Audiovisual Accessibility for the Deaf and Hard of Hearing in Iran

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ABSTRACT

This article aims to describe the legal status of media accessibility in Iran, take a close look at the actions that have been taken regarding media accessibility and find out how the d/Deaf and hard of hearing (DHH) are satisfied with the existing audiovisual media accessibility services. This study reveals that the Constitution of the Islamic Republic of Iran contains no direct reference to rights of people with special needs, particularly to the right of media accessibility. Furthermore, the Comprehensive Disability Rights Act and the Convention on the Rights of Persons with Disabilities (CPRD), despite having an impressive role in enhancing the life quality of people with special needs, have not been followed with adequate commitment. Subtitling for the d/Deaf and hard of hearing (SDH) and sign language interpreting (SLI), as the two assistive modalities of audiovisual translation (AVT), have been used to enable DHH to access audiovisual materials. However, these actions have not been implemented and controlled by the government regulation; in consequence, they fall short of the proper standard and cannot meet the expectations of the Iranian DHH community.

KEYWORDS: media accessibility, the deaf and hard of hearing, legislation, actions, reception

1. Introduction

An overwhelming yet erroneous opinion of some societies is that deafness, as a disability, is the origin of any limitations imposed on the community of the d/Deaf and hard of hearing (DHH). In these societies, the term "people with disabilities" is used as a misleading label to convince marginalizing people with special needs. While, other societies by recognizing DHH community as "one of the many parts of a fragmented reality" (Neves, 2009, p. 152) and providing efficient access services for them made the world a more just place to live. The most telling example is

provision of subtitles for the d/Deaf and hard of hearing (SDH) as an audiovisual media access service. The traditional access service of SDH in North American and European countries (e.g. USA, Canada, UK, Denmark, Poland, Italy, France, Germany, Spain) and the history of reception studies on live and pre-recorded subtitles for DHH audiences (Romero-Fresco, 2018) prove that DHH people can effectively use and enjoy audiovisual media through subtitles that are localized based on their' needs and expectations. This kind of evidence reveals that in other societies, if DHH people cannot benefit from audiovisual media, they are not subject to the constraints of their 'disability' but rather to the ignorance of the society in which they live.

Today, communication tools are an integral part of social life. The development of SDH or audiodescription (AD) as a professional practice and the growth of academic research on these new modalities of audiovisual translation all show a global concern for media accessibility for all. Aligned with this is listing the term of 'accessibility' as one of the eight general principles of the Convention on the Rights of Persons with Disabilities (McCallum AO 2012: 4). This principle refers to the responsibility of governments to provide all people with equal services as a human right (McCallum AO 2012). According to this Convention, any action taken to "accelerate or achieve de facto equality of persons with disabilities" should not be classified as discrimination. To achieve an accessible format for the relevant services, it is necessary to adopt appropriate standards based on the distinct abilities of the users (McCallum AO 2012: 6).

In AVT, what Díaz-Cintas, Orero, and Remael (2007) refer to as "audiovisual accessibility" includes any activities which aim to ensure equal accessibility of audiovisual media to all users. Corresponding to what the term 'accessibility' covers in both the Convention on the Rights of Persons with Disabilities and audiovisual translation, it can be said that studying or practicing audiovisual accessibility is aligned with what is regarded as respecting the human rights of all and not just most.

The present study sheds light on media accessibility for DHH in Iran and delves into its status in terms of legislation, actions and reception. The legislation section aims to provide the background to the way Iran has approached rights of people with special needs, especially rights related to media accessibility. This background would allow us to describe the quality and

quantity of media accessibility actions in a legal context. In consequence, the legal background and the actions taken would help us with the reception section, that is, we can more accurately understand how the Iranian DHH community would be satisfied or dissatisfied with the present condition of media accessibility.

2. DHH Community in Iran

Iran is a country of over 80 million people. The DHH community is the second dominant group of people with special needs in Iran (Ear Nose Throat Head & Neck Research Centre 2013). Based on The State Welfare Organization, the number of deaf people all over the country is about 230,000 (Mehrnewz, 2017). Based on the data provided by Firouzbakht et al. (2007), in the capital cities of Iran's provinces, the rate of deafness is approximately 4.7 out of every 1000 new-borns. The reported rate covers different degrees of hearing loss based on pure-tone average (PTA), including mild hearing loss (25-40dB), moderate hearing loss (41-65 dB), severe hearing loss (66-90 dB), and profound hearing loss (90+ dB). State Welfare Organization in Iran defines deafness as the disability to receive sounds from one's surroundings even with the use of hearing aids and also defines hard of hearing as disability to receive sounds from one's surroundings without the use of hearing aids or special training (Mansuri, 1997).

The DHH in the society of Iran, as in other societies, make up a heterogeneous community in terms of their language of communication (Iranian sign language/ Persian). A large number of DHH people use Iranian sign language in their everyday life; however, they are also expected to know signed Persian, as that is the signing system developed by The State Welfare Organization (SWO) to be used in formal situations such as television shows, conferences, etc. (Ghahreman 2015). Structurally based on Persian, signed Persian is very different from Iranian Sign Language and its learning is extremely demanding for DHH (Guity and Siavashi, 2018). Other DHH people, who have residual hearing through cochlear implant or hearing aids, normally prefer to use oral language, that is, Persian.

3. Method

This study offers a pioneering approach to media accessibility for DHH in Iran. It is designed in three main sections: legislation, actions, and reception, to answer the following three questions:

1. Are there any regulations in Iran pertaining to accessibility, or more specifically to audiovisual media accessibility for DHH people?
2. If so, how these regulations are represented in media providers' actions?
3. Have these actions satisfied the needs and expectations of DHH?

To answer the first question, document analysis method is adopted. The Constitution of the Islamic Republic of Iran were examined to see whether there are any laws related to the rights of people with special needs, specifically the right of media accessibility. In addition, the Comprehensive Disability Rights Act and the Convention on the Rights of Persons with Disabilities are studied to see if there are any media accessibility laws that require the government to take actions regarding media accessibility for people with special needs.
The documents were interpreted by the researcher to give voice and meaning around the subject of the legal status of media accessibility for people with special needs in Iran.

As for question two, a document analysis method was applied to examine what actions have been taken so far by Iranian TV broadcasters, cinemas and DVD distributors with regards to accessibility for all. For this goal, all public and private TV broadcasters, in addition to cinemas and DVD distributors were closely examined to see how they have dealt with media accessibility over the years. The main sources of data were online databases such as news websites (among others, tebyan.net; salamatnews.com; Mehrnews.com), which provided reliable information regarding both past and recent television actions. Furthermore, Telewebion.com (the online database of live broadcast and archives of Iranian broadcasting) and Aparat.com (an Iranian video sharing service) provided a representative collection of TV broadcasting.
As for cinema and DVD platforms, apart from news websites, an Instagram page named deafcinema (launched on 31 January 2018) and two large DVD distributors in the city of Mashhad offered accurate information on the existing accessibility services.

To answer question three, a survey method was adopted to see whether the state of the art could meet DHH's expectations or not. To form a representative sample of Iranian DHH people, members of the Deaf Association of Khorasan Razavi and students from two special high schools in Mashhad were contacted to voluntarily contribute to the study. A total of 112 DHH people agreed to participate in the study by completing a self-report questionnaire.

The instrument for data collection was a structured questionnaire with closed-ended multiple-choice questions and scales. To establish the content validity of the questionnaire, three established scholars in audiovisual translation revised the questionnaire. Afterwards, a pilot study using 13 participants was made to evaluate the clarity of the questionnaire's items. The pilot test led to further adjustments including the necessity of the presence of a sign language interpreter throughout the procedures of data collection and additions of answers of the type 'Don't know' for questions that respondents did not feel they could answer yes or no to. In addition, two experienced sign language interpreters were invited to comment and advise on how to improve the accessibility of the questionnaire. The final questionnaire as an easy-to-read, 2-page printed document consisted of 15 questions. Based on the classification offered by Dörnyei 2007: 102), the questions can be grouped in the three categories of factual, attitudinal, and behavioural:

- Ten factual or demographic questions that were used to find out certain facts about education, gender, degree of hearing loss, type of school, language of communication, reading proficiency, sign language proficiency, oral language proficiency, etc. (Closed-ended questions).
- Three attitudinal questions that were used to ask the participants to rate their own proficiency of sign language, oral language (Persian), and reading comprehension (Likert scale questions).
- One attitudinal question that was used to see whether the media accessibility measures taken in Iran have met the needs and expectations of the DHH (Likert scale question).
- One behavioural question that was used to see whether the DHH have ever requested the NGOs or governmental organizations to take actions for media accessibility enhancement (Closed-ended question).

The questionnaire was submitted to the participants and was answered individually in a group setting. At the beginning of the session, the sign language interpreter was asked to translate a formal presentation on the purpose of the research project and its prospective benefits at a general level. The interpreter also translated the follow-up questions and answers.

To analyze the quantitative data, descriptive and inferential statistical procedures were run using IBM SPSS Statistics 19.0 to answer question three.

4. Media Accessibility (Legislation, Actions, and Reception)

4.1. Legislation

The Constitution of the Islamic Republic of Iran (ratified in 1979; amended in 1989) contains no direct reference to the rights of people with special needs. However, Clause 9 of Article 3 contains a subtle reference to the fact that all people are entitled to equal protection of the laws without any discrimination. It notes that what is an absolute necessity is "T[t]he elimination of all unjust forms of discrimination and the creation of just opportunities for everyone, in all spiritual and financial areas". In addition, the constitution refers to social security of all people in Article 29, saying that:

It is a universal right to enjoy social security and have benefits with respect to retirement, unemployment, old age, workers' compensation, lack of guardianship, and destitution. In case of accidents and emergencies, everyone has the right to health and medical treatments through insurance or other means. In accordance with the law, the government is obliged to use the proceeds from the national income and public contributions to provide the abovementioned services and financial support for each and every one of the citizens.

The constitution does not contain any articles or clauses related to accessibility services, or more specifically media accessibility.

The Comprehensive Disability Rights Act, as the most comprehensive local legislation on the rights of disabled people was proposed to the Parliament and approved in 2004 (Moeini, 2011: 63). This legislation, which was mainly the result of disability-rights activists' efforts and non-governmental organizations' (NGOs) support, includes 16 articles and 24 notes and addresses the disabled's rights in terms of public building access, education, housing, finance, and

employment. However, due to some serious deficiencies such as lack of "monitoring system to ensure compliance", it failed to protect adequately the rights of people with special needs (Moore and Kornblet, 2011: 11). As the need for revision of the law was considered of utmost importance by the government, a Bill was submitted for debate before the Parliament in October 2012. After a long process of investigation and approval, the Guardian Council approved it in December 2017. Article 12 of the Comprehensive Disability Rights Act requires the Islamic Republic of Iran's Broadcasting Organization "to devote at least two hours of daily programs at appropriate times to The State Welfare Organization's programs in order to raise the public awareness about people with special needs". Although the Comprehensive Disability Rights Act has had a significant role in helping people with special needs achieve their rights, it has not been implemented adequately. For example, absence of accessibility to media, particularly accessibility to television (Arab, 2015), lack of accessibility to public utility buildings, or absence of training in Braille or sign language at mainstream education institutions such as universities still intensely annoys people with special needs (Kamali, 2011; Allaedini, 2004).

The Convention on the Rights of Persons with Disabilities (CRPD) (adopted in December 2006; opened for signature in May 2007) was the first international human rights convention process in which the Islamic Republic of Iran and other Islamic countries actively participated (Moore and Kornblet, 2011). CRPD, after going through an extensive legal process, was ratified in December 2008. Iran's Parliament in the ratification noted: "As for Article 46, the Islamic Republic of Iran does not consider itself bound to comply with the provisions of the Convention that may be incompatible with existing rules in the legal system". This clear-cut statement raised issues that CRPD might not add anything to the rights of the disabled in Iran; however, changes happen slowly but effectively (Moore and Kornblet, 2011).

Regarding 'accessibility', Article 9 of the CRPD requires the countries to "take appropriate measures to ensure persons with disabilities access, on an equal basis with others, to the physical environment, transportation, information and communications, including information and communications technologies and systems, and to other facilities and services, open or provided to the public, both in urban and in rural areas". Since lack of basic accessibility services has been considered as the reason that has made people with special needs stay indoors and increasingly socially fragmented (Allaedini, 2004; Moore and Kornblet, 2011; Kamali, 2011), the mere

implementation of this Article would be enough to bring a dramatic change to the life of people with special needs in Iran.

4.2. Actions

Audiovisual media accessibility is a neglected issue in Iran because there is scarcely any program fully accessible on television, cinema, and DVD platforms. Traditionally, the provision of audiovisual media access services for the Iranian DHH was initiated by using SLI on television programs, usually for the news and later expanded into using SDH and SLI in cinemas and DVD markets. This section aims at discussing audiovisual media accessibility in Iran in the three settings of television, cinema and DVD markets.

4.2.1. Sign language interpreted audiovisual products

4.2.1.1. SLI on TV

Iran is the leading country in the West of Asia in terms of interpreting TV programs into sign language (Salamatnews 2012); however, SLI as an access service has been used almost exclusively for news programs.

In 1983, a sign language interpreted news program called *Deaf News* was launched on the public channel of Islamic Republic of Iran Broadcasting 2 (IRIB TV2) and is still broadcast (Jamejam 2012). In this program, the news presenter presents the news in sign language and what s/he utters is accessible through voice-over and a fragment of text appearing on the right corner of the screen (see Figure 1). Another public news channel named Islamic Republic of Iran News Network (IRINN) has broadcast the news for DHH on a regular basis, at 10 a.m. and 3 p.m. The news presenter presents the news in Persian and a sign language interpreter, appearing on the right corner, translates the news presenter's speech. The news is also accessible through subtitles (see Figure 2). These subtitles and those appearing on IRIB TV2 have been lexically and structurally simplified to be easily understood.

Figure1: The Deaf News presented in three modes on IRIB 2

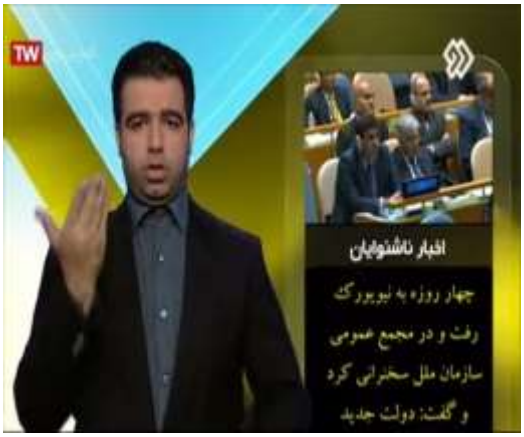
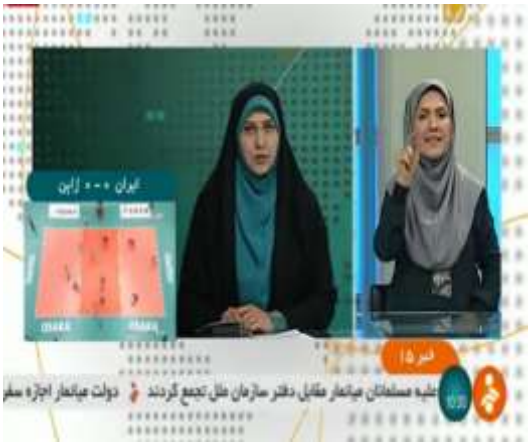


Figure 2: The Deaf News presented in three modes on IRINN



Another action taken by broadcasters was the provision of sign language interpreted programs 12 hours a day on the national day of the Deaf (30th September) in 1998 on the public channel of IRIB TV5 (Tebyannews, 2007). This channel, provided SLI for a TV series named The Age of Youth (Gharib and Tavasoli, 1998), which was not only the first TV series made accessible through SLI but also the last one to date. The sign language interpreter of The Age of Youth described the process of interpreting as follows:

> First, I watched the whole episode to understand the plot and the storyline. Then, while looking at the camera and listening to the soundtrack, I rendered the dialogues in sign language simultaneously. I usually shortened the dialogues while trying to preserve the main content. I laughed when the actor laughed and used facial expressions when the character was emotional. When DHH see a new sign, they try to learn it as the hearing learn a new word. (Kalmarzimoghadam 1 June 2014, translated by the authors)

On the national day of the Deaf, IRIB usually broadcast movies that feature the deaf and hard of hearing, such as The Little Bird of Happiness (Derakhshandeh, 1987) and Baghcheban (Khadem, 2011). However, these movies have never been accessible to the intended viewers through SDH or SLI.

In addition to Deaf News, the live talk show of The Image of Life aired by the IRIB 2 every day at 12:00 pm was made accessible to DHH through sign language interpreting (see Figure 3). The provision of this service started in the late 1990s and has recently been suspended but there is no accurate data to explain the reason.

Figure 3: Sign-language interpreting on
a TV talk show on IRIB 2

The very few TV programs displayed with SLI are accessible to those DHH whose language of communication is sign language. However, this accessibility service does not seem to meet the expectations of these intended viewers. The reason resides in the fact that IRIB tend to use signed Persian rather than Iranian sign language on TV programs believing that Iranian sign language is an informal way of communication and unsuitable to be used on television. While what the DHH community ten
d to use as a means of communication is Iranian sign language; for this reason, signed Persian as a signing system developed by SWO is obtrusive to their understanding since it is not a natural language system and its grammatical rules are closely linked to those of Persian (Guity and Siavashi 2018).

4.2.1.2. SLI in the Cinema and DVD Market

Provision of SLI on movies in cinemas started in 2017 in Tehran and Mashhad, the first and the second largest cities of Iran. *Texas* (Atyabi 2017), *Centipede* (Davoudi 2018), *Wing mirror* (Hadi 2017), *Damascus Time* (Hatamikia, 2018), *Negar* (Javan 2017), *Istanbul junction* (Kiayee 2018)

and *Oxidan* (Mohammadi 2017) are among the movies that had special showings for DHH. The genres of these movies are mostly comedy and drama. The significant and innovative point about the movie *Negar* was that a female and a male sign language interpreter were designated to translate the speech of female and male characters.

Provision of SLI does not happen very often in DVD markets. In 2015, a digital distribution website named *Filmnet* translated four popular movies into sign language including *Fargo* (Coen, E. & Coen, J. 1996), *City of Women* (Fellini 1980), *Bean: The Ultimate Disaster* (Smith 1997) and *A Mother's Love* (Tabrizi 1997) (Figure 4). The movies, other than the last one, were foreign and interpreted based on the dubbed version. All these movies were released on DVD[1].

Figure 4: Media accessibility through SLI in the DVD market

These actions are appreciated as a starting point in making movies accessible for DHH through SLI, although it seems that SLI is not an appropriate modality for making movies or TV series accessible in view of some shortcomings. For instance, SLI does not provide the needed information to help viewers distinguish between people talking. Furthermore, in cases where sentences run consecutively, the SL interpreter must apply considerable deletion in order to keep up with the rate of characters' speaking. Last but not least, SLI does not provide non-verbal auditory information such as sound effects, music, multilingualism, etc.

[1] Copyright is not enforced in Iran, so these solutions are not considered as illegal within the borders.

4.2.2. SDH on Audiovisual Products

4.2.2.1. SDH on TV

The main audiovisual translation mode used on TV broadcasting in Iran is dubbing, which means that domestic as well as foreign productions are beyond the reach of DHH. Even the Iranian entertainment channel of iFilm (launched September 9, 2010), which mainly aims at presenting Iranian movies and TV series to international audiences, used to broadcast all content dubbed in English[2]. SDH, mostly meaning intralingual subtitling (Szarkowska 2013), is close to non-existent in Iranian TV broadcasting. As stated in section 4.2.1.1, the only subtitled programs provided by IRIB are two news programs. The subtitles inserted on these programs are structurally and lexically edited to be easily interpreted.

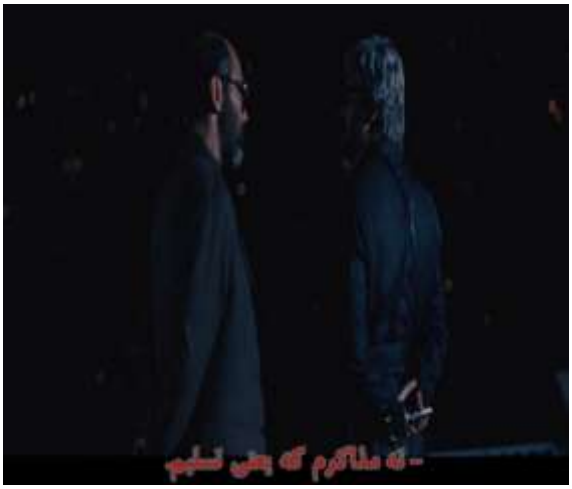
4.2.2.2. SDH in the Cinema and DVD Market

Provision of SDH on movies has been totally neglected until recent years. Three subtitled movies named *Ch* (Hatamikia 2014), *Mazarsharif* (Barzideh 2015), and *Bodyguard* (Hatamikia 2016) were the first Iranian movies released in Tehran for DHH (Cinemakhabar 2014). In 2018, the Deaf Association of Khorasan Razavi subtitled and sign interpreted the movie named *Istanbul junction* (Kiayee 2018) to be displayed for the DHH in Mashhad. It is also necessary to remark on the fact that the movies released in the cinemas of Tehran and Mashhad (mentioned in section 4.2.1.2) were also subtitled.

There is no argue that these measures are steps forward in terms of audiovisual media accessibility for all; however, some issues need to be addressed in the future. Firstly, the existing subtitles do not follow an overall consistency of approach since there are no national editorial guidelines for subtitlers to adhere to. Secondly, although SDH is made to help DHH achieve "easy and enjoyable reading" (Neves 2008: 137), the red-coloured subtitles with high presentation rate contradict this. Finally, the subtitles do not include any description of non-verbal information, for example no description is given to identify characters speaking (Figure 5), sound effects, and paralinguistic features.

[2] In July 2013, iFilm and other Iranian channels were removed from several European and American satellites (amongst others those of Eutelsat and Intelsat), allegedly because of the Iran sanctions (Presstv.ir, 2013).

Figure 5: A back-to-the-camera shot and difficulty of character identification



After *Ch*, *Bodyguard* was the second movie that was decided by its director to be subtitled for DHH audiences. The experience of subtitling *Ch* and the received feedbacks helped subtitle providers reconsider the strategies used for subtitling (SNN, 2016). For more information on linguistic features of SDH in *Bodyguard* see Shokoohmand and Khoshsaligheh (in press).

In producing SDH for *Bodyguard* the dialogue list is completely paraphrased. The original dialogues of *Bodyguard* are generally simple in structure but complex in lexis. Comparing the original dialogues with the subtitles shows that paraphrasing is more achieved by changing the vocabulary than the structures (Table 1).

Table 1: Samples of edited SDH in Persian

		Original Script	**Edited Subtitle**
Sample 1	FA	*الان صحبت دربارهٔ محافظی که باید فدای شخصیت نظامی میشد ولی درلحظهٔ خطر شخصیتو فدای خودش کرد. این جرم بزرگیه.*	*شما محافظ دکتر بودی و باید جلوی دکتر می ایستادی تا ایشون زخمی نشه. ولی شما این کار نکردی. این جرم (گناه) بزرگی هست آقای ذبیحی.*
	Trans.	Now we are talking about the bodyguard who had to sacrifice his life to save the official but used him as his shield to protect himself in time of danger. This is a big crime Mr. Zabihi.	You were the bodyguard and must stand before the Doctor to secure him against being wounded. However, you did not do that. This is a big crime Mr. Zabihi.
Sample 2	FA	*من با پوست و گوشتم میدونم نظام چیه، شخصیت چیه، کجاش مقدسه کجاش نامقدس.*	*من خیلی خوب میدونم که چطور از آدمها مراقبت کنم.*
	Trans.	I know very well what the system is, who is an official, what is sacred, what is not sacred.	I know how to protect people.
Sample 3	FA	*ای مادر! ای کاش زبونم لال شده بود ازت نمیپرسیدم حیدر ذبیحی یادت هست.*	*ای کاش از مادرم نمیپرسیدم حیدر ذبیحی یادت هست.*
	Trans.	Oh mother! I wish I'd gone mute and hadn't asked if you remembered Heidar Zabihi.	I wish I had not asked my mother if she remembered Heidar Zabihi.

Standard subtitling, instead of edited and verbatim subtitling, has been identified as "the optimum solution" in experimental studies (e.g. Szarkowska, Krejtz, Klyszejko, et al. 2011: 376). The reason resides in the fact that on the one hand, edited subtitles may slacken the reading speed because of noticeable mismatches between what is being said and what is given in the subtitle (de Linde and Kay 1999; Szarkowska et al. 2011). On the other hand, verbatim subtitles for having excessive density of information and high presentation rate are unlikely to meet the needs of DHH who are mainly slower readers than their hearing peers (McGill-Franzen and Gormley 1980; Wauters, Van Bon, and Tellings 2006; Ebrahimi 2010).

Deletion as another technique of editing is used for speech information considered not very relevant to the story. For example, in a scene in which a character is giving a lecture, only a general description of the subject of the lecture is given within speech marks: «Meysam is

teaching about nuclear energy» (see Figure 6). Synonyms of the words considered new but practically useful to be learned by the intended viewers are given in a (=) (Figure 7).

Figure 6: Replacing the irrelevant parts with a general description

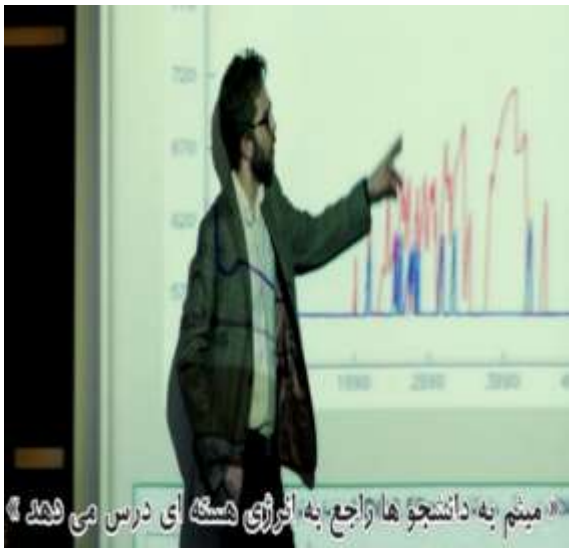
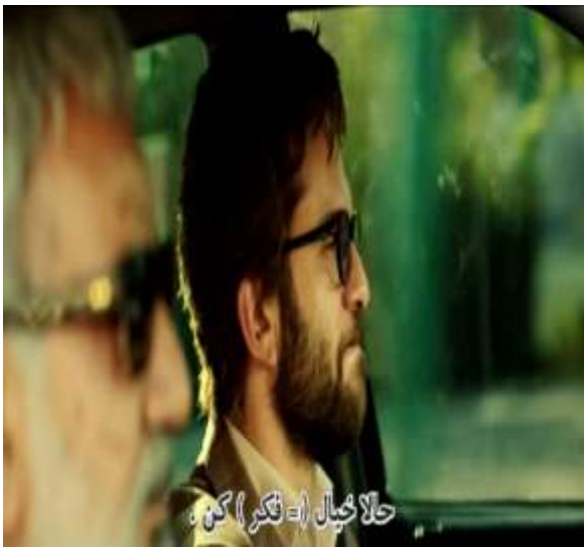


Figure 7: Giving the meanings of the new words within parenthesis



As for layout, the subtitles are mostly single line and the maximum number of characters per line is hardly more than 40. The subtitles are displayed in white with a black shadow effect for more legibility.

As to character identification, the first sentence of the new speaker begins with a dash (-) but it is not a consistent technique throughout the movie. Besides, when there is a two-line subtitle and each line belongs to different characters, a dash (-) is used at the beginning of each line (Figure 8).

Regarding other non-speech information, starting triple dots are used to indicate that the present subtitle carries the follow-up text of the previous uncompleted sentence and ending triple dots are used to indicate that the subtitled sentence is incomplete, so that the brain of the viewer can expect the arrival of a new subtitle to follow (see Figure 9). Sound effects are described within speech marks «» (see Figure 10). In a scene, the topic of a Turkish song is given in a subtitle and the subtitle is tagged by ‘singer’ (see Figure 11).

Figure 8: Use of dash in two-lined subtitles to indicate speaker shift

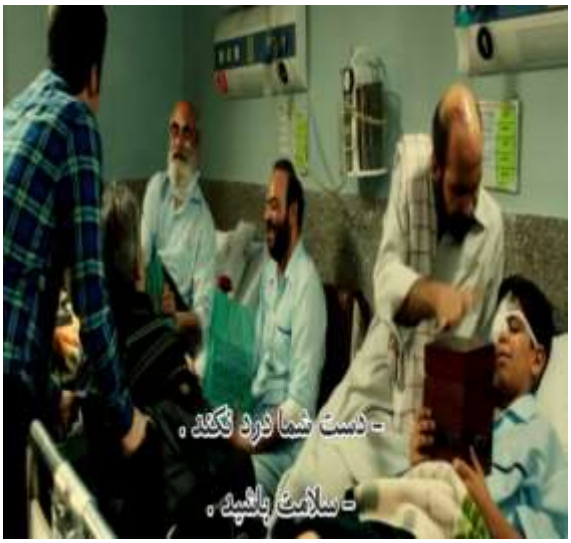


Figure 9: Use of triple dots to indicate that the consecutive subtitles are parts of one long sentence

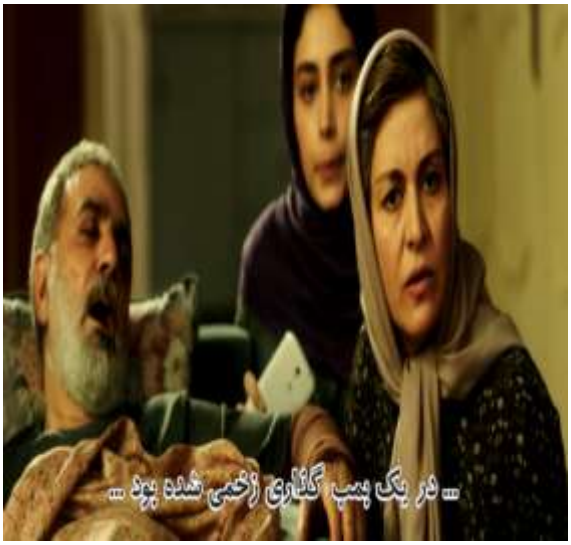


Figure 10: Sound description

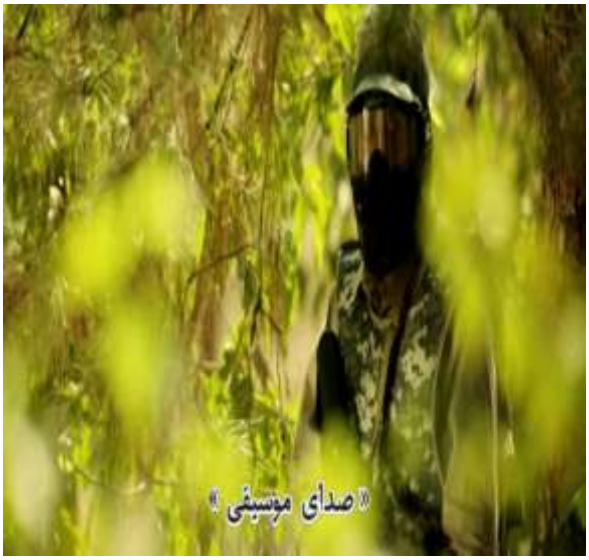
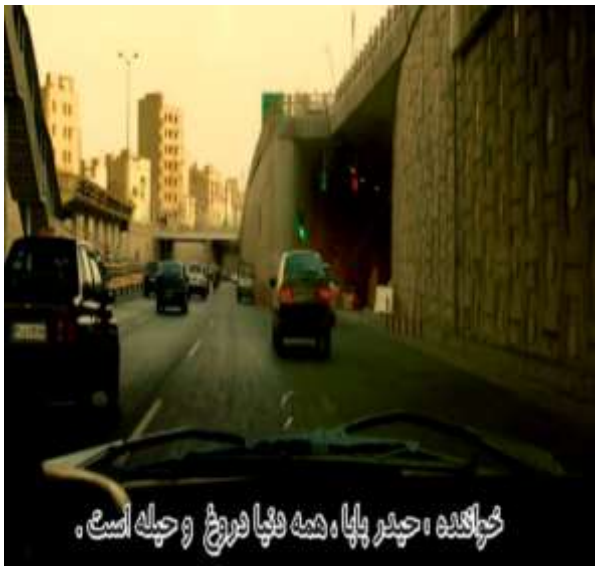


Figure 11: Tagging speeches heard through radio or television



Provision of SDH on movies has a short history in Iran's DVD markets. The number of subtitled Iranian movies in cinemas and DVD markets is too small; therefore, Iranian DHH almost have no other choice than to watch the interlingual subtitled foreign movies that are available in the DVD markets and genuinely intended for the hearing. However, these audiovisual materials normally fail to meet DHH's expectations, as they lack the significant features that are specific to SDH.

To compensate for the lack of accessible materials in the DVD markets, a website named deafportal and launched in 2009 started providing accessible audiovisual materials such as subtitled movies. Two of the subtitled Iranian movies provided by this website are *Two Women* (Milani 1999) and *The Broken Heart* (Rooyintan 2009). The quality of subtitles are less than adequate for several reasons. First of all, a large number of subtitles are longer than two lines and the number of characters reach 65 per line (Figure 12). Furthermore, the subtitles are displayed on a wide black box covering the screen images. Finally, character identification, sound identification, and rendering paralinguistic information are entirely ignored. However, these subtitles have few features that are specific to SDH. For example, the speech heard through the telephone is placed within vertical lines (Figures 13) and the narration was distinguished from the dialogue by quotation marks [Figure 14].

Figure 12: A long subtitle

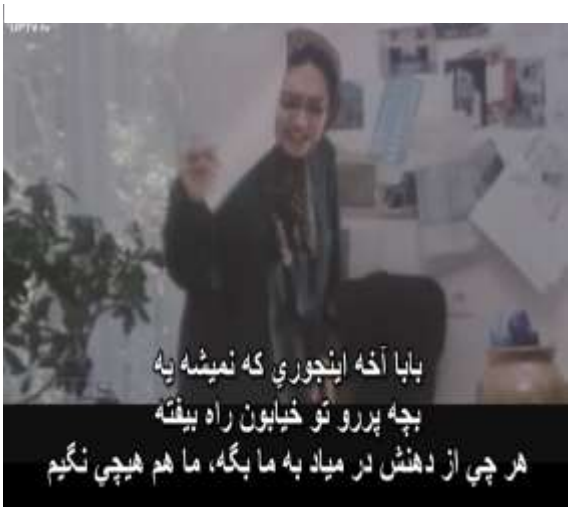


Figure 13: Vertical lines tagging the speech heard through the telephone

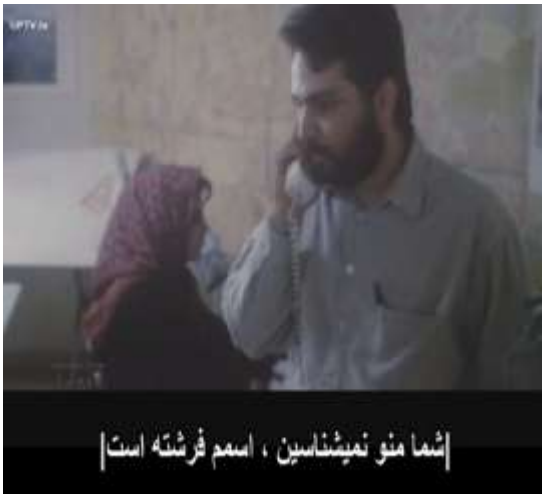
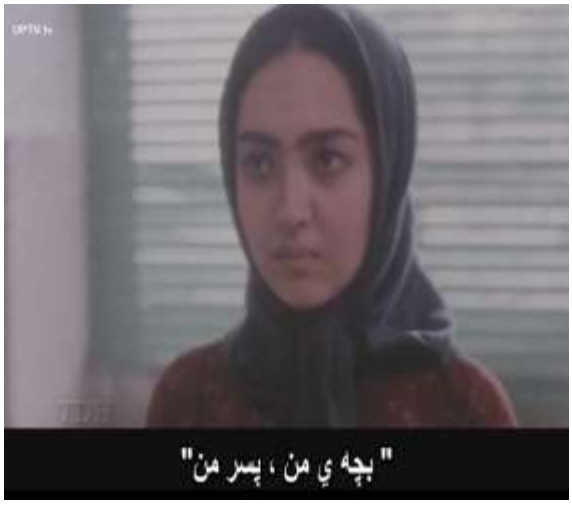


Figure 14: Quotation marks for distinguishing narration from dialogue



4.3. Reception

As mentioned in section 4.2.1, some actions have been taken to make audiovisual media accessible for DHH over these years. In an interview conducted for an online news website, some Iranian DHH people were asked about audiovisual media accessibility services. Some of their responses are listed in the following:

- I am educated in mainstream schools. I use oral language. I am not used to communicate in sign language. If I did, I could not communicate with hearing people. I use lip reading to understand TV programs. I have to focus on characters' lip movements, so I cannot enjoy the images.
- I watch the news on IRINN channel and subtitled foreign movies. If TV programs are subtitled, I can understand the speech and enjoy the image.
- I know sign language well. I can use TV programs through lip reading but I need to sit very close to the TV set. I can understand sign interpreted programs too, but sign language interpreters mostly give the gist of the speeches and skip the details. In watching sign interpreted programs, I have to focus on the interpreter, so quite often I cannot see the image. However, in subtitled programs, I think a short look is enough to

> get the meaning. The subtitles available on IRINN are actually the gist of the information. For making TV programs fully accessible, it is better to set special conventions for subtitling. (Kalmarzimoghadam 1 June 2014, translated by the authors)

Altogether, limited number of accessible programs, not having sufficient time to understand translation of verbal information and follow images, and omission of verbal and non-verbal information are mentioned as the three general problems about the existing access services.

4.3.1. Survey study

This section mainly pursues two goals by asking two general questions from a representative sample of the Iranian DHH community. As there has been no research in Iran so far on the satisfaction of DHH with the actions taken in the area of media accessibility, DHH were firstly required to express their opinions about how current condition of media accessibility could meet their needs by answering a multiple-choice question (suggested responses: not at all, slightly, moderately, significantly, no answer).

Additionally, DHH were asked whether they had ever formally requested NGOs or governmental organizations to make efforts for media accessibility enhancement. The policy behind this question was that the increasing presence of people with special needs and their frequent official or nonofficial complaints about different issues have always been decisive factors for the government taking necessary actions (Moeini, 2011).

To address these two questions, 112 DHH people participated in this study, out of whom 70 (62.5%) were female and 42 (37.5%) were male from 13 to above 50 years old (Appendix, Table 2). As an eligibility criterion, all participants had some degree of deafness. Level of deafness was mild in 2 (1.8%), moderate in 15 (13.4%), severe in 37 (33.0%), and profound in 57 (50.9%) participants (Appendix, Table 3).

Most of the deaf participants in this study have been deaf from birth for genetic reasons. As for hearing aids, 79 (70.5%) respondents made use of a hearing aid, 4 (3.6%) participants had a cochlear implant and 29 (25.9%) used no hearing devices.

Regarding education, 8 (7.1%) and 34 (30. 4%) participants had completed primary school and middle school, respectively. 40 (35.7%) had high school degree and 28 (25%) went through university. In this study, 42 (37.5%) volunteers did not progress from primary and middle school to high school, out of whom 26 (23.2%) participants were 13-17 years old (Appendix, Table 4).

As for sign language proficiency, most participants in four levels of deafness 69 (61.6%) described themselves as "Intermediate". 17 (15.2%) and 26 (23.2%) participants described themselves as "Beginner" and "Advanced" respectively.
As regards proficiency in lip reading, over 50% of the participants assess their proficiency as "Intermediate", out of whom 1 (0.9%) was mildly deaf, 5 (4.5%) moderately deaf, 19 (17%) severely deaf, and 27 (24.1%) profoundly deaf.
As far as reading proficiency is concerned, 66 (58.9%) of the participants described their proficiency as 'intermediate', 25 (22.3%) and 17 (15.2%) of the volunteers assessed their reading skill as 'beginner' and 'advanced' respectively.

After responding factual questions and rating their language skills, the participants were required to express their opinions about how much media accessibility actions taken in Iran have met their expectations by answering a Likert scale question (from not at all to very significantly). Most participants 60 (53. 6%) declared that the current condition could 'slightly' meet their expectations. The level of deafness in these participants was mostly 'severe' 20 (17.9%) and 'profound' 33 (29.5%) (Appendix, Table 5), their level of education was mainly 'high school degree' 23 (20.5%) and 'university degree" 21 (18.8%) (Appendix, Table 6), their level of sign language proficiency was mostly 'intermediate' 36 (32.1%) (Appendix, Table 7), and their command of lip reading and reading was also chiefly 'intermediate' 36 (32.1%) (Appendix, Table 8 & 9).

Based on the findings, the dissatisfaction of DHH with the current condition could not probably be explained by level of deafness, education or communicative skills (sign language, lip reading,

or text reading); since those who responded "Slightly", "Not at all" or "Moderately" are not distinct in terms of the variables mentioned.

When the respondents were asked about whether they have ever formally requested the NGOs or governmental organizations to improve the condition of media accessibility, 37 (33%) said "Yes", out of whom 13 (11.6%) and 19 (17%) were severely and profoundly deaf, respectively (Appendix, Table 10). The level of education was high school certificate 10 (8.9%) and university degree 15 (13.4%) (Appendix, Table 11) and their age were 18-29 (15 [13.4%]) and 30-39 (12 [10.7%]) (Appendix, Table 12).

5. Discussion and Conclusion

This study shed light on the condition of media accessibility for DHH in Iran by describing this uncharted territory in terms of legislation, actions, and reception.

As for legislation, by applying a document analysis method, this study showed that not only the right of accessibility but also disabilities rights in general, are not clearly referred to in the Constitution of the Islamic Republic of Iran. Although the Comprehensive Disability Rights Act has played an impressive part in helping people with special needs claim their rights, it has not been followed satisfactorily. The Comprehensive Disability Rights Act does not refer to the provision of accessibility services, but in Article 12 it requires the Islamic Republic of Iran's Broadcasting Organization to devote at least two hours of the daily programs to The State Welfare Organization in order to raise the public awareness about people with special needs. IRIB sometimes broadcasts programs related to people with special needs but it is not on a regular basis.

The convention on the Rights of Persons with Disabilities (CRPD) requires the government to provide accessibility services for "the physical environment, to transportation, to information and communications, including information and communications technologies and systems", but Iran has still a long way ahead to ensure people with disabilities access, on an equal basis with others, to all facilities.

As for actions, sign language interpreting and subtitling have traditionally been used for making audiovisual productions accessible on TV and in cinemas and DVD markets, although the range of these accessible productions has been too limited. Now, the only accessible program for the DHH is news programs broadcast on two public channels using subtitles and sign language. SLI used on television has failed to meet the needs of DHH for three main reasons. Firstly, the DHH are used to communicate in Iranian Sign Language, but the signing system used on TV programs is signed Persian. In addition to this, the means of communication is different among DHH; therefore, those DHH who are oralized (Neves 2009) cannot access these programs through SLI. Finally, SLI does not typically cover non-verbal information such as character identification, sound effects, music, etc.

As for cinema and DVD markets, some actions have been taken by movie directors and NGOs in recent years to devote special showings in cinemas to DHH viewers using SDH and SLI. In DVD markets, there is no provision of accessibility services for the DHH. To compensate this lack, some websites have subtitled and sign interpreted movies and released them on DVD.

Except for the accessibility service on IRIB, other media accessibility facilities provided so far for the DHH have been initialized and supported by individuals and non-governmental organizations. This fact is possibly a significant reason for the delay in the development of media accessibility facilities in Iran.

This study also clearly indicated the absence of a comprehensive editorial guidelines for SDH in Iranian broadcasting industry, which would probably explain the reason for inconsistency of subtitles. Consistent subtitles, following a defined set of standards, reinforce the enjoyment of watching audiovisual products. Standard subtitles are worthwhile not only for their entertainment value, but also for their positive effect on the literacy of DHH in written language.

Regarding reception, out of 112 DHH participants 53.6% stated that the current media accessibility could not meet their expectations. DHH see accessibility services as a social right that should be provided on TV every day on a regular basis and on every released movie (IRNA, 2018). It is therefore unsurprising that the scant regard of IRIB, DVD distributors and cinemas

have failed to satisfy DHH's expectations. Based on the findings of this study, the dissatisfaction of DHH with the current condition could probably not be explained by level of deafness, education or communicative skills (sign language, lip reading, or text reading); since those who responded "Slightly", "Not at all" or "Moderately" were not distinct in terms of the variables mentioned.

As for official requests for media accessibility, 67% participants declared that they had not requested NGOs or governmental organizations to take legislative action to improve media accessibility. The level of education of participants who had officially claimed their media accessibility rights was mostly high school and university degree, and their age was 18-39. This may be due to the fact that people typically begin to know their rights at these ages.
As the social movements of people with special needs and NGOs have had undeniable effects on realization of equal legal rights (Moeini 2011: 64), the increasing solidarity among DHH and well-organized social movements would probably pave the way for media accessibility enhancement.

SDH studies in Iran could be extended in the areas of reading speed, this way, we could explore the average DHH's reading speed in Persian and see how the findings would be compared with the reading speed of DHH in other languages. Placing the spotlight on challenges that may impede the DHH's understanding of SDH would provide useful findings for educational purposes. As revealed in this study, the first steps of media accessibility for all have already been taken in Iran and there is now a challenging but promising way ahead to develop media accessibility as a professional practice and academic field of study in this country.

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Appendix

1. Questionnaire

Please choose only one answer for each question.

1. What is your gender? 1. Female ☐ 2. Male ☐	2. Which city/town do you live in? 1. Mashhad ☐ 2. Other ☐
3. What is age? 1. 13-17 ☐ 2. 18-29 ☐ 3. 30-39 ☐ 4. 40-49 ☐ 5. 50-59 ☐ 6. 60-69 ☐ 7. Over 70 ☐	4. What is your education level? 1. Primary school ☐ 2. Secondary school ☐ 3. High school ☐ 4. University ☐
5. Which type of school did/do you study in? 1. Mainstream school ☐ 2. Deaf school ☐	6. What is your degree of hearing loss? 1. Mild deafness ☐ 2. Moderate deafness ☐ 3. Severe deafness ☐ 4. Profound deafness ☐
7. How did you become deaf or hard of hearing? 1. Genetically ☐ 2. Non-genetically ☐	8. How old was you when you became deaf or hard of hearing? 1. Congenital ☐ 2. Before 2 years old ☐ 3. Between 2-4 years old ☐ 4. Between 5-10 years old ☐ 5. Between 10-15 years old ☐ 6. Between 15- 20 years old ☐ 7. Above 20 years old ☐
9. Do you use any hearing devices or implants? 1. Hearing aid ☐ 2. Cochlear Implant ☐ 3. None ☐	10. Do you use any eye devices? 1. Glasses ☐ 2. Contact lens ☐ 3. None ☐
11. How do you assess your level of sign language proficiency? 1. Beginner ☐ 2. Intermediate ☐ 3. Advanced ☐ 4. None ☐	12. How do you assess your level of lip reading proficiency? 1. Beginner ☐ 2. Intermediate ☐ 3. Advanced ☐ 4. None ☐
13. How do you assess your reading proficiency? 1. Beginner ☐ 2. Intermediate ☐ 3. Advanced ☐ 4. None ☐	14. Are your needs and expectations fulfilled with the current media accessibility 1. Not at all ☐ 2. Slightly ☐ 3. Moderately ☐ 4. Significantly ☐

15. Have you ever requested any organizations about promoting the media accessibility? 1. Yes ☐ 2. No ☐	

2. Tables

Table 2. Participants by age and gender

Age	Gender		N	%
	Female	Male		
13-17	15	15	30	26.8
18-29	33	25	58	51.8
30-39	17	2	19	17.0
40-49	3	0	3	2.7
50 +	2	0	2	1.8
Total Frequency / Percent	70	42	112	100.0
	62.5	37.5	100	100.0

Table 3. Participants by level of deafness

Level of deafness	N	%
Mild deafness (25-39dB)	2	1.8
Moderate deafness (40-69dB)	15	13.4
Severe deafness (70-94dB)	37	33.0
Profound deafness (over 95dB)	57	50.9
N/A	1	0.9
Total	112	100.0

Table 4. Participants by age and level of education

Age	Level of education										Total	
	Primary School		Secondary School		High school		University		N/A			
	N	%	N	%	N	%	N	%	N	%	N	%
13-17	2	1.8	24	21.4	4	3.6	0	0.0	0	0.0	30	26.8
18-29	1	0.9	8	7.1	33	29.5	14	12.5	2	1.8	58	51.8
30-39	4	3.6	1	0.9	2	1.8	12	10.7	0	0.0	19	17.0
40-49	1	0.9	0	0.0	1	0.9	1	0.9	0	0.0	3	2.7
N/A	0	0.0	1	0.9	0	0.0	1	0.9	0	0.0	2	1.8
Total	8	7.1	34	30.4	40	35.7	28	25.0	2	1.8	112	100

Table 5. Current condition of media accessibility and level of deafness

Level of deafness	How could current condition of media accessibility meet DHH's expectations?						Total	
	Not at all		Slightly		Moderately			
	N	%	N	%	N	%	N	%
Mild deafness (25-39dB)	1	0.9	0	0.0	1	0.9	2	1.8
Moderate deafness (40-69dB)	1	0.9	6	5.4	8	7.1	15	13.4
Severe deafness (70-94dB)	5	4.5	20	17.9	12	10.7	37	33.0
Profound deafness (over 95dB)	8	7.1	33	29.5	16	14.3	57	50.9
N/A	0	0.0	1	0.9	0	0.0	1	0.9
Total	15	13.4	60	53.6	37	33.0	112	100.0

Table 6. Current condition of media accessibility and level of education

Level of education	How could current condition of media accessibility meet DHH's expectations?						Total	
	Not at all		Slightly		Moderately			
	N	%	N	%	N	%	N	%
Primary School	1	0.9	7	6.3	0	0.0	8	7.1
Secondary School	5	4.5	9	8.0	20	17.9	34	30.4
High school	8	7.1	23	20.5	9	8.0	40	35.7
University	0	0.0	21	18.8	7	6.3	28	25.0
N/A	1	0.9	0	0.0	1	0.9	2	1.8
Total	15	13.4	60	53.6	37	33.0	112	100.0

Table 7. Current condition of media accessibility and sign language proficiency

Sign language proficiency	How could current condition of media accessibility meet DHH's expectations?						Total	
	Not at all		Slightly		Moderately			
	N	%	N	%	N	%	N	%
Beginner	5	4.5	9	8.0	3	2.7	17	15.2
Intermediate	7	6.3	36	32.1	26	23.2	69	61.6
Advanced	3	2.7	15	13.4	8	7.1	26	23.2
Total	15	13.4	60	53.6	37	33.0	112	100.0

Table 8. Current condition of media accessibility and lip reading

Lip reading proficiency	How could current condition of media accessibility meet DHH's expectations?						Total	
	Not at all		Slightly		Moderately			
	N	%	N	%	N	%	N	%
Beginner	3	2.7	14	12.5	9	8.0	26	23.2
Intermediate	5	4.5	36	32.1	12	10.7	53	47.3
Advanced	7	6.3	10	8.9	16	14.3	33	29.5
Total	15	13.4	60	53.6	37	33.0	112	100.0

Table 9. Current condition of media accessibility and text reading skill

Text reading proficiency	How could current condition of media accessibility meet DHH's expectations?						Total	
	Not at all		Slightly		Moderately			
	N	%	N	%	N	%	N	%
Beginner	4	3.6	14	12.55	7	6.3	25	22.3
Intermediate	6	5.4	36	32.1	24	21.4	66	58.9
Advanced	3	2.7	10	8.9	4	3.6	17	15.2
N/A	2	1.8	0	0.0	2	1.8	4	3.6
Total	15	13.4	60	53.6	37	33.0	112	100.0

Table 10. Formal request for media accessibility and level of deafness

Level of deafness	Formal request for media accessibility enhancement				Total	
	Yes		No			
	N	%	N	%	N	%
Mild deafness (25-39dB)	2	1.8	0	0.0	2	1.8
Moderate deafness (40-69dB)	3	2.7	12	10.7	15	13.4
Severe deafness (70-94dB)	13	11.6	24	21.4	37	33.0
Profound deafness (over 95dB)	19	17.0	38	33.9	57	50.9
N/A	0	0.0	1	0.9	1	0.9
Total	37	33.0	75	67.0	112	100.0

Table 11. Formal request for media accessibility and level of education

Level of education	Formal request for media accessibility enhancement				Total	
	Yes		No			
	N	%	N	%	N	%
Primary School	6	5.4	2	1.8	8	7.1
Secondary School	6	5.4	28	25.0	34	30.4
High school	10	8.9	30	26.8	40	35.7
University	15	13.4	13	11.6	28	25.0
N/A	0	0.0	2	1.8	2	1.8
Total	37	33.0	75	67	112	100.0

Table 12. Formal request for media accessibility and age

Age	Formal request for media accessibility enhancement				Total	
	Yes		No			
	N	%	N	%	N	%
13- 17	8	7.1	22	19.6	30	26.8
18- 29	15	13.4	43	38.4	58	51.8
30- 39	12	10.7	7	6.3	19	17.0
40- 49	2	1.8	1	0.9	3	2.7
N/A	0	0.0	2	1.8	2	1.8
Total	37	33.0	75	67.0	112	100.0