind the eardrum may cause collapse onto the ossicles and damage them (MDH, No Date). Another disease that it is thought to be caused by ‘a problem with pressure deep inside the ear’ (NHS, No Date) is Ménière’s disease, a rare disorder that affects the inner ear and that can finally result in permanent hearing loss and tinnitus, which is ‘a condition of the ear in which the person suffering from it hears noises such as ringing’ (Cambridge Dictionary, 2016), usually described as “ringing in the ears”.

4.2.5 Treatment for deafness

As seen above, many degrees of hearing loss exist and many are the factors that define the type of deafness. Therefore, the rehabilitation of hearing loss may come in many different forms, depending greatly on the type and extent of the child’s hearing loss. This section provides information of the commonest treatments: hearing aids (HAs) and cochlear implants (CIs).

Conventional HAs are the most common device, since almost 95% of the various degrees of hearing loss can be fitted with HAs (Hearing Planet, 2008). They are small

electronic devices that amplify environmental sounds, including speech sounds and conduct sound through the ear canal and the middle ear. They consist of three parts: a microphone, an amplifier and a speaker. Sounds are received through the microphone, which converts the sound wave to electrical signals that are sent to the amplifier. The amplifier magnifies the power of the signals, which are sent to the ear through the speaker. Within conventional HAs, it is important to distinguish between analogue and digital aids.

Analogue aids ‘convert sound waves into electrical signals’, which are amplified, while digital aids ‘convert sound waves into numerical codes before amplifying them’ (NIDCD, No Date). Analogue aids are programmable according to the specifications recommended by the audiologist. Usually, they have more than one program—for example, from a quiet room to a crowded open area. Digital aids are more complex, since they also include information about the sound’s pitch or loudness. Therefore, they can be programmed to amplify more some frequencies than others or to focus on sounds coming from a specific direction. The digital manipulation of the input signal has allowed flexibility when adjusting the hearing aid to the user’s specific needs (NIDCD, No Date), particularly in people who have more demanding listening needs. Besides, digitally based hearing instruments have the ability to perform simultaneously many sophisticated functions, such as enhancing speech recognition in noisy environments, which was the major complaint of HAs users, to create a more comfortable listening environment (Agnew, 1999).

In addition, there are three different styles of hearing aids, depending, particularly, on their placement, and the degree to which they amplify sound (NIDCD, No Date):

- *Behind-the-ear (BTE) hearing aids* consist of a plastic case worn behind the ear connected to a plastic earmold, which conducts sound into the ear. They are used by people with mild to profound hearing loss.
- *In-the-ear (ITE) hearing aids* consist of a plastic case holding electronic components, which fits completely inside the outer ear. They are used by people with mild to severe hearing loss.
- *In-the-canal (ITC) hearing aids* are small devices that fit into the ear canal. There are two different types: ITC, which fits in the ear canal and *completely-in-canal (CIC)*, which is almost hidden in the ear canal. They are both used

by people with mild to moderately severe hearing loss, since their limited size reduces their power and volume, and, therefore, they are not suitable for people with severe to profound hearing loss.

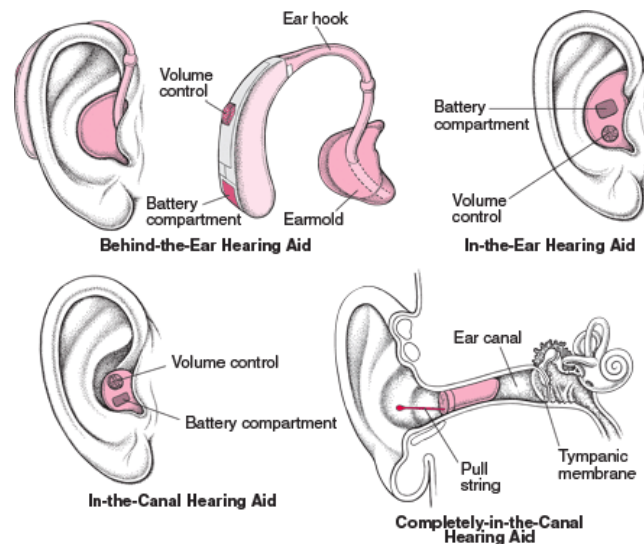


Figure 9: Different styles of hearing aids. Source: HealthLob.

However, hearing aids do not work for everybody. Despite having a degree of hearing loss, many children do not wear a HA. One of the reasons may be the avoidance of stigma; children do not want to appear different. Nonetheless, there are other functional reasons for which a child may deny wearing a HA (Goldstein, 1989: 32-33):

- because the hearing loss is too small that the HA is unlikely to be of benefit in noisy environments;⁸⁴
- because a suitable aid cannot be fitted;
- because ambient noises, especially lower frequency components, make amplification uncomfortable and unhelpful, since the amplification of higher frequencies entails making extraneous noises unpleasantly loud.

In cases where the hearing loss is so severe, a hearing aid would be insufficient (NIDCD, No Date). For this reason, a device was designed to be placed within the organ

⁸⁴ Background or environmental noises are usually ignored by hearing people, although they are picked up and amplified by a HA. Therefore, if a child with a mild hearing loss wears a HA, the amplified ambient noise would be likely to mask speech (Goldstein, 1989: 32).

for hearing: the **cochlear implant** (CI). Surgically inserted in children with profound sensorineural hearing loss in both ears,⁸⁵ this device converts sound energy into an electrical signal and sends the signal down an electrode directly into the cochlea, bypassing the hair cells and stimulating the usually healthy auditory nerve cells (ASHA, 2016).

This small electro-magnetic device consists of:

- a microphone, an external device that detects and picks up sounds from the environment;
- a speech processor that selects these sounds and converts them into electrical impulses, which are sent through a
- transmitter, a coil held by a magnet placed behind the external ear, which transmits the processed sound signals across the skin to a
- stimulator, which is an internal device that converts them into electric impulses. These electric impulses are collected by
- an electrode array, which is a group of electrodes that collects the impulses from the stimulator, that stimulates the cochlear nerve. The cochlear nerve sends the sound signals to the brain, where the electrical information will be perceived as sound (NIDCD, No Date).

⁸⁵ CIs can be inserted during the first 6 months of life (Waltzman Roland, 2005).

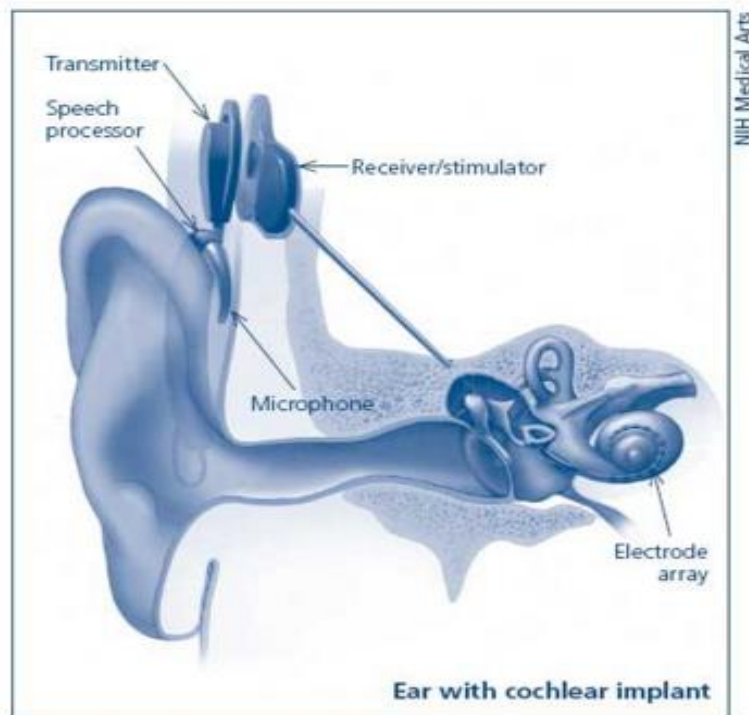


Figure 10: Parts of a cochlear implant. Source: (NIDCD, No Date).

Unlike conventional HAs, CIs do not amplify sound and do not restore the sense of hearing in deaf children either. Its function is to stimulate the auditory nerve using direct electrical signals of the inner ear hair cells to produce a sensation for better sound and speech awareness. It will allow the user to perceive, but not to interpret sound. Users have to learn to interpret the sounds created by the implant. This process, in which speech-language pathologists and audiologists are also involved, may vary in length depending on the user. Hence, apart from the risks implied in any surgical procedure, the hardest part of CIs implantations might be the significant therapy required to learn (or relearn) the sense of hearing (NIDCD, No Date). However, after this long process, a child born deaf with a CI will benefit from learning oral language ‘as easy and fast as a hearing child to a child born deaf’ (Nussbaum *et al.*, 2003: 9).

CIs have, therefore, a ‘significant beneficial effect on the development of language in profoundly deaf children’ (Svirsky *et al.*, 2000: 156). CIs not only help deaf children to receive and produce their first words, but they also contribute to greater impact on children wearing it. Two different kinds of benefits can be distinguished: primary and secondary benefits of being implanted. The former are related to the auditory perception, as they produce an auditory response that appears soon after the connection of the CI;

whereas the latter include all the medium-term and long-term changes that the implanted child will experience, including oral language development, behaviour changes and academic/educational results (Jiménez Romero, 2011: 121). These benefits are well represented as a consequence of CIs in deaf children and are described by Summerfield and Marshall (1999) in their cascade of benefits when CIs are provided to young deaf children:

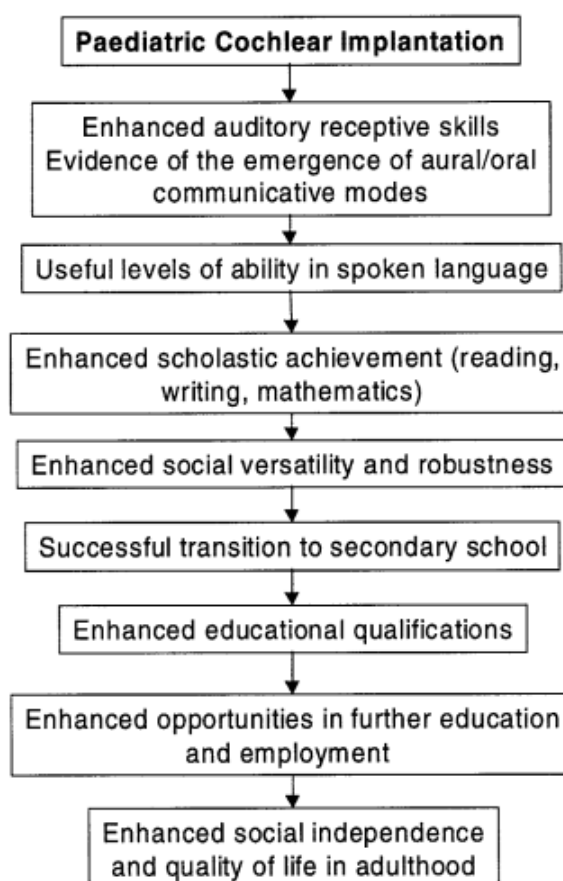


Figure 11: Cascade of benefits of cochlear implantation.
Source: Summerfield and Marshall, 1999.

That is why at present, growing numbers of profoundly or severely deaf children are being implanted (Edwards and Crocker, 2008: 23). As of December 2012, approximately 38,000 registered devices worldwide have been implanted in children (NIDCD, No Date). In Spain, according to the European Association of Cochlear Implant Users (2016), in 2005 there was a total of 2,750 CI users, of which 60%⁸⁶ were children. Two years later, in 2007, the number of CI users increased in a 38.2%, being this time the

⁸⁶ Percentage slightly higher than other European countries (Jiménez Romero, 2011: 66).

percentage of adults greater than the children's (43.8% and 34.4%, respectively) (Jiménez Romero, 2011: 66). Nowadays, 13,500 people use a CI, of which 40% are children (Federación de Asociaciones de Implantados Cocleares de España, 2016). The 100% of deaf children younger than 18 years old in Spain have an external stimuli for hearing, of which a 57% are HAs and 43% CIs (Jáudenes Casaubón, No Date). These numbers have allowed a vast majority (89.6%) to communicate in oral language, in contrast to a 9.4% that communicates in SL (*ibid.*).

Auditory integration is the main reason why a profoundly prelocutive deaf child should be implanted within his/her first years of life (Jiménez Romero, 2001: 245). The CI will provide his/her auditory system and brain with the fundamental discursive information to maximize the opportunities for the child to develop oral language (Geers, 2006 in Jiménez Romero, 2011: 208), especially in cases where CIs expose deaf children to sounds during an optimal period to develop speech and language skills, as well as to comprehend sound and music (NIDCD, No Date). The emergence of the auditory-oral communication by means of CIs will help deaf children to have an acceptable level of reading and writing skills, which will result in the achievement of similar results to those of their hearing peers.

4.3 Deaf children's language development and social integration

The onset of hearing loss is an important aspect to be considered in this research, since it becomes of special relevance in terms of communication and intellectual development, in short, social integration. In cases where hearing loss is developed at a later stage in life —*postlocutive hearing loss*—, especially after language development has begun or has been completed, the deaf child usually has a linguistic competence as good as the hearing child. However, in cases where hearing loss appears during the gestation —*prelocutive hearing loss*— or within the first two years of life —*perilocutive hearing loss*—; that is during the language learning period, speech and language development are hindered.

As mentioned earlier in this chapter, deafness is present at birth in 80% of deaf children. In the UK, congenital deafness —almost always of sensorineural type— affects

about 1 in 1,000 children (NHS, No Date). According to the Consortium for Research in Deaf Education 2015 report, there are ‘at least 48,932 deaf children across the UK’, a 2% more than in 2014. ‘An 87% of deaf children communicate using spoken English’ (NDCS, 2016). In Spain, on the other hand, one child out of 1,000 is born profoundly deaf, while 5 children out of 1,000 suffer different types and degrees of deafness. This means that 2,500 families have a new-born with audition difficulties (Jáudenes Casaubón, 2011), of which 95% will be born to hearing parents and eligible for a CI.

The profile under study in this thesis is children with *prelocutive* or *perilocutive* profound deafness.⁸⁷ Their mother tongue can either be oral language, to which they access by means of CIs, or SL. In the sections that follow, the similarities and differences between deaf and hearing children’s language development are discussed, as well as the limitations that may affect deaf children’s comprehension of subtitles.

4.3.1 Deaf and hearing children’s language acquisition

Being deaf is put on a level with lack of hearing. However, *hearing* is not just any sense; it is the sense that helps humans to access to oral language, which is the majority’s language. *Language* is a tool used to perform a great number of functions, such as to communicate ideas, to express emotions, to interact socially and to express identity (Paul, 2009: 23). It also serves us as a vehicle to pass on knowledge from generation to generation, and some experts⁸⁸ have even understood language as a tool for thought (*ibid.*: 28). Hence, anything which affects *hearing* diminishes the child’s ability to learn language, to speak, to communicate (Goldstein, 1989: 14).

Hearing is said to be the last sense to function after birth. For the first hours of life, therefore, hearing and deaf new-borns have exactly the same sense experience. In fact, during their first months of life both hearing and deaf babies have similar behaviours: they make similar random movements, have equally natural reflex movements in response to external stimuli —although deaf babies only respond to non-audible stimuli—, cry and babble (Ewing and Ewing, 1938).

Babbling appears between the ages of 7 and 10 months and it becomes the first stage of language acquisition. It has been largely said that babbling prepares the way for

⁸⁷ Originally. As will be seen in the forthcoming chapters, this study will be targeted at all children.

⁸⁸ Such as Cairns (1996), Cromer (1988), Crystal (1997) and Owens (1996) (Paul, 2009: 28)

speech ‘by facilitating the action of the organs of speech in a pleasurable way’ (*ibid.*: 205), and it is understood as a repetition of the language that children observe in others, particularly in their parents. The way in which parents talk to children is called *motherese*. It is characterised by short sentences, changes in the fluctuation of the voice and repetition of words and it is considered to enhance early language acquisition, due to the elicitation of the infant’s attention (Masataka, 1992). They start imitating simple vowel sounds, which later will be joined by consonant-like sounds. In a couple of months, the hearing child will be able to utter vocalisations that might be interpreted as words (Marschark, 1997: 89).

Deaf children also babble. They produce sound as hearing babies. However, by the time their hearing peers improve their vocalisations, deaf children’s babbling tends to decrease both in frequency and variety (*ibid.*). Despite this, deaf children have shown to be more expressive with their gestures. Deaf mothers use a visual form of *motherese*. Through a repetition of symbols, slowly delivered and exaggeratedly presented, it elicits stronger responses from deaf infants and helps them to better acquire SL (Masataka, 1992). Consequently, deaf infants use manual babbling (also called “mabbling”), as a pre-stage for signing, reaching a similar level of communication to that of their hearing peers (Marschark, 1997: 91). Language acquisition is universal and does not rely on the development of vocal tract, but in brain language capacity, which is able to process different types of signals (*ibid.*).

By their first birthday, hearing children usually produce their first comprehensible words. Deaf children, however, produce their first recognisable sign at around nine months of age, thus signing seems not to slow the emergence of speech, as has been commonly thought. The fact that children notice that some sounds they utter have particular meanings and lead to responses from listeners is highly beneficial for their language development, since it entails a feeling of satisfaction that encourages them to repeat the already known sounds or signs and to attempt other (Marschark, 1997: 93). It has been reported that deaf children appear to have larger vocabularies during the first year or two of life than hearing children only learning spoken language, due to the fact that signed language can be acquired earlier (*ibid.*: 95). However, there is a different story for deaf children born to hearing parents, which count for the 95% of the cases in Spain and over the 90% in the UK (Jáudenes Casaubón, No Date, and Moores, 2001; Marschark *et al.*, 2002; cited in Wallis *et al.*, 2004: 1).

Deafness is quite unknown among hearing people because we are trapped in language. Hearing parents of a deaf child have three possible communication approaches: auditory/oral (A/O), sign match⁸⁹ (SM) and sign mismatch⁹⁰ (SMM). Inevitably, the choice of the primary language of deaf children will have an effect on their language and intellectual, and, additionally, social and emotional development. Wallis *et al.*'s (2004: 3) findings suggest that, on the one hand, deaf children of hearing parents whose main communication comes through an A/O mode —despite the sensory mismatch— tend to perform better at school than those using SL, since the latter do not develop the same natural language as their parents. It has also to be taken into account that deaf children communicating through an A/O mode are exposed to spoken language from birth by parents who are native speakers. Although they do not have access to language through the auditory channel, they manage to find an alternative: the visual channel. They unconsciously rely on lip-reading to understand other's words. They try to repeat them orally, since the instinct for speech is as strong in deaf children as in hearing children.

However, in most cases, the imitation of words might be silent, since deaf children just imitate the shape of the words with lip movements. It is also important to help deaf children to correct their imitations of words, as with hearing children. Deaf children will not be able to hear their own voice, although they can rely on movement sensations when they speak. This early and consistent exposure to speech makes language development occur, entailing a high level of intelligible speech, despite the fact that this language is not fully accessible to the child by virtue of his/her deafness.

SM communication approach, in contrast, seems to make communication fully accessible to the child. However, parents may not be fully prepared to communicate effectively with their child (Knutson *et al.*, 2004: 927), since they are unlikely to be fluent signers. Even though they may try, 'hearing parents acquire only modest levels of skill in sign even after considerable use' (Wallis *et al.*, 2004: 10). This will entail a diminished language input, with the consequent delay of language development of the deaf child (Wallis *et al.*, 2004: 6). On the other hand, deaf children born to deaf parents 'follow the same developmental timelines and milestones as hearing children' (*ibid.*), since they live in a 'fully and naturally accessible language environment', due to the 'parental acceptance

⁸⁹ Children who use SL from early childhood (Wallis *et al.*, 2004: 7).

⁹⁰ Children who use SL from adolescence, but not in early childhood (Wallis *et al.*, 2004: 7).

and preparedness for raising a deaf child' (*ibid.*). Thus, it is not oral language itself that has an impact on children's mental development, but the early and consistent establishment of a shared mode of communication.

Between the ages of two and three both deaf and hearing children develop quickly. The urge to express their feelings and thoughts becomes stronger. In this stage is where the Deaf⁹¹ child experiences an increasing use of gestures, to express what s/he cannot express through speech. According to Ewing (1938: 208), the more intelligent the Deaf child is, the more inventive their gestures become. More and more, gestures become a vehicle of meaning. Nonetheless, the Deaf child still makes use of his/her voice to express feelings and emotions. Later in life, s/he will realise that the use of his/her voice is not enough and will increasingly rely more on gestures. It is important that people around him/her, communicate themselves through gestures as well. At this point, the child will focus more attention on hands than on faces.

4.3.2 Deaf children's education

Early and consistent language stimulation is widely accepted as affecting early cognitive growth (Marschark *et al.*, 1997: 5), although education also serves children with not only intellectual, but also physical and social fulfilment. Early education is fundamental for the better mental and speech development of the deaf child, as well as for the acquisition of speech and language condition (Ewing and Ewing, 1938: 209).

Speech is part of deaf children's education, since education today is mainly based on words. Words are given to deaf children to think with, to understand other's thoughts and to manage to express their own thoughts. According to Ewing (1938: 210), 'thinking must be both hindered and limited' without the use of words. Words provide them with the knowledge of themselves and of the world, although it is more difficult for deaf children to connect their experiences to words.

An attempt to mitigate the importance of speech in deaf children's education was made in 1990, when a bilingual-bicultural (Bi-Bi) education was first established at the Learning Center for Deaf Children in Framingham (Massachusetts) (Marschark and

⁹¹ See Section 4.3.3 Deaf children's social development and identity.

Spencer, 2010: 21). This program considered SL as the first language and the vehicle for deaf children's education and it was used to establish language competence through reading and writing (*ibid.*). Bi-Bi programmes involve the use of two languages —ASL⁹² and English, the latter primarily in print— and socialization in two cultures —hearing and Deaf. However, Bi-Bi education system is currently in decline, since the introduction of deafness treatments such as cochlear implants have changed the focus from SL to vocal communication (*ibid.*).

‘Children with cochlear implants are functionally hard of hearing’ (Marschark and Spencer, 2010: 129), which allows them to attend mainstream schools and, therefore, to be in contact with the oral language of their hearing peers. Hence, most deaf children are brought up to “oralise”, i.e. ‘they [are] taught to pronounce words and to make use of lip reading to understand speech’ (Neves, 2009: 155). There are only very few deaf children that communicate in SL and, therefore, have the oral national language as their second language. According to Ethnologue (Lewis *et al.*, 2016), 103 different SLs exist worldwide. Only 1‰ use these communication systems, of which more than 5 million people were born with congenital deafness. Children who acquire deafness later in life should also be taken into account, as well as hearing children born to deaf parents, who tend to be bilingual —oral and sign language users—, and hearing people who have learnt SL (Baez Montero and Cabeza Pereiro, 1997: 908).

Deaf children's reading skills

Deaf children's need to communicate effectively with the hearing world forces them to acquire facility in speech, reading and writing (Meadow, 2005: 6). Most d/Deaf children enter school at a language disadvantage already, since they do not have full access to the spoken language, although they might have grown up with the A/O approach. Deaf children usually show slower growth in language development compared to hearing children and present deficiencies at all levels, such as a limited knowledge of the world and command of lexis, syntax, and a slower reading speed (Neves and Lorenzo, 2007: 104). According to experts, children born deaf or who have become deaf before the age of 3 are likely to fall significantly behind their hearing peers (Svirsky, 2000: 1). Their reading scores lag behind their hearing peers by approximately 3 years at the age of 11-

⁹² ASL stands for American Sign Language.

13. This also affects their reading comprehension levels, in which they appear to perform generally below the level of their hearing peers similarly to those people learning a second language (Marschark and Spencer, 2010: 137).

In some instances, deaf children appear to be good readers. Their earlier diagnosis of their hearing loss and the consequent earlier language exposure, together with motivation and exposure to reading, may have a powerful impact on their reading abilities. The more a child reads, the greater his/her vocabulary becomes and there is no exception to deaf children in this regard. It is also remarkable that the use of CIs has helped deaf children to achieve higher reading skills, although they are still further behind their hearing peers (Marschark and Spencer, 2010: 129).

However, reading has always represented a great challenge for deaf children. In the process of learning to read, children must learn the mapping between the spoken language and printed words on a text, in other words, they must associate sounds with letters. For most languages, this mapping is based on sound. Deaf children have limited access to phonology, as lip reading —though playing an important role in the perception of spoken language— is not ‘sufficiently informative to provide deaf children with full access to phonological information’ (Dodd and Campbell, 1987 in Leybaert and Alegría, 1990: 1). Phonological representations may be segmented into phonemes, which correspond to the letters of the alphabet. They are essential for beginner readers, as they allow them to understand the conversion between the graphic and the phonologic representation of words. Hearing readers do not recognise printed words orthographically, but the phonological decoding helps them to “sound out” the words that they do not yet recognized in print (Goldin-Meadow and Mayberry, 2001: 224). For this reason, Stanovich (1986, in Paul, 1998: 261) states that orality should be taught to deaf students, as it supports the reading/writing acquisition process and it does not ‘impede the typical cognitive and language development’ (*ibid.*).

Although they may use the information provided by lip-reading —which is processed in the same way as heard speech, even though it cannot convey all of the phonological aspects of speech (MacSweeney, 1998: 183)— to mentally represent speech (Leybaert and Alegría, 1990: 3), severe or profoundly deaf children lack a procedure to access this phonological information from printed text. Instead, they ‘recode written text

into an intermediate representation' (de Linde and Kay, 1999: 19) through multiple encoding strategies, such as:

- orthography, articulation —phonological encoding need not be sound based, thus speech movements may be used for deaf readers to assemble a visual representation of the text by converting graphemes into articulatory movements—,
- fingerspelling —provides a comprehensive and unambiguous means for representing the phonetic structure of language in a manner that is uniquely isomorphic to the printed text—
- or SL —the use of signs to encode print— (Musselman, 2000: 14-19).

Hence, deaf readers supplement their limited abilities with visual codes that potentially play a similar role in deaf students as the phonological code in hearing students (Leybaert and Alegría, 1990: 4).

In this regard, in the US teachers of the deaf thought that 'learning to *sign English* ought to be better for learning to *read English* than learning to sign ASL' (Goldin-Meadow and Mayberry, 2001: 223). They invented different sign systems⁹³ —as a group referred to as Manually Coded English (MCE)— that used the syntactic structure of spoken English and the signs of ASL. In this way, children had access to the syntactic structure of English not only by means of lip-reading, but also through the manual patterns of signed English (*ibid.*), in which signs are arranged in English word order together with newly-created signs that represent the function words and morphemes of English (Musselman, 2000: 11).

Reading is an interactive process in which readers use the information provided in the text in conjunction with the information stored in their brains to construct the interpretation of the text. Thus, three components are at play: the features of the texts, the characteristics of the reader and the understanding between them. Ultimately, the reader and the text are bound together as part of one process and the development and

⁹³ Signing Essential English, Seeing Essential English, Signing Exact English and Signed English.

improvement of reading skills —or literacy— depend on their interaction (Paul, 1998: 260). The decoding process of understanding printed text also becomes an obstacle for deaf children to read, as it not only comprises the literal comprehension of the text, but also the understanding of the inferential meanings that are not the obvious message, but rather the deeper meaning found within the text. Thus, the ‘lack of clear relations between printed text, which is a representation of spoken language, and either low-fidelity spoken language or SL’ (Marschark and Spencer, 2010: 138) make it difficult for deaf children to draw inferences from either verbal or nonverbal contextual information, as well as understanding abstract concepts or Figurative senses when recodifying written messages. Undoubtedly, their vocabulary skills are much better when words have only a single meaning, or when they are presented in a context that facilitates its comprehension (Marschark, 1997: 143-44).

Deaf children’s memory

Besides language and inferential processing, memory is also a key element in reading comprehension. Memory is the sum of what we remember. Neurologically, memory is merely a set of encoded neural connections. Our brains are made up of 100 billion neurons that are wired up to each other as we grow and develop. Neurons communicate through thousands of electrical connections. When these connections are strong, memories are formed (Science Museum, No Date). Memory makes us able to learn and adapt from previous experiences as well as to build relationships. Thanks to memory, we encode, store, retain and subsequently recall information and past experiences in the human brain (Mastin, 2010).

There are three different types of memory: long-term, short-term and working memory. *Long-term memory* (LTM) is a repository of knowledge and a record of prior events over an extended period —from a few days ago to as long as many decades ago. *Short-term memory* (STM) is a faculty of human mind that can hold a limited amount of information in a very accessible state temporarily. *Working memory* (WM) is referred to memory as it is used to plan and carry out behaviour. It includes short-time memory and ‘combines memory, attention and perception abilities to temporarily store and process information’ (Grempe, 2011: 4). WM is one of the most important mental faculties, essential for cognitive abilities such as planning, problem solving, and reasoning. It is

also responsible for ‘temporarily storing information necessary for the performance of complex tasks, such as language comprehension’ (Baddeley, 1992, in Gremp, 2011: 4).

WM deficits may limit students’ ability to learn, as it is responsible for a variety of cognitive processes, including vocabulary and grammatical development. In fact, academic achievement in reading⁹⁴ and language comprehension⁹⁵ have been demonstrated to be influenced by WM (Hamilton, 2011: 3). This relation between WM and reading comprehension is particularly remarkable in Deaf children, since they are generally considered to have lower memory than their hearing peers.

However, deaf children communicating through A/O approach have a similar memory capacity to hearing children, since memory does not depend on hearing ability but on the nature of the communication modality. Working memory has a similar architecture at functional and neural levels for both SL and spoken language. However, the differences are found in sensory, perceptual and cognitive processing systems (Rudner *et al.*, 2009: 2).

SLs are manual languages that are transmitted visually, in contrast to oral languages that are transmitted audio-acoustically. SLs are perceived visually and ‘exploit visual-spatial mechanisms to express grammatical structures and functions’ (Emmorey *et al.*, 1993: 140). Despite this, they ‘share all the linguistic properties of other natural [spoken] languages, such as “phonology”, morphology and syntax’ (Boutla *et al.*, 2004). Signs are, moreover, composed of independent visual-gestural features of hand shape and palm orientation, location in space and motion, and so are they stored in STM. Words, on the other hand, are encoded in STM based on their phonological properties, that is, as they sound. Hence, as SL signs take longer to produce and are phonologically more complex, they ‘will yield shorter digit spans than spoken languages, in which the digits take less time to produce’ (Marschark, *et al.*, 2002: 120-121). For this reason, ‘deaf people using SL-based coding in working memory demonstrate shorter memory spans than deaf or hearing people using speech-based coding in working memory’ (*ibid.*).

According to Wilson and Emmorey (1997: 122-123) WM is divided into two major domains: verbal-phonological and visuo-spatial, whose main function is ‘the

⁹⁴ Cain (2006); Cain and Oakhill (2006), in Hamilton (2011: 3).

⁹⁵ Engle, Carullo and Collins (1991), in Hamilton (2011: 3).

storage and manipulation of verbal-acoustic and visual-spatial information' (Gemp, 2011: 6). The verbal domain is characterized 'by its relationship to language or by its grounding in auditory processing' (Wilson and Emmorey, 1997: 121). That is, it manages both the rehearsal and maintenance of the phonological representation of spoken words and learning of new words. In other words, it aids speech comprehension and maintains speech-based information (Gemp, 2011: 5-6). As a result, 'languages that are not auditory and vocal (i.e. signed languages) pose a challenge to this conception of WM' (Wilson and Emmorey, 1997: 121), as they are found in the visuo-spatial domain of WM, which temporarily stores and manipulates visual, spatial and kinaesthetic information (Gemp, 2011: 6).

This difference in sensory modality has also an impact on the different processing abilities and constraints (Wilson and Emmorey, 1997: 122) of SL —visual modality— and oral languages —auditory modality. The main difference existing between auditory and visual perception is 'their ability to process temporal versus spatial information' (*ibid.*). Audition is 'intimately tied to time' (Kubovy, 1988: 318), therefore, superior in temporal processing. However, it is not inherently spatial, as it provides poor spatial resolution. In contrast, space appears to be 'the province of vision' (*ibid.*). Spatial sequences allow more simultaneous expressions. In SL hand signs are accompanied by linguistic facial expressions. Thus, a substantial amount of information may be expressed simultaneously, which is not possible by means of speech, as its auditory/vocal elements are temporally arrayed. This suggests that WM for SL may likewise differ systematically from that for speech.

It seems that if deaf children are SL users, they should have better reading skills, since printed text is not temporal, but spatial. Although printed text and lip-reading are visual stimuli, they 'fall primarily within the domain of verbal WM' (Wilson and Emmorey, 1997: 121) and they are sequential. It has to be taken into account that both speech and SL are 'primary language codes', while print is a 'derived code' (Shand and Klima, 1981, in Wilson and Emmorey, 1997: 123). It should be taken into account that print is recoded into phonological form in WM, as stated above. Therefore, when the stimuli to be recalled by STM are spoken or written words, deaf children will perform poorly, due to their difficulties in using phonological strategies based on speech to decode text. Memory span may have a direct effect on reading skills, alternatively reading may affect memory span.

Deaf children's visual-spatial information processing

Deaf children are relatively more dependent on vision than hearing children, thus, by virtue of their hearing losses, it has been commonly assumed that the former have better visual capacities. Nonetheless, studies carried out over the two past decades have showed evidence that this is actually due to the use of SL rather than auditory deprivation.

The auditory system has the natural ability to retain sound order, whereas the visual system may be less efficient in this respect. On this basis, it should be easier to store the order of sound-based representations in WM than vision-based segments. It has also been discussed that hearing people showed preference for temporal coding, whereas Deaf people prefer spatial coding. This spatial bias seems to be due to SL use, which appears to result in a decreased emphasis on temporal ordering (Rudner *et al.*, 2009: 12). In fact, Deaf children show difficulties to understand concepts that are represented in temporal sequences (Villalba Pérez, 1996: 6).

Deaf children, however, tend to be faster than hearing children in redirecting visual attention from one spatial location to another (Parasnis and Samar, 1985). They have the ability to detect motion in the periphery, especially when that motion is language-relevant (*ibid.*). In addition, as mentioned earlier, hearing children lag far behind their deaf peers in a wide variety of visual spatial tasks, such as their perception and memory for complex visual signs, in face discrimination, in the ability to generate and/or transform or rotate mental images, imagery (Emmorey *et al.*, 1998), and motion detection in peripheral vision (Neville and Lawson, 1987). Deaf individuals' strength, hence, appears to lie in 'the recall of information presented in static visuospatial format for both linguistic and non-linguistic items' (Hamilton, 2011: 406).

However, 'deafness per se may not be a sufficient factor for enhancement of visual spatial cognition' (Parasnis *et al.*, 1996: 145). Deaf children's SL exposure results in a neuropsychological organization that presents advantages in some domains, being visuo-spatial information processing one of them (*ibid.*). Thus, early exposure to a SL and fluent sign skills may be the critical factors that lead to differential development of visual spatial skills in deaf people.

This ability to generate visual mental images, to maintain them, and to rotate them reflects the progression of processing when *imagery* is used in cognition (Emmorey *et al.*,

1993: 139-141). *Imagery* is the ability to create, maintain and manipulate a visual image in WM. Deaf signers ‘are especially adept at certain aspects of visual imagery’ (*ibid.*), since SL makes use of visual-spatial distinctions at all linguistic levels. The complex spatial organization of SL makes children faster in recognising and manipulating images.

4.3.3 Deaf children’s social development and identity

Deafness can be approached from two different points of view: the medical and the cultural. The medical model sees deaf people as deficient and, therefore, ‘in need of a cure’, while the cultural model sees deaf people ‘as a linguistic and cultural minority group with its own community and identity’ (Gregory, No Date: 8), which does not consider their deafness as a handicap, but as ‘an integral and positive aspect of their own identity’ (*ibid.*).

In this way, we distinguish between being *deaf* and being *Deaf*. The term *deaf* includes anybody who has lost his/her hearing, anybody that ‘cannot hear well enough to process aural information conveniently’ (Neves, 2005: 84). Therefore, *deaf* people belong to the hearing community, thus oral language is their mother tongue —and understand written text as ‘an instance of their mother tongue to which they relate, either through *residual* hearing, or in the case of progressive deafness, through a memory of sound once heard’ (*ibid.*: 20). Although they progressively lose their hearing, they will always be able to remember a sound once heard. However, *Deaf* people belong to a group, with their own rules and codes of conduct. They differentiate themselves from other social groups especially with the language, since they use a language that conveys messages visually: SL (*ibid.*).

Language is widely known to be a socialisation tool and plays a large role in social development (Goldstein, 1989: 39). Actually, Sapir (1921: 6) defines *language* as an activity that ‘is purely human’, as a traditional system of a particular society to communicate ideas. Thus, in the circumstance of a human born merely in nature, it would be natural for him/her to walk or breathe, although this naturalness would not be found in language. That is, humans use *language* because they are social, despite the fact that *language* varies —perhaps unconsciously— as we pass from a social group to another, as it is ‘purely historical heritage of the group, the product of long-continued social usage’ (*ibid.*: 5). Speech could be understood as a ‘merely conventional system of sound

symbols' (*ibid.*: 4) with unlimited possibilities of linguistic transfer that represent the outward facet of thought; a human activity which has 'noninstinctive, acquired, "cultural" function' (*ibid.*).

Hence, if language acquisition is limited, so is deaf children's social interaction. The fewer communication skills d/Deaf children have, the greater their isolation within the society is. Deafness can result in communication impairment and entail an impediment to develop normal relationships. Without words, the Deaf child may feel isolated from the hearing children group. As experts claim, no other physical handicap can isolate so completely as deafness (Ewing and Ewing 1938: 206).

However, according to Marschark (1997: 168), 'deaf children from deaf families often are more comfortable socially than deaf children from hearing families' as a consequence of belonging to a community which provides greater understanding and acceptance. They do not feel different from the others within the community; thus they are more likely to have greater social confidence and self-esteem, which leads to a social and career success.⁹⁶ Nonetheless, it is not that easy for deaf children born to hearing parents. They are deaf, but they belong to the hearing community. In this sense, the limited knowledge about social rules and the communication barriers make it difficult for them to establish social relationships with people outside their families. That is why, sometimes, they need to rely on others to achieve their goals, which entails a relation of dependence. This dependence may have an effect on their lack of social skills that may impede the development of deaf children's independence and self-esteem (Marschark, 1997: 168-170). Lower self-esteem seems to go together with poorer social adaptation and difficulties establishing relationships of friendship. For this reason, it has been largely considered that Deaf children have greater social maturity.

4.4 Deaf children and technology

On a daily basis, deaf children —and deaf people in general— face different routine situations in which technology plays a pivotal role. Waking up in the morning, knowing someone is at the door, communicating in the car or using the telephone may

⁹⁶ It has to be said, however, that they are usually confined and limited to people like themselves.

not be as simple as they sound for d/Deaf people. However, thanks to technological devices with special features especially designed according to the special needs and abilities of d/Deaf people. Alarm clocks, for example, include vibrating pads that are placed under the pillow or flashing lights and loud alerts with adjustable volume and tone. Standard doorbells near the front door may not be heard in other parts of the house, thus, amplified, flashing and vibrating doorbells are usually installed in deaf people's houses. This innovative alerting technology makes everyday life of deaf people much more comfortable.

Technology has also appeared in education. Radio aids, which consist of a transmitter—worn by the teacher—and a receiver—worn by the deaf child—are used in schools 'to help deaf children hear their teacher and other students better' (NDCS, 2016). Their function is to make the sound clearer in relation to background noises. Soundfield systems are designed to improve hearing conditions in schools. They produce a 'clear and consistent level of sound throughout the classroom' in order to make the teacher's voice loud enough to be heard. The teacher wears a microphone and a wireless transmitter—that allows her to move around the classroom—that sends the sound to speakers, which can be either portable or fixed in the classroom walls.

However, technology has gone further beyond within the education field. Educational e-tools 'have been increasingly examined as a tool for facilitating the development of deaf children's language and literacy skills' (Golos and Moses, 2013: 411). E-tools are becoming a valuable didactic and educational resource that aims at providing a different teaching-learning model. The communication method that arises from this model should allow full access to everyone with no exception. A considerable number of apps and/or computer programmes have been designed to target skills for young deaf learners. These resources include apps to develop numeracy skills, reading and writing skills, SL, problem-solving and memory skills, or to help with note-taking or organisational tasks at schools, to name but a few. Entertainment apps, which offer fun and wide range of creative options, usually 'help deaf young people and children enjoy and have better access to music, TV, films, books and games' (NDCS, 2016). They provide access in many different ways: by providing subtitles or lyrics, or by allowing the user to tailor his/her device to receive news in a very accessible format. In some cases, though, e-tools are developed according to children's age or gender, and do not take into

account other cognitive characteristics such as text comprehension skills, visual attention and memory abilities.

Television is of an utmost importance in the daily life of all children. It becomes a powerful social tool, and ‘children who do not watch television often miss cultural opportunities and daily conversational topics’ (Liss and Price, 1981: 493). Thus, ‘access to TV programmes is vital in supporting deaf young people to be part of everyday life and to join in discussions about TV programmes with their family and peers’ (NDCS, 2005: 3).

However, it may seem that deaf children’s sound access deprivation would make them a group less likely to watch TV and, consequently, further isolate the deaf child from their hearing peers. However, deaf children also enjoy watching TV. In fact, they ‘watch more television than hearing children’ (Liss and Price, 1981: 493). Even though TV is not yet 100 % accessible, as seen in Chapter Three, deaf children ‘use a range of methods to access TV programmes’, such as turning up the volume, lip-reading, using a loop system—that magnetically transmits sound to hearing aids and cochlear implants, functioning as in-the-ear loudspeakers—, using an infra-red listening device—which utilizes light-based technology and consists of an infrared transmitter that carries the sound to the infrared receiver worn by the deaf viewer—or even having a relative or a friend signing for them (NDCS, 2005: 16). According to studies carried out by experts (*ibid.*), the vast majority of deaf children shows preference for an auditory input, probably because ‘they are not able to rely wholly on the information subtitles give them or that children prefer a range of inputs to access TV’ (*ibid.*). Another option is the use of varying combinations of subtitles, lip-reading, SL or other visual cues, to get the best access to TV programmes (BBC Children’s and NDCS, No Date: 3).

As seen in this chapter, different options are available to deaf children when consuming TV programmes, according to their type, degree of hearing loss and language. This thesis aims at making a meaningful contribution to the field of SDH for children by presenting an alternative option that has never been suggested before. The information described thoroughly in the present chapter has been extremely valuable to create the visual code that will be detailed in the forthcoming chapters and that is the main contribution of this thesis to the field of SDH for children.

CHAPTER FIVE

SDH FOR CHILDREN: CURRENT PRACTICES

This chapter shows a general overview of the current situation of subtitling for deaf children, which details how children's programmes are subtitled in both British and Spanish televisions. SDH subtitles presented in audiovisual programmes targeted at children have been under study, which was divided into two phases: a qualitative and a quantitative analysis.

The first phase of this analysis observes the different strategies used when conveying non-verbal elements in SDH for children, compared with the recommendations established in applicable guidelines (Ofcom, 2012; BBC, 2009; and AENOR, 2012). The second phase is more focused on how much subtitling is provided to deaf children in the aforementioned countries, as well as examining which of the three non-verbal features is more rendered in SDH. In order to provide an at-a-glance overview of the findings, figures and tables will be provided.

5.1 Research methodology

Analytical observation of current practices in subtitling for deaf children has been the approach taken, with the aim to study the outcomes of the accessible subtitling process. The analysis pays special attention to the conveyance of non-verbal elements of sound effects and paralinguistic features —tone and mood— in a selection of children programmes across national (both British and Spanish) broadcasters.

Analysing how much accessible subtitling is being provided within children's programmes, as well as comparing how information is conveyed, i.e. if subtitlers render it according to the existing guidelines, seemed valuable to examine if there are any recurrent patterns between the programmes under analysis. The intended audience of SDH is the major focus of interest of the research in hand, that is why the different strategies currently adopted while dealing with preschool and school children's programmes have been observed.

5.1.1 Object of study

The programmes chosen for the analysis belong to TV channels that are particularly targeted at children. Therefore, the programmes broadcast in those channels are limited to animation and entertainment or educational programmes. The former are the ones that constitute the corpus of this research and become, consequently, the object of this study.

Animation is not a strictly-defined genre category, but a film technique that can do any genre. It is actually ‘one of the most ubiquitous and all-permeating forms of visual communications today’ (Popova, No Date) which can be found in the multitude of TV channels dedicated solely to cartoons, or even in the reactive graphic interfaces on our smartphones. Animation is the ‘art of making inanimate objects appear to move’ (Encyclopaedia Britannica, 2016). In animated films or series, hence, ‘individual drawings, paintings, or illustrations are photographed frame by frame (stop-frame cinematography)’ (Dirks, 2016).

A sole picture can quickly convey a large amount of information that will be perceived and interpreted by the human visual system, which undoubtedly is a sophisticated information processor. When a series of images are displayed in rapid succession, they are perceived as a single moving image. This is due to the ability of the human eye-brain complex to create a sensation of continuous imagery from a sequence of still images, by filling in the gaps between images to produce the perception of a continuously changing image (Parent, 2012: 2). In that sense, moving images ‘have the potential to convey even more information in a short time’ (*ibid.*).

Over the years there have been almost a hundred film formats, which differed ‘in the size of the frame, in the placement, size, and number of perforations, and in the placement and type of audio tracks’ (*ibid.*: 490). However, film and video productions, both analogue and digital, remained as the two most common formats for moving picture (*ibid.*). They include sequences of images that are displayed ‘at rates fast enough to fool the eye into interpreting it as continuous imagery’ (*ibid.*: 2). Although image display rates may vary depending on conditions such as room lightning or viewing distance, in sound film⁹⁷ it is common to play images at 24 frames per second (fps), although some sound

⁹⁷ In silent film images were displayed at 16 frames per second (fps) (Parent, 2012: 490).

film is displayed at 18 fps (*ibid.*: 490). In the former case, sound films are typically doubly projected. This means that each frame is displayed twice, in order to reduce the effects of flicker (*ibid.*) —when ‘the perception of continuous imagery fails to be created’ (*ibid.*: 2).

In animated films, thus, in order to give the illusion of movement, each frame differs slightly from the one preceding it and the rapid projection of the succession of images at (usually) 24 frames per second makes spectators believe the movement is real. Therefore, when (hand-drawn) images are combined with movement, the two-dimensional static art comes alive and creates imaginative cinematic images.

Even though this continues to be the essence of animation, animated films have suffered a great evolution since the earliest cinema animation appearance. Actually, ‘motion-picture technology is a curious blend of the old and the new’, since ‘in one piece of equipment state-of-the-art digital electronics may be working in tandem with a mechanical system invented in the 1800s’ (Encyclopaedia Britannica, 2016). It was in that period, even though the first film camera had not been invented yet, that ‘the ability to interpret a series of stills as a moving image was actively investigated’ (Parent, 2012: 4).

The investigation of the effect of moving images led to a variety of devices ‘for the production and showing of motion pictures’ (Encyclopaedia Britannica, 2016). Motion-picture technology does not only include the motion-picture camera and projector, but also more primitive display techniques —which became the baseline for current devices—, such as the *thaumatrope*, the *flip book* or the *zoetrope*.

The *thaumatrope* was a flat disk with images drawn on both sides with two strings connected opposite each other on the rim of the disk. By twirling the strings, one could quickly flip back the disk. If flipped rapidly, the two images appeared superimposed (Parent, 2012: 4).

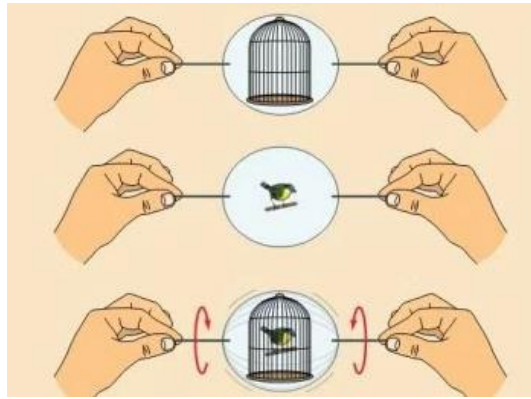


Figure 12: Thaumatrope moving image technique.
Source: Teacher’s Web Resources (2016).⁹⁸

The *flip book* is another equally primitive technique. It consists of a table of paper with an individual drawing on each page. When the pages are flipped rapidly, the images move creating the perception of motion on the viewer.

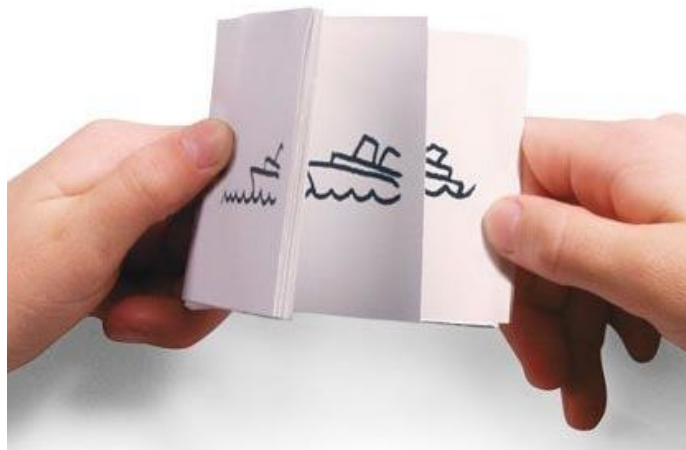


Figure 13: Flip book moving image technique.
Source: craftscollection.net (2016).

The *zoetrope*, also called the wheel of life, is one of the most well-known early animation devices. It consists of a short fat cylinder that rotates on its axis of symmetry with a sequence of drawings around its inside. To create the illusion of motion, long vertical slits cut into its side between each adjacent pair of images allow the eye to see the image on the opposite wall of the cylinder when it is spun on its axis (Parent, 2012: 4).

⁹⁸ Available online at “5 Great Thaumatrope Links”. Last accessed 25th May 2016. Internet WWW page at URL: <https://teacherswebresources.com/tag/5-great-thaumatrope-links/>

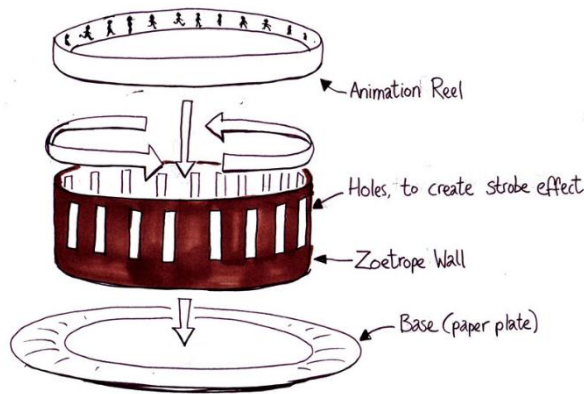


Figure 14: Parts in a zoetrope
Source: James Merry (2012).⁹⁹

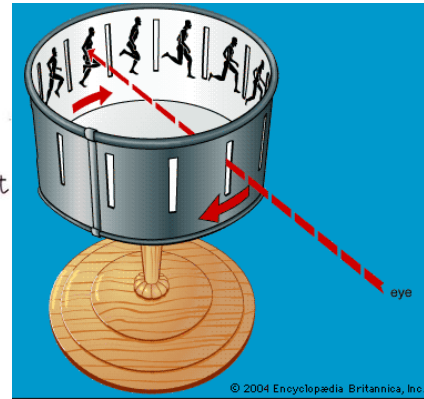


Figure 15: Zoetrope
Source: Encyclopaedia Britannica (2016).

Regarding the history of animated films, it is commonly believed that *Snow White and the Seven Dwarfs*, the adaptation of the Grimm’s Brothers fairy tale, released by Walt Disney in 1937, was the first fully hand-drawn animated feature film, which pioneered a new form of family entertainment (Disney, 2016). Lasting for 83 minutes, ‘it was vastly bigger than anything before, and a massive risk for Disney’ (The Telegraph, 2014).

However, there are instances of earlier animation productions during the silent film era (1900-1930). In fact, the early 20th century marks the beginning of theatrical showings of cartoons, until then understood as hand-drawing paper strips, such as Felix the Cat —considered the first animated film star—, Betty Boop, and Woody Woodpecker.



Figure 16: Felix the Cat
Source: The History of Animation (No Date)

⁹⁹ Available online at “Zoetrope”. Last accessed 25th May 2016. Internet WWW page at URL: <http://www.jamesmerry.co.uk/home/?p=356>

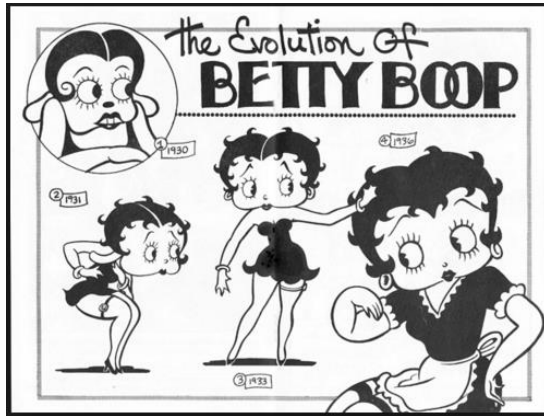


Figure 17: Betty Boop.
Source: Parker (2015)¹⁰⁰



Figure 18: Woody Woodpecker
Source: Zaclonius (2016)¹⁰¹

The first animation in America was created by J. Stuart Blackton, a British filmmaker who was among the first in the world to use stop-motion—a filming technique in which objects (such as clay models) are photographed in a series of slightly different position so that the objects seem to move (Merriam Webster Dictionary, 2015)—as a storytelling technique (Popova, No Date). It was during an interview with Thomas Edison when he discovered Edison’s brand new cinematic device, the Vitascope.¹⁰² It fascinated Blackton and he soon founded the American Vitagraph Company with which he began to produce films, being his first production *The Enchanted Drawing*¹⁰³ in 1900.

Émile Cohl, who is often referred to as the father of the animated cartoon (Popova, No Date), created *Fantasmagorie*¹⁰⁴, in 1908. It is the first animated film using hand-drawn animation; that is why, according to film historians, it is considered to be the first animated cartoon. The technique he used to create the animation was placing ‘each drawing on an illuminated glass plate and traced the next drawing, reflecting the

¹⁰⁰ Available online at “Button Up Your Overcoat”. Last accessed 27th May 2016. Internet WWW page at URL: <http://blogs.canoe.com/parker/2015/01/06/>

¹⁰¹ Available online at “Woody Woodpecker through Time. Last accessed 27th May 2016. Internet WWW page at <http://zaclonius.deviantart.com/art/Woody-Woodpecker-through-time-38088384>

¹⁰² ‘A motion-picture projector, [...] whose principal features are retained in the modern projector: sprocketed film operated with a mechanism to stop each frame briefly before the lens, and a loop in the film to ease the strain’ (Encyclopaedia Britannica, 2016).

¹⁰³ Video available online at URL: <https://www.youtube.com/watch?v=pe7HSnZotbU> Last accessed 8th March 2016.

¹⁰⁴ Video available online at URL: <https://www.youtube.com/watch?v=aEAObel8yIE> Last accessed 8th March 2016.

variations necessary to show movement, over it until he had some 700 drawings' (Popova, No Date). His characters look as they have been drawn on chalkboard, although it is an illusion, since 'Cohl filmed black lines on paper and printed them in negative' (*ibid.*).

In 1911, cartoonist and artist Winsor McCay presented the film *Winsor McCay, the Famous Cartoonist of the N.Y. Herald and his Moving Comics*.¹⁰⁵ It contained a two-minute¹⁰⁶ pure animated film that uses sequential hand-coloured illustration. He was then 'considered one of the fathers of "true" animation' (Popova, No Date).

In November 1928, Ub Iwerks, an American animator and special-effects technician, brought the cartoon character Mickey Mouse to life. In addition, he added a missing element to animation and made it possible to release the first cartoon with synchronised sound printed on the film. *Steamboat Willie*,¹⁰⁷ starred by Mickey Mouse piloting a steamboat and trying to delight Minnie by making music with the menagerie on the deck, is an 8-minute black and white film and 'a landmark in the history of animation' (The Museum of Modern Art, 2016). It was the first Mickey Mouse film and the first notable success for Walt Disney Studios, as it made the illusion of life 'much more complete, much more magical' (Encyclopaedia Britannica, 2016).

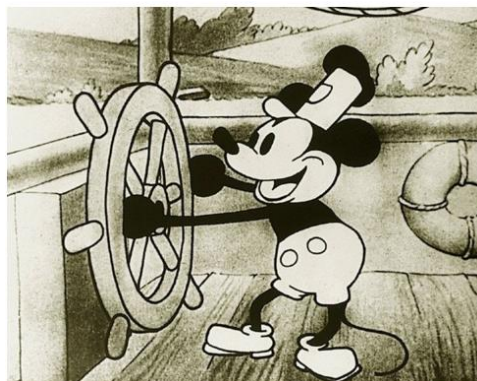


Figure 19: *Steamboat Willie* scene.¹⁰⁸
Source: The Museum of Modern Art (2016).

¹⁰⁵ Video available online at URL: <https://www.youtube.com/watch?v=kcSp2ej2S00#t=531> Last accessed 8th March 2016.

¹⁰⁶ At around minute 8:11.

¹⁰⁷ Video available online at URL: <https://www.youtube.com/watch?v=BBgghnQF6E4> Last accessed 8th March 2016.

¹⁰⁸ Available online at "Walt Disney, Ub Iwerks, *Steamboat Willie*, 1928". Last accessed 29th May 2016. Internet WWW page at URL: <http://www.moma.org/collection/works/89284>

Between the 1930s and the 1950s, theatrical cartoons became an integral part of popular culture. Besides Walt Disney, new production companies were founded, such as Warner Brothers, MGM, Hanna-Barbera, and Fleischer. At the same time, television continued its rise as an entertainment medium. Therefore, studios created many cartoons for TV, using a “limited animation” style: films were essentially flip-books that were projected onto a screen. Animators would draw each frame by hand, transfer them to animation cels, and finally compile them. It was undoubtedly a costly and time-consuming process, as a ‘full-length feature film produced cel animation would often require a million or more drawings to complete’ (Webopedia, 2016).

In the 1980s, animation lived a revolution: the transition from hand-drawing to CGI (computer generated imagery). A virtual version of stop-motion appeared and hand-drawing was replaced by 3D modelling. The first animated film using CGI technology was *The Adventures of Andre & Wally B* (1984), created by The Graphics Group, the precursor to Pixar. However, it was not until 1995 that the first feature-length fully computer-animated film was released.

Toy Story, by Pixar Animation Studios marked important milestones in animation, as it challenged the art form of animation with the push of technology. Characters, sets and scenes could be digitally stored in computers, so animators did not need to re-draw each cell. The actual amount of manual labour was dramatically reduced, contributing to a change in the economics of animation, as well as to the chance to reproduce and adapt the images infinitely. On top of that, this revolution in animation paved the way for animated films at the Oscars. *Toy Story* earned three Oscar nominations in 1996 and John Lasseter, its co-writer and director, received a Special Achievement Oscar that same year (Messer, 2015). Since then —and paraphrasing Walt Disney—, anything that can be dreamt, can also be brought to life.

Animation can be found in different types or genres, such as the following:

- Traditional 2D animation
- Computer animation: 2D and 3D
- Motion graphics
- Stop-motion

Traditional 2D animation involved animators creating numerous hand-drawings for each and every frame. These drawings were drawn ‘on a transparent piece of paper fitted on a peg using a coloured pencil’ (Merroz, 2016). The drawings are then fed into plastic cells to create the animated sequence on a painted background image. Sequential drawings are screened quickly one after another to create the illusion of movement. Animators first test animations ‘with very rough characters to see how many frames they would need to draw for the action to be properly perceived’ (*ibid.*). In addition, timing is essential in traditional animation, ‘since the frames have to fit the soundtracks exactly’ (*ibid.*). The animation process of traditional animation, which is one of the older forms of animations, can be lengthy and costly.

Computer animation includes both *digital 2D animation* and *digital 3D animation*. The former are animations in 2 dimensional space, in which frames are drawn with the help of a computer and animated to show some kind of movement. It was such a progress compared to traditional 2D animation, since small variations, such as changes in colour or frame rate, could be changed almost instantly, facilitating significantly the animators’ work. Besides referring to any key framed animation produced on a flat surface, 2D animation can also refer to vector animations that adopt the techniques of traditional animation (*ibid.*). The latter are animations in 3 dimensional space, which makes unreal characters become realistic ones. 3D animation is created using a computer software, which generates images using computer graphics, therefore, characters are digitally modelled on screen. 3D animation techniques have much in common with stop-motion animation, as they both deal with animating and posing models in certain key frames. However, quite a few more differences exist between 2D and 3D animations, as per Merroz’s words (2016):

‘When the modelling and/or animation is complete, the computer has to render each frame individually, which unlike 2D or stop-motion animations, can be very time consuming depending on the quality of the images and the quantity in each scene’. In addition, ‘when animating in 2D, the character has to be drawn from every frame. When the character is viewed from the side, half of its body is not shown and thus it is not drawn. It technically does not exist. It is drawn on a flat page and there is not really more of the character of the character other than what the animator draws. With 3D, though, the character’s body parts always exist in the shot. Even when one hand is not visible, it is

still there. That adds some work for the animator, since we need to be aware of the entire character at all times. The last major difference with 3D animation is the frame rate. Traditional animators usually work on 2's which means they draw a new drawing every two frames, and thus having one drawing last for two frames. With 3D animation, however, the motion is always smooth, and [...] even when the character is standing still there should always be some sign of life or gentle movement to keep the illusion of life.'

Motion graphics are quite different from the other types of animation, even though they are still considered an animation form. Unlike the rest of the aforementioned forms, motion graphics are not character or story driven. However, this category has been included, as it could be the category in which *creative* subtitles would fit in, as it is 'the art of creatively moving graphic elements or texts' (*ibid.*). It involves animating images, texts or video, using key framing that makes a smooth motion between frames. It also allows creating various effects, or to alter animations. For this reason, the creation of motion graphics requires good understanding of composition and all the important camera motion. Creative subtitles are flat-based images that are sometimes given the illusion of motion, accompanying the image to which they are inserted.

Stop-motion is a frame by frame animation that serves as a base to create the animated sequences. Objects are photographed in a sequence to create the animation action. This process, which is very long, is repeated to give the illusion of movement of the photos. One of the most popular forms of stop-motion is clay animation —also known as *Claymation*. It is a stop-motion technique in which pieces of clay are moulded to create characters. Different types of clay are available, such as oil or water based clays. *Puppet animation* is commonly used in children's cartoons and films and uses puppets instead of objects to create characters. 'The faces of the characters can be replaced based on the expression' (*ibid.*) of the character. *Cut-Out* is a similar strategy, but it uses cardboard characters instead.

According to all that has been said so far, the object of this study, i.e. cartoons, has a different nature than other children's programmes, due to its particular characteristics. Despite the great evolution in technology hoping to perfect animation described in this section, cartoons will always be less expressive than a human face. Characters' facial expressions, for example, are not as clear as in human starred films.

That is precisely what makes them a challenge. Most likely, cartoons will need to render emotional information that can be inferred from character's facial expressions in human starred films. The subsection below accounts for all the instances emotional—and other non-verbal—features are rendered in current subtitling practices. The strategies used to convey the aforementioned features will be also discussed.

5.1.2 Corpus

The corpus extracted from the analysis contains instances of current SDH practices in children's programmes in two different countries, the UK and Spain. The choice of these two countries responds to the interest in spotting any differences between subtitling practices of a country having been the pioneer and still leading SDH implementation (UK) and a country where SDH has come a bit later (Spain). As seen in Chapter Two, the advent of SDH took place in the UK¹⁰⁹ in the 70s, with the introduction of teletext subtitling, an economic and viable solution to provide TV subtitles for the hearing impaired viewers. The UK became a model for the rest of European countries and, at present, they still are one step ahead of the others. In Spain, SDH appearance took place about two decades later, in a state-owned regional channel: *Televisió de Catalunya* (TVC).

The Catalan SDH service was inaugurated on the 10th September 1990. It was a teletext subtitling service that provided more than two accessible hours per week, particularly films, a TV series, as well as the speeches delivered by the President of *Generalitat*¹¹⁰ on 11th September and New Year's Day. Two years later, in 1992, TVC and the Catalan government signed a collaboration agreement to provide SDH in TVC's evening news. Hence, they added live subtitling to their accessibility services. It was a completely new task, which had to be learnt while providing the service (TVC, 1993).

Due to the regional character of Spain, the Spanish television system is formed by a national state-owned channel (TVE) and many different state-owned regional channels—at least, one per region—, as well as various private channels, which operate both regionally and nationally. It appeared worthwhile to observe if both state-owned and private national and regional channels provide as much SDH and follow the same patterns

¹⁰⁹ As well as in France and the US.

¹¹⁰ Government of the Spanish region of Catalonia.

in subtitling for deaf children, since percentages of accessible programmes' demand varied according to the *Ley General de la Comunicación Audiovisual* of 2010, which regulated that state-owned TV channels must have provided 90% of accessible programmes by 31st December 2013, while national and regional private TV channels must have reached a 75%.

The selection of programmes included in the analysis intentionally belongs to both state-owned and private national and regional television channels. In addition, these TV channels are specifically targeted at children, since they only show cartoons and children's programmes (see table below). Furthermore, in some of Spanish regions, such as Catalonia, Basque Country and Galicia,¹¹¹ citizens speak another language than Spanish and, therefore, its regional TV channel airs the programmes in the respective regional language. That is why current subtitling practices in regional channels have been included, just by way of a small sample, to compare them with the national channels' output. Catalonia was chosen for this study, due to the fact that it pioneered TV accessibility in Spain. Thus, there are only two countries under study, but three languages contained in the subtitles, as can be seen in the table below:

Langu age	Audience	Programme and description	Channel	State- owned or private?
English	Preschool	<p style="text-align: center;">Dora the Explorer</p> <p style="text-align: center;">http://www.nickjr.com/dora-the-explorer/</p> <p>A Peabody Award (2004) and Daytime Emmy Award (2011) winning television series which is the longest-running show of Nick Jr. The series stars an American girl of Indigenous Mexican heritage, Dora, who introduces kids to Spanish words, encourages movement, and gives viewers the skills and the confidence needed to overcome challenges.</p>	Nick Jr.	Private

¹¹¹ In Basque country regional channels air both in Basque and Spanish.

		It is a ground-breaking children's show that incorporates play-along viewing and interaction in every episode.		
English	Preschool	<p>Shaun the Sheep</p> <p>http://www.cbeebies.com/za/shaun-the-sheep</p> <p>http://www.shaunthesheep.com/</p> <p>First aired in 2007, it is a British stop-motion animated TV series, starred by Shaun, a bright and clever sheep. It won twice (2010-2014) the British Academy Children's Awards in the category of Animation.</p>	CBBC	State-owned
English	Preschool	<p>Bubble Guppies</p> <p>http://www.nickjr.com/bubble-guppies/</p> <p>Premiered in 2011 and broadcast by Nick Jr., it is an American preschool children's programme that narrates the adventures of six fish-tailed kids.</p>	Nick Jr.	Private
English	Preschool	<p>Team Umizoomi</p> <p>http://www.nickjr.com/team-umizoomi/</p> <p>Released in 2010, it involves preschool math concept and encourages viewers to help them as they develop their Math Powers.</p>	Nick Jr.	Private
English	School	<p>Fanboy & Chum Chum</p> <p>http://north.viacom.com/se/nicktoons/nicktoon-shows/fanboy-and-chum-chum/</p> <p>First aired in 2009, it is an animated comedy series that centres on a fearless, comic book-loving 11-year old named Fanboy and his best friend and trusty sidekick, Chum Chum.</p>	Nick Toons	Private

English	School	<p>SpongeBob SquarePants</p> <p>http://www.nick.co.uk/shows/spongebob-squarepants/76ypv4</p> <p>Since 1999, the fast-food restaurant working SpongeBob and his starfish sidekick, Patrick, are always causing trouble and plenty of laughs in this TV series. Winner of various awards, among them the Anney International Animated Film Festival (2005), Annie Awards (2011, 2010, 2006), ASCAP Film and Television Music Awards (2013, 2012, 2011), the BMI Film & TV Awards (2013), Daytime Emmy Awards (2014, 2010), or Kids' Choice Awards USA (2015-2009, 2007-2003), to name but a few.</p>	Nick Toons	Private
English	School	<p>Arthur</p> <p>www.bbc.co.uk/cbbc/shows/arthur</p> <p>Based on the <i>Arthur</i> book series by Marc Brown, the adventures of Arthur, an 8-year-old aardvark were released in 1996. Since then, it received various awards, such as the BAFTA Awards (2003), CINE Competition (2006), Daytime Emmy Awards (2014, 2007, 2003, 2001, 2000, 1999, 1998), or the Peabody Awards (2001).</p>	CBBC	State-owned
English	School	<p>Ben 10: Ultimate Alien</p> <p>http://www.cartoonnetwork.co.uk/show/ben-10</p> <p>The first episode of this TV series was broadcast in 2010, starring Ben, a 10-year-old boy that discovers a mysterious watch with which he gains the power to transform into a number of different aliens with awesome powers.</p>	Cartoon Network	Private

Spanish	Preschool	<p>Pocoyó</p> <p>http://www.rtve.es/infantil/series/pocoyo/</p> <p>Since 2005, this curious toddler dressed all in blue, joins Pato (a yellow duck), Elly (a pink elephant), and other friends learning new things and having fun. Pocoyó's series have been awarded with the BAFTA Awards in 2006, the Animacor – International Animation Festival of Spain (2005) or the Annecy International Animated Film Festival in the category of best TV production (2006).</p>	Clan	State-owned (TVE)
Spanish	Preschool	<p>Los Lunnis y sus amigos</p> <p>http://www.rtve.es/infantil/series/lunnis/</p> <p>A children's TV series starred by puppets living in the planet Luna Lunera, which daily shows children what they rights are. <i>Los Lunnis</i> started a collaboration with UNICEF, and created <i>Lunicef</i>, a superhero that fights for a better world, who joined the rest of the cast in 2008. Premiered in 2003, <i>Los Lunnis</i> was chosen as the Best European Programme (2006) and was awarded with the Best Children's Programme Award (2010).</p>	Clan	State-owned (TVE)
Spanish	Preschool	<p>Chuggington</p> <p>http://www.rtve.es/infantil/series/chuggington/</p> <p>Three young trainee engines share their humorous adventures with the kids since 2008. They are helped by a modern, colourful fleet of engines to learn important lessons, including cooperation, perseverance and respect. Each episode aims at teaching simple, yet important social-emotional lessons to pre-schoolers.</p>	Clan	State-owned (TVE)

Spanish	Preschool	<p>Looney Tunes</p> <p>http://www.boing.es/series/looney-tunes/</p> <p>Released in 2011, this TV series present an updated iteration of the classic Looney Tunes characters.</p>	Boing	Private (Mediaset)
Spanish	School	<p>Geronimo Stilton</p> <p>http://www.boing.es/series/geronimo-stilton</p> <p>Based on the book series with the same title, <i>Geronimo Stilton</i> TV series were released in 2009 and narrate the adventures of Geronimo, the director of an important journal, who loves reading and playing chess, and his nephew, Benjamin.</p>	Boing	Private (Mediaset)
Spanish	School	<p>El show de Garfield</p> <p>http://www.boing.es/series/el-show-de-garfield</p> <p>Since 2008, a pussycat lives in a middle town where his owner, Jon Arbuckle, lives. Garfield is lazy and his only goal is to eat as much lasagne as possible during the day. It was awarded with the Daytime Emmy Award (2012).</p>	Boing	Private (Mediaset)
Spanish	School	<p>Los pingüinos de Madagascar</p> <p>http://www.rtve.es/infantil/series/pinguinos-madagascar/</p> <p>First aired in 2008, it narrates the adventures of the animals, particularly the penguins, living in New York's Central Park Zoo. Awarded with Primetime Emmy Awards (2012), Daytime Emmie Awards (2012, 2011, 2010), Annie Awards (2012, 2010), BMI Film&TV Awards (2011), among others.</p>	Clan	State-owned (TVE)

Spanish	School	<p>George de la jungla</p> <p>http://www.rtve.es/infantil/series/jorge-jungla/</p> <p>There is no challenge too great for the king of the jungle —only if he remembers to watch out for those jungle trees! George lives and protects the jungle from Mbebwe, a wild land full of exotic animals and villains.</p>	Clan	State-owned (TVE)
Catalan	Preschool	<p>La Lua i el món</p> <p>http://www.super3.cat/psuper3/sp3Item.jsp?idint=4270&item=programa&seccio=serie</p> <p>Lua is five years old and has got loads of energy and resources, such as her common sense, to solve the problems she has to face daily.</p>	Super3	State-owned (TVC)
Catalan	Preschool	<p>Les tres bessones (The Triplets)</p> <p>http://www.super3.cat/psuper3/sp3Item.jsp?idint=51&item=programa&seccio=serie</p> <p>The triplets were created by illustrator Roser Capdevila based on her own daughters. It soon became an audiovisual reality when in 1994 Televisió de Catalunya broadcast this classic Catalan cartoon series based on the books. Starred by the triplets Anna, Teresa and Helena, it narrates the pranks the sisters play to annoy Bruixa Avorrida (Bored Witch), who punishes them sending them to a classical tale or legend in order to learn the lesson.</p>	Super3	State-owned (TVC)

Catalan	School	<p>Rovelló</p> <p>http://www.super3.cat/psuper3/sp3Item.jsp?idint=109&item=programa&seccio=serie</p> <p>Rovelló is a small dog, who lives in a farm. He is not very good at hunting, nor is he at guarding the farm. However, he is always keen to learn new things and the other farm animals will discover his abilities to learn acrobatics.</p>	Super3	State-owned (TVC)
Catalan	School	<p>Doraemon</p> <p>http://www.super3.cat/psuper3/sp3Item.jsp?idint=15&item=programa&seccio=</p> <p>Doraemon is a cosmic robot cat with superpowers that comes from the 22nd century to the 20th century to stay with Nobi family. He has got a magic pocket, from which all children's dreamed devices come out. It is a long-running TV series in Spain, as it was first released in 1979.</p>	Super3	State-owned (TVC)

Table 1: Programmes included in the analysis.

Three episodes of four different programmes were recorded for each age group¹¹² in both English and Spanish, while only two episodes of two programmes were included for each age group in Catalan. The recordings took place between May and July 2011; that is before the digital television transition, which took place on 24th October 2012 in the UK. In Spain, the switchover from analogue to digital TV started on 1st January 2010 and continued progressively until its completion on 31st December 2012.

The English broadcast materials were obtained by the University of Roehampton under the ERA¹¹³ licence, only to be used for educational purposes. The Spanish and

¹¹² Age groups are further detailed in the subsection 3.1.3 Audience.

¹¹³ More information available at URL: <http://www.era.org.uk/>

Catalan series were directly recorded from the actual broadcast under the Spanish IP legislation in force, the Real Decreto Legislativo 1/1996, of April 12.¹¹⁴ It only allows to ‘include in one’s own work fragments of the works of others, whether of written, sound or audiovisual character, [...] provided that the works concerned have already been disclosed and that they are included for analysis, comment or critical assessment. Such use may only be made for teaching or research purposes’ (Art. 32. Real Decreto Legislativo 1/1996).

The goal of the analysis is to provide an extensive and representative overview of the current situation and to compare the output in the three working languages in this research. The selection of the programmes was done mainly according to their availability at the time of recording. Regarding the programmes subtitled in Catalan and Spanish, an attempt has been made to gather home-produced programmes¹¹⁵ —that is, programmes produced by Catalan and Spanish companies—, in order to examine whether the self-production of programmes has any impact on the way they are subtitled.

In Spain, subtitles have been created in house, at Teletexto iRTVE. However, it is very common that the task of subtitling is not done in-house, but outsourced. Broadcasters task external subtitling companies —such as Media Access Group at WGBH,¹¹⁶ Captionmax¹¹⁷ or Red Bee Media Ltd,¹¹⁸ to name but a few, in the British case— with the provision of accessible subtitles for the programmes they will broadcast. Regarding Catalan subtitles, no information has been disclosed.

5.1.3 Audience

The target audience is extremely important in this study, since it is what makes it innovative. Up until now (see Chapter Two), SDH research has mainly focused on general deaf adult audiences. Hence, the particular profile of the audience to which cartoons are intended for has been considered of such importance that the programmes analysed have been classified into two groups, depending on the age of the audience they are targeted at: preschool children’s (up to 5 years old) and school children’s (6 to 10 years old)

¹¹⁴ Royal Legislative Decree. BOE No. 97, of 22/04/1996. Text available online at: <https://www.boe.es/buscar/pdf/1996/BOE-A-1996-8930-consolidado.pdf>

¹¹⁵ *Los Lunnis y sus amigos* and *Pocoyó* in Spanish; *Les tres bessones*, *La Lua i el món* and *Rovelló* in Catalan.

¹¹⁶ More information available at URL: <http://main.wgbh.org/wgbh/pages/mag/>

¹¹⁷ More information available at URL: <http://captionmax.com/>

¹¹⁸ More information available at URL: <http://www.redbeemedia.com>

programmes. This classification has been done according to the information that the different broadcasting channels provide about the cartoon series in their own websites.

The school audience in this research, however, is up to 10 years old, rejecting the cartoon series recommended for ages 10 and up. Thus, it will be possible to find out whether the subtitles shown in school children's programmes differ considerably or not from the subtitles shown in preschool children's programmes, and whether the latter provide subtitles at all or not. The different needs and abilities of the target audience, as will be seen in Chapter Four may be a determining factor in deciding subtitling strategies. In addition, the differences in topics, expressivity and amount of dialogue, among others, will have an influence on the SDH approach to take.

5.1.4 Methodology

In the process of subtitling, the subtitler makes a particular decision taking into account the audiovisual product, as well as its target audience. Thus, choices are made subjected to various constraints that extend beyond the mere (audiovisual) text and the languages involved in the process. Therefore, according to Karamitroglou (2000: 15), 'conducting research into this area [...] should be accompanied by a thorough investigation and analysis of socio-cultural factors.' This task was not feasible, as the scope of this investigation could not be widened in that direction. What seemed more effective for the purpose of this research is to study the subtitling outcomes of each of the programmes.

Two of the main methods for investigating norms have been adopted in this research. The **observation** of subtitlers' behaviour has been followed by the **collection** of all instances of non-verbal information conveyance in children's programmes. The former has the goal of investigating the variety and irregularity of subtitlers' behaviour throughout the audiovisual sample, while the latter is aimed at showing whether subtitlers' behaviour contributes towards the establishment of a norm, generated by the lack of explicit recommendations on subtitling for deaf children (see Chapter Two).

All the non-verbal information extracted from the subtitles of the aforementioned audiovisual materials recorded (Table 1) was collected in a workbook database designed with Microsoft Excel. The workbook contains three spreadsheets: one for sound effects, another for paralinguistic features and a last one for music. Even though the latter is not

at the centre of the research in hand, it was interesting to see the strategies used to convey it. These spreadsheets will allow the descriptive analysis to be both quantitative and qualitative. A general overview in terms of quantity of subtitled programmes and non-verbal information conveyed will be presented; as well as a more detailed presentation on how, where and when the non-verbal information is provided within the subtitles.

Therefore, it will be possible to provide quantitative descriptions on the regularity of behaviour in recurrent situations of the same type (Toury, 1995: 55), as well as to classify the repetition of “correct” performances —according to the existing guidelines— on consecutive “correct” occasions, and to quantify errors and deviations, i.e. to study the subtitlers’ behaviour. Thus, it will be possible to determine the suitability of a behaviour, and the manoeuvres between all the factors which may constrain the subtitling activity, which are prerequisites for becoming a subtitler within a cultural environment (*ibid.*: 53).

The quantitative research perspective will be extracted from the columns of the spreadsheet. The qualitative research perspective, on the other hand, will be analysed according to the various parameters included in the rows. Given the different nature of the features under study, some of these parameters required a specifically tailored pattern of analysis. For instance, the importance of visibility or invisibility in sound effects becomes an irrelevant parameter in tone/mood spreadsheet. However, some parameters, such as position, format or distinction from verbal utterances, were observed in the three spreadsheets, since they apply to every feature. In addition, all spreadsheets contain general information about the audiovisual product, such as the name of the series, the title of the episode, the running time, the TV channel or the production and captioning companies, which may show a variety of subtitling strategies.

The main focus of the analysis lies on labels, which have been recorded exactly as they appear in the subtitles in terms of formatting (colours, italics, capitals, brackets, etc.), although this information has also been specified in the column *Format*. Information about their linguistic form, positioning on screen, volume or source have been analysed, since they would most likely determine the contents of the label. Not only have labels been introduced in the analysis regarding tone and mood features, but also other elements that denote intonation, emotion or emphasis, such as interjections, since they sometimes provide the same information as a label, without the need to invade the screen.

One of the limitations of this study is the non-inclusion of absent labels that should have been included in the subtitles, due to their relevance in the plot. Relevance of sound and tone or mood conveyance, though, is usually a result of subjective practice. Neves (2005: 244) advises thinking carefully if the information we are about to provide is ‘decisive for the comprehension of the whole or if it reduces the processing load.’ Therefore, a column entitled *Visible or invisible?* has been included in the *Sound effects*’ spreadsheet to give some indication of how many sounds which are visible are rendered. On the other hand, in the *Paralinguistic information* spreadsheet there is only the column *Comments* to annotate whether the label was necessary or not. The particular nature of animated cartoons might determine the number of labels about tone and mood, as characters’ facial expressions are not always clear.

Besides the simple observation of current practices, it seemed interesting to also compare these practices with the existing SDH recommendations according to the language involved in the subtitles. On the one hand, the *ITC Guidance on Standards for Subtitling* (1999) and its update *Ofcom’s Code on Television Access Services* (2012 and 2015), and the *BBC Online Subtitling Editorial Guidelines VI.1* (2009) in the English case. On the other, the Spanish *Norma UNE 153010* (2003) and its updated version *Norma UNE 153010:2012* will be used for programmes subtitled in Spanish and Catalan. In the ever ongoing development of SDH, it might be necessary to avoid following the established rules. As stated in Chapter Two, existing recommendations do not include specific guidelines about subtitling for deaf children or are too general for the different profiles existing within the d/Deaf audience.

The main goal of this comparison is the examination of the impact these recommendations may have on the translational behaviour of subtitlers, who make decisions that are sometimes motivated by other actors involved in the SDH process, such as broadcasters or producers. SDH subtitlers are the mediators between the audiovisual product and the intended audience of accessible subtitles. However, as Toury suggests for translators, SDH subtitlers may also perform ‘under different conditions’ and may adopt different strategies that will result in ‘markedly different products’ (1995: 53). That is actually what must be avoided when subtitling for deaf children. Subtitlers should use a shared code, in order to present consistency throughout programmes for SDH subtitles to become active and effective. Consistency will also help to create a norm, which would ease the task to read subtitles and enjoy the audiovisual programme at once. This project

aims at setting up new accessible subtitling strategies that are comprehensible to all deaf children. These strategies may also become universal, since the strategies used overcome language and cultural barriers. The examination of what is currently been done in comparison to what is established in the existing guidelines might be a first step towards an alternative way of providing SDH in order to fulfil the needs of the intended audience.

5.2 Corpus analysis

The subsections that follow are grouped into languages, i.e. a subsection for English programmes and another for Spanish and Catalan, even if the two languages follow different SDH guidelines. The comparison between the recommendations established regarding non-verbal elements conveyance and current television practices in programmes targeted at children is presented. The quantitative and qualitative results from the analysis are also examined. In order to provide an at-a-glance overview of the findings, programmes screenshots are provided, although in some cases, extracts from Appendix II might be quoted.

5.2.1 Existing guidelines vs. current practices: the case of British television

With regard to sound effects (SEs), ITC guidelines (1999: 16) recommend using white capital letters on a red background, as well as the displacement of sound effects subtitles towards the sound source to ensure the distinction between sound effects and speech. BBC guidelines (2009: 34), on the other hand, advise that sound effect labels should be ‘typed in white caps’, placed to the left of screen —unless the sound source is clearly to the right— and brief —subject + active, finite verb.



Figure 20 and 21: Examples of sound effects conveyance in preschool children’s programmes.
Sources: *Dora the Explorer* (Nick Jr.) and *Shaun the Sheep* (CBBC).

SEs are mainly provided in capital white letters on a black background in preschool children’s programmes such as *Dora the Explorer* or *Shaun the Sheep* (figures 20 and 21 above). The former, however, opts for using brackets additionally. Both layouts, surprisingly, coincide with their paralinguistic information’s layout (see figures 22 and 23). Although they are clearly differentiated from speech, these similarities in layout may cause confusion among the youngest group under study. Thus, following ITC’s advice of using red background (Figure 24) for sound effects seems to be recommendable to avoid confusion.



Figure 22 and 23: Examples of paralinguistic information conveyance, which coincide with the aforementioned sound effects layout.
Sources: *Dora the Explorer* (Nick Jr.) and *Shaun the Sheep* (CBBC).

In school children’s programmes, however, the distinction is clearly made in some cartoon series, although inconsistency occurs quite often. In *SpongeBob SquarePants* series, depending on the episode, sound effects are presented in white capital letters either on a red or black background (figures 24 and 25).



Figure 24 and 25: Examples of different sound effect layouts within the same cartoon series.
Source: *SpongeBob SquarePants* (NickToons).

This inconsistency in style will not have such a negative impact on children's comprehension of the programmes, as long as it is maintained throughout the episode. Needless to say, though, that if a consensus could be reached to subtitle all programmes using the same strategies, it would make it easier for deaf children to identify the feature that is rendered.

In other series, such as *Fanboy and Chum Chum*, inconsistency can even be found within the same episode (figures 26 and 27), which may confuse the audience and, consequently, reduce children's reading speed. This lack of consistency may be due to (1) the fact that the subtitling guidelines available in the UK are not prescriptive, (2) the fact that subtitling is outsourced and each subtitling company applies its own stylistic guidelines or (3) because one of the subtitles renders the sound by means of onomatopoeia while the other opts for a label. Whichever is the reason, it seems obvious that subtitling strategies are adopted according to broadcasters' preferences, to the policy of external subtitling companies in charge of the subtitles or, even, to the decisions made by subtitlers themselves.



Figure 26 and 27: Examples of two different sound effect layouts within the same episode.
Source: *Fanboy and Chum Chum* (NickToons)

Arthur, on the other hand, is the only programme that presents consistency throughout the series. White capitals on black background are the choice to render sound effects (Figure 28), although it coincides with the layout of paralinguistic information conveyance (Figure 29).

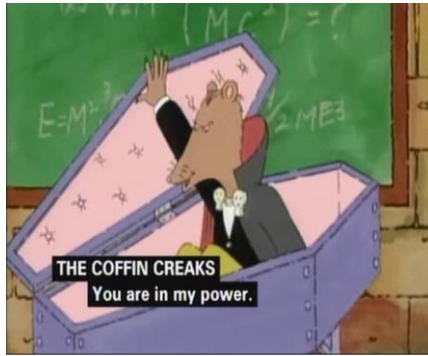


Figure 28: Arthur's (CBBC) sound effects conveyance.



Figure 29: Arthur's (CBBC) paralinguistic information conveyance.

As for paralinguistic features (PFs) both ITC and BBC guidelines suggest some strategies to account for different attitudes found in utterances, such as:

- capital letters to indicate shouted or screamed words;



Figure 30: Example of shouted word conveyance. Source: *Arthur* (CBBC)

- capital letters (Ford, 2009: 21) —better not to overuse this device— or change in colour (ITC, 1999: 12) to stress an individual word;¹¹⁹

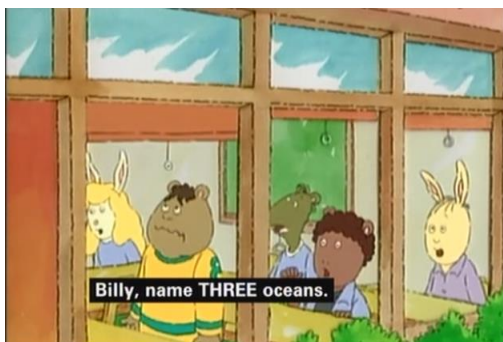


Figure 31 and 32: Examples of word emphasis. Sources: *Arthur* (CBBC) and *Dora the Explorer* (Nick Jr.).

¹¹⁹ If the stressed word is “I”, a change in colour is the recommended option to mark the emphasis, as seen in Figure 24.

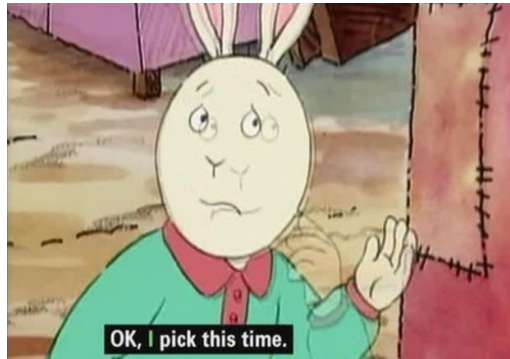


Figure 33: Example of an already capitalised word emphasis. Source: *Arthur* (CBBC).

- labels to indicate whispered speech. When no time is available, brackets around whispered speech are the preferred alternative (Ford, 2009: 21);



Figure 34 and 35: Examples of different strategies to convey whispered speech. Sources: *Dora the Explorer* (Nick Jr.) and *Arthur* (CBBC).

- it is recommended to convey sarcasm and irony by “(!)” and “(?)”, respectively, immediately following the speech (ITC, 1999: 13) (Ford, 2009: 21);



Figure 36: Example of sarcasm conveyance. Source: *Arthur* (CBBC).

- incredulous tone can be indicated by means of punctuation combination, like “?!” (Ford, 2009:21);

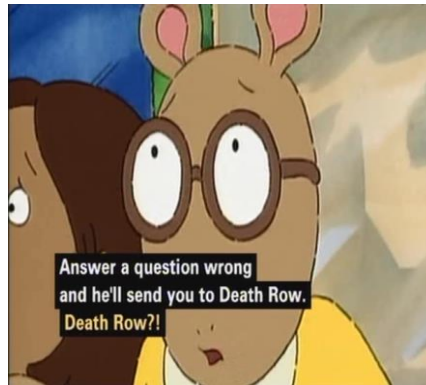


Figure 37: Example of incredulous tone.
Source: *Arthur* (CBBC).

- hesitation and interruption is conveyed by inserting three dots at the point of pausing (Ford, 2009: 25);



Figure 38: Example of hesitation.
Source: *Fanboy and Chum Chum* (NickToons).

- stammering can be rendered by hyphens between repeated sounds — letters to show a stammer should follow the case of the first letter (Ford, 2009: 26).

Regarding the layout of music, only the BBC (2009: 31) recommends using capital letters if incidental music is part of the action and crucial for viewer’s understanding. It seems that all the programmes analysed capitalise their music references. However, as in SEs and PFs, some programmes add brackets (Figure 39).



Figure 39 and 40: Examples of music conveyance’s layout in preschool and school children’s programmes. Sources: *Dora the Explorer* (Nick Jr.) and *Arthur* (CBBC).

In relation to songs, both guidelines recommend providing the lyrics,¹²⁰ pointing the importance of their conveyance in programmes targeted to younger audiences (ITC, 1999: 16). To show that they are lyrics, it is advisable to place a hash sign (#) at the beginning of every subtitle (Figure 42) and at the beginning and the end of the final song subtitle. However, some programmes, such as *Dora the Explorer* (Figure 41) and *Fanboy and Chum Chum*, place the hash sign at the beginning and the end of every subtitle.



Figure 41 and 42: Examples of lyrics conveyance’s layout in preschool and school children’s programmes. Sources: *Dora the Explorer* (Nick Jr.) and *Shaun the Sheep* (CBBC).

¹²⁰ Song lyrics should be subtitled verbatim, i.e. no editing is allowed; if not, whole verses may be omitted (ITC, 1999: 16).

5.2.2 Existing guidelines vs. current practices: the case of Spanish television

With regard to sound effects (SEs), both Norma UNE, as stated in Chapter Three, establish that SEs should be made visible by locating them at the top right hand side of the screen to be distinguished clearly from verbal utterances, as well as by conveying them in red or blue¹²¹ on white background (AENOR, 2003: 13 and 2012: 8). They also recommend to use both sound description and onomatopoeia when subtitling children's programmes (*ibid.*).

As can be seen in figures 43 and 44, Spanish programmes tendency is to follow the “rules” —although some of them do not provide the white background—, whereas Catalan programmes (Figure 45) seem to decline them and prefer to locate sound effects subtitles in the centre of the screen, in white without background. This is due to the fact that Catalan programmes are not subtitled as per UNE's recommendations. They have their own in-house style guidelines, as explained in Chapter Two. These TVC guidelines suggest that both PFs and SEs should be placed at the bottom part of the screen, centred. In addition, white capital letters on black background are recommended (1993: 14).



Figure 43 and 44: Examples of sound effect conveyance in Spanish preschool children's programmes. Sources: *Chuggington* (Clan) and *Looney Tunes* (Boing).

¹²¹ According to *Norma UNE* (2003: 7), both blue and red colours on white background have equal visual characteristics. Therefore, there is no preference for one or another.



Figure 45: Example of sound effects conveyance in a Catalan preschool children's programme. Source: *La Lua i el món* (Super3-TVC).

However, in some cases SE subtitles coincide with dialogue subtitles on screen. In these instances, SE subtitles are displaced in order to differentiate them clearly from utterances. As seen below (figures 46 and 47), the displacement is just to the bottom left side of the screen when the utterance fits in a single line subtitle, whereas the displacement is towards the top left hand side of the screen when the utterance is displayed in two-liners.¹²² Whichever is the reason for a different placement, it may be understood as inconsistency. In addition, these changes in position may confuse audiences.



Figure 46 and 47: Examples of subtitles' displacement when coinciding with dialogue on screen. Source: *Les tres bessones* (Super3-TVC).

In relation to paralinguistic features (PFs), former and updated *Norma UNE* recognise the need for providing information about utterance's characteristics to help the audience to have the right access to the contents as long as it cannot be deduced from the actor's performance. According to them, PFs should be rendered in the same colour

¹²² Term to refer to subtitles of two lines (Díaz Cintas, 2003: 153).

allocated for the character, in brackets and capital letters, as well as locating it in the same line preceding the utterance. The majority of programmes follow this recommendation, as seen in the figures below:



Figure 48 and 49: Examples of paralinguistic information conveyed in Spanish preschool and school programmes. Sources: *Pocoyó* (Clan) and *George de la jungle* (Clan).



Figure 50, 51 and 52: Examples of paralinguistic information conveyed in Catalan preschool and school programmes. Sources: *Les tres bessones*, *Rovelló* and *Doraemon* (Super3-TVC).

In some instances, PFs are conveyed as SEs, as in figures 53, 55 and 57. It might be to differentiate mood from tone (figures 54 and 56), since it has been observed that every subtitle placed as SE belongs to mood.



Figure 53, 54, 55, 56 and 57:
Examples of tone and mood differentiation in layout and position.
Sources: *Looney Tunes* (Boing), *El show de Garfield* (Boing)
and *Los Lunnis* (Clan).

Inconsistency was also found within the same programme and the same episode, as illustrated below. In both cases mood is conveyed (*pedorreta* – *ríe*¹²³ / *ronca*¹²⁴), however, their layout is completely different: *pedorreta* and *ríe* are centred on the screen and are subtitled in the colour allocated to the character, while *ronca* is placed at the top right side of the screen, in blue letters without background.



Figure 58 and 59: Examples of inconsistency in paralinguistic information layout within the same episode. Source: *Chuggington* (Clan).

One of the suggestions found in *Norma UNE* (AENOR, 2003) is using emoticons in order to invade the screen as little as possible. Instead of emoticons, Catalan programmes tend to use exclamations (Figure 60), interjections (Figure 61), vowel extensions (Figure 62) or combinations of punctuation (Figure 63) to reproduce the contextual information surrounding the utterance, i.e. paralinguistic information.



¹²³ Raspberry – laughs (my own translation).

¹²⁴ Snores (my own translation).



Figure 60, 61, 62 and 63: Examples of paralinguistic information conveyed without labels.
Source: *Les tres bessones* (Super3-TVC).

Last but not least, AENOR did not provide much detail about music conveyance. It only stated that song lyrics should be presented in blue letters on yellow background. TVC guidelines, on the other hand, recommend identifying songs with the label “CANÇÓ:” before the song lyrics. In cases where the song is meaningful for the action, indication of which kind of music —or even the title— should be provided.

Catalan subtitles, as seen in the figures below, subtitle songs in the colour allocated to the character singing, without background. In addition, subtitles start and finish with a hash sign (#), which indicates that it is not a simple utterance but a song. Punctuation is also conveyed in every subtitle.



Figure 64 and 65: Examples of lyrics conveyance in Catalan preschool and school programmes.
Sources: *La Lua i el món* and *Rovelló* (Super3-TVC).

Spanish programmes, on the other hand, do not make obvious that the subtitle provides lyrics.



Figure 66: Example of lyrics conveyance in a Spanish preschool programme.
Source: *Los Lunnis* (Clan).

Besides, no reference is made regarding incidental music. Subtitles, though, take different approaches, which are listed below with examples mostly extracted from *George de la jungla* (Clan) series, the ones to provide more variety in incidental music:

- to render the atmosphere they provide;

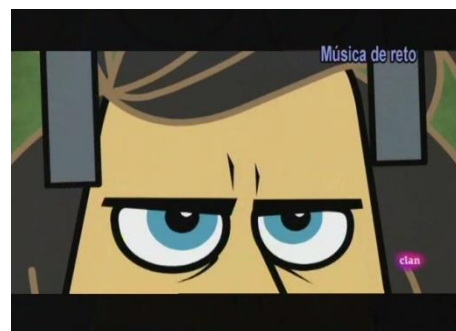


Figure 67 and 68: Examples of incidental music reproducing a particular atmosphere.

- the pace of the music;



Figure 69 and 70: Examples of incidental music pace conveyance.

- the instrument playing or



Figure 71: Specification of the instrument playing.

- just let the audience know that some music is being heard.



Figure 72: Example of incidental music conveyance.

5.2.3 How many non-verbal features are conveyed in SDH

The conclusion reached after comparing current SDH guidelines against current SDH practices is that existing guidelines mainly concentrate on subtitles' *legibility*; that is on making subtitles visible and recognisable. Apart from differentiating non-verbal information from speech, guidelines should encourage *readability*, i.e. subtitles' comprehension, which is the other major SDH feature according to Gambier (2003: 179).

In the subsections that follow, the different strategies adopted to convey non-verbal information, which are hoped to complement the information already provided by the guidelines, will be presented both in terms of quantity and quality.

After the observation of 20¹²⁵ programmes in the three working languages—English, Spanish, and Catalan—, evidence of the differences and similarities when subtitling for preschool or school children is provided.

The chart below illustrates the total number of subtitled programmes among the ones analysed. Only 3 programmes out of the 20 chosen for the analysis do not provide subtitles (15% of the total). Surprisingly, these 3 programmes belong to the English cartoons group, as opposed to 100% subtitling in the other two languages in spite of the relatively recent SDH activity in Spain.

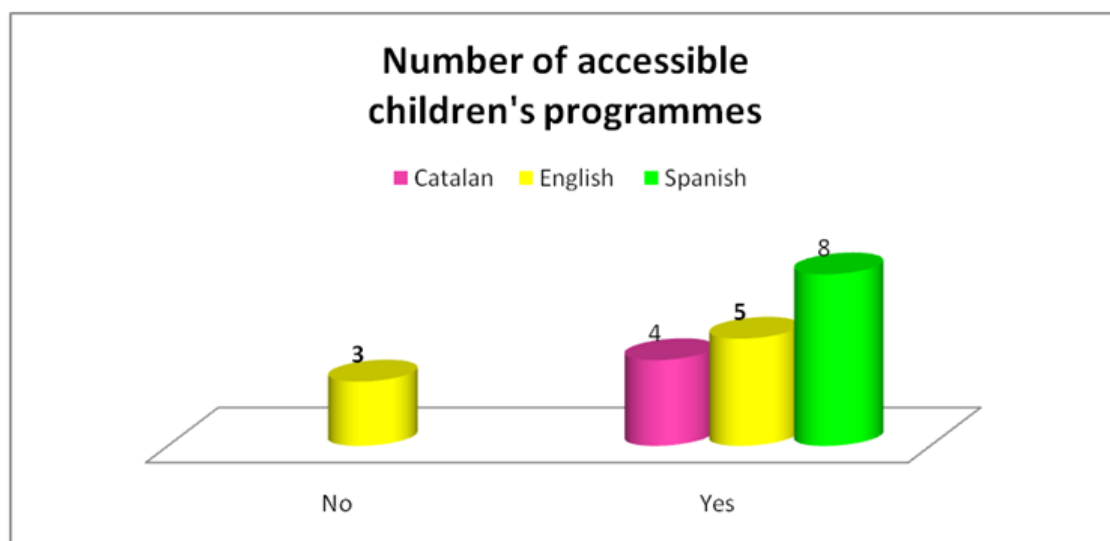


Figure 73: Total of programmes analysed that contain subtitles.

¹²⁵ Four programmes per each age group in English and Spanish. Two programmes per each age group in Catalan.

Regarding the English channels, only two out of the four preschool children's programmes (Figure 74) analysed and three out of the four school children's programmes (Figure 75) provided accessible subtitles.

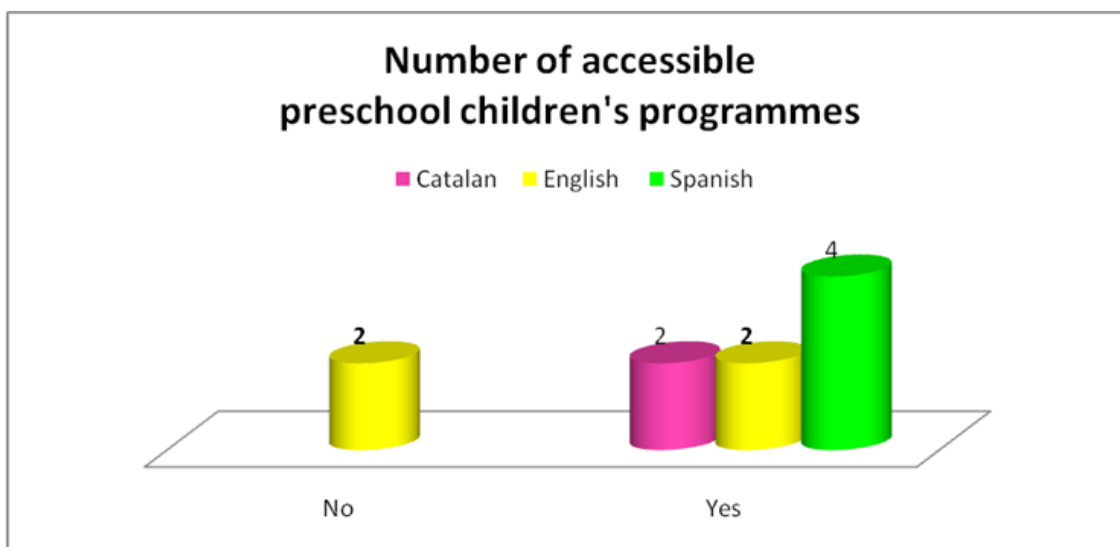


Figure 74: Total of preschool children's programmes subtitled.

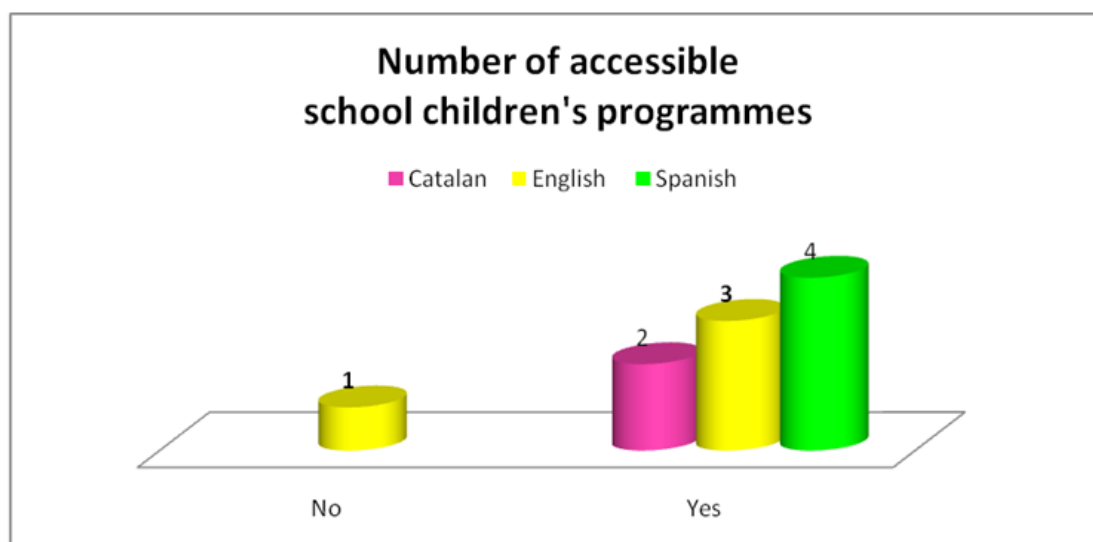


Figure 75: Total of school children's programmes subtitled.

Had it not been for the school programme without subtitles, it could have been argued that preschool children do not require subtitles, since they still do not have the ability to read. This issue, however, needs to be further investigated with other research, such as studies with deaf children belonging to both age groups, since there is no clear

evidence that the previous statement is completely true. In this respect, deaf children's educator Marta Vinardell (Appendix II) claims that:

Deaf children learn how to correlate the visual stimuli that refer to the auditory stimuli. When they start watching TV, their families are aware that they need to play the subtitles mode although their children do not understand the written words on screen. These words will become a stimulus that, little by little, will be assimilated with a meaning, at the same time as they learn to read and write.¹²⁶

On the other hand, it is not possible to find a justification for the omission of subtitles in school children's programmes. Their intended audience should be perfectly able to read and follow the subtitles' pace. In this case, the only possible explanation is that some particular channels still do not provide subtitles at all. Since the sample for this analysis was too small and only covered one or two programmes per channel, it is not possible to assert that certain channels do not provide any SDH subtitles.

Among all the data collected, labels for PFs account for a vast majority, with 1,275 out of 1,661 instances¹²⁷ recorded (77%). Following this amount, although not closely, are SEs with 296 (18%), and, finally, only 88 instances (5%) of music conveyance.

¹²⁶ My own translation.

¹²⁷ The term labels has not been used in reference to *paralinguistic features*, since not only have labels been included in the analysis, but also other linguistic elements that denote intonation/emotion or emphasis, such as interjections.

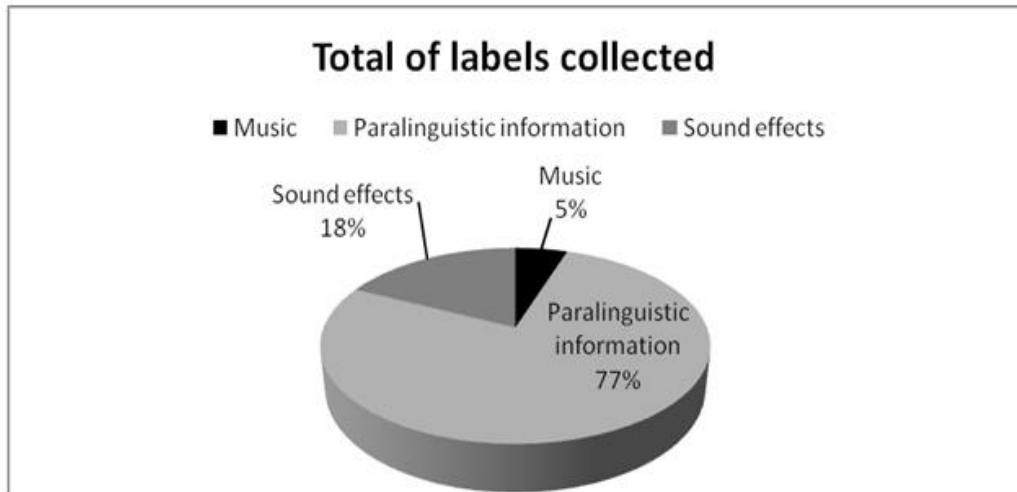


Figure 76: Percentage of type of information collected.

When dividing these amounts by language, as observed in the chart below, English programmes convey more non-verbal information in their subtitles, with 798 labels in total. Spanish programmes, on the other hand, presented a total of 586 labels. This does not seem a huge difference between both languages; however, it has to be taken into account that not all English programmes (only 5 out of 8) provided accessible subtitles, whereas all Spanish programmes did. Therefore, this gives evidence to the fact that English programmes tend to convey more non-verbal information through subtitles, paralinguistic information being the feature most rendered.

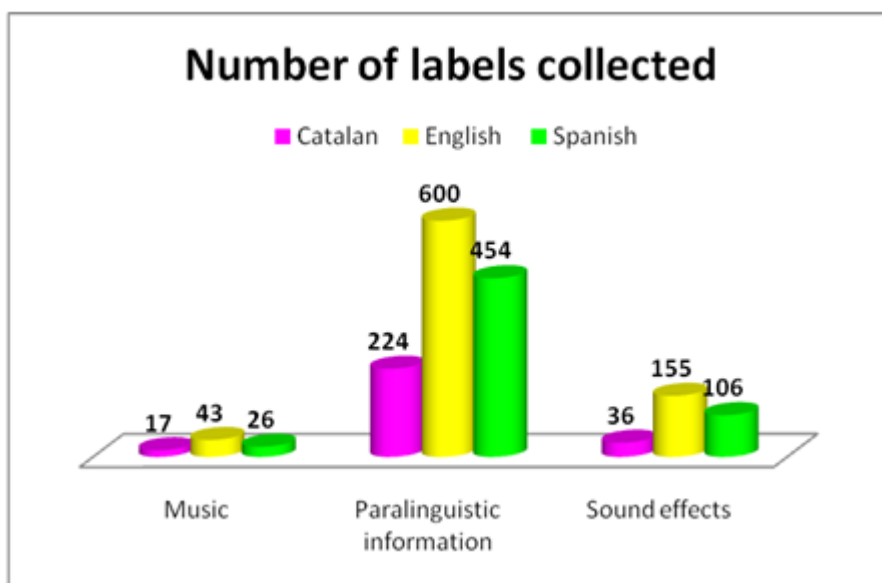


Figure 77: Total of labels collected per feature and language.

Particularly concerning SEs, the chart below shows the differences in conveyance between the two age groups and the three languages under study. The goal of presenting the results of both groups side by side is to see if one conveys more non-verbal information than the other and why. In this case, Catalan and English programmes follow the same pattern, in which preschool children’s programmes tend to render a higher number of sound effects than school children’s programmes, which could be due to the fact that preschool children need more explanation, since they may be less able to infer sounds from images.

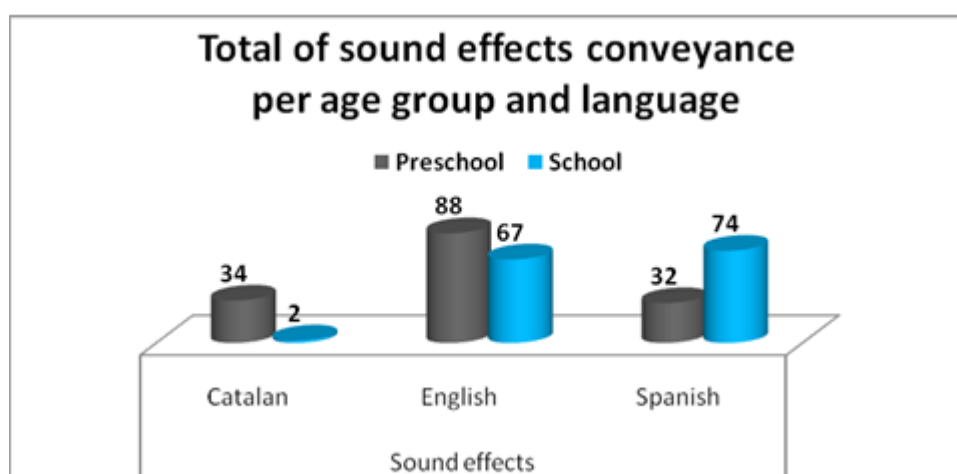


Figure 78: Total of SEs conveyed per age group and language.

Having said that, Spanish figures do not follow the aforementioned hypothesis, since school programmes contain considerably more SE labels than preschool programmes. It can be argued, though, that it makes more sense to convey more sound in school children’s programmes, since they will be able to read and understand the labels, which may not be the case of preschool children, despite Marta Vinardell’s suggestion.

However, there is no need to subtitle every single sound appearing in the audiovisual product. According to the ITC guidelines¹²⁸ (1999: 15), *Norma UNE* (2012: 13), and TVC’s style guide (1993: 12), only relevant sound effects which are not immediately obvious from the visual action should be subtitled; i.e. “invisible” sounds. That is, that “visible” sounds or sounds that may become apparent in the subsequent action are not to be in the subtitles.

¹²⁸ BBC guidelines (2009) also agree with this statement.



Figure 79: Example of visible sound.
Source: *Shaun the Sheep* (CBBC)



Figure 80: Example of invisible sound.
Source: *Shaun the Sheep* (CBBC).

The chart below (Figure 81) illustrates the number of visible and invisible sounds conveyed in the programmes analysed. Overall, the tendency is to subtitle any sound, in particular visible¹²⁹ ones, in spite of the guidelines that would recommend subtitling invisible sounds only. However, a possible justification to these results could be that subtitling visible sounds contributes to vocabulary acquisition, since the intended audience are children. The fact of linking a visible sound, which they cannot properly hear, with a linguistic reference may help deaf children to access the sounds belonging to the world that surrounds them, as Pepita Cedillo states (Appendix II):

Deaf children identify the sounds conveyed in the subtitles through the visual support of the image. Most of the time, subtitles are meaningless until they appear on screen together with the sound they represent. It is only at this point when children are able to associate the sound with its linguistic reference.¹³⁰

¹²⁹ Sounds that are evident from the subsequent scene were included in the visible sounds group.

¹³⁰ My own translation.

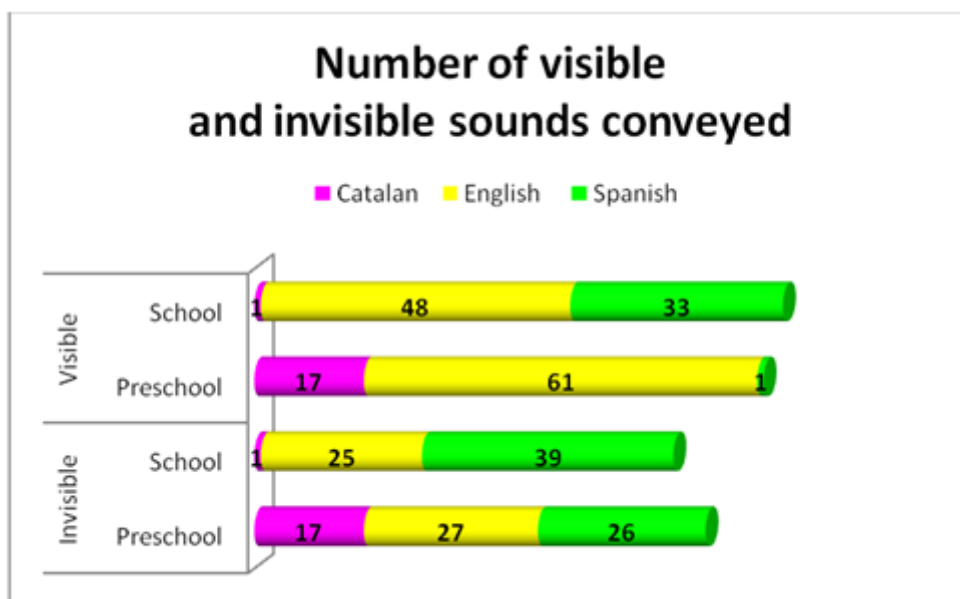


Figure 81: Total of visible and invisible sound effects conveyed per age group and language.

Another explanation might be that subtitlers, who usually do not have hearing problems, are not completely aware of invisible sounds, i.e. they process the invisible sound effects unconsciously, since they receive the audiovisual programme as a whole. Thus, they can miss some important invisible sounds. Unfortunately, it has not been possible to include all the “invisible” sounds that should have been subtitled, of which there are quite a few. A clear example belongs to the Spanish *Geronimo Stilton* series. In one scene, two bodyguards are guarding a traitor. Suddenly, as soon as a robbery alarm sounds, the bodyguards run away leaving him behind. As can be seen in Figure 82, there is no sound conveyance; thus deaf children will not understand what is happening.





Figure 82, 83, 84 and 85: Sequences of a scene in which invisible sound needed to be subtitled for a good understanding of the action. Source: *Geronimo Stilton* (Boing).

According to the guidelines, sometimes there is no need to subtitle an “invisible” sound, since the scene to follow may give the audience clues to understand the previous one. However, this is not always the case as can be seen in the example below. Here, the scene, which takes place on a quiet island, has nothing to do with the previous one (Figure 82) in which there was an invisible sound. Consequently, deaf children will miss relevant information for the comprehension of the storyline.



Figure 86: Image of the subsequent scene, from which the invisible sound cannot be inferred. Source: *Geronimo Stilton* (Boing).

As the results suggest, there is a lack of understanding between producers and consumers of SDH. On the one hand, as Vinardell and Cedillo suggest, deaf people demand subtitling any sound relevant to the action, either visible or invisible. On the other, experts and academics state that re-codifying visible sounds into subtitles should be avoided, as it would be redundant for the audience and it might contribute to a loss of visual content, either invading the visual content of the programme or lowering the time available to read the verbal utterances (Zárate, 2011). The only exception is when visible sounds convey extra nuances on “how”, “why” or “where” the sound is heard (Neves,

2005: 244). Further research, thus, needs to be carried on in this respect, with the main goal of SDH: the fulfilment of the needs of the intended audience, in this case deaf children.

5.2.4 How non-verbal features are conveyed in current SDH

The most widespread tendency for SE conveyance used to be labels, which rendered sounds linguistically. According to Nina Weber's categorisation (2010: 20), depending on the statements included on them, labels can be *indicative*, *explanatory*, *elaborative* and *descriptive*. *Indicative* labels contain statements conveyed nominatively;¹³¹ while *explanatory* labels do convey information predicatively.¹³² *Elaborative* labels go more into detail how a sound is produced, providing the sound source. Finally, *descriptive* labels are used to highlight the quality of the sound heard, usually by means of adjectives and/or adverbs.

Although indication (44%) and explanation (26%) of sounds are still widely used, in children's programmes the tendency is moving towards the reproduction of sound (25%).

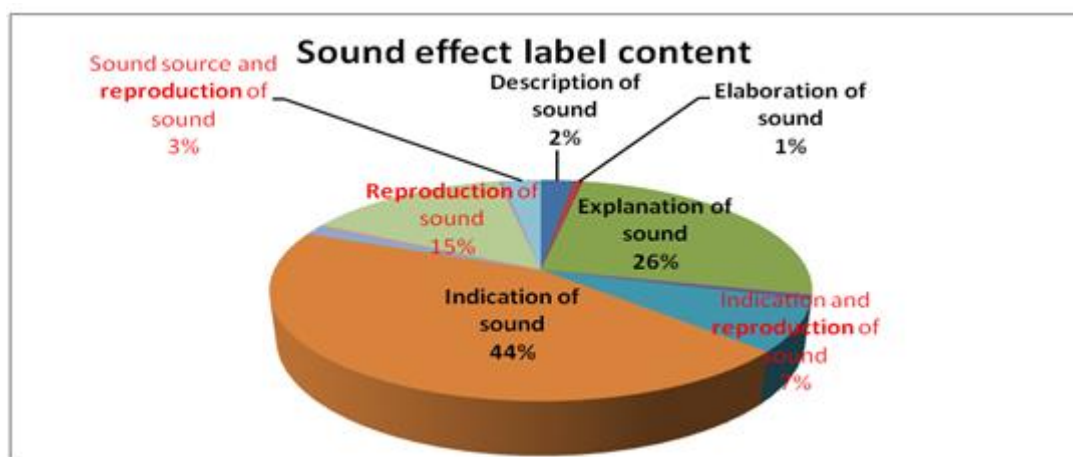


Figure 87: Informational content contained in sound effects labels.

Sounds may be unknown for the target audience, since deaf children may not have had the opportunity to hear them. Particularly in invisible sound conveyance, indication

¹³¹ Statements that have the shape of a noun, sometimes by means of verbs functioning as nouns, like gerunds.

¹³² Statements conveyed by means of a verb, which is most of the times accompanied by its subject.

or explanation of sound may be meaningless to deaf children, since they would need further specification. For example, indicative labels such as the Spanish “estruendo” [strong noise / confusion / din / racket] or the Catalan “soroll” [noise] are extremely wooden, since the words they contain are either highly polysemous or too general, and they do not provide any clue to the cause of the sound, its pitch or its length.



Figure 88: Example of indicative sound label.
Source: *Les tres bessones* (Super3-TVC).



Figure 89: Example of indicative sound label.
Source: *George de la jungle* (Clan).

Hearing children can perceive these nuances in the sounds they hear and recreate the story as it was planned. For this reason, as illustrated in the charts above and below, subtitles targeted at children are increasingly introducing onomatopoeic spellings that reproduce sounds as an alternative to descriptive and elaborative labels.

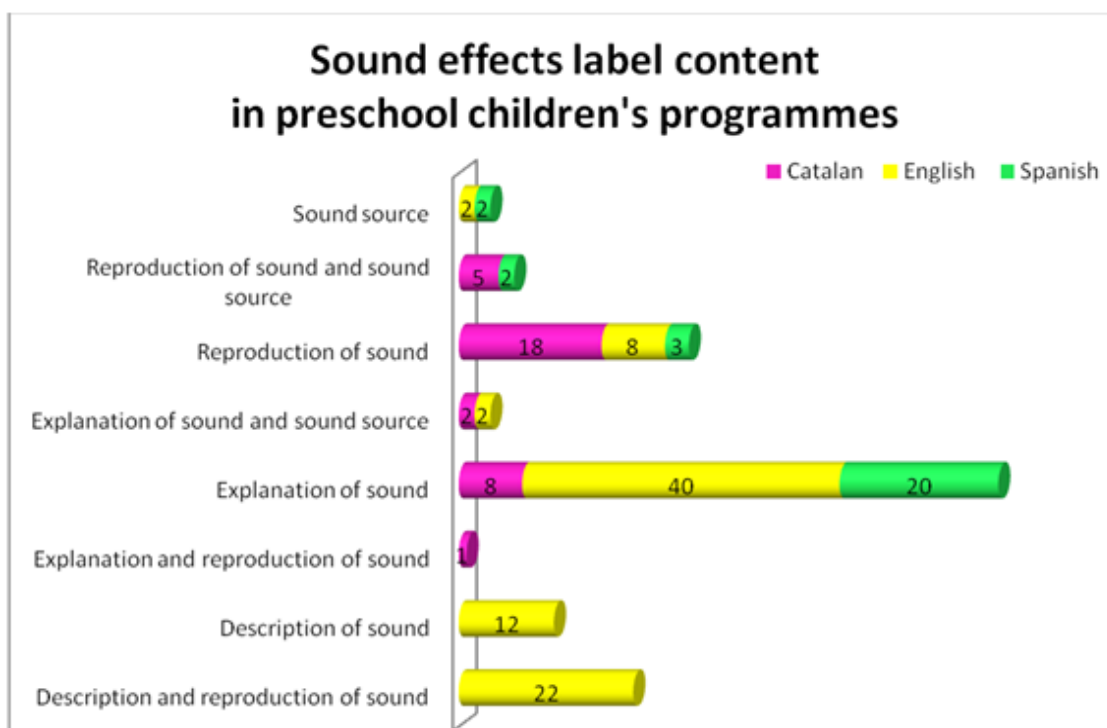


Figure 90: Informational content of sound effects labels in preschool children’s programmes.

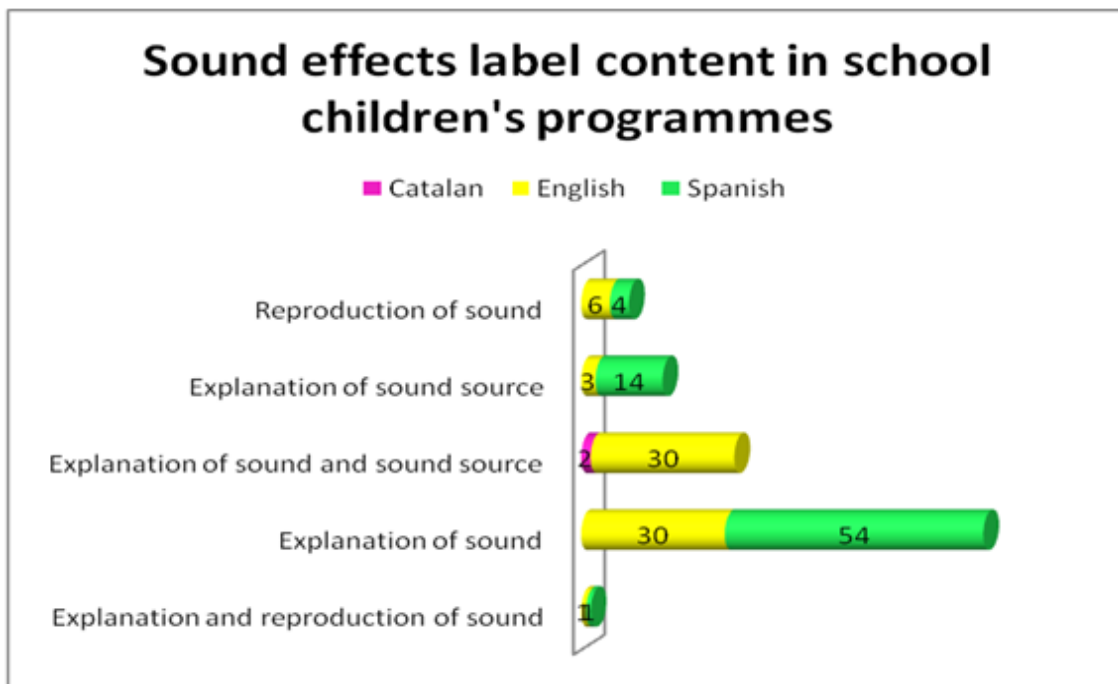


Figure 91: Informational content of sound effects labels in school children's programmes.

Hence, the choice of the onomatopoeia can contribute to the pitch of the sound by means of vowels (*i/e* for high pitches, as in *beep*; *o* for low pitches, as in *bong*), or to the length by means of vowel extensions (*piiip*), although 'even the most accurate representation of a sound is likely not be as evocative as the sound itself' (de Linde and Kay, 1999: 14).



Figure 92: Example of vowel extension to reproduce the sound length.
Source: *Les tres bessones* (Super3-TVC).

Catalan programmes follow their stylistic guidelines and lead the tendency towards the use of onomatopoeia, whereas Spanish and English programmes still opt for sound explanation (47% in English programmes and 74% in Spanish), followed by English sound description (26%) and Spanish sound source (19%). In contrast, in Catalan programmes, 53% of sound effects were conveyed by means of onomatopoeia, such as *rau-rau*, *pum!*, *crac*, *xof* or *toc-toc*. All the onomatopoeic spellings, however, were found in preschool children’s programmes, which is not a coincidence. Onomatopoeia is faster to read and easier to remember, i.e. to retain information. Deaf preschool children’s linguistic development and reading ability are lower than those of deaf school children’s; hence, onomatopoeia may contribute to a deeper understanding and, consequently, greater enjoyment of the programme.



Figure 93 and 94: Examples of onomatopoeia conveying sound.
Sources: *Lua i el món* and *Les tres bessones* (Super3-TVC).

Reproduction of sound is followed by explanation of sound, which constitutes 23% of the labels collected; reproduction of sound and sound source sums 15%, leaving far behind explanation of sound and sound source (6%) and explanation and reproduction of sound (3%). It is worth remarking the 15% of reproduction of sound and sound source, since current subtitling practices —mainly by Super3, and Clan to a lesser extent— add reproduction of sound in indicative labels, as the Spanish *Norma UNE* (2003: 13) recommends for children’s programmes, in order to confer more accurate effects. Therefore, the information provided is more complete, in the sense that deaf children can have a nominative reference of the sound and an idea of what this sound is like, through its onomatopoeic spelling.



Figure 95 and 96: Examples of indicative labels together with reproduction of sound.
Source: *Les tres bessones* (Super3-TVC).



Figure 97: Examples of indicative labels together with reproduction of sound.
Source: *Pocoyó* (Clan).

In regard to PFs, two main categories have to be distinguished: tone and mood. *Tone* can be described as the way words are uttered, the volume, the pitch, the intonation or even the breathing type affecting them (Merriam Webster Dictionary, 2015). *Mood*, on the other hand, includes all non-linguistic elements articulated by the character, such as a groan or laugh, and that may or may not surround utterances (*ibid.*). Tone tends to be more subjective and difficult to interpret, since it can contribute towards a change in the meaning of or be contradictory to the words uttered. Mood, on the other hand, is more objective, it accounts for a non-linguistic sound, which, at the same time, may have a meaning, depending on every particular situation. Perhaps, this difference in objectivity and subjectivity is also what may cause the rift between tone and mood conveyance, in which tone constitutes only 32% of the total, while the 68% remaining corresponds to mood.

At the beginning of this section, the importance of PFs was demonstrated by their constituting 77% of the total of labels collected (see Figure 76 above). The chart below (Figure 95) reasserts this statement, since in Catalan 224 labels out of 283 corresponded

to PFs, in English it was 590 out of 828 and in Spanish it was 453 out of 596. Therefore, paralinguistic information becomes an essential feature to be included in SDH subtitles, in order to facilitate the intended audience's proper understanding of the action. Prelocutive deaf children,¹³³ for instance, are likely to have difficulties in understanding Figuretive meanings or ironies. Francesc Morón, father of a deaf child, claims that his son is not always able to catch the intended meaning, because he does not have access to the intonation or emphasis employed while uttering the ironic statement (Appendix III). The linguistic development of deaf children, thus, could be a determining factor when deciding whether to account for every single paralinguistic feature heard in the programme.

The chart below accounts for the noticeable differences in paralinguistic information conveyance between the two age groups. Preschool subtitled programmes tend to convey fewer PFs. This could be due to the fact that images in programmes addressed to the youngest group are normally more visually expressive, as has been argued previously. This explanation could be contradicted by the results obtained from the programmes subtitled in Catalan, in which paralinguistic information in preschool children's programmes constitutes 82% of the total of paralinguistic information rendered in this language. It is, undoubtedly, a significant difference compared to 40% and 32% of the English and Spanish programmes, respectively.

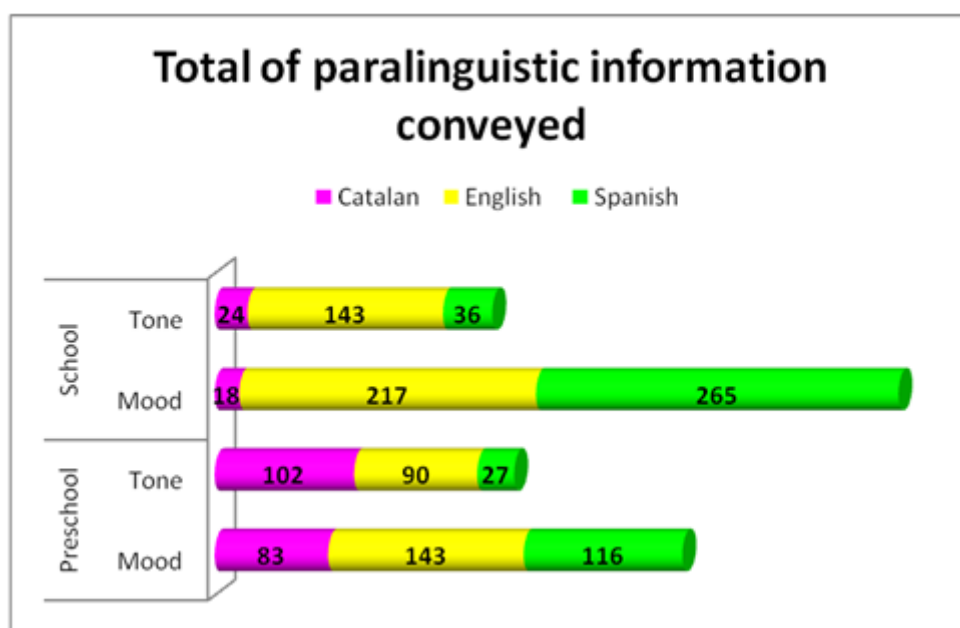


Figure 98: Numbers of paralinguistic information conveyed per age group and language.

¹³³ See Chapter Four, section 4.2.3.

A possible explanation for this fact is that one of the Catalan preschool children's programmes, *Les tres bessones*, lasts longer than the average time of the other programmes, which are about 25 minutes, and episodes are packed with adventures. The conveyance of every single tone or mood reference, though, can be seen as a way to help prelocutive deaf children to increase their vocabulary and to understand the possibility of playing with oral language, in which intonation, emphasis or different noises may contribute towards a meaning or another.

In general, two strategies have been observed to convey PFs: labels and within dialogues. The analysis suggests that the tendency is still to use labels, although some differences appear between the two age groups. As the chart below shows, preschool children's programmes tend to convey more paralinguistic information within dialogues than school children's. Catalan programmes, again, are at the top of the list, with 92% of paralinguistic information conveyed within dialogues, followed by English programmes (62%). The results corresponding to Spanish programmes, though, present an inverted tendency, since preschool's children's programmes use labels in 74% of the instances recorded.

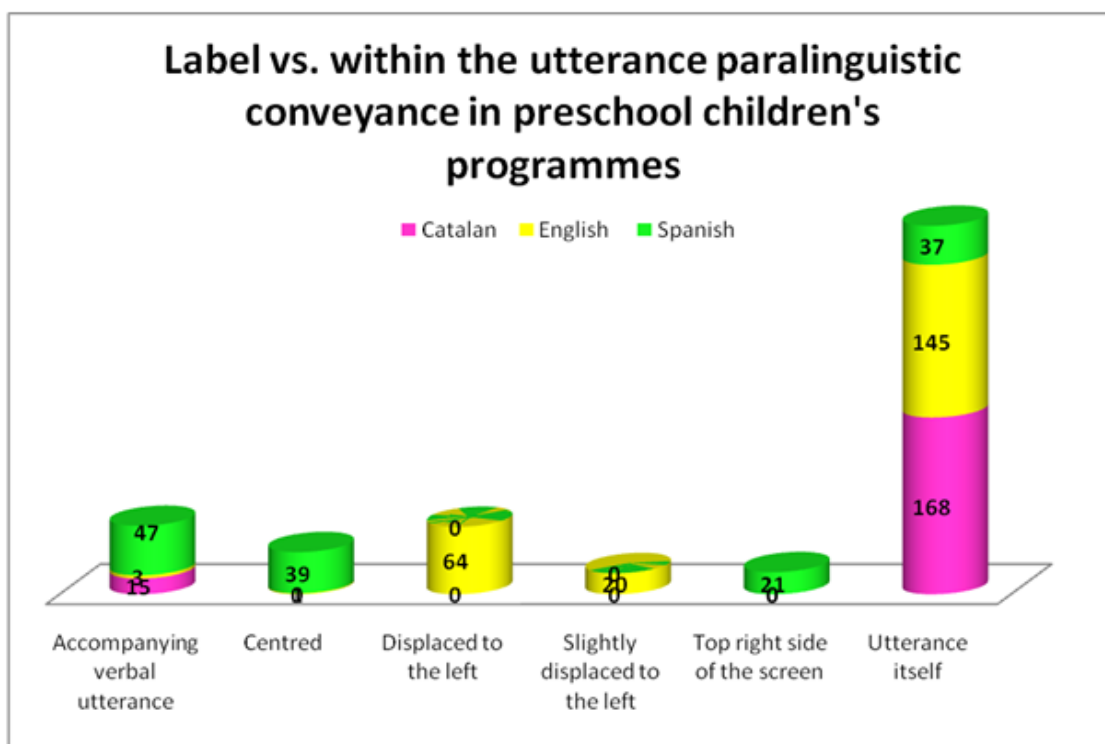


Figure 99: Type of paralinguistic information conveyance in preschool children's programmes.

School children's programmes, on the other hand, appear to convey more information through labels. The clearest example is English programmes, where 54% of the paralinguistic information is conveyed through labels, opposed to 38% corresponding to preschool children's programmes. They are followed by Spanish programmes with 51% of information conveyed by means of labels, although it means an enormous fall compared to preschool programmes in the same language, which account for 74%. This change might be due to the differences in reading skills development between the two age groups under study. Despite of this, Catalan programmes continue conveying it within dialogues (88% of the instances).

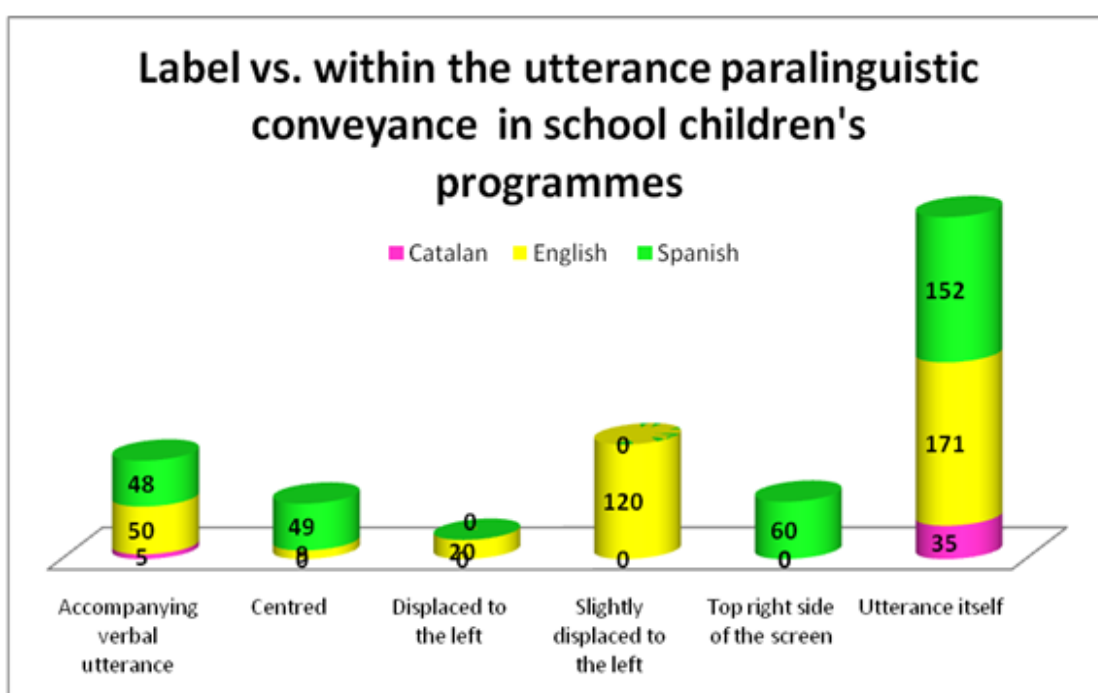


Figure 100: Type of paralinguistic information conveyance in school children's programmes.

Different strategies have been observed in all languages when conveying paralinguistic information within the utterance, such as combination of punctuation, vowel extension, capitals and small letters or different colours (see figures below). Their goal is to avoid labels, which increase the amount of information to be read, particularly when they appear together with an utterance. Usually, preschool (deaf) children either still do not have the ability to read or have a lower speed; thus, the aforementioned strategies appear to be suitable to indicate the different attitudes characters may have before an utterance. In addition, their visual impact can become more attention grabbing than information provided in brackets. Consequently, it can facilitate the correlation between the visual and the auditory stimuli.



Figure 101 and 102: Differences on the visual impact when conveying PFs within the utterance or through labels. Source: *Les tres bessones* (Super3-TVC).



Figure 103 and 104: Examples of combination of punctuation to convey amazement. Sources: *La Lua i el món* and *Les tres bessones* (Super3-TVC).



Figure 105 and 106: Examples of playing with punctuation to convey the fear of the character and the repetition of a truncated word to represent stutter. Source: *Chuggington* (Clan).



Figure 107 and 108: Examples of happiness and anger conveyed within the utterance.
Source: *George de la jungle* (Clan).



Figure 109: Example of mood conveyed by means of onomatopoeia.
Source: *Dora the Explorer* (Nick Jr.).



Figure 110: Example of emphasis conveyed through colour.
Source: *Dora the Explorer* (Nick Jr.).

In audiovisual programmes, music goes sometimes unnoticed, although it becomes a vital emotional support provider to the story. By analysing current practices in subtitling, it has been found that music seems to be not as essential as stated previously, since most of the time there is no reference to it throughout the subtitles.

The two main categories of music to be distinguished in audiovisual products are diegetic and extradiegetic. *Diegetic music* is part of the story; it belongs to the plot, whereas *extradiegetic music* is considered to be part of the soundtrack (Díaz Cintas, 2003: 357). In other words, the former can be heard by the characters, while the latter can have a narrative value or be a mood setter (Neves, 2010).



Figure 111: Example of diegetic music.
Source: *Les tres bessones* (Super3-TVC).



Figure 112: Example of extradiegetic music.
Source: *George de la jungle* (Clan).

Overall, subtitles convey more diegetic (64%) than extradiegetic (36%) music. This fact is justifiable by the role that diegetic music plays within the storyline, which often involves characters' participation. In preschool children's programmes, Catalan and English subtitles follow this tendency and they render diegetic music, and they do not present any instances in which extradiegetic music has been conveyed. Spanish subtitles, however, present inverted results, in which extradiegetic music is conveyed more than diegetic music. In school children's programmes, Spanish subtitles include many instances of extradiegetic music, but no diegetic; whereas English subtitles opt for conveying more diegetic than extradiegetic music, as in preschool children's programmes. Catalan subtitles, this time, include more extradiegetic music than diegetic, although there is just a slight difference.

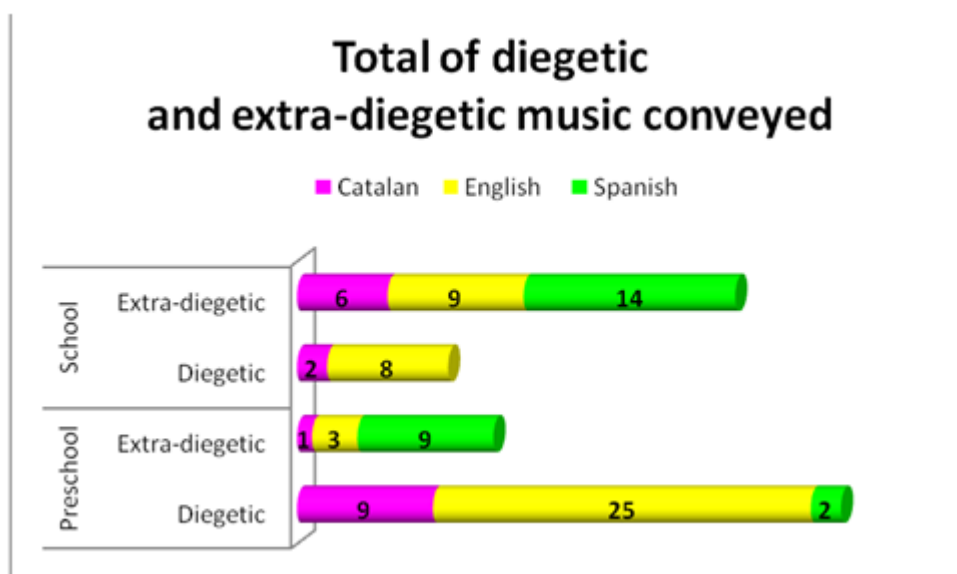


Figure 113: Numbers of diegetic and extradiegetic music conveyed per age group and language.

As seen in the previous figure, preschool children’s programmes tend to convey more music than school children’s.¹³⁴ The main reason is because they include more musical passages. This might be due to the fact that music has been proved to have a positive influence on ‘different areas of child development, especially those related to language’ (Galicia, Contreras and Peña, 2006). Songs, in particular, seem to provide preschool children with ‘fluency of oral expression and good diction, as well as helping them to learn from phrases, to use words correctly and to understand their meaning’ (Anquino, 1991; cited in Galicia, Contreras and Peña, 2006). Deaf children¹³⁵ will hardly benefit from oral features; however, subtitles become the perfect tool to facilitate them acquiring new vocabulary, as well as developing early reading skills. Therefore, song lyrics should be subtitled. This statement appears to be confirmed by the analysis results. The chart that follows indicates that songs are generally more conveyed¹³⁶ than instrumental music, pointing the greatest difference in numbers in preschool children’s programmes, where songs adopt a special relevance for their didactic function.

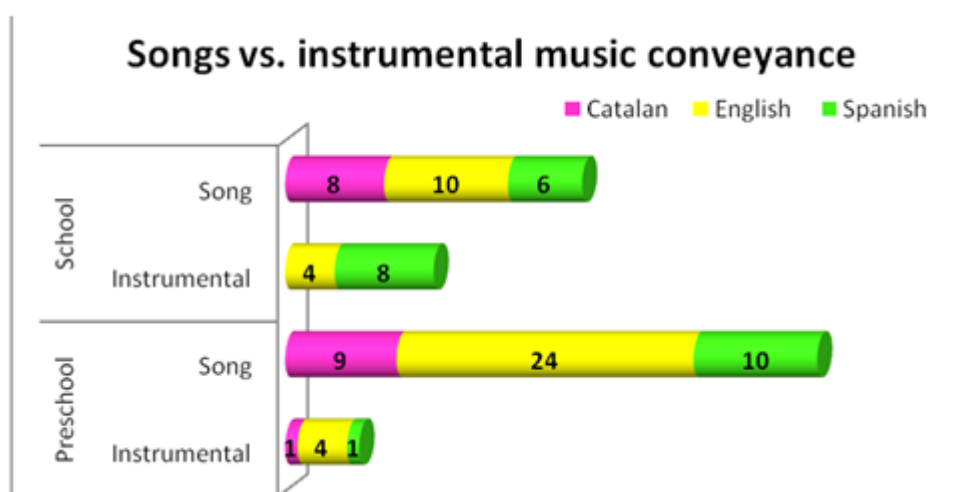


Figure 114: Type of music conveyance per age group and language.

¹³⁴ Except Spanish programmes, which convey more music in school children’s programmes than in preschool children’s, although the numbers are quite similar.

¹³⁵ In particular, moderately and profoundly deaf children.

¹³⁶ Song lyrics are conveyed entirely, since editing is not allowed. An alternative would be cutting them, however, in all the instances presented in the subtitles under analysis, song lyrics were conveyed entirely.

5.2.5 Analysis conclusions

Throughout this chapter, SDH guidelines have been analysed and compared to current subtitling practices in programmes targeted at children. The goal of the established recommendations to be followed by subtitlers and distributors is to contribute towards standardisation of the practice of subtitling. Institutional bodies and entities, such as the RNID, Ofcom (former ITC) or NCI in the British case, and the Asociación Española de Normalización y Certificación (AENOR) in the Spanish case, working in conjunction with subtitling companies, broadcasters and SDH users, are broadening the scope and potential users of accessibility services.

Despite this apparent normativity that regulates SDH both in Spain and the UK, inconsistency is found between recommendations and actual practices. It may be due to technical constraints or solution preferences among subtitlers. However, the only option available should be adequacy to specific needs of the audience the programme is targeted at.

For this reason, the study in hand will propose a new set of subtitles based on the particular needs of deaf children and on the particular preferences of deaf adults that were once deaf children. These alternative subtitles will account for the legibility as well as for the readability of subtitles and will demonstrate that both theory (guidelines/SDH users opinions or preferences) and practice can be knit together to adapt subtitles to that particular audience that still does not have well developed reading skills and speed.

CHAPTER SIX

MAKING SDH (more) VISUAL

Deaf children naturally depend on their eyes, on their vision, by virtue of their hearing loss. Thus, subtitles should present the information visually. It may seem that current subtitles do so, as they provide linguistic representations of the dialogues, the sound effects and provide also a linguistic description of paralinguistic features accompanying (or not) speech, by means of printed text. However, reading printed text is a challenging process for deaf children, as seen in Chapter Four, as it involves oral language decoding strategies. Deaf children, though, supplement their limited abilities with visual codes that potentially play a similar role as the phonological-auditory codes in their hearing peers (Leybaert and Alegría, 1990: 4). In this research, advantage of this visual capacity has been taken.

In regard to dialogues, it is true that in subtitles modality dialogues cannot be rendered in any other way than with printed text. If they conveyed dialogues by means of SL instead of printed text, they would not be subtitles,¹³⁷ but SL interpretation, with the risk of not providing access to the vast majority of SDH users, as most of deaf viewers use oral language to communicate and have little or no knowledge of SL (as stated in Chapter Four). However, it is feasible to reduce the amount of printed text to be read by deaf children: by establishing a visual code to convey all the features not belonging to speech, that is, sound effects (SE), paralinguistic features (PF), and music.¹³⁸

In order to design an access modality tailored to the targeted audience's needs, i.e. deaf children, four different associations in Spain were contacted. Unfortunately, only APANSCE¹³⁹ contacted back. At the very beginning they even seemed a little reluctant, until they understood the goal of this study. Since then, they have answered all the

¹³⁷ Some experts, such as Bartoll, consider recorded SL interpretation as a way of subtitling, since it renders information both visually and linguistically.

¹³⁸ Music has not been included in this research. It deserves a whole thesis devoted to its particularities and complexity (see Conclusion).

¹³⁹ Associació de Pares de Nens Sords de Catalunya. Catalan Deaf Children's Parents Association. More information at: <http://www.apansce.org/>

questions that were put to them. Although many of the answers to the questions asked may be found in books about children's deafness, interaction with the Deaf community has been more instructive and rewarding, by far.

The intention of this contact was to avoid misunderstanding deaf children's needs and abilities, since sometimes hearing people have a distorted image of our deaf peers. Having deaf children as a target is even more challenging than dealing with deaf adults, since subtitles can become a tool of personal and intellectual development for them. Subtitles, therefore, can play a pivotal role in children's development.

The first communication established with the Deaf community was mainly with adults. The information received was either from parents of deaf children, adults who were born deaf or adults working as teachers or educators with profoundly deaf children. Actually, the idea of carrying out this project came in a flash of inspiration during an informal conversation with Mark Nelson, a Deaf adult that was once a Deaf kid. He is the Managing Director of Remark! Ltd —an award-winning¹⁴⁰ Deaf led organisation established in 1999 and based in London that offers media, BSL training and access services. His words inspired the design of creative subtitles:

‘When I was a kid, I preferred reading comics to watching TV. In comics I had all the information I needed on the same page. All sound effects were visual, there, being part of the action’ (Mark Nelson, interviewed on 25th October 2012).

Comics was the key word. Without noticing it, these informal conversations were suggesting me the hypothesis of my thesis: would comics' visual language be applicable to SDH?

¹⁴⁰ Remark! Ltd was awarded with the Best Deaf UK Business Award from the Deaf Business Academy in 2014 and it was shortlisted as a finalist for the second year running at the prestigious National Broadcast Awards for Magic Hands (2014) and My Life: Signing Off (2015). More information at: <http://www.remark.uk.com/>

6.1 Comics

Comics have been commonly defined as magazines, which contain “a set of stories told in pictures with a small amount of writing” (Cambridge Dictionary, 2016). They have also traditionally been classified as a literary genre, similar to horror, science fiction or fantasy literature.

However, comic authors understand them as a social object, which is the result of two human behaviours: writing and drawing (Cohn, 2013: 1). Despite this, comic authors claim to *write* and not *draw* stories, and they identify comics not as a genre, but ‘a developing language’ (*ibid.*), i.e. a medium of expression —as movies or prose— to communicate ideas and emotions that can embrace different genres (McCloud, 1993: 4-6). Actually, it is possible to find many subgenres within comic books: romance, horror, westerns, crime, science fiction and fantasy or superheroes. They also underpin that important pieces of literature can appear in comic book form. A good example could be *Maus*, by Art Spiegelman. It chronicles the experiences of Art’s father, a Polish Jew, during the Holocaust and his life at Auschwitz. Apart from being a moving story, ‘it was the first comic book to win a Pulitzer Prize’ (The Mad Swede, 2009), which is awarded to an outstanding work of journalism or literature.

6.1.1 Text and image

What seems unarguable is the *relay* existing in comics, as they combine verbal —text— and non-verbal/visual language —images— seamlessly. Words are absolutely integrated to images (Barthes, 1977: 41), and this additive fusion of text and image evidences that comics are a ‘hybrid form of two separate media’ (Faust, 1971: 195). In other words, comics are a visual media and ‘and try to embrace all the senses within it’, as the different elements, such as pictures, words, and the different symbols ‘are funnelled through the single conduit of vision’ (McCloud, 2005). In comics, words and images produce meanings that neither could convey alone; it is an *interdependent* combination (McCloud, 1993). Visual language occurs in conjunction with written language, as naturally as speech appears with gesture (Cohn, 2012: 110).

According to Peirce (1977), words are *symbols*, based on an arbitrary and utterly conventional connection between signs and their meaning. *Images*, by contrast, are *icons*, which are founded on a close physical resemblance between signs and the objects to

which they refer. However, McCloud extends this classification of comic elements. He states that *icons* are ‘any image used to represent a person, place, thing or idea’. *Symbols* are ‘sorts of images’ that belong to ‘one category of icon’ and are used to represent concepts, ideas or philosophies, whereas *pictures* are ‘images designed to resemble their subjects’ (1993: 27). The former have a ‘fixed and absolute’ meaning, which would not be affected by any means by its appearance, as they represent invisible ideas (*ibid.*). The latter have a ‘fluid and variable’ meaning, which highly depends on their appearance and their level of abstraction (*ibid.*). However, all icons demand viewers’/readers’ participation to make them work, it is our job to recreate moment by moment (1993: 59).

When consuming comics, pictures and symbols are not processed simultaneously. Pictures are immediate to process, due to their specific representation of objects of the natural world. Symbols, in contrast, take slightly longer time to be processed (Cioffi, 2001: 98). This pause between image and word comprehension is similar to the pause between reading subtitles and enjoying the image in a subtitled film, in which the audience must read the subtitles before understanding what has been said. In comics, this pause is minimum, since the words reinforce or complement what is being depicted. In fact, there is a physical pause or space between comic panels called *the gutter*. It ‘plays host to much of the magic and mystery that are at the very heart of comics’ (McCloud, 1993: 66). It is here where viewers’ imagination and experience take ‘two separate images and transforms them into a single idea’ (*ibid.*).



Figure 115: Source: McCloud, 1993.

6.1.2 Sequential visual art

In addition, comic pictures are shown in deliberate sequences, which define a ‘narrative, integrative text throughout’ (Cohn, 2005: 1). Thus, pictorial elements, sequentiality and text are the features responsible ‘to convey information and/or to produce an aesthetic response in the viewer’ (McCloud, 1993: 9).

The designation of comic consumers as *viewers* in the previous statement is at least remarkable. A *viewer* can be defined as ‘a person who watches something, especially television’ (Dictionary Cambridge, 2016). However, comics have been traditionally presented in printed publications, such as magazines or comic books; thus, it would be reasonable to refer to their consumers as *readers*, that is, ‘people who read a particular [...] magazine’ (*ibid.*).

Undoubtedly, the definition of comic consumers as *viewers* suggested that comics and animated films may have much in common. In fact, McCloud (1993: 6-7) pointed out the idea that comics and animated films may have more similarities than not, as both could be included under the categorisation of “*sequential visual art*”. In animated films, drawings or illustrations are ‘photographed frame by frame’. The drawings in the different frames are slightly different from the one preceding it, creating the illusion of movement. In this way, ‘the illustrators’ two-dimensional static art’ comes to life and creates imaginative cinematic images (Dirks, 2016). Thus, animated films are sequential in time, as frames are projected successively on the same space—the screen—; while in comics the sequence is set in space, as they need to occupy a different space—comic pages—to complete the succession (McCloud, 1993: 6-7). When reading comics, we perceive time spatially, as ‘time and space are one and the same’; we have the sense that as ‘our eyes are moving through space, they are also moving through time’ (*ibid.*: 100). Due to these similarities, the merger between comics and animated cartoons to create meaning out of sequential images and convey non-verbal information seems to be feasible.

6.1.3 Language of comics

As stated previously, comics are not simply images structured in a certain way to express the author’s feelings. Comics are a verbal-visual blending in which both text and image are at play, and this interaction of verbal and visual components ‘creates a type of *language* that is more than the simple sum of the two codes’ (Saraceni, 2000: 5). Actually,

Cohn (2013: 2) states that ‘comics are written in *visual languages* the same way novels are written in English.’ Thus, comic authors and their *viewers* undoubtedly share a code, whose properties can be understood as a “visual vocabulary” (Cohn, 2012: 92), which, in turn, becomes sequential. Comics become a communication tool all of their own, with specific languages and dialects. Comics generally adhere to some common rules or conventions, depending on culture, genre or style, although there may be differences in presenting the information. Moreover, within the visual narrative used to convey information in comics, a distinction should be made between “visual language” and “visual signs”.

Verbal components —texts— are conveyed within text boxes, as part of the landscape to indicate diegetic sounds, or —and most distinctively— and in speech and thought balloons which are the most recognisable visual signs of the visual language of comics (Harvey, 2001: 75-76). The latter form an important part of the visual design, they act as a “container” for written language and they provide the way in which ‘text and image can interface with each other’ (Cohn, 2013: 35). Speech balloons depict speech through a bubble that then extends back with a line towards the speaker’s mouth (*ibid.*: 36). They typically appear ‘as a block of text within a white oval with a protrusion to denote the speaker’ (Wong, 2014). Although speech balloons emerging from non-speaking objects may seem awkward, any object can plausibly “speak” in comics, as language is not related to real physical properties (*ibid.*).

For the purpose of this study, attention will not be focused on the speech contained in balloons, but on the strategies and visual signs that are used to convey non-verbal features, which may or may not accompany the speech. These non-verbal features are mainly paralinguistic features (PF) and sound effects (SE). Comic symbols and conventions commonly used to render these non-verbal features have been carefully analysed in order to help the researcher to tailor SDH subtitles according to the particularities of the film used for the study.

6.1.4 Non-verbal information: paralinguistic features in comics

PFs include all kinetic or vocal features that transmit additional information to what the uttered words communicate (Díaz Cintas, 2001: 128) that sometimes accompany oral messages. Kinetic features can be appreciated from gestures or facial expressions.

Vocal features, however, cannot be inferred from images. PFs are likely to be language bound and dependent, since they convey emotions or implied meanings that can only be interpreted in relation to the language they accompany (Neves, 2005: 166). The same statement can adopt a totally different attitude depending on the intonation, the emotion, the tone or the volume, to name but a few.

As seen in Chapter Three (see Section 3.2.4) two main categories are to be distinguished within PFs: *tone* and *mood*. This suprasegmental elements ‘lie somewhere between the verbal and non-verbal modes of delivery’ and they ‘may belong to speech proper or carry a propositional content’ (Tsaousi, 2013: 237). While tone is inherent in speech, mood does not necessarily need to be connected with the dialogue (Weber, 2010: 48), although both are ‘necessarily communicated acoustically’ (Tsaousi, 2013: 237).

In comics, *tone* is usually conveyed through speech balloons, which adopt a wide range of forms, depending on the purpose of the speech. Thought bubbles (Figure 113) contain unspoken speech, that is, inner thoughts, which are presented in the shape of nimbus. Burst or jagged balloons (Figure 114) are used to express shouted or screamed dialogues. Balloon contours with squiggly lines denote the speaker is disoriented or off-kilter —sometimes can also be used to render dialogues of monsters (Figure 115). Mechanized or electronically filtered voices —or speech which is transmitted through a radio, TV or telephone— are evoked by rigid lines and a speaking protrusion stylized like a lightning bolt (Figure 116). Wavy balloons (Figure 117) convey physical distress, while dashed-stroke balloons (Figure 118) show whispered statements. Whispering or softer tones of voice can also be indicated by words shrunk to illegibility (Figure 119). Hanging icicles in balloons suggest an especially cold tone of voice (Figure 120) (Wong, 2014 and Piekos, 2015).



Figure 116

Source: Barreira and Magallón, 2008.



Figure 117



Figure 118

Source: Piekos, 2015.



Figure 119

Source: Barreira and Magallón, 2008.



Figure 120



Figure 121

Source: Piekos, 2015.



Figure 122: Different representations of tone by means of speech balloons.

Source: Wong, 2014.



Figure 123: Whispering or unintelligible speech.
Source: Wong, 2014.

However, not only the shape but also the size, the placement of the balloon and/or its non-linguistic content suggest a particular pitch, volume, intonation, stress, rhythm, speed, pausing or emphasis, among others, that accompany the character's utterance. Even the choice of the font can determine the impact of the bubble content. This flexibility comes from the subtlety of speech balloons. They are there in the picture for a purpose, although they go unnoticed as they are understood as whole together with the speech they contain.

In fact, this versatility of speech bubbles extends to the contents inside the balloon. 'Simple variations in lettering, like enlarging or bolding certain words or phrases, signals changes in the speaker's volume or emphasis' (Wong, 2014). Also, colours, for example, are often used to help establish a visual signature for the character that is reflective of his/her personality or being.



Figure 124: Example of emphasis.
Source: Wong, 2014.

Speech balloons can also convey non-verbal information by using question or exclamation marks to express a sense of emotion, without verbalising it (figures 122 and 123).



Figure 125



Figure 126

Source: Barreira and Magallón, 2008.

On the other hand, *mood* features also appear in comics and are uttered by the characters, like laughing (Figure 124), crying, groaning (Figure 125), whistling (Figure 126) or swallowing (Figure 127). Their function is to resemble real speech, while maintaining meaning. According to Cruse, the defining characteristic of *paralinguistic signs* is ‘an extreme dependence on the accompanying language. Either they cannot be produced except during speech (because they are carried on the voice), or they cannot be interpreted except in conjunction with accompanying the language’ (2000: 9). PFs become so powerful in meaning that they may even replace a gesture, although the different codes in interaction, such as gesture and linguistic and paralinguistic signs, often reinforce each other (Revermann, 2006: 42).



Figure 127



Figure 128

Source: Barreira and Magallón, 2008.



Figure 129



Figure 130

Source: Barreira and Magallón, 2008.

6.1.5 Non-verbal information: sound effects in comics

Comics are, by definition, a silent medium that becomes noisy as soon as readers turn the first page. Sound effects (SEs) are part of comics' textual phenomena, which also includes narration and dialogue. While both narration and dialogue are not actually part of the image matter, sound effects are more 'pictorial' and 'function in an intermediate position between the literary and the pictorial' (Abbott, 1986: 156), either adding or amplifying meaning (Covey, 2006). Therefore, SEs convey more information than just what a thing sounds like. They 'can often clarify the events in a panel by enhancing an action that is hard to capture in a still image' (Uyeno, 2015), and they are essential to read and enjoy comics.

The need to imply sounds through images, makes comics 'the only medium where the audience regularly sees sound instead of hearing it' (Wong, 2014). This peculiarity

forces comic book artists ‘to utilise, innovate, and invent all sorts of methods to depict sound’ (*ibid.*). Comic style provides the versatility required in capturing nuances. Even the shape alone can highlight all sorts of auditory effects (*ibid.*). However, playing with typeface is only the beginning. Moving from written to visual language opens up new ways for representing sound. Symbols can serve as visual equivalents to sound, and may capture its essence in a more elegant and evocative manner than verbalization is capable of (*ibid.*).

Sound in comics is depicted with a purely visual element. Depicting the sound with a trait that requires sight is not as easy as it may sound. There should be implications between the visual element and the readers, who must infer all the characteristics of a sound from the manner in which the sound is visualised (*ibid.*). Hence, illusion of sound is mostly rendered by means of onomatopoeia. That is, the naming of things or actions by a vocal imitation of the natural sound associated with it (Merriam Webster Dictionary, 2015, and Encyclopaedia Britannica, 2016). These onomatopoeic words become essential for the “imaginary space” comic writers build, and require viewers’ sense of vision to represent and understand written sound.

Onomatopoeia are integral to comics. They are actually a necessary visual cue in comics, otherwise ‘the panels would appear strangely silent in the reader’s head’ (Wong, 2014). Onomatopoeic representations of SEs can be imaginative, although some of them are more traditional and conventionalised. Comic artists choose words that evoke sounds, which at the same time create a rhythm when read on the page. To achieve this, it is essential the establishment of a sequence of varying words, typefaces, colours, and sizes, in order to ‘represent the texture of sound to capture its essential character through visuals’ (McCloud, 2005), while integrating them visually into the pictorial context.

Nonetheless, abuse of onomatopoeia may be blunt and flashy (Wong, 2014). For this reason, sometimes the absence of onomatopoeia compensates the expressivity of the image itself. In this way, images are neither overloaded with meaning nor is the action diminished by the onomatopoeia (*ibid.*). SEs should be conveyed moderately. An overuse of sound effects may become distracting for the viewers, and they should be reserved to render significant sounds.

In addition, a distinction has to be made between the visible and the invisible in comics. Comic artists balance what they give to their viewers, as they offer something ‘to see within the panels and then something to imagine between the panels’ (McCloud, 2005). This allows the viewers to interpret what is being suggested by the visuals in the whole sequence and not only by a sound description or representation. All the features accompanying the onomatopoeia, such as texture, colours, size, weight, expansion or position within the panel, among other strategies, may convey timbre or physical characteristics of the object making the noise; i.e. they help to completely construct the story.

The representation of sound by means of visual cues, such as stylized lettering or floating letters, suggests sound qualities. The louder the sound is, the larger the word would be; repetition would imply duration. Comics allow ‘this freedom to graphically imbue a sound word with expression, from a delicate pizzicato to a bone-rattling sonority’ (Uyeno, 2015). SEs location in comics also contributes to the understanding of the story, as it adds or amplifies its meaning. While SEs ‘located in the upper part of a panel suggest that the sound precedes the action shown,’ its position is ‘along the bottom of the panel indicates a low-frequency sound’ (Covey, 2006). However, if the SE fills the background of a panel, it suggests that the sound is spread throughout the scene atmosphere.

SEs can be used for two different purposes in comics: to convey sounds present in the actions, which are called *depiction SEs*, or to render soundscapes, known as *soundscape SEs* (Covey, 2006). The former are sounds derived from actions, while the latter are background sounds that draw an atmosphere for the panel. In many of these cases, it is possible to find an entire strip with little or no more text than SEs. *Depiction SEs* may also add a humorous clarification to a situation, serve to emphasize an action already visually depicted, or add a metaphoric layer to a scene. Thus, they can sometimes be used symbolically. For instance, *KA-BOOM!* is an onomatopoeia used to depict explosions, rather than an actual sound (Covey, 2006). Therefore, onomatopoeia can also be used metaphorically, and *KA-BOOM* may render an explosion of anger of a character, as seen in the picture that follows.



Figure 131: Example of explosion of anger by means of an onomatopoeia.
Source: Covey, 2006.

As seen above, most comic artists try for words that evoke sounds. Those words, in addition, have to create a rhythm when read on the page. They have to match with the visuals of the story. Therefore, SEs will be understood as part of the action and not as a foreign element on the page.

It is essential to design sound effects so that the reader “hears” the sound when reading. However, sound effects lettering have more implications than just helping readers to “hear” sounds. They work as an indicator of sound, and their function goes beyond the actual connotation of a particular sound. For instance, the onomatopoeia “SHATTER!”, according to Uyeno (2015), does not only convey a particular sound, but also indicates that ‘something has broken and is making a sound in the process.’ Rather than imitations of sounds, they become clear descriptions of actions and emphasize the communicative role of SEs in comics. SEs are loaded with information by means of a great diversity of forms, which ‘can often clarify the events in a panel by enhancing an action —suggesting degree or severity of an impact, for instance— that is hard to capture in a still image’ (Uyeno, 2015). This means that SEs are loaded with more information than just what a thing sounds like. In addition, SEs carry other important storytelling information, which can only be communicated through sound. For example, the importance to indicate the origin of a noise ‘by its position in the panel or with a “tail” pointing to the source’ (Uyeno, 2015).

According to his/her needs, the comic book artist will use various shapes, forms and types to convey SEs. There is a remarkable variety in the representations of sounds, as a result of singular aesthetics and the different genre or audience to which comics are intended. SEs are all expressed in different ways, but the key fact is that they can be understood by vision. In order to facilitate comprehension, inevitably, SEs are standardised and associated with certain actions. Therefore, comics are easier to understand.

Comics are, nonetheless, much more than visualising sound and reading speech. The simplicity of speech bubbles and the conveyance of SEs hide a greater complexity. They are a key part of appreciating comics and developing greater visual literacy, which is shared between the comic artist and the comic reader.

6.2 Cartoons

Cartoons are ‘motion pictures made from a series of drawings, computer graphics, or photographs of inanimate objects (as puppets) that simulate movement by slight progressive changes in each frame’ (Merriam Webster Dictionary, 2015). As stated in Chapter Three, animation is more a film technique than a genre category. Animation, i.e. ‘the art of making inanimate objects appear to move’ (Encyclopaedia Britannica, 2016), can be found in the multitude of TV channels dedicated solely to cartoons.

Cartoons usually have a simple storyline, which involves characters exploring something new which gets complicated and needs resolution. In some cartoons, particularly the ones addressed to preschool audiences, the action generally takes place wordlessly, although sometimes characters utter verbal noises. Information or narration are mostly conveyed visually, just making use of gestures and facial expressions. In school cartoons, characters teach viewers lessons to deal with conflicts encountered in everyday life, to be kind and responsible, to respect the difference, to value the love of their family, to increase self-esteem, in short, to develop social skills.

Do not believe, however, in the simplicity of cartoons, as they are a form of amplification through simplification. Cartoons abstract a real image. It seems they eliminate details, but, in fact, they focus on specific details. They strip down an image to

its essential meaning and become an effective tool for storytelling in any medium —comics, audiovisual programmes, videogames, etc. (McCloud, 1993: 30).

Cartooning should not be understood as a way of drawing, but as a way of seeing. Its power lies on its ability to focus the readers’/viewers’ attention on an idea. In addition, cartooning trains our minds to abstract meanings from very simple drawings. For instance, we understand a circle, two dots and a line to be a human face. We cannot avoid seeing a face there; a face that could belong to anyone. This is the universality of cartoon imagery. The cartoonier a face is, the more people it could be said to describe:

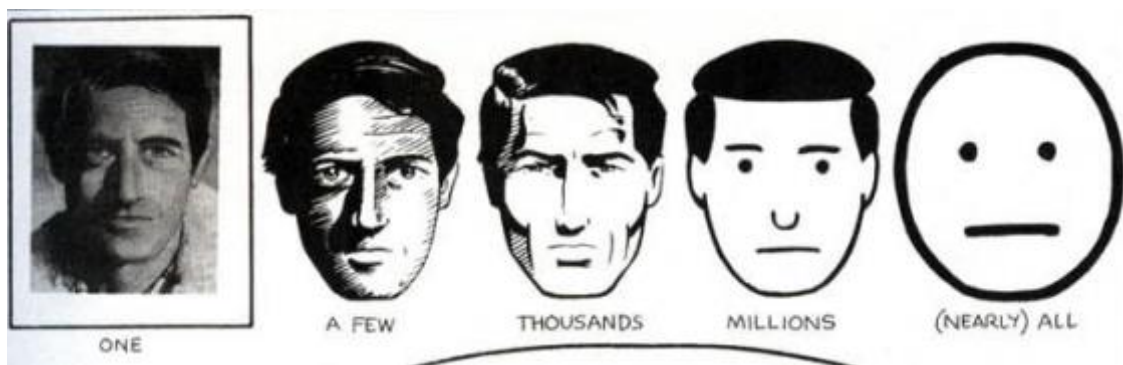


Figure 132: McCloud’s exemplification of universality of cartoon imagery (1993: 31).

This universal identification is, according to McCloud, the ‘primary cause of our childhood fascination with cartoons’ (*ibid.*: 36). In realistic films (or realistic drawings), we see the face of other people, but in cartoons, no matter how simplified images are, we can identify ourselves being part of what’s going on in the comic book or in the audiovisual cartoon. We do not just read or watch the cartoon, we become it.



Figure 133: Source: McCloud, 1993: 36.

It may seem that the *natural receiver*¹⁴¹ of cartoons is a younger audience. Nothing further from the truth. As stated by O’Sullivan, ‘cartoons are an art form for both kids and adults’ (2016). Producers and distributors are very interested in attracting a range of public as wider as possible. Therefore, they always keep an eye on broadening the scope of cartoons (Zabalbeascoa, 2000: 22). In fact, the tendency is having a growing number of projects which are targeted at adults. The Cartoon Movie¹⁴² director, Annick Maes, claims that current adult generations come from (video) games and comic books and are increasingly becoming interested in animation. This has resulted in ‘a change in public, in generation’ (Euronews Culture, 2016), since ‘a third of the projects are for adults’ (*ibid.*), although ‘they are still advertised as family movies and are mainly targeted towards children’ (O’Sullivan, 2016). For instance, recent cartoonish feature films, such as *Inside Out*¹⁴³ or *Zootopia*, have tackled surprisingly mature topics, such as depression or racism, respectively (*ibid.*). Children are seen as miniature adults who need to be taught adult ideas and values. Cartoons emphasize positive relationships by means of engaging plotlines with clever dialogues and quality art direction.

6.2.1 Film

Precisely *Inside Out* has been the film chosen for the purpose of this research. Co-written and directed by Pete Docter —‘the long-serving Pixar genius behind *Monsters, Inc* and *UP*’ (Collin, 2015) — and co-directed by Ronnie del Carmen, it was released in June 2015 and distributed by Pixar and Walt Disney Pictures. This animated feature film is targeted at all audiences, as it will speak to cinemagoers of all ages. During the 94 minutes it lasts, *Inside Out*’s narrative ‘plays out within the psyche of a girl named Riley and the film’s characters are her feelings’ (Romney, 2015).

Inside Out has been described as ‘an animated masterpiece by Pixar’ that ‘looks just stunning, with every scene oozing class and attention to detail’ (Edwards, 2015). Critics agree that it is inventive, gorgeously animated, and powerfully moving. According to *The Guardian* (Romney, 2015) it is ‘formidably ingenious’, and it ‘hits an elusive sweet

¹⁴¹ Term of Zabalbeascoa (2000: 22). It defines the type of target that was in mind of the autor/artist when designing a product.

¹⁴² Cartoon Movie is a forum for animated feature films, sponsored by the European Union’s Media programme. It should not be understood as a fair or a festival, but as an opportunity for makers, producers and distributors to meet over pitching sessions with the hope of bringing films to life (Cartoon Media).

¹⁴³ More information about this film in upcoming subsection 5.2.1 Film.

spot in appealing to children and adults alike'. In other words, it is 'unquestionably the finest toon of the year' (Edwards, 2015).

With such good reviews, it is not surprising the great recognition it has received so far. Since its premiere, *Inside Out* has won prestigious awards, such as the Best Animated Feature Film Award by Academy Awards (2016), by Golden Globes (2016), by BAFTA Awards (2016), by 3D Creative Arts Awards (2016), by AFI Awards (2016), or by Annie Awards (2016), among many others (IMDB, 2016).

Inside Out narrates the story of a young girl, Riley (voiced by Kaitlyn Dias). This 'animated masterpiece by Pixar' (Edwards, 2015) begins 'no less ambitiously than at the birth of human consciousness' (Collin, 2015). We see how Joy (Amy Poehler) —Riley's main emotion— takes Riley's memories as components to build her psyche (*ibid.*). When Riley is 11 years old, she has a pretty joyous life in Minnesota. However, Riley experiences the bumpy road of growing up, as soon as she is uprooted from her Midwest life when her parents (Kyle MacLachlan and Diane Lane) decide to move from rural Minnesota to the hustle and bustle of San Francisco, where her father will start a new job. Upon arriving at their new (actually rundown) home, Riley must cope with homesickness and fitting in at a strange school (Edwards, 2015). It is then when other emotions start to come out.

Riley, like all of us, is guided by her emotions. Riley's emotions —Joy, Sadness, Anger, Disgust, and Fear— are personified as cartoon characters, and they are found in the HEADquarters, a sort of air traffic control tower inside Riley's head from where they control Riley's mind. They try to keep Riley in balance and help her navigate the stormy waters of leaving her beloved Minnesota and starting a new life and finding new friends in San Francisco. They are the little voice we all have in our heads. Therefore, the action takes place in two places at once: San Francisco and inside Rileys' mind, where her five emotions try to make sense of the upheaval. Two parallel worlds that are differently realised: while San Francisco, which represents the external reality, is 'all muted colours and grey sunlight' (Collins, 2015), inside Riley's mind everything is a dazzlingly colourful cavalcade of experiences and memories (Macnab, 2015).

The five emotions guide all Riley's acts and decisions and help advise her through everyday life. 'They monitor Riley's life and produce her responses by operating a

console of levers and buttons' (Romney, 2015). Online computer age becomes part of the film, and it reflects a world in which 'consciousness is perceived almost as if it is a computer hard drive and emotion as something that can be expressed by hitting buttons on a keyboard' (Macnab, 2015). In addition, at HEADquarters, they are in charge of Riley's memories, which are stored as little translucent marbles at the back of her mind. Their goal is to keep as many joyful memories as possible. However, Sadness will manage to touch some of them, turning them blue. That is what Joy is in charge to avoid.

Joy is the main and most important emotion. She is the leader at HEADquarters. She is light-hearted and a big fan of laughter. She is effervescent and endlessly upbeat. She tries to keep things positive, and sees life's challenges as opportunities, whereas she understands sad bits as hiccups on the way back to something great. She is hopeful and optimistic and her only goal is to make—and keep—Riley happy. In her absence, nobody at HEADquarters is capable to moderate Riley's behaviour or to cheer her up. Joy's colleagues are Sadness, Disgust, Fear and Anger.

Sadness is totally the opposite emotion to Joy. She would actually love to be more optimistic and wants to help to keep Riley happy, but she cannot avoid being moping all the time. She is tempted to touch the marbles that contain Riley's memories. As soon as she starts fingering them, she ruins Riley's mood. None of the other emotions understand which Sadness' role is. Even she is not happy at all with the responsibility she has been assigned and prefers lying on the floor and having a good cry to participating in Riley's life.

Disgust has got extremely refined tastes—with a virulent hatred of broccoli. Her duty is to protect Riley from being poisoned, both physically and socially. She can be seen as a bit of an elitist, but she refuses to lower her standards for anybody. Fear is a nervous type whose responsibility is to protect Riley and keep her safe. He evaluates the dangers, pitfalls and risks involved in Riley's everyday activities. Anger is a fiery red sponge that cares very deeply about things being fair. He uses his impatience and impulsiveness to ensure that all is fair in Riley's life. He is quick to overreact which results in rash decision making and rude remarks. He even bursts into flame when provoked.



Figure 134: Emotion characters in *Inside Out* (Pixar, 2015).
Source: Movie City News (2015).

The film has a strong moral worldview. The bittersweet experiences Riley goes through, such as dealing with sadness, may ‘help children to understand the complex emotions they must wrestle with every day’ (Edwards, 2015). The film allows us —both adults and children— to understand that negative emotions are not negative at all. They are vital responses to unpleasant circumstances which are as healthy and human as laughter (Collin, 2015).

Undoubtedly, *Inside Out* is a film with a huge emotional load by nature from the beginning onwards. This means that there is a great amount of non-verbal information to convey within subtitles. Furthermore, the fact that the action is mainly developed by a five-emotion team, made it a challenge to design a strategy to render all the emotions within SDH subtitles without presenting an overloaded image.

After a deep research on the particular profile of potential subtitles’ users (Chapter Four), meeting them and listening to their suggestions, the conclusion that current subtitling practices were not satisfying their targeted audience was reached. The understanding of the needs of SDH users and the constraints faced by subtitling professionals resulted in an innovative and alternative subtitling proposal, which will be presented and detailed in the chapter that follows.

As seen in this chapter, comics are a visual media that ‘try to embrace all the senses within it.’ One of the hypothesis of the research in hand is that SDH may take advantage of the language of comics, in which all the information is conveyed visually, no matter what sense it should originally be felt by. This is what the deaf audience needs, as their sensory impairment prevents them to use hearing and forces them to understand the world through their eyes. As in comics, SDH could render the different elements, such as pictures, words, and the different symbols to grasp the whole message exclusively by means of vision.

CHAPTER SEVEN: CREACTION SUBTITLES
(Chapter removed due to intellectual property issues)

CHAPTER EIGHT

EMPIRICAL ANALYSIS

Previous chapters have shown the scarcity of theoretical studies in the field of SDH for children. Consequently, empirical studies in this field are rather scarce. The fact that the study in hand proposes a completely new set of subtitles, which are innovative in both design and presentation, urged the need to have feedback from the potential end users. The target audience of both this research and its end product has been considered of such an utmost importance that has always been at the centre of attention during the process of designing *creative* subtitles. Therefore, this study would not have been completed without having their opinion.

8.1 Aims and methodology

The main purpose of the empirical study in hand was to examine the impact of *creative* subtitles on both deaf and hearing children, to listen to the opinion of potential users of *creative* subtitles. It was interesting to discover whether such a different subtitling system would be gladly welcomed among children. Deaf children may seem to be the main target of this study, since they are the potential users of SDH to access to the auditory information provided in audiovisual programmes. However, it was considered interesting to analyse, additionally, the reaction of hearing children to *creative* subtitles, since it has been defended throughout this thesis that *creative* subtitles are subtitles intended to be for all: helpful to deaf children and non-disturbing to hearing children.

Creative subtitles have been created with the intention to serve d/Deaf children and not to disturb hearing children. Spain ‘has traditionally been a country with a clear preference for dubbing’ (Anderman and Rogers, 2003: 196). There is no habit of reading subtitles and despite the significant growth of the number of films that are displayed in their original version with Spanish subtitles, audience still shows their bias in favour of dubbing (*ibid.*). One of the main hypothesis is that the design of *creative* subtitles would also be suitable to establish a subtitles reading habit among hearing children.

Preferences are not as set in stone as it may seem. It is true that ‘audience preference is, in the first place, determined by familiarity’ (*ibid.*). This only implies that the public will be more receptive to the mode with which they are most familiar, but it does not mean that preferences may not be unalterable. Actually, they might be transformed by familiarisation with other alternatives. And this may apply also to deaf children, who are used to conventional subtitles. As we will see in the coming subsections, some of deaf children still prefer conventional subtitles, despite confirming they like the new version. Habit comes again.

The research methodology employed for the purpose of this thesis has been a *case study*. More particularly, a descriptive case study, which is exploratory, since relatively little research has been done in this field. As mentioned in previous chapters, up to date only Zárata (2014) and Tamayo (2015) have researched the topic of subtitling for deaf children and have carried out studies with participants.

The qualitative descriptive research approach taken has been used to look at a group of participants, both as a whole and individually to obtain a complete picture of the participants. Despite the wide range of methods available to use, data about group behaviour was examined with direct observation, while the subjects’ individual behaviour and understanding was collected using questionnaires. Only one method of data collection could have been conducted, although ‘case studies are likely to be much more convincing and accurate if they are based on several different sources of information’ (Colorado State University, 2016).

In addition, multiple sources of evidence ‘increase the reliability and validity of the data’ (*ibid.*). It was also considered to record participants during the experiment to examine their behaviour more in detail once finished. However, the school’s data protection policy did not allow the researcher to do so. Nonetheless, the methodology also included conversations with students, particularly with older ones, established as an open debate. They showed their interest in the research and asked interesting questions. The school setting, where they feel comfortable, was favourable for them to share their thoughts.

In this particular case, the phenomenon under study was the reaction of children to *creative* subtitles. The study was designed to be carried out in the context they share

and feel comfortable as a group: their school. The study consisted of two parts and both included watching a video followed by a questionnaire filling activity. In the first part, participants watched a 10-minute fragment of *Inside Out* with *creative* subtitles (see Appendix VI), which was followed by twelve questions. These questions were aimed at discovering: (1) whether they identified *creative* subtitles as subtitles, (2) reading comfort, (3) use of onomatopoeia, (4) recognition of new subtitling code—that is, emotion colours, as well as bubble shapes—, (5) identification of external inserts, and (6) participants' liking for *creative* subtitles (see Appendix X).

Once the first questionnaire was completed, we proceeded to the second part of the study, in which participants watched the same clip again, but with conventional SDH subtitles this time. While watching this second version of subtitled *Inside Out*, comments arose among participants. Their faces were also quite expressive. After the film, participants continued with the second part of the questionnaire, which included questions in the direction of (1) reading comfort of conventional SDH, (2) amount of information conveyed in both *creative* and conventional subtitles, and (3) the extent to which *creative* subtitles may be more disturbing than conventional SDH (see Appendix X).

Except the questions regarding the recognition of new subtitling code together with the ones related to the identification of external inserts, the majority of questions were closed questions, which restricted the answers to as few as two: *yes* or *no*. This type of question can be easily converted into quantitative data, which was necessary to quantify the percentage of people that would prefer one subtitling mode to the other. The data can be quickly obtained, since *yes/no* questions are easy to answer. This characteristic is also helpful for respondents, who sometimes feel under pressure when having to write in a blank space.

Yes/no questions leave no room for detail, as the responses are fixed. Therefore, respondents did not have the freedom to supply answers which reflect their true feelings regarding the two subtitling modes. As this had been taken into account beforehand, a space at the bottom of the page was left for participants to comment on what they felt it was relevant and was not included in the questions (see Appendix X). All respondents were asked exactly the same questions in the same order, regardless of their age. The questions were written with simple vocabulary and clear syntax, so they were suitable for all the participants.

8.2 Participants

A total of 161 participants, aged seven to seventeen, took part in the study (see Figure 217 below). Prior to the study, parental consent forms (see Appendix IX) were obtained. Parents were informed about the main aims of the project, for which their consent was formally requested, as well as they were given the assurance that the personal data of their children would remain anonymous.

Fifteen out of the 161 subjects, which count for almost 10% of the sample size, participated in the preliminary (or pilot) study, which is a small scale ‘pretesting, or trying out, of a particular research instrument or research procedures’ (Baker, 1994: 182-183). Its purpose was to check the feasibility of the design of the questionnaires, as pilot studies ‘give advance warning regarding weaknesses’, in order to guarantee the success in the main study.

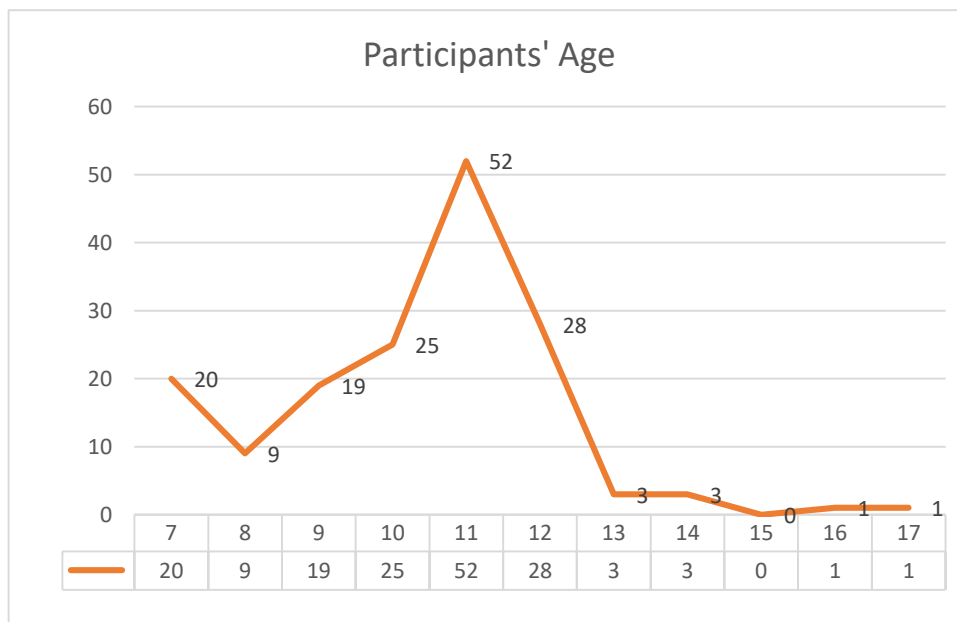


Figure 226: Age of the subjects that participated both in the pilot and the main studies.

The pilot study was conducted on the 29th of April 2016 at Escola d’Idiomes i Audiovisuals, in Palafolls (Barcelona), as it provided an appropriate environment and equipment to project the two videos and carry out the questionnaire filling activity. It addressed issues that were of an utmost importance to be resolved prior to the main study, such as the clarity of instructions to follow the research protocols, the certainty that the

wording of the survey was not inappropriate or too complicated, the reliability and validity of the results, or the time needed to perform all the tasks. The results informed the researcher that the research would be successful with a couple of minor changes in the way instructions were presented. They were made simpler and clearer. Pilot study findings also revealed the future likely outcomes, which were quite favourable to *creative* subtitles.

Experts recommend that findings from pilot studies should not be included in the main study results. The reason why they should be excluded is contamination. *Contamination* occurs when pilot study participants also participate in the main study, as they may respond differently due to their previous experience (van Teijlingen and Hundley, 2001). However, this has not been the case in this research, as pilot study participants did not participate in the main study, but served to gain insights that improved the questionnaire and specific questions.

Participants for the main study were recruited from Escola Pinya de Rosa.¹⁴⁹ It is a public school based in Blanes (Girona), inaugurated in 2003. It is an inclusive mainstream school, which provides school support for deaf students from the perspectives of the deaf students themselves, their teachers and support staff, such as language and audition teachers (MALL, for its acronym in Catalan). Therefore, deaf students from the Catalan regions la Selva (Girona) and/or el Maresme (Barcelona) attend this school. Their classmates are mainly hearers, although deaf children have all types of access facilities in the classroom, such as FM and subtitled materials. This was the perfect scenario for the purpose of this study, which is aimed at studying the subtitles preference of both deaf and hearing children. Thus, their natural environment, where they feel comfortable and part of the community group, appeared to be the perfect setting to conduct the research.

Nonetheless, the school setting presented a disadvantage. When given the questionnaires, some participants felt under exam pressure conditions. It was clearly explained that they just had to share their opinion on different subtitling proposals and that it was actually the researcher who was being examined (by them). Occasionally, though, some participants would copy from their classmates. Thanks to the direct

¹⁴⁹ Information available online at URL: <https://sites.google.com/a/xtec.cat/escolapinyaderosacurs-2013-14/presentacio-de-l-escola> Last accessed 27th July 2016.

observation of participants, the researcher and the school teacher were able to prevent these behaviours in the classroom.

Francesc Morón,¹⁵⁰ the sixth grade teacher, facilitated the communication with the school head teacher, who happily authorised the experiment. It took place between the 23rd and the 26th of May 2016 and children enrolled from second to sixth grades —aged seven to twelve— were considered to participate. Younger children were not able to take part in the study, as they are less likely to be able to read. Therefore, they would not have been able to read neither subtitles nor the questions in the questionnaire. From the total of 161 children involved in the research project, 18 were deaf; that is deaf children account for an 11% of the whole sample.

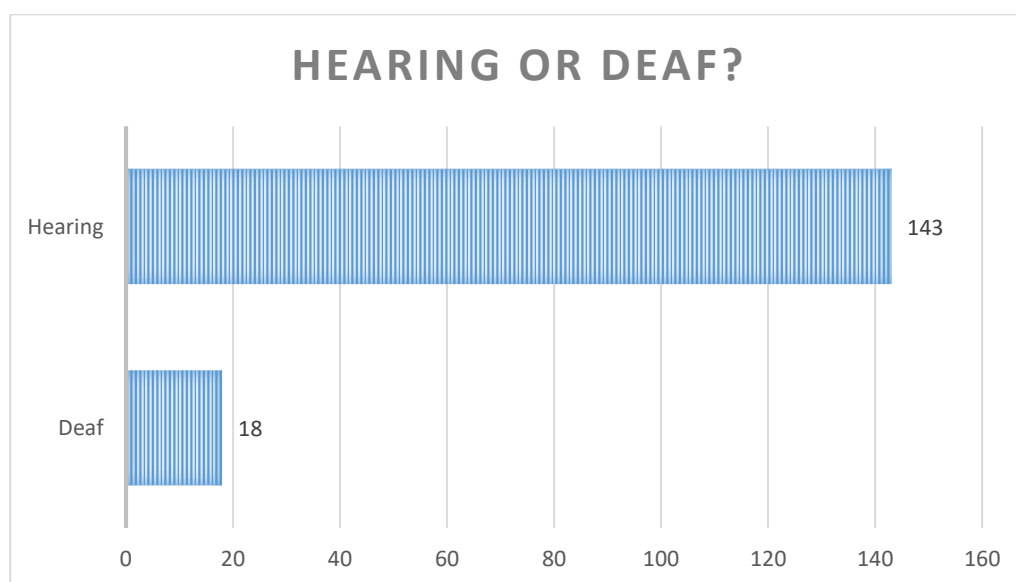


Figure 227: Participants' sensorial profile.

Among the 18 participants who are deaf, various degrees of deafness that range from moderate¹⁵¹ deafness to profound¹⁵² deafness can be found. However, they all wear hearing aids —either cochlear implant or hearing aid— and communicate exclusively through the A/O channel.

The 161 participants also represent a great diversity of cultures, origins, mother tongues, and intellectual and hearing abilities, as Pinya de Rosa is a school where lower-

¹⁵⁰ Besides being a teacher at a school of A/O deaf children, Francesc is the father of two profoundly deaf kids.

¹⁵¹ It entails a hearing loss between 41-70 dB.

¹⁵² It is a degree of hearing loss above 90 dB.

middle and upper-middle class students are mixed, which enriches the sample. However, none of the aforementioned aspects were taken into account to exclude any of the participants, since their own personal histories do not affect the outcome of the study. The only distinctive characteristic that helped to classify the participants was whether they had a diagnosed degree of deafness (Figure 218) and if they were regular conventional subtitles users (Figure 219).

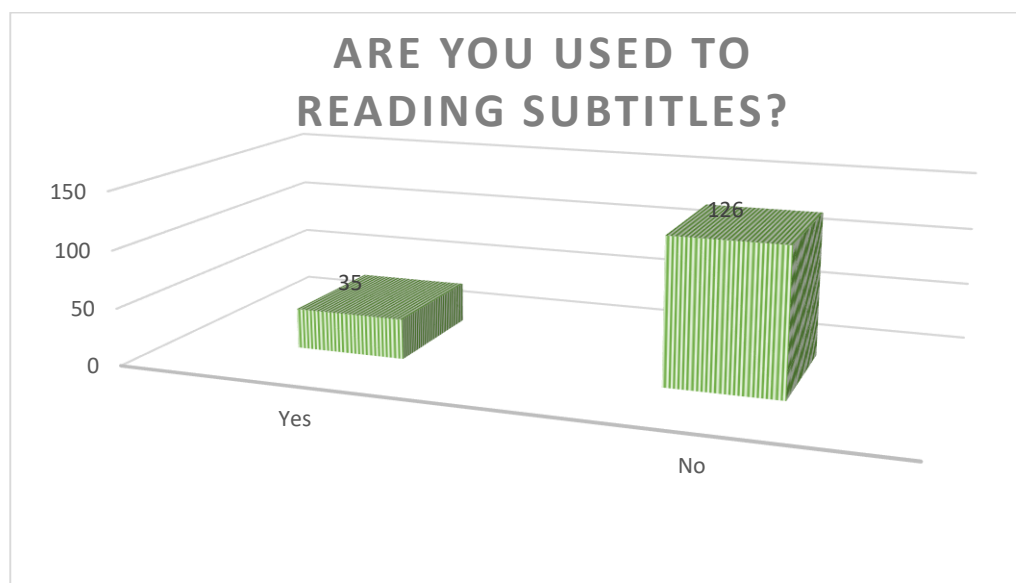


Figure 228: Participants' subtitles consumption profile.

The unfamiliarity with subtitles shown in the previous chart might be due to the general conception that subtitles are a nuisance rather than a helpful tool for hearing people. As per Karamitroglou's words (2000: 242), 'viewers are creatures of habit.' Especially in Spain, where the influence of dubbing is still present in the community, subtitling is seen as an invading element that is rejected by the vast majority of the audience. Dubbing consumers, quite often, also consider that subtitling entails a greater cognitive effort to follow the audiovisual programme, while 'dubbing is associated with a more fluent viewing experience that leads to a greater final satisfaction and enjoyment' (Perego *et al.*, 2014: 14).

This is far from the truth. Even though subtitling might be more cognitively taxing than dubbing, it has also been proved to have some advantages over dubbing, since subtitling can enhance certain aspects of cognitive performance. Especially 'in regard to the lexical aspects of performance (i.e. the ability to remember face-name associations

and specific expressions of dialogues), which benefitted from the written presentation' (*ibid.*: 15). Therefore, introducing the subtitling habit would help to read the subtitles with ease and spectators would be able to rely on them to understand the film. They just need to give subtitles a chance to experience their positive effects, as they do not impede, in any case, but help film comprehension and memory (*ibid.*: 14).

8.3 Results

The research in hand investigates children's behavioural reaction to an innovative set of subtitles in a real-life context. In addition, it also tests their capacity to accept a completely new design, which is far from the established conventionalism, and to adapt their viewing experience to it. The results of the survey carried out at both Escola d'Idiomes i Audiovisuals and Escola Pinya de Rosa are presented in the subsections that follow.

8.3.1 Creative subtitles ID, reading comfort and nuisance

Conventional subtitles have a fix position at the centre of the screen. This is the convention established and everybody knows beforehand that the text provided in that position accounts for the dialogues and the non-verbal information¹⁵³ of the programme. However, as stated in previous chapters, various eye-tracking experiments have shown the degree in which the viewers' behaviour is affected by visual elements. They mostly demonstrate that the visual component of the film, i.e. the image, is as important as subtitles in order to process all the information provided.

For this reason, *creative* subtitles convey this information all around the image, together with the action. In this way, the eye travelling from the image to the text is avoided and spectators can relax and enjoy both image and subtitles at the same time. Their sight will only need to follow the action in order to receive all the necessary information for the understanding of the programme. Hence, efforts have been made to integrate *creative* subtitles as part of the original image.

¹⁵³ In Spain, SEs will be located at the top right side of the screen, according to the conventions established by Norma UNE.

The moving position, however, was potentially double-edged in its consequences, as it may have entailed the risk of failure to identify the extra information provided by subtitles. This was one of the major concerns that appeared during the *creative* subtitles design process, although, as illustrated in the chart below, participants did not have problems when recognising *creative* subtitles, despite their different format and appearance.

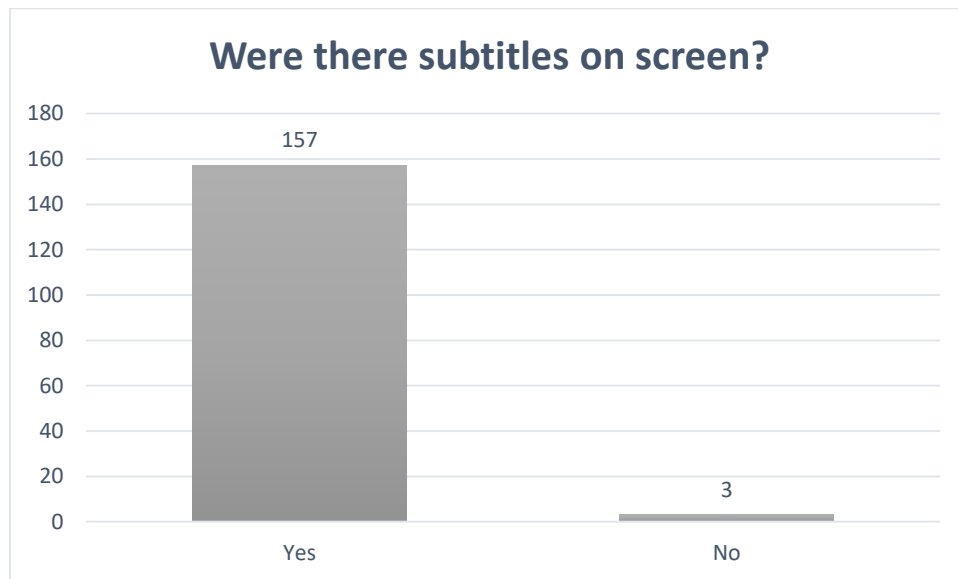


Figure 229: Creative subtitles identification.

Only three subjects replied there were no subtitles on screen, as they did not identify them as a foreign element inserted to the image, but as part of the original audiovisual product. Therefore, *creative* subtitles fulfilled its initial intention.

The fact that *creative* subtitles do not have a static position at the centre of the screen reduces monotony. Thus, viewers' eyes are not only focused on one part of the screen, which results in a reduction of the possibilities to miss visual information. Since this moving position is one of the innovations incorporated in *creative* subtitles, it caused a great worry about its reception among participants. It was believed that it could affect the viewers' comfort of reading the moving subtitles. Fortunately, as shown in the chart below, the vast majority of participants (82%) found *creative* subtitles easy to follow and comfortable to read. The remainder 18% that answered negatively argued that reading *creative* subtitles was not comfortable at all due to their moving position, which created confusion.

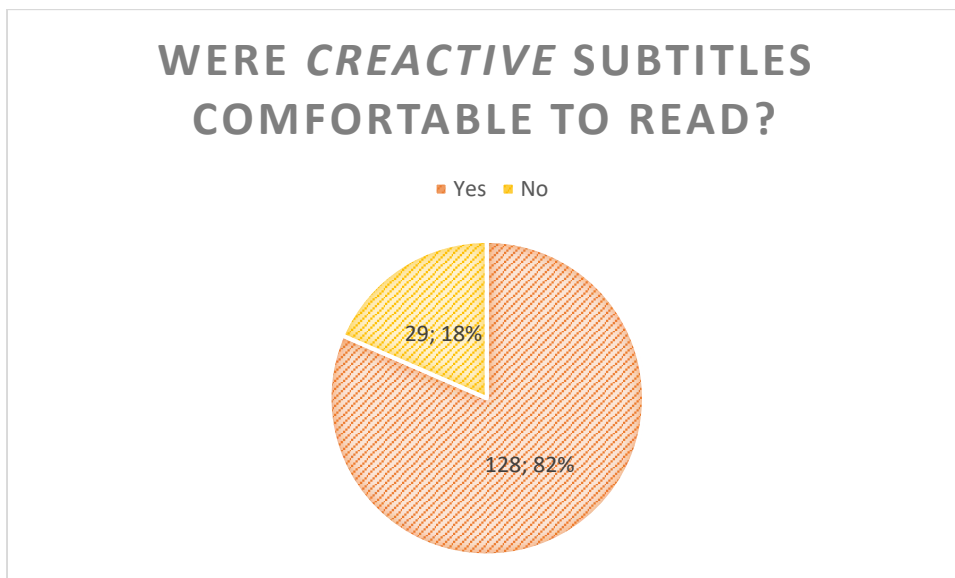


Figure 230: Reading comfort of creative subtitles.

Confusion can be understood as disorder or lack of understanding, which may annoy spectators. For this reason, it was also interesting to test whether *creative* subtitles might be disturbing for viewers. Besides the moving position, the different colours and shapes may also contribute to cause trouble to spectators.

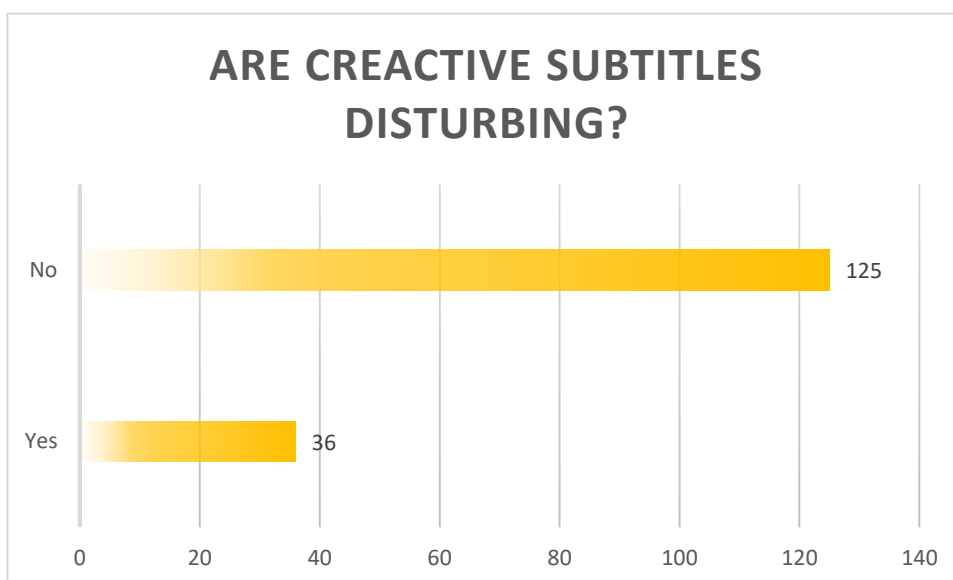


Figure 231: Nuisance of creative subtitles.

Fortunately, results were found in the opposite direction, as most of the comments received were to the detriment of conventional subtitles. Conventional subtitles are considered boring, dull, and disturbing. In fact, the majority of participants did not feel annoyed by any of the aforementioned features —moving position, bubble shapes, and colours— that are inherent to *creative* subtitles. On the contrary, they showed their approval and admitted that *creative* subtitles are¹⁵⁴:

- ‘easy to identify’
- ‘as lively as the image’
- ‘attraction-catching’
- ‘more animated and colourful and they do not disturb’
- ‘are not disturbing for hearers and helpful for deaf people’

The first barrier, which is the impact of accepting a completely new subtitling system, seems to be overcome. Now it is time to check whether the newly designed code has been understood by the audience.

8.3.2 Recognition of a new subtitling code

As described in the previous chapter, *creative* subtitles make use of bubble shapes and colours to describe volume and emotions, respectively. The former were borrowed from comics, which is quite a standard and universal language. The latter was not a random allocation of colours. It was determined by the results of “the colours of the emotions” survey (Appendix V).

It is worth highlighting the fact that the people who participated in the “colours of the emotions” survey did not take part in the *creative* subtitles experiment. The reason why these participants were not eligible to perform the main study of this research is to avoid contamination. In this case, they may have responded the questionnaire differently due to the influence of their previous experience. This prevention will help to have more objective results regarding the understanding of the new subtitling code.

In a broad sense, it can be said that participants perfectly understood which colour corresponded to which emotion. Data show both hearing and deaf children to be competent to identify emotions and characters. This might be due to the fact that (1)

¹⁵⁴ Comments made by participants in their questionnaires during the experiment.

creative subtitles are presented in accordance with the aesthetics of the audiovisual programme, or that (2) the audience may be familiar with the film *Inside Out* and its main characters. The latter may have had a positive effect on the identification colour-emotion, as in all cases, emotions have been well recognised by means of colours, with a few exceptions (see figures below). Therefore, 99% of the participants identified yellow as happiness, 94% knew blue corresponded to sadness, 97% associated red with anger, 91% related green to disgust and a lower 89% thought purple indicated fear.

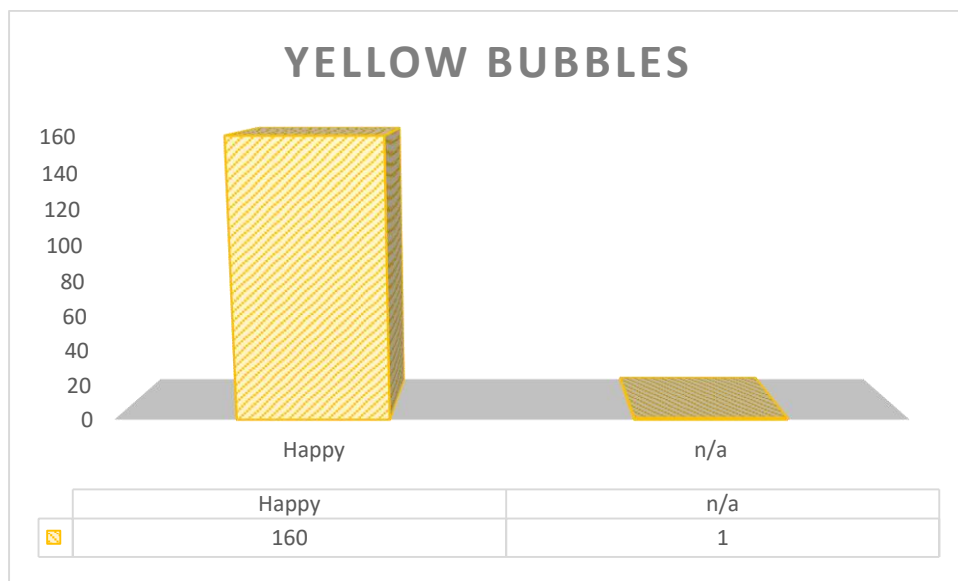


Figure 232: Emotion that corresponds to yellow bubbles.

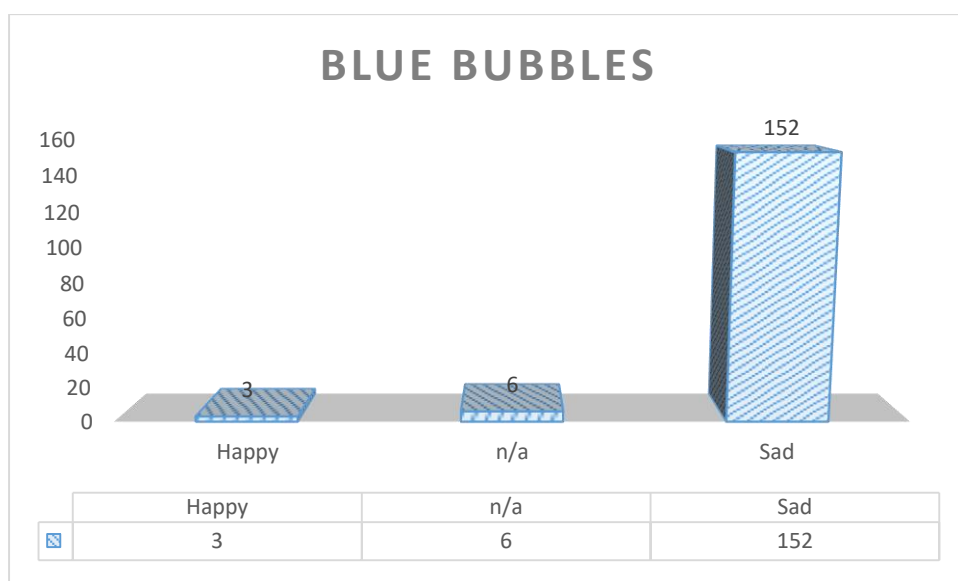


Figure 233: Emotion that corresponds to blue bubbles.

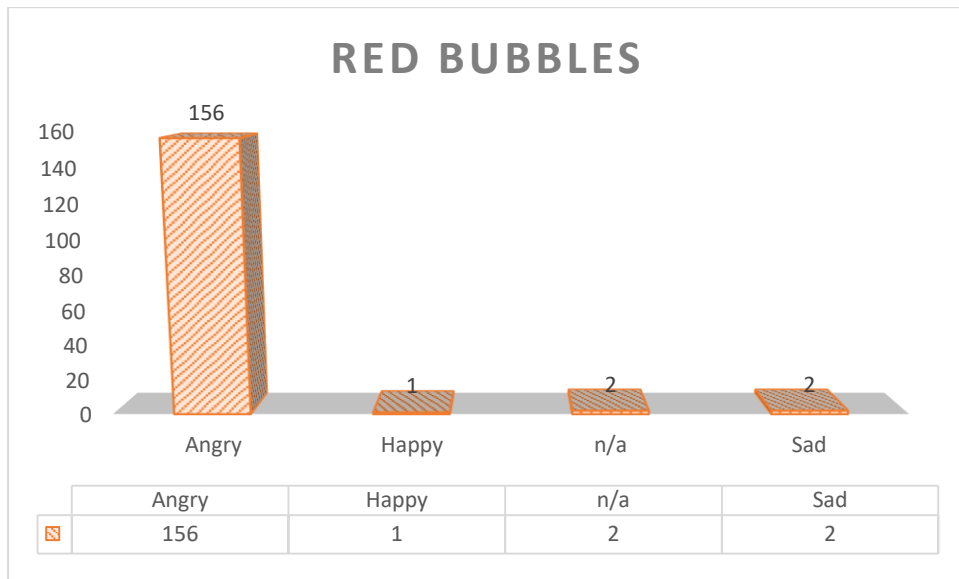


Figure 234: Emotion that corresponds to red bubbles.

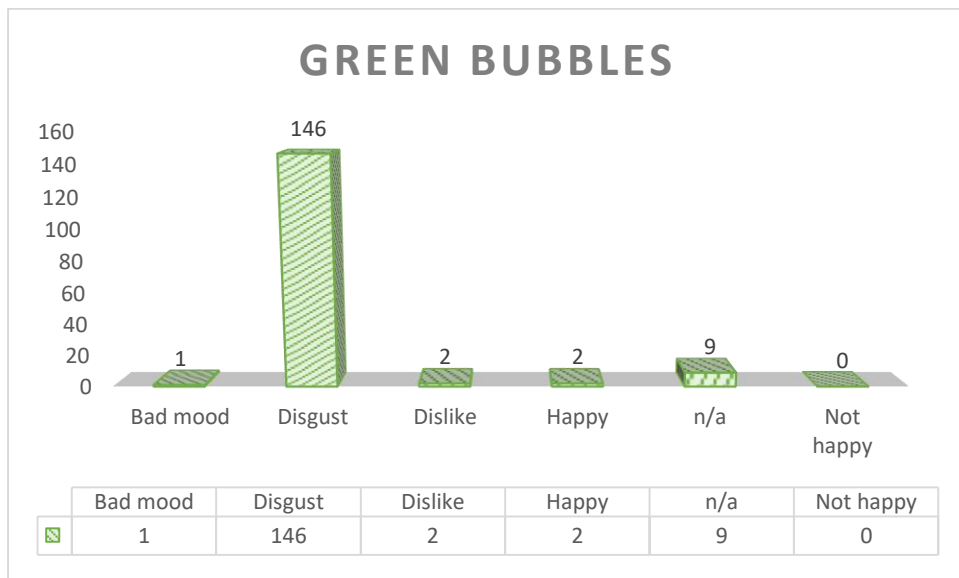


Figure 235: Emotion that corresponds to green bubbles.

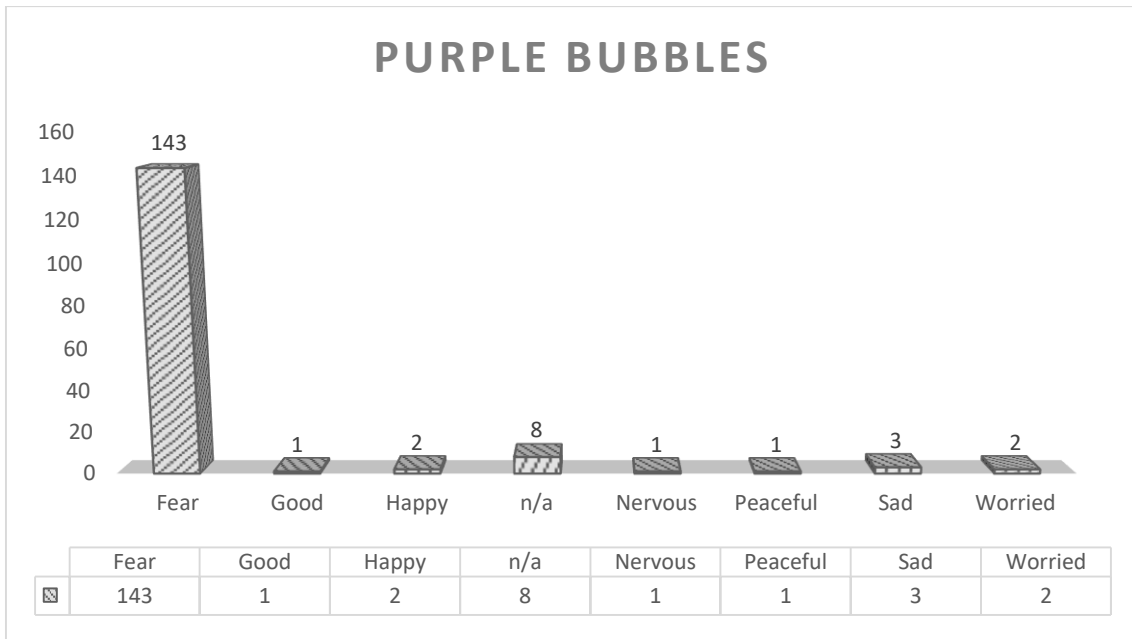


Figure 236: Emotion that corresponds to purple bubbles.

However, there has been a different story for bubble shapes. They were designed to add a clarifying effect that was supposed to be beneficial to the appropriate understanding of the subtitle and all its connotations.

Burst or jagged bubbles implied the volume of the utterance. Thus, all statements within this type of bubbles were uttered at a higher volume than normal. Despite a 63% of participants understood burst or jagged bubbles as a volume signal, there is a high 37% that did not identify which kind of information was provided by means of jagged or burst bubbles. Forty-eight students did not reply to this question in the questionnaire, while three students understood burst bubbles rendered thought, eight students understood anger was conveyed, and one student thought it meant sadness.

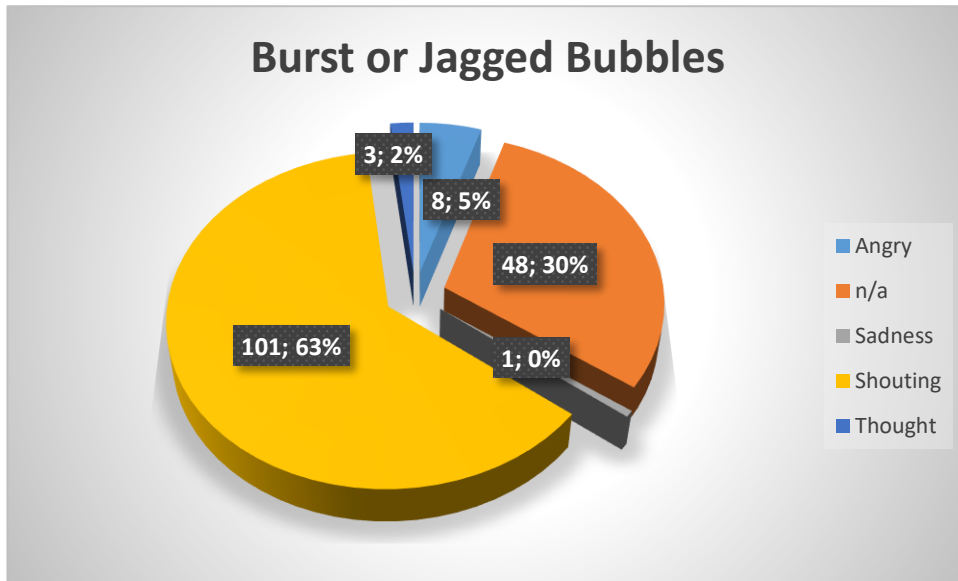


Figure 237: Understanding of burst or jagged bubbles.

The narrator is another innovative feature included in *creative* subtitles. Its utterances are framed in a white rectangle. This is another feature that has been borrowed from comics. It has not been identified properly in *creative* subtitles, since only a 31% of the participants knew the white rectangle referred to the narrator. The majority of the respondents, a 67% to be exact, did not know the meaning of the white rectangle, while 1% considered it rendered joy and another 1% considered it conveyed whisper. Only one person out of the 161 understood the white rectangle as a symbol of happiness.

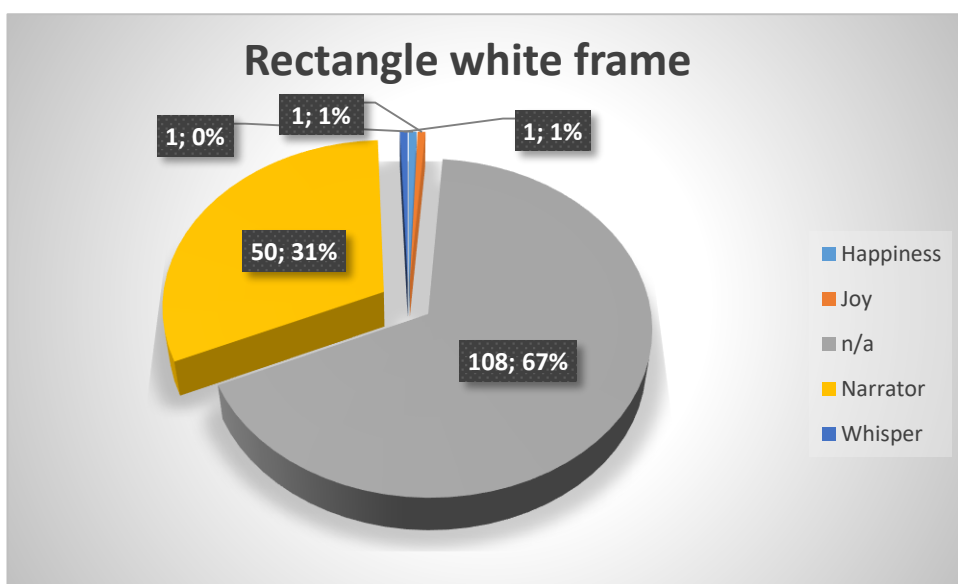


Figure 238: Understanding of narrator's box.

According to the previous charts, it does not seem that participants were familiar with comics' language. It would have been interesting asking them whether they usually read or have ever read a comic and whether they are able to identify its conventions. Teachers confirmed that text types are part of the primary school curriculum. Although students should have known the aforementioned conventions, as they had previously studied them at school, it seems that they do not have the habit of reading this type of text.

One of the main objectives of this empirical study was to determine whether *creative* subtitles were legible and readable. According to Gambier (2003: 179), subtitles *legibility* is the feature in charge of making subtitles visible and recognisable. Subtitles *readability*, on the other hand, is the other major feature of subtitling, which focuses on making subtitles comprehensible. *Creative* subtitles were designed taking into account both legibility —by means of colours and position to identify characters and source of the sound— and readability —by means of shapes and colours.

Therefore, it was important to test whether the audience would be able to identify and follow the subtitles, as well as understanding what they mean. The results illustrated previously suggest that *creative* subtitles alone may not be enough. It would probably be necessary to present an explanatory introduction in current films or television programmes as a complement to the *creative* subtitles code. It would not be a replacement of subtitling, as 'its features and functions would be in effect complementary, not conflicting' (di Giovanni, 2014), but a further clarification on the conventionalisms used. It would play a similar role to that of audio introductions in AD.

8.3.3 Participants' general opinion of *creative* subtitles

Regardless the unfamiliarity or the initial lack of understanding of the *creative* subtitles code, all participants, except one who did not answer the question, liked the new subtitling system presented.

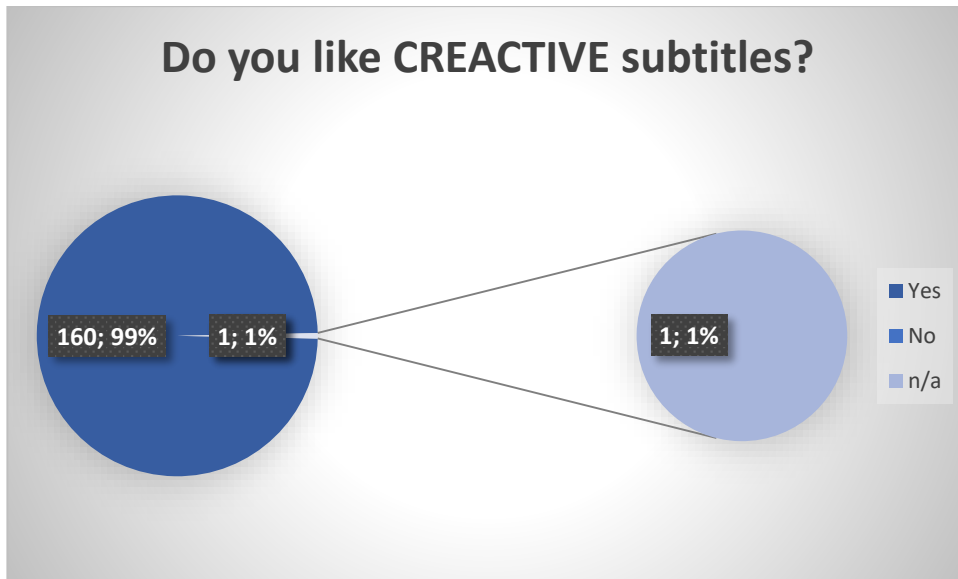


Figure 239: Participants liking for creative subtitles.

In addition, hearing people confirmed that *creative* subtitles caused a minimum nuisance. Hearing people are the ones who do not need to rely on subtitles to receive the audiovisual message in its entirety. The fact that they are not annoyed by the presence of subtitles will prevent them from turning off the subtitles mode, as seen in Figure 231.

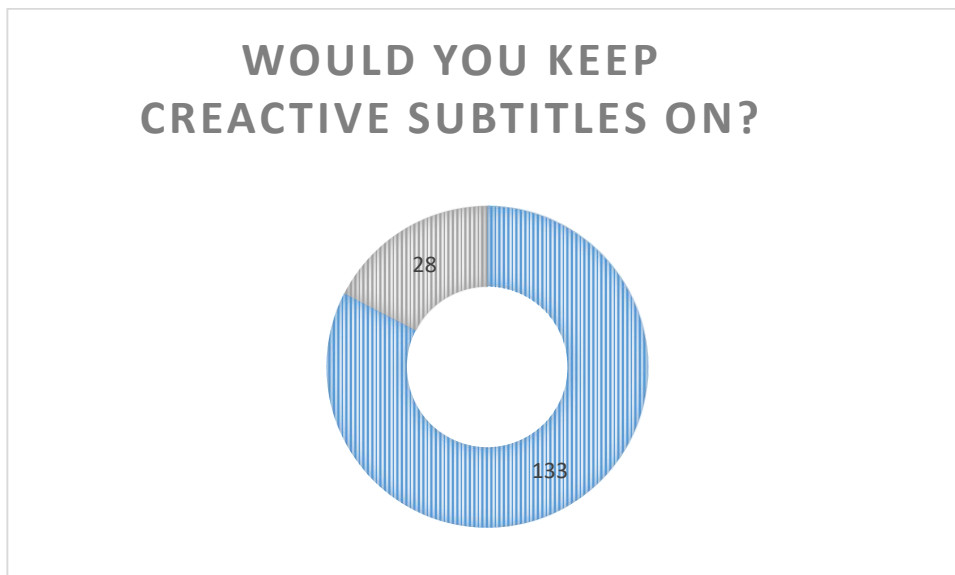


Figure 240: The vast majority of participants would not turn creative subtitles off.

Participants' likes or dislikes do not seem empirical data. However, these results may entail future consequences, such as the increase of subtitles consumption. Creating the habit may also have a domino effect and impact not only on subtitling consumption but also on viewers' reading skills and memory, as 'subtitling does not impede, but in some respects helps, film comprehension and memory' (Perego *et al.*, 2014: 14).

Moreover, changes are not usually widely accepted the first time they are suggested. In general, new ideas are generally resisted. It is always easier to say *no* than to say *yes* to something unknown (Moss Kanter, 2012). In this case, participants' behaviours were not manipulated. They were able to express their opinion freely at all times and they have spoken: they prefer *creative* subtitles to conventional subtitles, as shown in Figure 232.

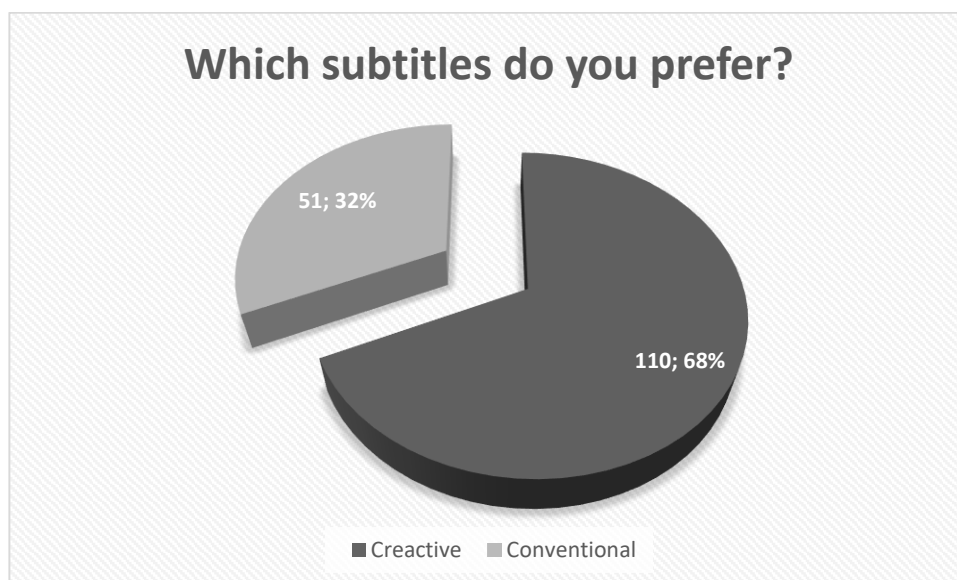


Figure 241: Participants' subtitles preference.

8.3.4 Final findings

Findings reveal that *creative* subtitles may not only be a research project, but become a reality. *Creative* subtitles have had a positive impact on both deaf and hearing children. It is especially remarkable that the former seem to be a little bit more reluctant to accept this new subtitling code, since they are used to conventional subtitles. Five out of the 18 deaf participants showed their preference for conventional subtitles. Their major

complaints are that *creative* subtitles (1) look “childish” due to their colours, and (2) are displaced at a very fast speed rate.

Colours are information transmitters, and subtitles’ speed rate is the same one they have in conventional subtitles. After discussing points (1) and (2) with the subjects and their teachers, we reached the conclusion that the lack of habit forced them to refuse *creative* subtitles. Deaf children have the ability to grasp the information from subtitles quickly to go back to the main image, but they are not used to the new technique of *creative* subtitles. They finally admitted that *creative* subtitles are funny and a great idea. However, since they are used to conventional subtitles, as it is what they have been using throughout their lives, they still prefer conventional subtitles.

On the other hand, hearing children showed a great interest in *creative* subtitles. They find conventional subtitles boring, and rather dull. As they do not need the information conveyed in subtitles, they turn them off. Nonetheless, their opinion regarding *creative* subtitles is slightly different. They thought it was great having a subtitling technique that:

- contributes to make the film nicer and complete,
- that identifies characters and emotions,
- that is easier to understand because of the colours and onomatopoeia,
- and, last but not least, a subtitling technique that will avoid fights between deaf and hearing siblings,¹⁵⁵ as *creative* subtitles are useful for deaf children and do not disturb hearing children.

Finding this balance was the centre of this research during the designing process. All participants demonstrated their knowledge of the structural features of *creative* subtitles and employed an array of communication strategies to achieve understanding and enjoyment. Hence, it can be said that *creative* subtitles met their initial purpose.

¹⁵⁵ My brother is deaf and I would be happy to watch *creative* subtitles with him.

CONCLUSION(S)

Audiovisual products are about a dialectic relation between the producer and a receiver. Decoding the information conveyed by the former through multiple channels, such as speech, sound and image is a complex process. So it is, also, for people with any sensory impairment. Throughout this thesis we have witnessed all the efforts that are currently being made in order to ensure accessibility is provided and is provided within good quality standards.

Besides all the legislation that has come into force in the last two decades, professionals and academics are investing their time and talent to make accessibility an up-to-date reality. However, in the particular case of SDH, as seen also throughout the research in hand, all these efforts do not seem to be translated into accessible options that satisfy the audience. This is particularly remarkable in the case of younger audiences. Their cognitive and intellectual abilities are developing, and the issue of not having their needs satisfied by means of complete access, may have serious consequences in the future.

For this reason, current SDH targeted at children was under analysis. One of the major complaints was image obstruction and attention distraction. The fact that subtitles have a static position at the centre of the screen either invades the main action on screen or makes viewers' eyes focus only on one part of the screen —due to monotony. Either way, it results in visual information being missed most of the times.

After observing the strategies used to render non-verbal components in current SDH and comparing them to the recommendations established in existing SDH guidelines, the results also show that conveyance inconsistency is the current tendency in SDH, as it is found throughout all the programmes included in the analysis. This quality variability of current subtitles, besides the fact that features are not rendered coherently between programmes and, more seriously, within the same programme, is worrying, as SDH recommendations and guidelines are available to subtitlers and broadcasters. It may be due to the fact that subtitling guidelines are not specific enough to fulfil the needs of neither subtitlers nor the audience.

Whatever the reason, inconsistency should be avoided by all means, since it may cause confusion among the viewers, especially among those younger audiences that need to rely on subtitles to access the programme. Inconsistency may result in impaired accessibility, which would be detrimental to the understanding of the audiovisual message.

The audience needs to pay attention to a number of variables, such as subtitles, images or background information, to understand a TV programme. Therefore, it is of an utmost importance that the same features are rendered in all programmes under the same convention. It should be understood as a universal code that may be applied to any programme without changing the meaning. In this way, deaf viewers, and particularly deaf children, would know the code beforehand and they would just need to enjoy the programme. As stated in Chapter Two, existing guidelines have already established a set of recommendations regarding the features that should be rendered by means of subtitles. However, each to his/her own, as every broadcaster or production company seem to apply their own rules, despite the existing guidelines.

The fact that the audience under study are deaf children determines the entire study. Deaf children's audiences are not a homogeneous being. They have special needs and abilities that differ from those of deaf adults, due to their age, maturity, language appreciation and reading skills. The latter, in fact, are a consequence of their lack of hearing, which, in turn, has an impact on their memory and the way they process the information. Many scholars' concerns, such as Zárte (2014) or Tamayo (2015) are 1) reducing reading speed rates, 2) subtitles' heavy editing or simplification, and/or 3) accuracy and grammaticality. The research in hand, on the contrary, raises awareness about the factors that make deaf children perform poorly when reading subtitles, which is not a lower language command,¹⁵⁶ but their manner of processing and recalling written information.

Audition is superior in temporal processing because it is 'intimately tied to time' (Kubovy, 1988: 318), while space appears to be 'the province of vision' (*ibid.*). Thus, the main difference existing between hearing children and deaf children —especially signers— is that the former have better abilities to process temporal information, whereas

¹⁵⁶ In fact, both hearing and deaf children acquire the same linguistic, semantic, and conceptual language complexity at the same pace (Pettito, 1994).

the latter perform better when processing spatial information. It is a consequence of SL usage, as signs are accompanied by linguistic facial expressions in SL. This means that spatial sequences allow more simultaneous expressions, since a substantial amount of information may be expressed simultaneously. This is not possible in speech, as its auditory/vocal elements are arrayed temporally.

Language has repercussions for memory. Languages that are not auditory and vocal, as SL, are found in the visuo-spatial domain of working memory, which temporarily stores and manipulates visual, spatial and kinaesthetic information (Grep, 2011: 6). Deaf children's dependence on vision, by virtue of their hearing loss and their use of SL, makes them faster than hearing children in redirecting visual attention from one spatial location to another. In addition, they perform better than their hearing peers when recalling information presented in static visuo-spatial format both for linguistic and non-linguistic items (Hamilton, 2011: 406).

According to the previous statements, it may seem that deaf children should have better reading skills, since printed text is not temporal, but spatial. Even though printed text is a visual stimulus, it is a derived code from the primary language of speech, which is recoded into phonological form in working memory. In other words, current SDH subtitles are not visual language, but a visual-written representation of spoken language. Due to their difficulties using phonological strategies based on speech to decode text, deaf children perform poorly when recalling spoken or written words, i.e. reading subtitles. Hence, it can be said that current SDH subtitles are not fulfilling deaf children's needs as they are not designed to avoid printed text processing.

The present study is not the first one to point out the issues of inconsistency and deaf children's needs. It is, however, the first one to take action to stop inconsistency and to study in depth the audience's profile, which is special not only due to their age and maturity. It is surprising that previous studies never suggested alternatives or improvements, despite highlighting (negative) issues in their analysis. This thesis suggests a (possible) solution, which takes into account the aforementioned "special" abilities to design a completely new subtitling code: *creative* subtitles.

Deaf children struggle while recalling the stimuli of spoken or written words, since they experience difficulties in using phonological strategies based on speech to decode text. Nonetheless, ‘the human drive for language is so strong that when deafness makes speech inaccessible, it finds another channel, creating language in sign’ (Perlmutter, No Date). *Creative* subtitles have also found “another channel”, and, consequently, they have created a language in which the verbal dimension is supplemented by elements in other media. They are the result of the need to imply sounds through images.

A language that is able to embrace all the senses in one media already exists: comics’ visual language. In conversations with d/Deaf people, they mentioned their preference for comics as they had all the information they needed on the page. Thus, the idea of using comic conventions in SDH was kept in mind, as a possible future SDH reality. Comics are the only medium where the audience regularly sees sound instead of hearing it. This peculiarity forces comic book artists ‘to utilise, innovate and invent all sorts of methods to depict sound’ (Wong, 2014). In addition, comic style provides versatility when capturing nuances. Shapes and colours, for instance, highlight all sorts of auditory effects, as seen in Chapter Five and Seven.

Moving from written to visual language opens up new ways to represent non-verbal components. Symbols can serve as visual equivalents to sound, and may capture its essence in a more evocative manner than verbalisation is capable of (*ibid.*). However, depicting sound visually is not as easy as it may sound. There should be implications, a shared code, between the visual element and the viewers, as it will be necessary to infer all the characteristics of a sound from the way in which it is visualised. Moreover, comic artists choose words that evoke sounds and that, at the same time, create a rhythm when read on the page.

Creative subtitles believed in all this. *Creative* subtitles aspire to be a little piece of active art that serves the needs of deaf children. However, subtitling is a constrained mechanical process, as seen in Chapter Six. Therefore, to create a new subtitling code that provided the necessary flexibility to render acoustic information by visual means and be able to translate from sound into image —from auditory into visual—, *creative* subtitles had to break all the established norms, starting by changing the manner subtitles have been commonly conceived.

Norms are a social phenomenon that guides the behaviour of people and, sometimes, have a prescriptive force within a community. In subtitling, norms and conventionalisms form an entire system for subtitlers to follow. They are acquired through socialisation and govern behaviour, as well as they ensure social order, producing regularity of behaviour. Toury (1995: 55) defines *norms* as follows:

[...] ‘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.’

This regularity, which is what viewers expect to find, is sometimes understood as “right”, whereas a deviant —or innovative— action is perceived as “wrong”. However, as the results of the analysis of current SDH practices suggest, each system varies from broadcaster to broadcaster. *Creative* subtitles pursue coherence in this respect, although they totally break the norms of subtitling. Toury (*ibid.*) warns us that deviation from the norm usually implies sanctions. In our case, surprisingly, we paid this deviant behaviour with the contentment of the audience. Instead of obeying the subtitling norms, *creative* subtitles have propelled the modification of the already existing normative patterns. The purpose is not eliminating previous norms, but favouring the co-existence of previous sets of norms and the new ones (*ibid.*: 62).

We are living an authentic technology revolution that may help us to tailor subtitles according to the needs of the audience. One of the main concerns when creating *creative* subtitles was presenting a universal design to benefit people of all ability kinds, without disturbing those who do not need to rely on subtitles to follow the audiovisual programme. *Creative* subtitles ease access to auditory information by means of a variety of methods to present information, such as bubble shapes, colours and inserts. These flexible strategies have been designed taking into account accessibility, eliminating unnecessary and inconvenient obstacles for both disabled and non-disabled people.

Empirical findings

In the empirical part of this study, it was possible to work closely with children, both hearing and deaf, which has added valuable information about the usefulness of the alternative subtitling suggested in this thesis. In general, it can be said that the audience has gladly welcomed *creative* subtitles.

The results extracted from the experimental research carried out in mainstream school with both hearing and deaf children suggest that *creative* subtitles were 1) easily identified, and 2) read comfortably. Moreover, 3) most participants understood the shapes and the colours that constitute the newly designed subtitling code; most likely due to the fact that colours and shapes are a universal visual —not written— language. Finally, 4) the vast majority of them preferred *creative* subtitles to conventional subtitles (see Chapter Eight), as they considered them more visually engaging and conceptually clearer.

In addition, hearing participants highlighted that *creative* subtitles benefited people of all ability kinds without being disturbing. This means that it did not only benefit deaf audiences, but also pleased hearing audiences, which is a remarkable fact, since Spain has traditionally shown its preference for dubbing. Subtitling is still seen as an invading element and it is rejected by the vast majority of the audience. Dubbing, on the other hand, is associated with ‘a more fluent viewing experience that leads to a greater final satisfaction and enjoyment’ (Perego *et al.*, 2014: 14), although subtitling has been proved to have some advantages, as it enhances certain aspects of cognitive performance (*ibid.*). However, preferences are not unalterable. The design of *creative* subtitles may also be suitable to establish a subtitles reading habit among hearing children, which would, undoubtedly, improve their reading skills.

Creative subtitles – pros and cons

Despite the positive response of participants to *creative* subtitles, it appears worthwhile to examine the advantages and disadvantages of this new subtitling proposal.

Pros

- *Creative* subtitles are legible and readable.

Creative subtitles are designed to preserve the two major SDH features, according to Gambier (2003: 179): subtitles' *readability* and *legibility*. As seen in Chapter Three, current SDH guidelines focus their attention on the latter. Their major concern is to make subtitles visible on screen and differentiate SEs and PFs conveyance from utterances by means of a different position, i.e. at the top left side of the screen, or a different colour, i.e. in blue letters with (or without) white background.

Making subtitles visible within the screen is important for viewers to receive all the information conveyed through subtitles. However, it is essential that subtitles' contents are comprehensible enough for the audience, as they are likely to be the most important source of audio information to understand and follow the story. *Readability* is, thus, an essential feature to ensure access to the intended message of the audiovisual material.

Creative subtitles concentrate on subtitles' comprehension. They eliminate labels and, consequently, reduce the amount of text to be read, which allows time for viewers to centre their attention on reading and understanding the linguistic contents of the subtitle. However, they do not overlook legibility. The newly created code permits viewers to identify subtitles within the action and to recognise the message, which is transmitted by means of colours and shapes, as described in Chapter Seven.

Results from the empirical study suggest that viewers had no difficulties recognising the message hidden behind colours:

- 99% of the participants identified yellow as happiness,
- 94% knew blue corresponded to sadness,
- 97% associated red with anger,
- 91% related green to disgust, and
- a lower 89% thought purple indicated fear.

However, the recognition of bubble shape meanings was not distinguished as straightforward as colours:

- 63% of the respondents identified jagged or burst bubbles as a symbol of screamed or shouted speech,
- while only 31% was able to pinpoint that rectangle white “balloons” were used to render narrator’s utterances.

All in all, *creative* subtitling is an artistic process that requires the participation of different disciplines, such as graphic design, animation, video editing, subtitling, and transcreation. It results in a code that is well understood and easily remembered, which facilitates the comprehension of the whole message accessing to auditory information visually. It is true, though, that a part of the audience would probably need an explanatory introduction, a further clarification on the conventions used, as a complement to *creative* subtitles.

However, this complementary introduction would only be indispensable the very first time viewers access to *creative* subtitling, since it is aimed at becoming a conventionalised universal code. This code, moreover, is a loan from another one that is universally known: comics’ language. This implies that reading subtitles would be a mechanical process and would imply less cognitive effort as they would let pictures do the talking.

- *Creative* subtitles reduce the amount of text / labels to be read.

PFs conveyance by means of shapes and colours and SEs conveyance by means of animated inserts avoid the use of labels. Labels are a linguistic explanation, commonly presented in capital letters and in brackets immediately before or after the utterance affected by the emotion or volume. Bubble shapes and colours contribute to a significant reduction of the amount of labels, and therefore written text, to be read throughout the programme.

This is particularly advantageous to severe or profoundly deaf children, whose hindered access to orality impedes their reading/writing acquisition process and the

mental representation of speech. As stated in Chapter Four, they lack a procedure to access this phonological information from printed text, and, consequently, they have to recode written text into an intermediate representation by means of orthography or articulation—they use speech movements to convert graphemes into articulatory movements and assemble a visual representation of the text—, fingerspelling or SL—the use of signs to encode print (Musselman, 2000: 14-19). Hence, deaf readers supplement their limited abilities with visual codes that potentially play a similar role as the phonological code in hearing children.

With *creative* subtitling, the experience of reading subtitles becomes more relaxed, both for deaf and hearing children. It implies a lower cognitive effort, compared to conventional subtitling, and it results in a more relaxed and fluent viewing experience. Viewers do not feel overwhelmed by the great deal of information contained in subtitles and have more time to read subtitles. Therefore, they do not have the perception that they would miss part of the subtitles' contents if they do not hurry to read. As a result, a greater enjoyment of the image is also favoured. The time that is not needed to read and understand overloaded subtitles is invested in enjoying the whole audiovisual programme, which leads to a greater final satisfaction and contentment.

- *Creative* subtitles are part of the action.

Speech bubbles and SEs have been accurately placed where the main action takes place. They are in the picture for a purpose, although they go unnoticed as they are understood as a whole together with the speech they contain and the image they accompany. However, special care has been taken to avoid obstructing the image. This means that *creative* subtitles do not have a static position, and, therefore, spectators' attention is not only focused on the bottom part of the screen, as in conventional subtitles.

Despite the human visual system is a sophisticated information processor, concentrating only on one side of the screen may entail missing important visual information, provided in the film. That is why *creative* subtitles provide the freedom to place subtitles where most appropriate on screen. In fact, there are a very few instances in which subtitles are found in their “usual” position, since the purpose of *creative* subtitles was to become part of the action, to be integrated to it, without being an obstacle

to follow the film. Therefore, utterances have been placed closer to the speakers or to the source sound, to prevent the eye from moving around the screen to gather all the information, i.e. image and dialogues. According to the results of the empirical study, this appears to be more comfortable for 82% of the viewers (see Chapter Eight).

- *Creative* subtitles are a universal language.

The *creative* code is based on shapes and colours, which are a universal language. This is also an advantage over onomatopoeia, which need translation. Besides facilitating the viewers' understanding, it is also positive for the multilingualism found in films. When subtitling into different languages, subtitlers would only need to translate the linguistic content, as PFs and SEs would not need translation. Moreover, they would serve as a subtitling template.

- *Creative* subtitles are inclusive.

Creative subtitles are aimed at making a contribution towards the practice of subtitling for all, both deaf and hearing children. Their inventive layouts are not targeted at children who are seen as “different” from the majority due to a sensory disability. It is commonly known that children do want to be “different” from the rest.

Creative subtitling has evolved the general conception of subtitling and will contribute to a more inclusive film watching experience. Now hearing children will not want to turn the subtitles mode off, since captions will be useful for deaf children and non-disturbing for hearing children, as 78% of the hearing participants claimed in the empirical study. *Creative* subtitles will help deaf and hearing children to share the experience of watching and enjoying accessible programmes. Thus, in families where there are both hearing and deaf people, no one would have to make sacrifices to the benefit of the other.

Cons

- *Creative* subtitles are not applicable to live subtitling

Creative subtitles can be best achieved in pre-recorded subtitling. As described previously, *creative* subtitling consists of innovative strategies that are not readily applied to live subtitling. Due to its nature, *creative* subtitling requires a laborious tailoring process, which involves different disciplines and includes the manipulation of the image and the language to be inserted in the subtitles. At the moment, it is a time-consuming activity, which is incompatible with the instantaneity of live subtitling.

- *Creative* subtitles are screen invading.

Some may consider that *creative* subtitles invade the screen. However, as stated in the pros, we understand it not as an invasion nor as an image obstruction, but as becoming part of the image. It is true, though, that special care should be taken to avoid overloading the image. It is extremely important to balance subtitles with action. The abuse of *creative* subtitles may be blunt and flashy. For this reason, sometimes the absence of subtitles compensates the expressivity of the image itself. Non-verbal information should be conveyed moderately, when necessary. The strategy of only rendering “invisible”, significant SEs, i.e. SEs that are not immediately obvious from the image should be employed. An overuse of SEs may become distracting for viewers. In this way, images are neither excessively loaded with meaning nor the action is diminished by subtitles.

- *Creative* subtitles are not didactic.

Some experts, such as Zárate (2014), consider that subtitles could become a didactic tool for deaf children. The potential didactic role of subtitles lies in words. Editing may suit the reading abilities of the youngest children and, therefore, encourage them to make use of subtitles. In other instances, when opting for verbatim subtitles, the introduction of new vocabulary or words that ‘might not be particularly easy to read or even understand’ in subtitles can be beneficial for deaf children to expand their

vocabulary. Even redundancy, i.e. subtitles that describe what is visually available on screen, can have a didactic purpose.

Creative subtitles are mostly verbatim, i.e. literal. One of their main contributions is, however, that they reduce the amount of text to be read. They eliminate PF and SE labels,¹⁵⁷ which are translated into visual items, to allow more time to read and understand the linguistic contents of subtitles. It could be discussed that this fact hinders deaf children's vocabulary expansion. *Creative* subtitles, however, are thought to benefit the comprehension of the linguistic content of subtitles, where the main vocabulary load is found.

- *Creative* subtitles are time-consuming.

The process of tailoring subtitles is not as straightforward as conventional subtitling. As stated previously, *creative* subtitles are an artistic process. As such, they require the participation of different disciplines, such as graphic design, animation, video editing, subtitling, and transcreation. Hence, each and every subtitle has been designed purposely. First, it was essential to analyse the character of the statement. Then, the bubble was created. After, the linguistic contents were inserted into the bubble. Finally, the bubble with the utterance was burnt into the image and carefully time-coded.

It seems an easy and standard process. It is, but any mistake causes this process to be repeated again. It is hoped that *creative* subtitles become a reality, although I am aware that this will not be possible until this process is accelerated. At present, subtitlers need to have a good linguistic command and they are taught all the techniques and constraints involved in the process of subtitling.

From my point of view, this should not be enough. Making accessible subtitles for deaf children is not only the transcription of what is being said and heard in the audiovisual programme. Subtitlers should understand the norms and guidelines of accessibility, and they should know in depth the characteristics of the disability they are providing access to. In fact, the thorough study of children's deafness allowed me to

¹⁵⁷ PF, SE, and music are usually named as the "extralinguistic" or the "non-verbal" elements of SDH. Therefore, we have not rendered them by "linguistic" or "verbal" means.

discover their difficulties in decoding printed text and made me believe it was necessary to adapt the information into a graphical code, which has been adapted to their needs and abilities.

However, it is not common that subtitlers have a professional command of graphic design, animation or video editing techniques, nor that graphic designers, animators or video editors have knowledge of the basics of subtitling and/or sensory disabilities. For this reason, more than one professional would be involved in creating subtitles, which would increase both the time and money spent to complete the process. Subtitling industry and broadcasters work with tight deadlines and budgets. Therefore, it sounds quite unthinkable that they would opt for a project in which they would have to invest more time and money.

That is why new technological solutions that facilitate the task of creating *creative* subtitles should be developed. Thus, *creative* subtitles are challenging not only for academics and professionals, but also for subtitling software developers.¹⁵⁸ They could come together to find creative solutions that accelerate and standardise the process of tailoring subtitles. Nobody said it was easy, but the thesis in hand has laid the foundation stone. Five years of research, training, trials, tests, a long etc. are just the beginning. It is a proposal that, without a doubt, needs to be further developed to be finally implemented.

Along with technological developments, animators and producers should be aware of the importance of accessibility. In this way, subtitles should be conceived as a natural component of a film rather than an after thought (Sinha, 2004: 174 in Romero Fresco, 2013). If subtitles were considered at a pre-production stage, filmmakers would know all the elements that should be taken into account to make their films accessible, not only to viewers with sensory disabilities, but also to spectators in other languages (Romero Fresco, 2013). They would be able to produce a universal design that is accessible to people both with and without disabilities, and they would consequently reach not only a minority, but a large share of the audience. (*ibid.*).

¹⁵⁸ In case it is a disadvantage, since challenges are always positive.

Limitations of the study – future research

The research in hand has created an elaborated a code whose attention has been called to convey PFs and SEs visually. However, as stated previously in Chapter Seven, it would be interesting to study complex emotions in further detail together with expert psychologists. An initial idea of comparing facial expressions associated with emotions has been pointed out, as facial movements are universal and can be recognised all around the world.

On the other hand, and despite the success of *creative* subtitles among deaf and hearing children, one of its features, i.e. music, needs to be further researched. It has not been possible to provide a concrete alternative for music. Several attempts have been made and some of them seem to meet the standards of *creative* subtitling, such as the figures below extracted from Chapter Seven. Nonetheless, this feature unquestionably needs to be further studied and developed.

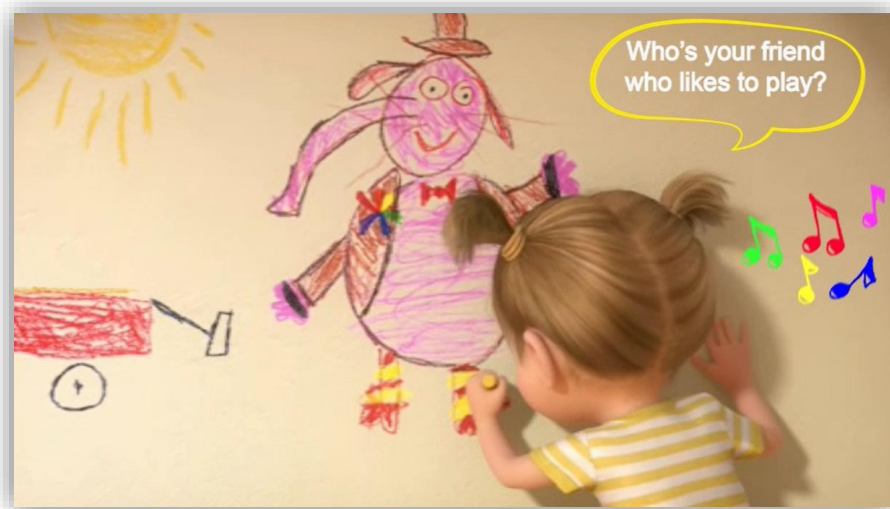




Figure 242 and 243: Example of lyrics creative conveyance.
 Source: creative subtitles (Sala Robert, 2016), *Inside Out* (Pixar, 2015).



Figure 244: Extradiegetic music conveyance.
 Source: creative subtitles (Sala Robert, 2016), *Inside Out* (Pixar, 2015).

As seen in the figures above, in diegetic music conveyance *creative* subtitles have gone further than just accounting for the music and the lyrics, as they also convey the emotion of the character. Moreover, they have avoided the use of italics at the same time they have provided a visual alternative that mirrors the scene and matches the aesthetics of the film.

Details needed to be carefully considered and designed, as music is an element of an utmost importance in films. It creates atmospheres and moods and it causes the emergence of feelings. It conveys meanings in such a special manner that makes viewers respond powerfully, but unconsciously.

The fact that music is such an abstract and versatile element with such a power in films is what complicates its visual conveyance. This feature should be further developed, together with music experts. It would be very positive to be able to establish a code according to the feelings awoken by the music. Perhaps colours could be applied to render emotions produced by music in the same way they render emotions that accompany speech.

A more elaborated and laborious strategy would be creating a code that is able to shape visually the different elements of music, which are in charge to express and convey emotions, thoughts and ideas. The basic characteristics of sound that are manipulated to create music are the following:

- ◆ *Pitch*, i.e. the highness or lowness of a musical sound.
- ◆ *Rhythm* is the element of time in music. It includes the *tempo*, i.e. the speed of the beat.
- ◆ *Harmony* is thought of as the art of combining pitches into chords, which are several notes played simultaneously as a “block”.
- ◆ *Dynamics* contain the relative loudness or quietness of music.
- ◆ *Timbre* is used to evoke certain atmospheres. Upper registers will produce brilliant and piercing tones, while lower registers achieve a rich and dark timbre.
- ◆ *Texture* refers to the number of individual musical lines or melodies.
- ◆ *Form* is the combination of musical elements to build a melody.
- ◆ *Style and articulation* are the traits that can enhance musical experiences by offering clues of what the composer was trying to express.

Whatever the final option is, it is recommended that it is designed bearing in mind deaf children's needs and abilities. They should be at the centre of the research despite the difficulties that might be encountered throughout the process. Therefore, it is important to find a strategy to render music 100% visually. The aforementioned points are the ideas my future research will depart from to achieve a similar result to the ones presented in the thesis in hand.

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FILMOGRAPHY

Programmes used for the analysis of current SDH practices

Preschool children's programmes

English

Dora the Explorer — “Quack! Quack!” broadcast by Nick Jr in July 2011. 23 minutes.

Dora the Explorer — “Wizzle Wishes” broadcast by Nick Jr in July 2011. 23 minutes.

Dora the Explorer — “Bouncing Ball” broadcast by Nick Jr in July 2011. 24 minutes.

Shaun the Sheep — “Take Away” broadcast by CBBC in June 2011. 13 minutes.

Shaun the Sheep — “Spring Lamb” broadcast by CBBC in June 2011. 8 minutes.

Shaun the Sheep — “Shirley Whirley” broadcast by CBBC in June 2011. 8 minutes.

Bubble Guppies — “No Title Provided” broadcast by Nick Jr in June 2011. 22 minutes.

Bubble Guppies — “No Title Provided” broadcast by Nick Jr in June 2011. 20 minutes.

Bubble Guppies — “No Title Provided” broadcast by Nick Jr in June 2011. 22 minutes.

Team Umizoomi — “No Title Provided” broadcast by Nick Jr in June 2011. 21 minutes.

Team Umizoomi — “No Title Provided” broadcast by Nick Jr in June 2011. 20 minutes.

Team Umizoomi — “No Title Provided” broadcast by Nick Jr in June 2011. 22 minutes.

Spanish

Pocoyó — “Pocoyó detective” broadcast by Clan in June 2011. 10 minutes.

Pocoyó — “El restaurante imaginario” broadcast by Clan in June 2011. 8 minutes.

Pocoyó — “Loula huele mal” broadcast by Clan in June 2011. 7 minutes.

Lunnis y sus amigos — “ABC” broadcast by Clan in June 2011. 5 minutes.

Lunnis y sus amigos — “Aprende inglés” broadcast by Clan in June 2011. 5 minutes.

Lunnis y sus amigos — “Lunnipedia” broadcast by Clan in June 2011. 5 minutes.

Chuggington — “Despierta, Wilson” broadcast by Clan in June 2011. 10 minutes.

Chuggington — “Brewster y el dragón” broadcast by Clan in June 2011. 10 minutes.

Chuggington — “Wilson y el helado” broadcast by Clan in June 2011. 10 minutes.

Looney Tunes — “Gatito acorralado” broadcast by Boing in June 2011. 7 minutes.

Looney Tunes — “Speedy Gonzales en... ‘Desastre en conserva’” broadcast by Boing in June 2011. 6 minutes.

Looney Tunes — “Identidad equivocada” broadcast by Boing in June 2011. 6 minutes.

Catalan

La Lua i el món — “El cirerer que no volia créixer” broadcast by Super3 in May 2011. 4 minutes.

La Lua i el món — “Els polls saltadors” broadcast by Super3 in May 2011. 4 minutes.

Les tres bessones — “El Dr. Jekyll i Mr. Hyde” broadcast by Super3 in May 2011. 24 minutes.

Les tres bessones — “Tristany i Isolda” broadcast by Super3 in May 2011. 24 minutes.

School children’s programmes

English

Fanboy & Chum Chum — “Chicken Pox” broadcast by NickToons in May 2011. 12 minutes.

Fanboy & Chum Chum — “Moppy Dearest” broadcast by NickToons in May 2011. 11 minutes.

Fanboy & Chum Chum — “Norse-ing Around” broadcast by NickToons in May 2011. 12 minutes.

SpongeBob SquarePants — “Bummer Vacation” broadcast by NickToons in May 2011. 11 minutes.

SpongeBob SquarePants — “Wigstruck” broadcast by NickToons in May 2011. 11 minutes.

SpongeBob SquarePants — “Blackened Sponge” broadcast by NickToons in May 2011. 11 minutes.

Arthur — “Arthur’s Eyes” broadcast by CBBC in May 2011. 13 minutes.

Arthur — “Francine’s Bad Hair” broadcast by CBBC in May 2011. 11 minutes.

Arthur — “Arthur and the Real Mr. Ratburn” broadcast by CBBC in May 2011. 12 minutes.

Ben 10: Ultimate Alien — “The Enemy of My Enemy” broadcast by Cartoon Network in June 2011. 30 minutes.

Ben 10: Ultimate Alien — “Nor Iron Bars a Cage” broadcast by Cartoon Network in June 2011. 30 minutes.

Ben 10: Ultimate Alien — “Fused” broadcast by Cartoon Network in June 2011. 30 minutes

Spanish

Los pingüinos de Madagascar — “El rey sin reino” broadcast by Clan in June 2011. 12 minutes.

Los pingüinos de Madagascar — “Un elefante nunca olvida” broadcast by Clan in June 2011. 11 minutes.

Los pingüinos de Madagascar — “Compuesta y sin nutria” broadcast by Clan in June 2011. 13 minutes.

George de la jungla — “El primo Larry de la jungla” broadcast by Clan in June 2011. 11 minutes.

George de la jungla — “Licencia para balancearse” broadcast by Clan in June 2011. 11 minutes.

George de la jungla — “Los ronquidos” broadcast by Clan in June 2011. 11 minutes.

El show de Garfield — “El oro pirata” broadcast by Boing in June 2011. 12 minutes.

El show de Garfield — “Yo, Garfield y yo” broadcast by Boing in June 2011. 12 minutes.

El show de Garfield — “La habichuela saltarina” broadcast by Boing in June 2011. 12 minutes.

Geronimo Stilton — “Operación Shufongfong” broadcast by Boing in June 2011. 23 minutes.

Geronimo Stilton — “La ratonera del futuro” broadcast by Boing in June 2011. 23 minutes.

Geronimo Stilton — “La Banda de las Joyas” broadcast by Boing in June 2011. 23 minutes.

Catalan

Rovelló — “Autopista a Navell” broadcast by Super3 in May 2011. 24 minutes.

Rovelló — “La càmera m’empaïta” broadcast by Super3 in May 2011. 22 minutes.

Doraemon — “La màquina que canvia el sentit de la gravetat” broadcast by Super3 in May 2011. 8 minutes.

Doraemon — “Les rodes màgiques” broadcast by Super3 in May 2011. 7 minutes.

Films used to design *creative* subtitles

Inside Out, directed by Pete Docter (Pixar, 2015).

Las aventuras de Tadeo Jones, directed by Enrique Gato (Telecinco Cinema, 2012).

APPENDICES

Appendix I

Corpus database for the analysis of current SDH practices

The Excel Workbook contains the examples of non-verbal components conveyance extracted from the programmes analysed. The workbook constitutes three spreadsheets, one for each non-verbal element: sound effects, paralinguistic features and music.

The corpus database has not been attached to the paper version of this research due to its spatial constraints. It seemed more comfortable to consult it in its electronic version, which has been included in the DVD together with the electronic version of this thesis.

Appendix II

Communication via email with Pepita Cedillo and Marta Vinardell: deaf children's educators, who were born deaf themselves

From: [Èlia Sala Robert](#)

Sent: Friday, May 13, 2011 10:22 AM

To: Pepita Cedillo and Marta Vinardell

Subject: Ajuda per a la realització d'un treball sobre subtitulació per a n

Benvolgudes Pepita i Marta,

em dic Èlia Sala Robert i sóc estudiant del màster en traducció audiovisual ofertat per la Roehampton University (Londres). Estic realitzant el treball de fi de màster, i la meva àrea d'estudi és la subtitulació per a persones sordes (SPS), especialment les pràctiques de subtitulació en programes infantils. En particular, estic parant especial atenció a la transmissió dels efectes sonors a través dels subtítols. La meva pregunta de recerca és "com un/a nen/a sord/a, de naixement, pot fer correspondre una onomatopeia escrita en el subtítol amb un so"?

Per això necessitaria la vostra ajuda, per conèixer el punt de vista dels consumidors reals de SPS. Jo, com a oient, només puc parlar des de la intuïció, però això ajudarà poc a millorar el servei per a les persones sordes.

Us agrairia molt si em poguéssiu guiar per algun camí que m'ajudés a tirar endavant el meu estudi.

Gràcies,

Èlia

Èlia Sala Robert

15 de maig de 2011 20:12

Per a: Pepita

Hola de nou, Pepita,

Més que res, el que em preocupa és que treballi des de la intuïció. Com a usuària oient dels productes audiovisuals, només puc tapar-me les orelles o abaixar el volum de la televisió per consumir el producte tal com ho fa un oient sord. No obstant això, crec (i ara parlo des de la ignorància) que una persona sorda, especialment els nens, ha de tenir força més dificultats per relacionar la representació lingüística d'un so amb el so real. És així? Com relacionen, els nens sords, una onomatopeia amb el seu so corresponent, si mai l'han sentit?

Tinc una sèrie de dubtes que per desconeixement de la comunitat sorda no sé respondre'm. Aquí és on necessito ajuda per al meu estudi. Com ja us vaig comentar, es basarà en una anàlisi dels subtítols de programes infantils (dibuixos animats) emesos actualment a Espanya (principalment a Clan TV) en comparació amb els subtítols que s'emeten a Anglaterra (país força més avançat en qüestió d'accessibilitat als mitjans). Un cop feta l'anàlisi, m'agradaria contrastar els resultats amb els consumidors reals de subtitulació per a persones sordes, per comprovar si realment els subtítols són d'ajuda per a entendre els continguts del producte audiovisual. Sé que es tracta d'un procés força complex, i atès que sóc lluny de casa és possible que no es pugui arribar a realitzar. Tot i això, si tot va bé, continuaré estudiant aquest tema un cop torni a Barcelona al setembre.

Perdona aquests grans paràgrafs, però suposo que voldreu saber què és ben bé el que faig. T'agradaria moltíssim si em poguéssiu contestar els meus dubtes. Tot i que estic llegint força sobre sordesa (ja sé que ets l'autora de *Mira lo que te digo* i faré tot el possible per adquirir-lo des d'aquí), hi ha dubtes que qui millor me'ls pot respondre és una persona en aquesta situació.

Moltíssimes gràcies pel vostre interès i les vostres respostes.

Èlia

Pepita 15 de maig de 2011 21:17

Per a: Èlia Sala Robert

Bona nit Elia, ara que tinc una mica de temps disponible t'escric ràpid:

... una persona sorda, especialment els nens, ha de tenir força més dificultats per relacionar la representació lingüística d'un so amb el so real. És així? Com relacionen, els nens sords, una onomatopeia amb el seu so corresponent, si mai l'han sentit?

[Els nens sords descobreixen l'existència dels sons gracies als subtítols... també passa que alguns senten amb els audíofons i amb els subtítols li ajudarien a interpretar el que senten... m'explico? En el meu cas els subtítols dels sons m'ajuden a descobrir què es el que senten els oïdors...](#)

... en comparació amb els subtítols que s'emeten a Anglaterra (país força més avançat en qüestió d'accessibilitat als mitjans, [em pots dir en quins elements estan més avançat?](#)). Un cop feta l'anàlisi, m'agradaria contrastar els resultats amb els consumidors reals de subtitulació per a persones sordes, per comprovar si realment els subtítols són d'ajuda per a entendre els continguts del producte audiovisual.

[Per exemple: observo com en una escena un personatge deixa de parlar amb un altre... i si no acompanya dels subtítols dels sons hauria d'endevinar el perquè passa... si és pels trons, si es perquè algú truca pel telefon, si ha hagut algun accident, algun soroll fort que no se sap ben bé què, etc...](#)

[Fins ara m'aturo. Ja me'n diras quelcom i ... ah! com va per Anglaterra?](#)

Èlia Sala Robert

15 de maig de 2011 22:01

Per a: Pepita

Moltíssimes gràcies per la teva resposta, Pepita.

Perdona que torni a molestar-te, però és que les teves respostes m'han semblat molt interessants.

M'agradaria fer-te una pregunta, i espero que no sigui una indiscreció: ets sorda de naixement, oi? Pel que he llegit sobre el teu primer llibre, he deduït que sí. I suposo que durant la teva infància encara no es coneixia la subtitulació per a persones sordes. Aleshores, com t'ho feies per mirar la televisió com qualsevol altre/a nen/a? Et senties exclosa del gaudi dels audiovisuals? Vas preferir altres maneres d'entretenir-te, com per exemple la lectura?

Quant a les teves respostes:

[Els nens sords descobreixen l'existència dels sons gracies als subtítols... també passa que alguns senten amb els audíofons i amb els subtítols li ajudarien a interpretar el que senten... m'explico?](#)

Així, doncs, entenc que per a la canalla és molt millor reproduir els sons en forma d'onomatopeia, més que no pas amb etiquetes (les etiquetes són subtítols que descriuen el so o la seva procedència. Ex: TRET vs. pum).

[En el meu cas els subtítols dels sons m'ajuden a descobrir qué es el que senten els oïdors...](#)

Segons el que he vist fins ara de subtitulació de TV3, els subtítols no inclouen gaire onomatopeies i encara menys en la subtitulació per a programes destinats a un públic adult. Aleshores, com descobriu què senten els oïdors? Vull dir, amb una etiqueta com TRET és difícil imaginar el so, si no l'has sentit mai, no?

Per aquí Londres molt bé. Estic fent el màster en Traducció Audiovisual de la universitat de Roehampton. La veritat és que n'estic força contenta, estic aprenent molt i moltes coses que a casa, per desgràcia, encara estan molt endarrerides (com la subtitulació per a sords o l'audiodescripció). M'agrada el tema de l'accessibilitat als mitjans, tot i que també m'he especialitzat en subtitulació, doblatge o veus superposades, per exemple. També he cursat una assignatura anomenada *respeaking* (reparlat, en català), que és la subtitulació en directe a través de programes de reconeixement de veu. De totes aquestes especialitats, la que més em crida l'atenció (com ja deus haver suposat) és la subtitulació per a persones sordes. M'he inclinat més pels programes destinats als més petits de la casa. Crec que tenen unes habilitats i necessitats molt diferents de les dels adults i, no obstant això, consumeixen uns subtítols que no s'hi adequen. Trobo que no s'haurien d'aplicar les mateixes pautes per a petits i adults. I això és el que tractaré de demostrar amb la tesina.

Moltíssimes gràcies una vegada més per les teves respostes, han estat molt interessants. Ah! I acabo de demanar el teu primer llibre!

Gràcies per tot, de veritat. La vostra ajuda és indispensable per millorar les coses!

Bona nit,

Èlia

Pepita 16 de maig de 2011 22:20

Per a: Èlia Sala Robert

[Molt bona nit Èlia! t'escric en blau sota de les teves preguntes:](#)

[M'agradaria fer-te una pregunta, i espero que no sigui una indiscreció: ets sorda de naixement, oi?](#)

[Soc sorda de naixement pero amb perdua auditiva progressiva... això vol dir que vaig sentir força en una oïda i amb els anys vaig anar perdent audició... i amb els audífonos sentia música, sorolls.... tot i que no el mateix que un oïdor...](#)

[.. I suposo que durant la teva infància encara no es coneixia la subtitulació per a persones sordes. Aleshores, com t'ho feies per mirar la televisió com qualsevol altre/a nen/a? Et senties exclosa del gaudi dels audiovisuals? Vas preferir altres maneres d'entretenir-te, com per exemple la lectura?](#)

[es veritat que a la meua infància no es coneixia la subtitulació... i per això mateix no coneixia el que podia dir els personatges animats... em feia gràcia els moviments, els cops... i quan vaig tenir oportunitat d'accedir als continguts dels diàlegs gràcies als subtítols... doncs m'enfadava molt quan deixaven de subtitular.... ara bé, els nens sords quan són petits encara no saben llegir i no gaudeixen dels audiovisuals de la mateixa manera que els altres infants fins que descobreixen que els subtítols diuen alguna cosa \(si es que algun adult ho va informar\) doncs demanen als pares que tradueixin el que apareixen els subtítols... Penso que](#)

amb les onomatopeies que semblen més fàcil de llegir pot facilitar millor la comprensió per part dels nens no se si m'he explicat prou clar... s'enten el que vull dir?

Així, doncs, entenc que per a la canalla és molt millor reproduir els sons en forma d'onomatopeia, més que no pas amb etiquetes (les etiquetes són subtítols que descriuen el so o la seva procedència. Ex: TRET vs. pum).

Si d'acord amb tu... com els comics... vaig descobrir l'existència de diferents onomatopeies gràcies als comics... no sé què pensarien les altres persones sordes... jo ho dic per mi...

Segons el que he vist fins ara de subtitulació de TV3, els subtítols no inclouen gaire onomatopeies i encara menys en la subtitulació per a programes destinats a un públic adult. Aleshores, com descobriu què senten els oients? Vull dir, amb una etiqueta com TRET és difícil imaginar el so, si no l'has sentit mai, no?

també pot passar que el PUM al principi un nen no sapiga què significa fins que no es vegi la imatge i l'associi.... als comics es veia el PUM alhora la imatge de la pistola... encara que de vegades no passa sino en OFF...

Moltíssimes gràcies una vegada més per les teves respostes, han estat molt interessants. Ah! I acabo de demanar el teu primer llibre!

Encantada de col.laborar amb tu...
Molt bona nit i que et vagi tot mooolt bé a Londres !!!
Pepita Cedillo

Èlia Sala Robert

17 de maig de 2011 0:53

Per a: Pepita

Moltes gràcies per la teva predisposició i les teves respostes. T'has explicat perfectament. A més a més, volia dir-te que ja tinc encarregat el teu primer llibre. N'he llegit el resum i ja tinc ganes de continuar amb la resta!

Com li he comentat a la Marta, avui, m'heu donat força pistes per on guiar la meva recerca. Segons el que em dieu, dedueixo que la subtitulació de sons no us comporta gaire problemes. És a dir, si no ho he entès malament,

1. la canalla coneixen els sons a través dels subtítols, sobretot si el subtítol es correspon amb una imatge en què clarament es vegi l'efecte sonor.

2. La posició del subtítol (segons el que m'ha comentat la Marta) no suposa gaire problemes per als nens sords, ja que la velocitat lectora i visual els ajuda perfectament a localitzar el subtítol dislocat i a entendre que es tracta d'un so.

Però què me'n diries d'altres elements extralingüístics que configuren la subtitulació per a persones sordes com són la identificació de personatges (colors, posicionar el subtítol el més aproximat al personatge que parla o guionets), la música (descripció del tipus de música, proveïr la lletra, volum, etc.), l'entonació (ironia, broma, etc.) o l'estat d'ànim del personatge (trist, enfadat, passota...)?

Segons la meva experiència acadèmica en subtitulació, la identificació dels personatges, normalment, és prou clara com per saber a qui correspon cada parlament. Però en el poc que he vist de subtítols a Espanya, veig que no es transmet gaire l'entonació o l'estat d'ànim amb què s'interpreta un diàleg. Per a mi seria important transmetre-ho a través dels subtítols, ja que aspectes com la ironia no es poden deduir de les gesticulacions facials. Per a vosaltres seria igual d'important?

I, per últim, creus que seria necessari recrear la música d'ambient (la música cantada per personatges normalment es subtitula) per facilitar a les persones sordes que aflorin els sentiments d'intriga, desesperació, por...?

Sento atabalar-te amb preguntes i més preguntes, però és que encara estic en un estadi inicial de la meua recerca i he de situar-me per saber quins són els punts febles de la subtitulació per a persones sordes actual. Quin aspecte, doncs, dels subtítols que consumeixen els petitons de casa caldria millorar? Hi ha alguna pràctica que els pugui perjudicar o excloure del gaudi dels audiovisuals?

Mil gràcies de nou, Pepita. Si estàs enfeïnada, no et preocupis, no cal que contestis immediatament. Puc esperar. Però moltes moltes gràcies altra vegada.

Bona nit,

MARTA VINARDELL
Per a: Èlia Sala Robert

16 de maig de 2011 9:38

Bon dia Èlia,

És una pregunta senzilla, però potser esperes una resposta molt llarga i tècnica.

Els nens sords, aprenen a correspondre els estímuls visuals que fan referència als estímuls auditius des de ben petits. Quan inicien a mirar la televisió, la família té la consciència de que han de posar els subtítols, tot i que no entenguin el significat de les paraules però són estímuls que de mica en mica van assimilant el seu significat, paral·lelament amb l'aprenentatge de la lectura i de l'escriptura. Hi haurà un moment en que identificaran que els sons i els sorolls que apareixen a la part superior i a la dreta de la pantalla corresponen amb el so.

Aquests sons subtitulats, els identificaran amb el suport visual de la imatge de la seqüència, i també per la generalització que fan amb els contes o còmics en els quals també surten aquestes onomatopeies escrites. A més, la família i els agents educatius ja expliquen les onomatopeies en el transcurs de l'explicació dels contes o dels sorolls que se senten en el món quotidià.

Espero haver-te respost.

Una abraçada,

Èlia Sala Robert
Per a: MARTA VINARDELL

16 de maig de 2011 10:21

Bon dia, Marta,

la veritat és que no espero respostes tècniques (llargues tant com vulgueu!), ja que la part tècnica, com aquell que diu, me l'expliquen els llibres que tracten la sordesa. El que necessito són opinions, experiències personals relacionades amb els productes audiovisuals infantils.

Pel que entenc del teu missatge, el fet que els subtítols presentin onomatopeies no suposa cap problema per a la canalla, ja que aniran aprenent els sons del seu entorn a través dels subtítols. És a dir, és preferible que els programes infantils subtitulats continguin onomatopeies en comptes d'etiquetes (subtítol que descriu el mateix so o el seu origen), oi? Per als adults (també sords de naixement) és el mateix, o preferiu l'ús d'etiquetes?

M'has comentat una cosa molt interessant i és sobre la posició del subtítol. Creus que la dislocació del subtítol pot afavorir als més petits a diferenciar la part lingüística de l'extralingüística? Segons els estudis de diversos investigadors anglesos, el fet de dislocar el subtítol pot comportar la pèrdua d'informació, ja que el recorregut que ha de fer l'ull per la pantalla per buscar la informació escrita pot ser massa llarg i la duració del subtítol massa curta, amb la consegüent dificultat de llegir el subtítol col·locat a la part superior dreta. Hi estàs d'acord?

I què me'n dius d'altres aspectes extralingüístics com la transmissió de música, entonació i estat d'ànim o la identificació de personatges? És prou acurat perquè la canalla amb sordesa pugui seguir i entendre el programa audiovisual el més aproximat possible a com ho faria un/a nen/a oient?

Les preguntes, com dius, són fàcils, però per a mi són de vital importància per poder allunyar-me de la tecnicitat i, sobretot, de les suposicions. El meu estudi pretén analitzar els subtítols i mirar si es poden millorar per tal d'ajudar a l'aprenentatge, però sobretot al gaudi del programa audiovisual.

Moltíssimes gràcies per la teva resposta, i disculpa que ara et contesti amb més dubtes.

Molt agraïda,

Èlia

MARTA VINARDELL

16 de maig de 2011 11:54

Per a: Èlia Sala Robert

Hola de nou,

Creus que la dislocació del subtítol pot afavorir als més petits a diferenciar la part lingüística de l'extralingüística? Segons els estudis de diversos investigadors anglesos, el fet de dislocar el subtítol pot comportar la pèrdua d'informació, ja que el recorregut que ha de fer l'ull per la pantalla per buscar la informació escrita pot ser massa llarg i la duració del subtítol massa curta, amb la consegüent dificultat de llegir el subtítol col·locat a la part superior dreta. Hi estàs d'acord?

Jo crec que no, perquè els nens sords guanyen molt en discriminació i camp visual. Quan surten aquestes informacions, al ser d'un color molt destacat, l'ull capta de seguida que surt aquella informació. Les persones sordes estem molt acostumades a llegir els subtítols, inclús si van ràpids. La nostra velocitat lectora, si va acompanyada d'una bona comprensió, és força superior. Per tant, és important que aprenguin a diferenciar els elements extralingüístics dels lingüístics; per fer l'associació i la contextualització.

I què me'n dius d'altres aspectes extralingüístics com la transmissió de música, entonació i estat d'ànim o la identificació de personatges? És prou acurat perquè la canalla amb sordesa pugui seguir i entendre el programa audiovisual el més aproximat possible a com ho faria un/a nen/a oient?

Depèn de la programació que subtitula. Hi ha cadenes que posen [pom pom][truquen la porta] i altres que posen bé solament [pom pom] o [truquen la porta].

Crec que com més completa és la informació extralingüística, millor. L'exemple [pom pom, truquen la porta] la trobo molt encertada. Ja que ajuda a relacionar el so amb l'acció.

;))

16 de maig de 2011 12:01

Èlia Sala Robert

Per a: MARTA VINARDELL

Moltíssimes gràcies!

La veritat és que és molt important saber què opineu els usuaris de subtitulació. Pot ser que els oients subestimem la vostra capacitat lectora o d'entendre els sons que per a nosaltres són el dia a dia. I és per això que m'he posat en contacte amb vosaltres, per no caure en l'error de parlar pels altres.

Moltes gràcies. Crec que per ara tinc prou informació per començar a fer barrinar el cap. Tot i això, suposo que més endavant necessitaré contactar amb vosalres de nou.

Gràcies per la vostra amabilitat i rapidesa en les respostes.

Molt agraïda,
Èlia

MARTA VINARDELL

Per a: Èlia Sala Robert

16 de maig de 2011 12:17

Encantada de poder col·laborar!

Una abraçada,

Marta

Appendix III

Communication via email with Francesc Morón: father of two profoundly deaf kids and teacher at an inclusive school.

2011 about deaf children and their TV watching habits.

FRANCIS MORON

7 de juny de 2011 15:53

Per a: Elia Sala Robert

Molt

bones

Èlia!

Què tal per Londres? Sóc un tio d'aquests "raros" que no tenen facebook, però l'Anna Manrique li va enviar un missatge a la Sandra (my wife... (quin nivell d'anglès que tinc ...)) sobre un doctorat que estàs fent. Doncs tu mateixa, pregunta i jo responc. Si necessites dades, entrevistes, imatges, vídeos el que necessitis, nosaltres tenim experiència amb tot això (per desgràcia). En Gael és un màquina amb el subtítols. Llegeix molt ràpid i al cole és un dels millors alumnes. Doncs això, quedem en contacte.

Francesc

Èlia Sala Robert

7 de juny de 2011 16:16

Per a: FRANCIS MORON

Francesc!!!

quina il·lusió! Tranquil, jo també sóc "rara" perquè tampoc tinc Facebook ni coses d'aquestes! Per això he hagut de fer tanta volta per trobar-te... però, ho veus?, sense Facebook es pot trobar la gent també!

Com va tot? Espero que molt bé!

A veure, t'explico: no, no estic fent un doctorat (encara!). Vaig venir a Londres a estudiar un màster en traducció audiovisual, després d'acabar la carrera (de traducció i interpretació) el juny passat. Aquí he après moltíssimes coses (a part d'anglès, of course!) i una de les modalitats de traducció audiovisual que més m'agrada és l'accessibilitat als mitjans, que inclou subtitulació per a persones sordes i l'audiodescripció per a persones cegues.

És per això que he decidit fer el treball de fi de màster sobre subtitulació per a persones sordes. M'he centrat en programes infantils, perquè és un terreny que no s'ha estudiat mai encara. És a dir, hi ha molta recerca feta al voltant de subtitulació per a persones

sordes en general, però no hi ha cap estudi centrat en un tipus de receptor. En el meu cas són la canalla. M'agradaria comprovar si les pràctiques actuals de subtitulació són vàlides i d'ajuda per a ells/es per comprendre els programes que veuen, si els donen el màxim accés possible als productes audiovisuals. És una llàstima que a Espanya estiguem tan endarrerits amb aquest tema (i amb altres...).

Aleshores, necessito, doncs, l'opinió dels usuaris "reals". Em vaig posar en contacte amb l'Associació de Pares i Mares de Nens/es Sords de Catalunya, però per qüestions d'ètica només vaig poder parlar amb dues noies que són mestres/pedagogues de nens sords. El fet de ser fora em fa més difícil poder fer entrevistes o "experiments" amb els peques, però jo t'agradaria si em pogués explicar una mica la vostra experiència (dels pares) i la d'en Gael. No sé quin grau de pèrdua auditiva té, ni si utilitza audiòfon o no. M'he descuidat de dir-te que la meua recerca se centra en la transmissió dels elements no verbals a través dels subtítols. Això inclou tota mena de sons, efectes sonors, identificació dels personatges o característiques de la parla (entonació, ironia, etc.). Creus que hi ha informació que en Gael no rep amb els subtítols? Hi ha alguna vegada que es perd en alguna conversa perquè no se li ha dit que parlen irònicament? Té problemes per identificar personatges o està prou clar? Enganxa tots els sons que conté el programa o n'hi ha que no estan subtitulats que potser ho haurien d'estar? En cas que tingui un grau de sordesa severa (pèrdua auditiva superior als 71 dB), com identifica una onomatopeia amb el so real?

Buf! Quina parrafada! Moltes gràcies per haver llegit fins aquí! Si pots contestar-me algun d'aquests dubtes, estaré encantada. Sé que des de la distància és més difícil, per això estic més en contacte amb associacions de nens sords aquí a Anglaterra. Tot i això, quan torni al setembre no descarto continuar fent recerca sobre el tema... Us en faríeu creus de l'avantatge que ens porten els anglesos!

En fi, que moltíssimes moltíssimes gràcies per posar-te en contacte amb mi i per la teva predisposició. I t'agafó la paraula que en un futur us vingui a fer entrevistes o, si m'ho permetéssiu, a "observar" el vostre fill veient programes subtitulats. Però ja et dic, això seria en un futur doctorat, que tant de bo pugui dur a terme!

I res, que ja et deixo que deus estar esgotat de tant llegir! hehehe

Many many many thaaaaaanks!

Que tingueu bona setmana,

Èlia

FRANCIS MORON

7 de juny de 2011 23:03

Per a: Èlia Sala Robert

Bones Èlia, vaig a intentar posar-me al teu nivell i intentar respondre't alguns dels teus dubtes.

És interessant això que dius de les ironies, sentits Figurets de les expressions, etc ... Els nens sords tenen dificultat a l'hora d'entendre totes aquestes qüestions. A en Gael li costa molt entendre les expressions de sentit Figuret. És una feina que li fem a part. Aquest any, una de les feines de les logopedes, ha sigut precisament aquest treball de no ser tan literal.
Exemple: Gael posa't les piles !! Ell et contestarà. Si ja en porto (per exemple). Quan llegeix els subtítols també es troba amb aquest problema. Mirar molt el Bob

Esponja, i allà hi ha molts acudits o bromes que no sempre les capta. Per tant en aquest sentit els subtítols són una mica pobres. Però també haig de dir, que gràcies a ells retén molta informació.

És que en Gael és un sord força atípic. Va començar amb audiòfons, i als 5 anys li vam fer un implant coclear a una orella. Ara porta un implant en una orella i a l'altra no porta res, perquè no s'ha adaptat a l'audiòfon. A Catalunya quan es detecta una possible sordesa, ens posem en contacte amb els CREDAS. A Girona n'hi ha un. Són els grups de audiopretesistes, logopedes i mestres en audició i llenguatge del Departament d'Ensenyament. Des dels CREDAS, els controlen: que no tinguin pèrdues auditives, ajustar l'audiòfon ... A l'escola on treballa n'hi han 8 nens sords (entre ells en Gael i la Martina) ... Sí no t'ho he dit... La meva nena també ho és però amb una sordesa severa (entre 80 i 95 %). En Gael és pregona (a partir de 95-100). La MARTina està fent P4. Els subtítols l'ajuden a seguir... Ja llegeix una mica, no amb fluïdesa, però va fent. .. De tant en tant enganxa alguna paraula llegint-la i la repeteix. O sigui que podem dir que didàcticament afavoreix l'aprenentatge de la lectoescriptura. La meva escola és una escola d'agrupament. En tenir un nombre de sords, ensenyament proporciona una MALL (Mestre d'audició i llenguatge) en el centre. També hi ha seguiment per les logopedes del CREDA. A nivell d'alumnes jo en tinc un nen amb pèrdua severa. Quan passem algun vídeo, alguns profes intentem inserir els subtítols. T'haig de dir que depenent de la peli costa de trobar i no sempre ho hem pogut fer.

Com t'he dit en el mail anterior, en Gael llegeix molt ràpid. Passem proves de velocitat lectora (com aquelles del Fonlladosa jijijiji) i ell està a gairebé 130 paraules per minut. És el més ràpid de tercer .. (ara em toca presumir de fill). El tema associacions. Jo he tingut contacte amb dues. Facaps i Fiapas. La primera força bé, els altres una mica pobres. Em quedo amb els CREDA. Però continuem amb la subtitulació. Hi ha cadenes que emeten a HD, per exemple la TVE HD no té subtítols. Guai eh! A nivell de subtitulació em quedo amb TV3. Pràcticament tenen subtítols a tots els programes. Tots els subtítols es centren en els diàlegs. No fan menció d'onomatopeies, ironies, dobles sentits. Penso que tenint en compte que els sords són molt literals, i que tenen dificultats precisament en diferenciar allò literal dels sentits Figurets es podria fer alguna cosa més per ajudar-los.

Bé Èlia. Em sembla que és un dels texts més llargs que he escrit. Perdona les faltes o frases poc estructurades. He anat una mica ràpid.

Seguim en contacte i

Èlia Sala Robert

7 de juny de 2011 23:38

Per a: FRANCIS MORON

Hola de nou, Francisc,

al meu nivell? Per a res, ets tu qui m'estàs ensenyant coses a mi! Jo només sóc experta en subtitulació... però no en les necessitats dels usuaris, que crec que hauria de ser la base de qualsevol professional!

Amb aquest mail ja m'has ajudat moltíssim. Ara he de lligar tot el que m'has dit amb el piló de llibres que m'estic llegint. A vegades, s'entén molt més parlant amb algú que, malauradament, ho viu, que no pas amb piles i piles de teoria. I no, no sabia que la teva nena també tenia pèrdues auditives. En aquest (mini)estudi que estic fent, de fet, també estic mirant tot el tema de programes infantils en edat preescolar (o destinats a nens i nenes que encara no llegeixen). A mi, que desconec el món dels nens sords, em resulta molt difícil de creure que els subtítols els puguin ajudar, ja que no tenen l'habilitat lectora

que pot tenir un nen de 9-10 anys, per exemple. Tot i això, amb alguns estudiosos d'aquí Londres ens plantejàvem la possibilitat de, en comptes de reproduir els sons amb onomatopeies, transmetre'ls a través d'icones o dibuixos. Com en els còmics, més o menys. D'aquesta manera una estrella podria voler dir un cop fort, per exemple.

Llavors, per no angoixar-te, dues preguntes:

1. Dius que et quedes amb els subtítols de TV3, tot i que se centren massa en els diàlegs i deixen de banda la transmissió dels sons o efectes sonors i els dobles sentits o ironies. Creus que hi ha efectes sonors que caldria subtítular, i, d'aquesta manera, ajudar els nens sords a entendre els sons que hi ha en el món que els envolta (a través d'onomatopeies, per exemple)? (és una de les meves preguntes de recerca)

2. Què vols dir quan dius "es podria fer alguna cosa per ajudar-los", referent als dobles sentits o ironies: fer-los literals o bé explicitant que es tracta d'una ironia? Ex. Al desert, a 40°C de temperatura, un diu a l'altre: "Quin fred que fa!", ajudaria que el subtítol digués: (Irònic) Quin fred que fa!

Et puc preguntar a quina escola treballes? Si mai necessiteu subtítular qualsevol material escolar (o que ho necessitis tu per als teus nens) o el que sigui, si us plau, no dubtis a demanar-m'ho!

I res, per ara, et deixo tranquil. És probable que et torni a escriure durant aquests dos propers mesos (he de lliurar el treball a finals d'agost). Ara estic escrivint la part teòrica, però d'aquí a dues setmanes o així començaré la part pràctica. Es tracta d'analitzar els subtítols que actualment s'emeten per Clan Tv, Boing i TV3, per programes infantils com Les tres bessones, Doraemon, Els Dalton, Geronimo Stilton, etc. O sigui que el més probable és que em trobi amb dubtes durant aquest estadi de la tesina.

T'agraeixo moltíssim les teves respostes i la teva disposició per ajudar-me i donar-me un cop de mà. Si tota la gent a qui he preguntat fos com tu... otro gallo cantaría!

Moltíssimes gràcies, Francesc, de veritat!

Bona nit,

Èlia

FRANCIS MORON

10 de juny de 2011 18:05

Per a: Èlia Sala Robert

Bones Èlia, sento no haver-te respost abans, però anem liadíssims ara ... A partir d'ara aprofitaré el teu mail per contestar-te els dubtes. El marcaré en negreta i te'l comentaré. Comencem.

A mi, que desconec el món dels nens sords, em resulta molt difícil de creure que els subtítols els puguin ajudar, ja que no tenen l'habilitat lectora que pot tenir un nen de 9-10 anys, per exemple.

Els sords, com totes les discapacitats, malalties etc ... tenen uns trets característics, però crec que no els podem englobar a tots en el mateix sac. Els nens de la nostra escola, són força atípics. La línia de treball actual, descarta molt el llenguatge de signes i en ensenyament es potencia el llenguatge natural. Els pares que opten per el llenguatge de

signes es consideren que no volen o es donen per vençuts i la vida que seguiran anirà per aquest camí. Al CREDA (tots els de Catalunya) només treballen llenguatge **ORAL** i no per signes. Tornem al tema inicial. Els meus fills per exemple tenen una gran habilitat lectora, parlen molt bé, (no semblen que siguin sords) i llegeixen molt bé també. (La Martina llegeix bastant bé per la seva edat) i en Gael ho començava a fer als 3 anys. No t'ho he dit, però la Sandra diu que t'ho comenti. En Gael és un nen d'altas capacitats. Vaja una Èlia Sala 2 un Eloi Abradó 2.... Li van fer unes proves al CREDA Girona i els resultats van ser força alts. Tot això t'ho comento, perquè sí, hem de tenir en compte el que suposa la deficiència, però ara és diferent. La majoria de nens sords de la meua escola llegeixen i segueixen força bé i alguns com els meus fills, tenen un rendiment molt alt. Per tant molts tenen aquesta habilitat lectora, i per tant els ajuda. Després està l'avenç tècnic: L'implant coclear. Els nens sords pregons (la sordesa va de lleu (-20%), moderada (fins 40%), severa (fins 80-90%) i pregona (de 90 en endavant). A veure, aquesta llista és "ma o meno". Que et vull dir, que un nen amb sordesa pregona (profunda en castellà) és candidat a implantar-se. Hi ha nens, que amb mesos ja estan implantats. Això fa que escoltin, de manera diferent, però que escoltin... Per tant nens sords pregons i que no s'implantin és una decisió de la família o que tinguin un tipus de sordesa, o estructura interna que no els permeti operar i implantar. Total, que el miracle es produeix i amb molta feina, treball logopèdic ... el nen pot escoltar i fer vida d'oients. Això fa que tot el reforç de subtítols s'agraeixi, perquè encara que sentin, els hi costa molt i se'ls hi escapen moltes coses. En Gael és implantat, et segueix bé, però hi ha moltes coses que no les sent bé i m'ho pregunta.

reproduir els sons amb onomatopeies, transmetre'ls a través d'icones o dibuixos...

Abans de la teua resposta, la meua dona ja em donava aquesta idea. Per tant totalment d'acord. A part ara que ens hi fixem més en els subtítols, sí que diuen "Riuen", "tanca la porta fort"... però poques vegades.

1. Dius que et quedes amb els subtítols de TV3, tot i que se centren massa en els diàlegs i deixen de banda la transmissió dels sons o efectes sonors i els dobles sentits o ironies. Creus que hi ha efectes sonors que caldria subtítular, i, d'aquesta manera, ajudar els nens sords a entendre els sons que hi ha en el món que els envolta (a través d'onomatopeies, per exemple)? (és una de les meves preguntes de recerca)

Abans t'he dit que tot el que sigui ajudar al sord al de llenguatge de signes (actualment és la minoria i no es potencia això), i sobretot, al que aprèn llenguatge ORAL, que són la majoria, aquesta informació és de gran ajuda. I sí que em sembla bona idea subtítular amb icones tot això.

2. Què vols dir quan dius "es podria fer alguna cosa per ajudar-los", referent als dobles sentits o ironies: fer-los literals o bé explicitant que es tracta d'una ironia? Ex. Al desert, a 40°C de temperatura, un diu a l'altre: "Quin fred que fa!", ajudaria que el subtítol digués: (Irònic) Quin fred que fa!

La resposta és semblant. Em sembla que sí estaria bé. Per contingut en Gael, aquest any, ha treballat a llengua els sentits Figurets. Ha sigut el camp de batalla aquest any. En no aprendre de manera espontània i natural el llenguatge, has d'estar contínuament treballant això. Però clar, tu faràs el treball sobre subtítols per nens, per tant penso que sempre estaria bé fer un comentari per ajudar a entendre la frase.

Et puc preguntar a quina escola treballes? Si mai necessiteu subtítular qualsevol material escolar (o que ho necessitis tu per als teus nens) o el que sigui, si us plau, no dubtis a demanar-m'ho!

L'Escola es diu Pinya de Rosa. La directora és molt enrollada, i si necessites alguna cosa et puc posar en contacte. No tenim web, per tant no busquis, està en projecte, Però crec que potser t'anaria millor estar en contacte amb alguna logopeda, que d'aquests temes ho saben tot i del CREDA. Si vols puc fer d'intermediari i s'interessa et passaria el correus. Ja em diràs alguna cosa. Pel que fa al programa, el que faig jo és baixar-me arxius en srt amb la pel.lícula. El problema que tenim a casa i al cole, és quan no hi ha arxius srt amb la peli. Vaig intentar-ho amb algun programa, però la veritat no ho sé fer. Aquesta informació de primeríssima mà d'una experta en el tema m'aniria de conya.

Bé et deixo. Si vols que t'envii algun vídeo amb els nens mirant la tele, m'ho dius i ho fem. Cuida't i no passis fred.

Francesc

Èlia Sala Robert

10 de juny de 2011 18:38

Per a: FRANCIS MORON

Bona (i plujosa) tarda!

Primer de tot: res de disculpes! Fas molt en contestar-me...! I us estic molt agraïda, tant a tu com a la teva dona.

Em desconcerta una mica això que em dius de l'educació en llengua oral... tot el que m'estic llegint planteja tot el contrari, que forçar els nens sords (a partir de sordesa severa) al llenguatge oral és caure en l'error d'introduir-los en un món que no és el seu... però estic totalment d'acord amb la reflexió que m'has fet tu. Tema de controvèrsia! Així, entenc que ni en Gael ni la Martina es comuniquen en LSC, no? I, l'han après (com a llengua de suport, quan no sabem com expressar-se en llengua oral)? I ara que parlem de llengües, una curiositat que m'ha vingut al cap: tenen dificultats a l'hora d'aprendre una segona llengua (català-castellà)?

Pel que fa al tema dels CREDA i/o logopedes especialitzats en nens sords... si em poguéssis fer aquest favor... seria genial! Tinc molt poc temps (he de lliurar el treball la 3a setmana d'agost), però com més opinions, punts de vista, experts, familiars, etc. pugui contrastar, millor que millor. També sé que seria molt més fàcil fer les coses personalment, però si coneixes algú que estigués disposat a contestar-me algun correu, si us plau, dóna-li la meva adreça (o em dones la seva) perquè m'hi pugui posar en contacte. Però, això sí, no vull que hagi de tenir cap problema per ser l'intermediari, d'acord? Vull dir que si algú et posa alguna pega, deixa-ho estar. Com et vaig dir, aquest treball ha de ser "petit", tot i que ja m'estic enfilant "por las ramas" i m'estic excedint, com sempre. Però tot contacte possible m'anirà genial per a un futur (i espero que no llunyà) doctorat sobre aquest tema.

Tema programes subtítolats: si no hi ha arxiu .srt és que no hi ha subtítols. Aleshores s'han de crear des de 0. Hi ha algun programa de subtitulació gratuït, com el Subtitle Workshop, tot i que no és gaire de fiar per l'exactitud de l'entrada i sortida del subtítol. D'altres, com WinCAPS (cars no, caríssims) van molt bé, i es pot calcular l'entrada i la sortida del subtítol frame by frame, cosa que és exacte i molt més còmode per a l'espectador sord. Jo no el tinc, però aquí a la uni hi tinc accés, així que si em vols enviar alguna cosa, jo et faig els subtítols.

Vídeos... si en tens algun que no pesi gaire i me'l pots passar per mail, sí, si us plau, envia-me'l. Serà interessant veure'n les reaccions...!

I res, que només em queda tornar-te a donar les gràcies per tot el que m'estàs ajudant (et posaré als agraïments del treball!!). Sembla mentida, però, després de llegir tants de llibres, trec més profit dels teus correus i opinions que dels grans experts en neurociència del llenguatge i dels sentits!!

Que passeu molt bon cap de setmana!

Gràcies per tot,

Èlia

FRANCIS MORON

16 de juny de 2011 21:54

Per a: Èlia Sala Robert

Bones

Èlia,

per quí encara no ha arribat l'estiu, fa una mica de fresqueta. Anem per feina. En Gael i la Martina no han treballat mai llenguatge de signes. Quan no porten els aparells llegeixen els llavis. Això no els hi ensenya ningú, ho aprenen de manera espontània. Allò que et vaig comentar sobre els CREDA de Catalunya, Sandra em va dir que a Barcelona sí que n'hi ha un de nens que aprenen amb LSC. Però podríem dir que no és la normalitat. Pel que fa a en Gael, parla en català amb nosaltres. El castellà l'ha après al cole, podríem dir que li va costat més, però ara ja el parla bé. La Martina té una pèrdua inferior i més natural en l'aprenentatge. Va fer en català i també en castellà.

(Aquest tros te'l vaig fer fa dies) Avui dijous 16 ja fa uns dies que ha tornat la calor. Bé, continuem. Aquests dies vaig de cul. Notes, preparar vídeos, un lipdub de sisè, Estic trucant a la nostra amiga logopeda del CREDA per passar-te el seu mail. En quan parli amb ella te l'envio.

Queda pendent, de cara la setmana vinent el vídeo d'en Gael.

Goodbye London.

Èlia Sala Robert

16 de juny de 2011 22:05

Per a: FRANCIS MORON

Hola, Francesc (i Sandra, Gael i Martina)!

M'encanta això que m'escriguis per capítols.

Gràcies per la informació i per posar-te en contacte amb la logopeda del CREDA. Però no t'estressis. Vull dir que si em pots contestar bé i si no, per la feina o pel que sigui, doncs no passa res. No t'ho prenguis com una feina, perquè ja m'ajudes molt. O sigui que amb calma, ok? Que si sé que t'he de portar més feina, no et dic res! hehehe Que em sap greu fer-vos anar de bòlit... ;(

Ara vaig pel capítol de "tractament de la sordesa". És a dir, encara estic embolicada amb la teoria i si tardes dies a contestar-me no em fas anar malament per res del món, entesos?! Ja fas molt movent tots els fils que estàs movent!

I, más de lo mismo, el vídeo d'en Gael, quan puguis, durant les vacances o quan vulguis.
I si no pots, pel motiu que sigui, don't worry!!!

Gràcies per tot!!

Keep in touch!

Èlia

FRANCIS MORON

18 de juny de 2011 2:45

Per a: Èlia Sala Robert

Bones Èlia, estic liat a les 2,41 de la matinada montant un vídeo de comiat pels de sisè. Encara tinc feina, demà continuaré. Sandra ha parlat amb la Rosa Castells. És la logopeda dels meus fills, i també bona amiga. Viu aquí a Blanes. Ella en sap molt i et sabrà resoldre els dubtes que tinguis. És molt bona tia, i diuen que de les millors logopedes. Per tant la informació que et pugui donar serà de ben segur profitosa. Li pots enviar sense por algun mail que ella ja sap de que va. A part sóc el tutor del seu fill, o sigui que et cuidarà ... (és broma).
El se mail és rcaste23@xtec.es

Estem en contacte.

Èlia Sala Robert

18 de juny de 2011 11:13

Per a: FRANCIS MORON

Perfecte!!

Moltíssimes gràcies! I jo no dic res, però sort que ja arriben les vacances d'estiu... no treballis tant!!!

Que passeu molt bon cap de setmana,

Èlia

2016 about the possibility to carry out the empirical study
at the inclusive school he works.

Hola!

19 messages

Èlia Sala Robert

9 May 2016 at 10:26

To: Francis Moron

Bon dia, Francesc!

Com esteu? Com va tot?

Jo ja estic a punt d'acabar el meu doctorat sobre subtitulació per a nens i nenes sords :) He dissenyat una nova tècnica de subtitulació basada en les estratègies dels còmics per transmetre tota la informació auditiva en pantalla.

Ara, després d'anys de recerca i disseny audiovisual, necessito saber si el que he fet és útil i realment ajuda o si ho he de reconduir en algun altre sentit. L'única manera de saber-ho és tenint l'opinió dels usuaris potencials dels meus subtítols.

He recordat que tu treballes a Pinya de Rosa (encara?) i que sou una escola d'agrupament d'alumnat sord. No sé si hi hauria la possibilitat d'organitzar una jornada audiovisual accessible ☺

Aquesta jornada consistiria en el visionat d'un fragment (10 minuts) de la pel·lícula *Inside Out (Del Revés)*. El visionat tindria dues parts: una primera part amb subtítols dinàmics (que he creat jo mateixa), i una segona part amb el mateix contingut, però amb subtítols convencionals. Els vídeos anirien seguits d'un qüestionari breu, per poder saber què opinen i quins subtítols llegeixen amb més comoditat.

Aquesta activitat no només s'adreçaria al vostre alumnat sord, si no que també m'interessa saber l'opinió dels nens i nenes oients. Defenso que els subtítols que he creat són per a tots: dinàmics com el gènere audiovisual en què es troben, per tal que proveeixin tota la informació necessària als nens i nenes sords i, al mateix temps, no molestin als nens i nenes oients.

Si creieu que com a escola us semblaria interessant poder dur a terme aquest final de projecte junts, només m'ho heu de dir. Jo estaré encantada, ja que aquests 4 anys d'estudi seran no res si els subtítols dinàmics no arriben als seus destinataris.

Gràcies i fins aviat!!

Pd. I disculpa aquest email taaaaaan llarg!

Francis Moron
To: Èlia Sala Robert

9 May 2016 at 17:54

Què tal Èlia!!

Crec que seria molt interessant que puguessis venir, i és més, penso que t'hauríem de "fixar" com a formadora. Clar, això és el penso jo, i espero que la directora actual també ho vegi així. Demà parlo amb ells. Passa'm el telèfon i així podem estar en contacte. Jo també penso que els subtítols fan millorar a nivell de lectura a tots els alumnes, no només els sords, que per cert llegeixen millor que la majoria d'oients.

Ja et dic, que jo estic molt interessat. O sigui que pots comptar. Demà el diré alguna cosa.

Ens veiem !!

[Quoted text hidden]

Èlia Sala Robert
To: Francis Moron

9 May 2016 at 18:45

Ai, Francesc,

si és que ara entenc perquè t'adorava jo com a profe! Quines paraules més boniques :)

Doncs si us interessa poder fer el visionat i si us puc donar un cop de mà amb el que sigui, *just let me know!!* El meu telèfon és el xxxx1. Si em truqueu al matí o de 17 a 19 h els dilluns i els dimecres és més fàcil localitzar-me. La resta de dies/hores sóc a classe i no puc xerrar per telèfon!

Exacte, lluito perquè "treure els subtítols" sigui una opció, no "posar-los", com passa ara. Tothom se'n beneficiaria i no tindríem aquest problema que "llegir els programes és avorrit", ja que he intentat que els subtítols s'integrin en el programa i no es vegin com un element extern, imposat. És clar que tot és un estadi força inicial. No he tingut cap mena d'ajuda i m'he hagut d'espavilar com he pogut, no podent-hi dedicar tot el temps del món.

Però crec que la proposta podria tirar endavant. És més, al setembre vaig fer una ponència a la Universitat de Sydney i hi havia representants de productores de TV i no els va pas semblar una idea descabellada. A veure què en surt, de tot això! Jo ho he fet amb tot l'amor i respecte del món, i espero que serveixi, com a més gent, millor!

Truqueu-me quan vulgueu. Si preferiu comunicar-vos per correu electrònic em sembla bé i si voleu que us faci una visita, només hem de fer quadrar les agendes!

Moltes, moltes gràcies :)

È

Francis Moron
To: Èlia Sala Robert

10 May 2016 at 13:19

Hola Èlia !!

He parlat amb la directora i cap problema. T'explico. Tenim una classe amb 3 nens sords a 4t (aquí hi ha la Martina, la meva filla), un a tercer, un a segon i alguns a infantil, però allà no crec que t'interessi. Jo porto els de sisè, que són molt macos i estan acostumats a la subtitulació perquè jo n'hi poso a les pel.lis. Digue'm com ho vols fer. Et passo el meu telèfon, perquè per whatsapp potser per quedar anirem millor. Si és parrafada, millor per aquí, al menys a mi em va millor, no sóc massa bo amb el mòbil...

Res, per a qualsevol cosa ja saps i tu mateixa.

Estem en contacte.
[Quoted text hidden]

Èlia Sala Robert
To: FRANCIS MORON

10 May 2016 at 13:27

Hola, Francesc!

Gràcies per parlar amb la directora i "apanyar-ho"!

A veure, per a mi, com més nens ho puguin veure i donar-me'n opinió, millor. Els d'infantil suposo que encara no llegeixen, oi? No entendrien el contingut dels subtítols però potser sí que podrien entendre la forma dels subtítols ;) Podríem provar-ho, si voleu.

Com us aniria bé organitzar-ho? Una sessió conjunta o per classes? Teniu hores per poder fer això i no entorpir el ritme escolar? En principi una hora seria suficient.

Com et vaig comentar, els matins els tinc lliures. Digueu-me quan us aniria bé que vingúes i ho enllestim ;)

La pel•li la tinc subtitulada en anglès. Creus que seria millor per als nanos que la subtituli en català o castellà?

Gràcies!

[Quoted text hidden]

Francis Moron
To: Èlia Sala Robert

10 May 2016 at 18:49

Bones!!

En anglès la nostra escola està una mica peix. L'àudio estarà en anglès, entenc. Si vols podem fer-ho en anglès a sisè, cinquè, ... com vulguis i català per la resta, tu mateixa. No sé si serà molta feina... Necessitaràs ordinador, algun programa en especial, algun reproductor?

Thanks i seguim...

[Quoted text hidden]

Èlia Sala Robert

10 May 2016 at 20:17

To: Francis Moron

Haha, cap problema!

El que puc fer és traduir els subtítols al castellà i així tindran l'àudio i els subs en el mateix idioma. Tindrè una mica de feina, però no tanta com fer-los de nou!

Posem una data? Com que he de refer els subtítols, si poguéssim quedar cap a finals de mes, m'aniria perfecte per retocar-los :)

Heu pensat si us convé més fer una sessió amb tots els grups o bé separats per classes?

Necessitaré un PC on pugui introduir el *pendrive* i no sé si teniu projector o pantalla de televisió per poder projectar la movie :)

Ho teniu? Si no, porto la de casa!

Gràcies!

[Quoted text hidden]

Francis Moron

12 May 2016 at 14:28

To: Èlia Sala Robert

Hello !!

No pateixis pel projector i ordinador, anem servits. A intantil s'haurà de descartar, o no sé que els vulguis passar a nens oients. El nen sort fa P3 i té altres patologies. Si vols et puc lligar P5. La resta, tu mateixa. Final de maig està bé, la setmana del 23 al 27 millor, la següent som fora. L'horari que fem és de 9 a 11, mitja de pati i de 12,30 a 13,30. Podem fer tres grups, o més si vols convinar 30 minuts de sisè... El que vulguis.

Aquí estic.

[Quoted text hidden]

Èlia Sala Robert

13 May 2016 at 11:49

To: Francis Moron

Hola, Francesc,

disculpa que no t'hagi pogut contestar abans, ahir vaig anar de bòlit!

Val, em sembla bé fer tres grups i combinar-ho amb els teus de sisè, i tant!

Us aniria bé el dijous 26/05 o el divendres 27/05? Podríem fer 4 grups: de 9 a 10, de 10 a 11, d'11.30 a 12.30 i de 12.30 a 13.30 h. No sé com us afectarà a les classes que teniu programades. Si veieu que us afecta massa negativament, vinc dos matins, no problem :)

M'hauríeu de dir quants nens són en total, per poder portar prou qüestionaris per a tothom!

Gràcies!

Francis Moron

17 May 2016 at 09:54

To: Èlia Sala Robert

Hello!!

L'horari és fins les 12;30. Disposem de 3 grups. He mirat i parlat amb les tutores i el dia que tenen millor és el dilluns. Podríem fer dilluns a primera hora 2n, on hi ha una nena sorda que es diu Martina; a 2ª hora 4t, amb 3 nens, l'Èric, la Laura i la meva Martina; i a última hora a tercer, on hi ha un nen, en Massi. Si vols podem quedar a cicle superior un altre dia, millor el dimecres, però aquí tots són oients. Ja em diràs què t'interessa fer.

Seguim en contacte

[Quoted text hidden]

Èlia Sala Robert

17 May 2016 at 09:58

To: FRANCIS MORON

Hola!

Disculpa, no sé com vaig llegir el mail, havia entès que era fins les 13.30 h ;(

Perfecte, fem-ho així. El dilluns 23/05 entenc, oi?

I el dimecres 25/05 amb els teus de 6è, perfecte ;)

Quants nens teniu per classe? Necessitaré portar impresos els qüestionaris i és per no quedar curta!

Gràcieeeeees!!!

[Quoted text hidden]

Francis Moron

17 May 2016 at 10:02

To: Èlia Sala Robert

Hello!

Sí, aquest 23. Calcula 26 per classe. Els de sisè et dic com ho fem. Serien 3 grups més els de sisè, que ja et diré quants som.

Vinga!!

[Quoted text hidden]

Èlia Sala Robert

17 May 2016 at 10:06

To: Francis Moron

Perfecte, quedem així!!

L'enquesta que els passo al final és anònima, però per si de cas prepararé un consentiment informat pels pares, d'acord.

Ens veiem el 23 una miqueta abans de les 9 h. Per qui pregunto?

Thanks!!!!

[Quoted text hidden]

Francis Moron

18 May 2016 at 13:18

To: Èlia Sala Robert

El dilluns quedem a l'entrada de l'escola?

Jo arribaré 15 minutets abans i parlem de com fer-ho amb els de 6è, que seria el dimecres. Fes-me un truc i t'obriré. Si preguntes per mi, a l'escola som dos Francescs, un de música i jo. A mi em coneixen com a Francis.

Ens veiem

[Quoted text hidden]

18 May 2016 at 13:43

Francis Moron

To: Èlia Sala Robert

Bones,

Al matí acabem a les 12:30. Per tant, serien 3 grups, o venir 2 dies. El divendres a mi no em va bé, millor, si pots, el dimecres. Igualment el dimarts et lligo tots els grups i et dic. No et preocupis.

Ciao

[Quoted text hidden]

Èlia Sala Robert

18 May 2016 at 16:58

To: FRANCIS MORON

Hola!

Sí, quedem a l'entrada ;) però no et podré trucar perquè em vas dir que em donaries el teu núm però no me'l vas enviar ;)

Ja pregunto per tu, don't worry!

Fins dilluns,

[Quoted text hidden]

Francis Moron
To: Èlia Sala Robert

18 May 2016 at 22:30

Ostres, pensava que te l'havia donat!!

[Quoted text hidden]

Èlia Sala Robert
To: FRANCIS MORON

18 May 2016 at 22:31

Got it!!

Gràcies ;)

[Quoted text hidden]

Èlia Sala Robert <elia.salarobert@gmail.com>
To: FRANCIS MORON <fmoron12@gmail.com>

22 May 2016 at 14:53

Hola, Francesc!

Per un problema tècnic m'és impossible poder-vos presentar els subtítols en castellà :(Hem elaborat el vídeo d'una manera que a l'hora de fer el vídeo en castellà se'ns desquadra tot l'anglès :(Ahir vaig mirar de solucionar-ho jo i avui, de bon matí, ens hi hem posat amb el tècnic i no hi ha manera.

Però no passa res. Més que el contingut, vull que els nens i nenes vegin la nova proposta de subtítols. Ho entendran perfectament, perquè el que ens interessa no està escrit en paraules. Les paraules transmeten els diàlegs, però no els valors afegits de les emocions, els sons, etc. Així que jo crec que podem fer el visionat de totes maneres.

Odio que passin aquestes coses, i sempre han de passar a última hora. Me'n vaig adonar a l'hora d'exportar el vídeo i per mostrar-vos-el en castellà l'hauria de fer de nou i no arribo :(

Podem provar i a veure què surt, però jo crec que ho entendran igualment!

Ens veiem demà i disculpa les molèsties!!

È

Appendix IV

Survey “The colours of emotions”

The colours of emotions – testing with users

Gender: MALE / FEMALE

How old are you?

Please colour the following emotions. Which colour inspires you each emotion?



Thanks for participating in this project! I really much appreciate your help ☺

È

Appendix V

Results of the survey “The colours of emotions”

The Excel Workbook titled *Appendix V_Results of the survey_The colours of emotions* reports the colours that participants assigned to the different emotions under study.

The workbook constitutes two spreadsheets, one for all the data collected and one for the graphs based on the data. This database has not been attached to the paper version of this thesis due to its spatial constraints, although it is provided in the DVD with the electronic version, as it will be more comfortable to consult.

Appendix VI

Creative subtitles

Creative subtitles are presented in video format. The video is included in the DVD together with the electronic version of this thesis. All the strategies used in *creative* subtitles, moreover, have been discussed in Chapter Seven.

Appendix VII

Creative subtitles time-cueing report

#	Subtitle	Duration
1	Have you ever looked at someone	48:21 – 50:13
2	and wondered: what's going on inside your head?	50:18 - 53:06
3	I know!	53:10 – 54:10
4	I know Riley's head.	54:22 – 56:10
5	And there she was.	01:39:15 – 01:40:20
6	INSERT BABY'S FACE (entra i surt just amb el canvi de pla)	01:35:14 – 01:36:23
7	Hello...	01:43:04 – 01:44:08
8	Riley.	01:46:01 – 01:47:01
9	Oh, look at you.	01:47:08 – 01:48:16
10	Aren't you a little bundle of joy?	01:49:11 – 01:51:15
11	GOLD NOTE (entra just amb el so de la nota i surt amb fade out abans del canvi de pla)	01:53:09 – 01:55:08
12	Es manté amb el canvi de pla i segueix la bola que identifica el so.	01:55:13 – 01:58:17
13	Aren't you a little bundle of joy?	02:02:03 – 02:04:00
14	Whoa.	02:04:14 – 02:05:14
15	MUSIC NOTES Last for the duration of the lively music that becomes protagonist of the aciton.	02:08:14 – 02:21:07
16	It was amazing!	02:23:03 – 02:24:06
17	Just Riley and me...	02:25:00 - 02:26:05
18	... forever...	02:26:17 – 02:27:24

19	INSERT BABY'S FACE (entra amb so del plor i surt just amb el canvi de pla)	
20	... for 33 seconds.	02:33:23 – 02:36:01
21	I'm Sadness.	02:38:02 - 02:39:16
22	Hello. I'm Joy.	02:40:00 - 02:42:08
23	Can I just...	02:43:24 – 02:45:00
24	I want to fix that.	02:45:08 – 02:46:13
25	That was just the beginning.	02:47:10 – 02:49:03
26	Headquarters got more crowded from there.	02:49:06 – 02:52:01
27	HA-HA-HA (entra i surt amb canvi de pla/escena)	02:52:02 – 02:53:20
28	Very nice.	02:53:21 - 02:54:21
29	Seems you got this.	02:55:00 – 02:56:08
30	LOOK OUT!!!	02:56:20 – 02:58:01
31	That's Fear.	02:58:12 – 02:59:12
32	He's good at keeping Riley safe.	02:59:16 – 03:01:14
33	Easy, easy! AAAH! BAAACK!	03:02:06 – 03:03:22
34	Oh, we're good!	03:04:04 – 03:05:05
35	Whew! Good job!	03:06:09 – 03:07:17
36	Thank you... very much!	03:06:13 – 03:07:23
37	And we're back!	03:07:09 – 03:08:09
38	HA-HA-HA (entra i surt amb canvi de pla/escena)	03:08:10 – 03:10:06
39	Oh! (Menys d'un segon però, s'ajusta a canvi de pla.)	03:10:11 - 03:11:06
40	Here we go. Open.	03:13:16 – 03:15:00
41	Hmm. This looks new.	03:15:01 – 03:16:09

42	Is it safe?	03:16:09 – 03:17:09
43	What is it?	03:16:20 – 03:17:15
44	Caution!	03:18:01 – 03:19:01
45	Dangerous smell!	03: 19:06 - 03:20:14
46	Hold on. What is that?	03:20:19- 03:21:24
47	This is Disgust.	03:21:18 - 03:22:18
48	She keeps Riley from being poisoned...	03:22:22 - 03:25:06
49	... physically and socially.	03:25:10 – 03:26:19
50	That's not brightly coloured, or shaped like a dinasour.	03:26:16 - 03:29:14
51	It's broccoli!	03:29:18 -
52	I saved our lives.	03:33:21 – 03:33:23
53	Whew!	03:35:02 – 03:36:02
54	Whew!!	03:35:02 – 03:36:02
55	Whew!	03:35:02 – 03:36:02
56	Yeah, you're welcome!	03:35:10 - 03:36:14
57	Eat your dinner, or	03:36:15 – 03:37:17
58	you won't have dessert.	03:37:20 - 03:38:21
59	Did he say we couldn't have dessert?	03:39:09 – 03:41:16
60	That's Anger.	03:41:19 – 03:42:19
61	He cares very deeply about things being far.	03:42:22 - 03:45:21
62	You want to play, old man?	03:45:24- 03:47:17
63	No dessert? Oh, sure!	03:47:20 – 03:49:13
64	We'll eat our dinner, right after YOU eat this!	03:49:17 - 03:52:16

65	GrrrraaaAAHH!!!	03:52:20 – 03:54:05
66	Riley, here comes an airplane!	03:56:13- 03:58: 04
67	PLANE Acaba just amb el canvi de pla. No és ni un segon, però com que no cal llegir, és visual, no passa res, ja que es veu. De fet, la majoria de participants l’han entès com a part de la pel·lícula.	03:58:06- 03:59:00
68	Oh, airplane. We got an airplane.	03:59:22 – 04:02:03
69	Oooh!	04:01:24 – 04:03:08
70	Oooh!	04:01:24 – 04:03:08
71	Oooh!	04:01:24 – 04:03:08
72	Oooh!	04:01:24 – 04:03:08
73	PLANE Entra i surt just amb el canvi de pla.	04:03:09 – 04:05:06
74	And you’ve met Sadness.	04:11:24 - 04:13:07
75	She... well, she...	04:13:11- 04:15:02
76	MOM-MAAA	04:15:03- 04:16:09
77	BOO-HOO	04:16:10 – 04:17:06
78	BOO-HOO	04:17:07- 04:18:11
79	aiEEE!!	04:18:12- 04:19:16
80	I’m not actually sure what she does.	04:19:18 – 04:21:01
81	I’ve checked, there’s no place for her to go,	04:21:04 - 04:23:12
82	So she’s good, we’re good.	04:23:16- 04:25:01
83	It’s ALL great!	04:25:05- 04:26:08
84	These are Riley’s memories.	04:27:06- 04:29:06
85	They’re mostly happy.	04:29:17 – 04:30:20
86	WOO-HOO	04:30:20 – 04:31:21

87	WOO- HOO	04:33:01 – 04:34:13
88	The most important ones are here.	04:35:23 – 04:38:00
89	I don't want to get too technical but these are called Core Memories.	04:38:12 - 04:42:04
90	Each is an important time in Riley's life.	04:42:08 – 04:45:11
91	Like when she first scored? That was amazing!	04:45:15 – 04:48:12
92	Heey!	04:48:18 –
	Look at that!	04:50:04
93	Very nice!	04:50:07 – 04:51:07
94	Nice job!	04:51:10 - 04:52:10
95	YAY!	04:52:11- 04:53:14
96	YAY!	04:52:11- 04:53:14
97	YAY!	04:52:11- 04:53:14
98	YAY!	04:52:11- 04:53:14
99	YAY!	04:52:11- 04:53:14
100	MUSIC NOTES Last for the duration of the recorregut de la bola fins al centre de core memòries.	04:53:15 – 05:03:24
101	Each core memory powers an aspect of Riley's personality.	05:04:20 – 05:08:22
102	Like Hockey Island!	05:09:00 – 05:10:10
103	Goofball Island is my favorite.	05:13:02 – 05:15:03
104	Come, little monkey!	05:15:17 - 05:16:20
105	HA-HA-HA Surt amb el canvi de pla	05:15:18 – 05:17:01
106	Ha-ha-ha! Oh, dear!	05:19:01 – 05:20:13
107	Goofball is the best!	05:20:16 - 05:22:05
108	Friendship Island is pretty good too.	05:22:18- 05:24:12

109	Hi-hi-hi!	05:24:14- 05:26:03
110	Hi-hi-hi!	05:24:14- 05:26:03
111	Oh, I love Honesty Island!	05:27:01- 05:09:07
112	And that's the truth!	05:29:10- 05:30:13
113	Family Island is amazing!	05:31:02- 05:33:03
114	The Islands of Personality are what make Riley...	05:35:02 – 03:38:19
115	RILEY!	03:39:01 – 03:40:01
116	Look out, mermaid!	03:39:24- 05:41:11
117	HA-HA-HA	05:42:11- 05:43:03
118	LAVAAAA!	05:47:11- 05:48:13
119	HA-HA-HA	05:49:01- 05:49:19
120	Who's your friend who likes to play?	05:50:18- 05:52:16
121	Bing Bong! Bing Bong!	05:52:19- 05:54:03
122	Music notes (drawing)	05:50:18- 05:54:03
123	Heey!	05:54:18- 05:55:13
124	Wow!	05:55:06- 05:56:00
125	AAAHH!!!	06:00:17- 06:01:12
126	BRAIN FREEZE! Cb pla	06:01:13- 06:02:10
127	AAAAAAAH! Cb pla	06:02:11- 06:03:05
128	AAAAAAAH! Cb pla	06:03:06- 06:04:01
129	AAAAAAAH! Cb pla	06:04:02- 06:05:06
130	YAY!	06:10:00- 06:11:04
131	Good night, kiddo.	06:13:05- 06:14:05

132	Good night, Dad.	06:14:06- 06:15:06
133	And... we are out.	06:22:09- 06:23:16
134	Another perfect day! Nice job everybody!	06:24:05- 06:26:22
135	Memories down to Long Term.	06:28:01- 06:29:15
136	We did not die today!	06:34:21- 06:36:12
137	I call that an unqualified success.	06:36:15- 06:38:12
138	And that's it!	06:53:05- 06:54:05
139	We love our girl.	06:54:14- 06:55:17
140	She's got great friends and a great house.	06:55:21- 06:58:07
141	Things couldn't be better.	06:58:11- 06:59:24
142	Riley's 11 now. What could happen?	07:00:11- 07:03:19
143	Not what I had in mind.	07:10:21- 07:12:18
144	Look! The Golden Gate Bridge!	07:36:17- 07:38:15
145	Isn't that great?	07:38:16- 07:40:01
146	It's not made of solid gold, but still!	04:40:02- 07:43:08
147	You said earthquakes are a myth.	07:43:20- 07:45:19
148	Otherwise, I'd be terrified right now!	07:45:20- 07:48:07
149	Uh... yeah.	07:48:16- 07:49:23
150	Beep! Beep! Beep! Entra amb canvi de pla	07:49:24- 07:52:09
151	These are MY kind of people!	07:52:10- 07:54:12
152	Just a few more blocks to our new house!	07:54:13- 07:57:18
153	Step on it, Daddy!	07:57:19- 07:58:19
154	Do we live in this smelly car? It's taken forever.	07:58:11- 08:01:09

155	Which was lucky, because that gave us time to think about our new house!	08:01:13- 08:04:14
156		08:04:17- 08:06:18
157	Let's review the top five daydreams.	08:06:22- 08:09:04
158	That looks safe!	08:09:24- 08:11:04
159	Looks nice.	08:10:04- 08:11:04
160	This will be great! No, no, no!	08:11:05- 08:13:11
161	She can't live in a cookie!	08:13:15- 08:15:20
162	THIS one!	08:13:19- 08:15:04
163	THAT one! It comes with a dragon!	08:15:21- 08:18:02
164	I can feel we're getting close!	08:19:11- 08:21:11
165	Here is our new house! Aaaaand...	08:22:19- 08:25:19
166	Maybe it's nice on the inside.	08:32:02- 08:33:20
167	We're supposed to live here?	08:38:15- 08:40:03
168	Do we have to?	08:40:04 - 08:41:12
169	It smells like something died in here.	08:40:22- 08:42:23
170	Can you die from moving?	08:43:02- 08:44:17
171	Nobody is dying--	08:44:01- 08:46:24
172	A DEAD MOUSE!!!	08:46:09- 08:47:09
173	Great...	08:47:20- 08:48:13
174	I'll be sick!	08:48:14- 08:49:20
175	The house of the dead! We'll get rabies!	08:48:23- 08:50:21
176	GET OFF ME!	08:51:01- 08:52:00
177	AAAHH!	08:52:03- 08:53:03

178	Through the drive, dad said our new room is cool.	08:52:14- 08:55:20
179	Let's check it out!	08:55:23- 08:56:23
180	You're right!	08:57:02- 08:58:02
181	Yeah!	08:57:02- 08:58:02
182	Great!	08:57:02- 08:58:02
183	Yes, yes, yes! Cb de pla	08:58:05- 08:59:02
184	No, no, no!	08:59:03- 09:00:09
185	I envy the dead mouse.	09:00:13- 09:01:16
186	We're in solitary confinement.	09:01:19- 09:03:16
187	Riley cant' live here.	09:03:17- 09:05:08
188	She's right.	09:05:01- 09:06:01
189	Absolutely the worst I've ever been to.	09:06:09- 09:09:13
190	Really bad.	09:06:18- 09:07:18
191	It stinks.	09:06:21- 09:08:02
192	Oh, yeah.	09:08:24
193	Our butterfly curtains will fix it.	09:10:03- 09:12:16
194	An empty room is an opportunity. Did you read that?	09:12:13- 09:15:16
195	Yes, and it's great.	09:15:19- 09:17:03
196	The bed there.	09:17:06- 09:18:11
197	The desk over there...	09:18:14- 09:19:14
198	The hockey lamp there.	09:19:17- 09:20:22
199	A chair there.	09:20:14- 09:21:17
200	The trophies there.	09:21:23- 09:23:19

201	Posters there...	09:22:14- 09:23:19
202	STARS!	09:23:03-
203	I like that!	09:24:12- 09:25:12
204	Now we are talking!	09:24:20- 09:25:24
205	Let's get our stuff!	09:26:00- 09:27:14
206	Alright. Bye.	09:28:05- 09:29:10
207	The moving van will come on Thursday.	09:29:14- 09:32:05
208	You're kidding.	09:32:08- 09:33:10-
209	The van is lost?!	09:33:15- 09:34:15
210	The worst day ever! S'ha deixat més temps perquè hi havia too much going on per llegir sub.	09:35:10- 09:37:06
211	The van is lost!	09:36:01- 09:37:06
212	You said it would be yesterday!	09:37:19- 09:39:08
213	That's what they told me! Se solapen ells dos parlant	09:39:01- 09:40:18
214	They're stressed out!	09:40:07- 09:41:12
215	Stressed out?!	09:41:15- 09:42:15
216	They're arguing...	09:41:20- 09:42:22
217	What will we do?	09:42:23- 09:44:05
218	What's their problem?	09:44:06- 09:45:10
219	I've got a great idea!	09:44:19- 09:46:09
220	Did you read the contract?	09:46:19- 09:48:08
221	Honey --	09:48:11- 09:49:10
222	Andersen moves!	09:49:10
223	She's closing in!	09:49:11- 09:50:21

224	Hey!	09:50:22- 09:52:00
225	No, you're not!	09:52:01- 09:53:03
226	Lining up for the shot!	09:52:20- 09:54:06
227	Behind you! Watch out!	09:54:09- 09:55:16
228	GOOOOAL! Yeah!	09:56:07- 09:57:13
229	YAY!	09:57:14- 09:58:16
230	Woo-hoo!	09:57:14- 09:58:16
231	Come on, Grandma!	10:00:06- 10:01:16
232	Ha! Grandma?!	10:01:17- 10:02:17
233	Hair up! We're in for it!	10:02:20- 10:04:12
234	WOO!	10:04:13- 10:05:13
235	Grrrr!	10:05:07- 10:06:06
236	He-he-he!	10:06:01- 10:07:00
237	Aaaah!	10:06:19- 10:08:00
238	Put me down!	10:07:03- 10:08:05
239	Hi-hi-hi!	10:07:17- 10:08:17
240	Phone ringing	10:10:19- 10:11:19
241	Hi-hi-hi!	10:10:19- 10:11:19
242	Ugh. Sorry. Hold on.	10:11:22- 10:13:05
243	Hello?	10:14:11- 10:15:11
244	Whait. Wha--?	10:15:12- 10:16:12
245	You're kidding.	10:16:16- 10:17:16
246	Stall for me, I'll be right there.	10:18:14- 10:20:22

247	The investor was coming on Thursday.	10:21:10- 10:24:06
248	I go.	10:25:01- 10:25:24
249	We get it.	10:25:12- 10:26:23
250	You're the best.	10:27:02- 10:28:02
251	See you, sweetie.	10:29:02- 10:30:06
252	Dad just left us.	10:31:09- 10:32:24
253	He doesn't love us anymore. That's sad, I drive.	10:33:00- 10:37:04
254	What are you doing?	10:37:11- 10:40:00
255	Uh, give me one second.	10:40:05- 10:42:05
256	I've realized that Riley hasn't had lunch.	10:42:12- 10:45:06
257	Remember?	10:45:10- 10:46:10
258	I saw a pizza place down the street. We could try that.	10:48:17- 10:52:03
259	Pizza sounds delicious!	10:52:04- 10:53:13
260	Pizza!	10:53:14- 10:55:04
261	Yeah, pizza!	10:53:14- 10:55:04
262	Pizza?	10:53:14- 10:55:04
263	What the HECK IS THAT?	10:57:14- 10:59:05
264	Who puts broccoli on pizza?	10:58:10- 10:59:18
265	That's it. I'm done.	11:00:01- 11:01:02
266	Congratulations, San Francisco. You've ruined pizza!	11:01:06- 11:02:21
267	First the Hawaiians,	11:03:00- 11:04:07
268	and now you!	11:04:11- 11:06:23

Appendix VIII

Children's consent form



HOLA!

Ara veuràs dos fragments de la pel·lícula *Inside Out* (*Del Revés*) subtitulats.

Et demanaré que completis un qüestionari breu. NO ÉS UN EXAMEN, no et preocupis si no saps respondre alguna de les preguntes.

Només vull saber si la proposta de subtítols que he dissenyat té bona rebuda entre els espectadors sords i oients. Si em vols ajudar, passa i gaudeix de la pel·li!

Moltes gràcies ☺

Èlia



Appendix IX

Parental consent form

CONSENTIMENT PARENTAL PER A LA PARTICIPACIÓ EN EL PROJECTE DE RECERCA

Aquest formulari de consentiment informat és per al projecte de recerca doctoral de SUBTITULACIÓ PER A NENS I NENES SORDS, dut a terme per la doctoranda ÈLIA SALA ROBERT i supervisat pel Dr. EDUARD BARTOLL TEIXIDOR.

Benvolgut pare, benvolguda mare,

Gràcies pel teu interès i participació en el meu projecte doctoral. Aquest document descriu el que es demanarà al teu fill/a a la sessió del visionat de subtítols. Si us plau, llegeix atentament aquest document i signa'l a la part inferior si entens i acceptes les condicions d'aquest estudi. Si tens algun dubte o pregunta, si us plau, adreça't a ÈLIA SALA ROBERT.

- 1) Dónes el teu consentiment per què el teu fill/a a assisteixi i participi a la sessió de visionat de subtítols. La pel·lícula projectada serà *Inside Out (Del Revés)* en anglès i subtítols (també en anglès).
- 2) Dónes permís a ÈLIA SALA ROBERT per prendre nota de les reaccions i converses informals del teu fill/a durant la projecció de la pel·lícula.
- 3) Dónes permís a ÈLIA SALA ROBERT que lliuri un qüestionari al teu fill/a per dur a terme la seva investigació, que conduirà a la publicació d'articles científics i a la presentació del treball a congressos científics.
- 4) Aquest qüestionari consta de diverses preguntes de resposta SÍ-NO que el teu fill/a haurà de respondre de manera anònima. Les úniques dades personals requerides per a completar el qüestionari són les següents: sexe, edat, grau de sordesa, hàbit de consumició de subtítols a la televisió.

El teu temps: el visionat de la pel·lícula es durà a terme el divendres 29 d'abril de 2016 a les 11.30 h a l'Escola d'Idiomes i Audiovisuals (Av. Pau Casals, 3 Local 2, Palafolls). La participació és voluntària, per això es pot abandonar en qualsevol moment sense penalització ni donar cap explicació.

La teva privacitat: tota la informació recollida durant el visionat s'usarà exclusivament per a la realització de la recerca doctoral en curs. Serà emmagatzemada de manera segura i mantenint l'anonimat dels/de les participants. L'accés a les dades recollides estarà restringit a les persones involucrades en aquesta investigació i només s'utilitzaran per a finalitats científiques i de recerca. En cas que les dades obtingudes siguin utilitzades en publicacions o presentacions, la identitat dels/de les participants no quedarà desvelada sota cap circumstància.

T'agraeixo enormement la teva participació i ajuda. Aquesta recerca no seria possible sense la teva col·laboració 😊

A continuació, fes constar la data i signa aquesta pàgina conforme has estat informat/ada de la finalitat del projecte, i conforme dónes permís perquè el teu fill/a participi en aquest estudi que inclou el visionat d'una pel·lícula subtitulada en anglès, seguit de la resposta d'un qüestionari amb l'única finalitat de recollir informació sobre l'opinió dels nens i nenes sobre una nova proposta de subtítols.

Nom de la investigadora:

Signatura:

Nom del pare / de la mare
del / de la participant:

Signatura:

Appendix X

Questionnaire on *creative* subtitling

QÜESTIONARI VISIONAT SUBTÍTOLS *CREACTIUS*

CREACTIVE SUBTITLES

**PERFIL DEL/ DE LA PARTICIPANT:
PARTICIPANTS' PROFILE:**

Sexe /gender: M F	Tens algun grau de sordesa diagnosticat? Do you have a diagnosed degree of deafness?	SÍ Yes	NO No
Edat /age:	Ets consumidor/ora habitual de subtítols? Are you a regular subtitles' consumer?	SÍ Yes	NO No

QUESTIONNAIRE

Vídeo 1

Hi havia subtítols a la pantalla? Were there subtitles/captions on screen	SÍ YES	NO NO
--	------------------	-----------------

En cas que sí, els has identificat fàcilment? If YES, did you identify them easily?	SÍ YES	NO NO
--	------------------	-----------------

Has pogut llegir els subtítols amb comoditat? Could you read them with no effort?	SÍ YES	NO NO
--	------------------	-----------------

En cas que no, és per què no tenen una posició fixa? If NOT, is it because they don't have a fixed position?	SÍ YES	NO NO
---	------------------	-----------------

Com a persona oient, deixaries aquest tipus de subtítols o triaries l'opció "sense subtítols"?

As hearer, would you keep this type of SDH or would you choose the "no subtitles" option?

SÍ	NO	Per què?
YES	NO	Why?

Què t'ha semblat l'ús d'onomatopeies? Excessiu Bé Molt
bé What do you think about the use of onomatopoeia? Too much Good
Very good

Has identificat la finalitat de les bafarades?
Did you understand why we used text in bubbles?

Quan els personatges parlaven amb una bafarada de color GROC, de quina manera parlaven? Tristos, contents, enfadats...?

I amb una bafarada VERMELLA? _____

I amb una de BLAVA? _____

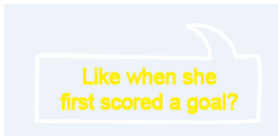
I VERDA? _____

I LILA? _____

What did the colours mean when associated with bubbles?

YELLOW RED BLUE PURPLE GREEN

Per què s'utilitzen les bafarades quadrades blanques? _____



Exemple:

Why are squared white bubbles used? _____

Per què s'utilitzen les bafarades punxegudes? _____

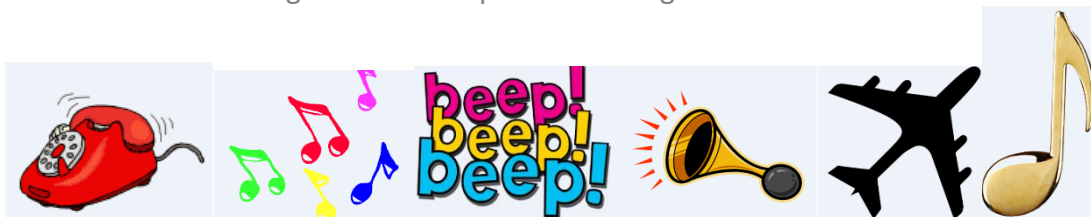


Exemple:

Why are spiky bubbles used? _____

Quin d'aquests elements NO forma part del vídeo original? Encercla'ls.

Which of the following items is NOT part of the original vídeo? Circle them.



En general, t'agrada aquest nou tipus de subtítols?
Overall, do you like this new SDH approach?

SÍ
YES

NO
NO

Vídeo 2

Has pogut llegir els subtítols amb MÉS comoditat que els anteriors?
NO

SÍ

Could you read them MORE comfortably than the previous ones?
NO

YES

Creus que hi havia la mateixa informació subtitulada en els dos vídeos?
NO

SÍ

Do you think the same amount of information was subtitled in both videos? YES NO

Prefereixes els subtítols *creactius* o els subtítols de sempre? **creactius**
Do you prefer *creative* or conventional subtitles? *creative*

normals
conventional

COMENTARIS:

COMMENTS:

Appendix XI

Results of the empirical study

The Excel Workbook titled *Appendix XI_Results of the empirical study* contains the answers and comments that participants completed in the questionnaires during the experimental study carried out at Escola Pinya de Rosa.

The workbook constitutes three spreadsheets, one for all the data collected and two for the graphs based on the data, which have been presented in Chapter Eight. This database has not been attached to the paper version of this thesis due to its spatial constraints, although it is provided in the DVD with the electronic version, as it will be more comfortable to consult.