Accessible content production to deaf people on the web: analysis of the video channel Ôxe

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Abstract
The article discusses the production of content accessible to the deaf on the web, through the case study of the Ôxe video channel on the YouTube platform. Describes and analyses its proposal and characteristics to identify how it dialogues with the accessibility debate, and what innovations its experience adds to the field of Communication. The data were collected on the channel page on YouTube, considering the videos published between July 2015 and January 2016. Among the results, stands out the need to encourage the quantitative and qualitative increase of accessible communication products.
Keywords: Brazilian Sign Language. Accessibility. Content management. New technologies. YouTube.

Introduction

The use of information and communication technologies (ICTs) accessible to deaf people is a topic that has been growing in Brazil, mainly since 2000, with the recognition of the Brazilian Language of Signals (Libras), through Law 10.436/2002 (BRASIL, 2002) and the creation of the Law on the Inclusion of People with Disabilities (PCD in Portuguese) – 13.146/2015, which addresses, among other aspects, the right to information, culture and leisure in an accessible format.

These regulations drew attention to the linguistic peculiarities of deaf people, which, according to the latest IBGE[1] demographic census, represent 7.6% of the population with disabilities in Brazil, equivalent to more than 3 million people (OLIVEIRA, 2012).

1 Available at https://ww2.ibge.gov.br/home/estatistica/populacao/censo2010/caracteristicas_religiao_deficiencia/default_caracteristicas_religiao_deficiencia.shtm. Accessed on: 20 nov. 2015

Both regulations fostered the debate on the importance of accessibility to provide greater autonomy and inclusion of these subjects in society.

Law 10.436/2002, for example, stipulates that public authorities - including utility concessionaires - should support the use and dissemination of Libras as a tool of objective communication and current use (BRASIL, 2002). Decree 5.626 of December 22, 2005, which came to regulate this normative, determined the inclusion of Libras as a compulsory discipline in Speech-Language Pathology and Teacher Training courses for the Middle and Higher Education; and as an optional discipline in the other courses, in all the educational institutions of the country, public and private. Public service concessionaires and the entire public administration also had to provide attendance in Libras with at least 5% of the number of servers and staff trained to do so (BRASIL, 2005).

Similarly, in 2014, the *Agência Nacional do Cinema* (Brazilian Film Agency – Ancine), through normative instruction nº. 116, instituted compulsory subtitling, audio description and Libras in all audio-visual production projects financed with federal public resources managed by the Agency, in order to promote accessibility (BRASIL, 2014).

Although, from a clinical or organic perspective, deafness is defined as the reduction of the ability to perceive sounds (RINALDI et al, 1997), it can also be understood, in addition to hearing impairment, as an identity mark of a specific cultural group. In this understanding, the deaf are "people who do not consider themselves disabled, use sign language, value their history, art and literature, and propose a pedagogy appropriate for the education of deaf children" (BISOL; VALENTINI, 2011). According to Sacks (1998), language of signals is the natural form of communication of these subjects, since its gesture-visual modality makes it accessible in comparison with oral languages, such as Portuguese.

Created in the second half of the 19th century, Libras was only considered official in 2002, when the Brazilian deaf started to have two official languages, the first being Libras, and the second, Portuguese (BRASIL, 2002; MONTEIRO, 2006). The difficulties of understanding this second language, due to its structural and meaningful differences in relation to Libras, constitute an access barrier that is often not perceived by producers of websites and digital content, as observed by Goes and Gomes (2011). According to these authors, when we examine the accessibility resources available to deaf people in the world wide web, we usually have only videos with explanatory subtitles in Portuguese – which does not contemplate the reality of this social group, which uses Portuguese as a second language.

They point out that is due to the common sense that deaf people do not hear, but they can read and understand texts written in Portuguese because visual reading would be related to a sense that works for them; and suggest the use of translators and Libras windows, besides the production of content in this language, so that deaf people can have access to a greater diversity of communication products to consume, contributing more effectively to overcoming the linguistic barrier to their effective inclusion in society.

Aiming at this demand, several ICTs emerged with the proposal of minimizing communication barriers in different media, offering broader access for the deaf, for example, to the cinema, television and the Internet. In 2013, emerged the first TV station for the deaf, TV INES, the result of a partnership between the National Institute of Education of the Deaf (INES) and the Roquette Pinto Educational Communication Association (ACERP). With a team of six deaf presenters and five interpreters from Libras, it offers programming of movies, news, cartoons, sports, culture and technology, which is distributed by satellite to satellite dishes, cable TVs, Smart phones and tablets. Everything is done in Libras and translated into Portuguese with subtitles (SIQUEIRA; SOUZA, 2016).

Some studies, such as Amorim et al (2010), point out possibilities of translating the closed captions for Libras by creating signs in GIF animated extension. In addition, there are translators that can be used on mobile devices and totems, such as the internationally awarded ProDeaf[2], and HandTalk, considered by the United Nations Organization in 2013 as the best social inclusion application in the world[3].

Inserting these technologies in the production of content of the most diverse genres is a challenge in the field of Communication, because one must be prepared not only to overcome linguistic barriers, but also to meet the demands of the deaf public for high quality information that is connected with their cultures and interests.

> allowing the deaf to belong to a specific group where they are able to begin the construction of identifying borders with the other, as well as to obtain the social recognition of the other groups, [since] the constitution of identity by the deaf person is related to the presence of a language that gives it the possibility of constituting itself as a "signal" that can establish discursive and social practices (QUADROS; STUMPF, 2009, p.171).

In this sense, our article analyses the video channel Ôxe, on YouTube platform, created in 2015 by a group of young people from the state of Alagoas, Brazil, with the proposal of producing humorous videos accessible in Libras.

The role of new technologies in the inclusion of people with disabilities

Law 13.146 / 2015 represented a milestone in the quest for the social inclusion of people with disabilities, which provides for the elimination of barriers to access fundamental rights and guarantees in order to provide citizens with the full exercise of citizenship.

2 Available at: <https://www.facebook.com/prodeafLibras/info/?tab=page_info>. Acessed on: 15 nov. 2015.

3 Available at: <http://g1.globo.com/al/alagoas/noticia/2013/02/aplicativo-alagoano-hand-talk-e-eleito-o-melhor-do-mundo-em-concurso.html>. Acessed on: 15 nov. 2015.

In the field of Communication, it has made accessibility in cultural products and websites compulsory, and the use of technologies such as subtitles, audio description and Libras window in the broadcasting services of sound and image (BRASIL, 2015), fomenting the debate on the importance of ICTs in the process of social inclusion.

The Statute of the Person with Disabilities defines accessibility as "a right that guarantees persons with disabilities or with reduced mobility to live independently and exercise their rights of citizenship and social participation" (BRASIL, 2015, art.53), through the use safe and autonomous of spaces, furniture, urban equipment, buildings, transportation, information and communication.

This autonomy in the use of the media comprises access to technological resources adapted to the motor, visual, auditory and cognitive limitations of users in both analog and digital media, such as Braille printers and keyboards, voice scanners, character magnifiers and readers (BRAZIL, 2015).

Specifically in the digital environment, accessibility encompasses, according to Comfort and Santarosa (2002):

> (1) accessibility to the computer that includes access software including differentiated types of technical aids for generic use of access to computers and peripherals (more detailed see Hogetop and Santarosa (2001) or that can be specially programmed for access (2) Browser accessibility, which may be generic such as Microsoft Explorer and Netscape Navigator, however, there are specific browsers that offer ease of access to different users such as the LYNX text-only browser for the blind;) the accessibility to web page planning, which involves several dimensions such as content, structure and format.The fundamental element in this case is the choice of the page building tool that can offer greater possibilities of accessibility options (p.2).

In a broader perspective, accessibility does not only concern the person with physical, motor or cognitive impairment, but any user whose temporary or permanent condition interferes with the way he or she uses technology: this is what guides the World Consortium for the Web (WC3), an organization responsible for accessibility in the world wide web (BEZ; MONTARDO; PASSERINO, 2008). It is a consortium in which affiliates, professionals and the general public work to develop standards such as HTML and CSS, free and open, to ensure the evolution of the web (WC3, 2015).

In 1997, WC3 created the Web Accessibility Initiative (WAI) with the mission to promote the access of people with disabilities to the Internet and began to study the elaboration of recommendations for the use of technologies adapted to different special needs. In 2015, the Brazilian office of the Consortium, which has been active in the country since 2008, has published the first issue of the web accessibility booklet: a 47-

page document with initial recommendations, guidelines and contextualization of the theme (VENTURA, 2015).

The first recommendations focused on basic principles of universal design, such as simple and intuitive use, so that any user, regardless of the level of experience, can enjoy the web without prejudice; minimum of physical effort, so that the use is efficient and comfortable with a minimum of fatigue; perceptible, easy to find information; and flexibility of use to meet a wider range of individuals, preferences, and abilities (WC3, 2015).

For Montardo and Passerino (2007), effectively including people with disabilities implies creating conditions for them to meet their development needs, quality of life, equity and the opportunity for rights. These authors argue that digital inclusion is a facet of social inclusion; it is "the right of access to the digital world for intellectual development (education, knowledge generation, participation and creation) and for the development of technical and operational capacity" (p.3).

In this sense, ICTs are the means by which these subjects can consume and produce the necessary knowledge to overcome the limitations for their active participation in society, enabling not only the minimization of existing barriers, but also contributing to the deconstruction of prejudices and stereotypes (WARSCHAUER, 2006). According to Albuquerque Jr. (1999), the stereotype is a "gross and indiscriminate characterization of the strange group, in which individual multiplicities and differences are erased in the name of superficial similarities" (p.30).

However, to meet the demands of these users, securing access to technologies is not enough. ICTs need to offer a plurality of content that dialogues with the different cultural, political and economic realities of social actors so that they can effectively transform them, as Montardo and Passerino (2007) suggest.

Goes and Gomes (2011) call attention to the fact that the whole process of world meaning and development of cognition of the deaf happens visually through the signals. Writing, by determination of Brazilian legislation, is learned in Portuguese as a second language, but the correspondences between two are limited in literality, mainly because they are languages of different modalities (GOES; GOMES, 2011).

Once they learn to read and write Portuguese without the phonological knowledge of the language, these deaf people are considered as non-literate readers (FERNANDES, 2006).

> When the deaf person accesses the Internet, their navigation experience is permeated by these visual forms of contact and meaning of information and knowledge. [...] When referring to the deaf Internet user, users of LIBRAS, it is necessary to remember that he is a bilingual individual, whose domain of the Portuguese Language is given as reading in the second language. Depending on their level of proficiency, reading in Portuguese may be fragmented and

> limited, compromising the possibility of immersive reading (GOES; GOMES, 2011, p.7-11).

These authors suggest the use of translators and windows of Libras, as well as the production of content in this language, so that deaf people can have access to a greater diversity of communicational products to consume, contributing more effectively to overcome the linguistic barrier to their inclusion in society.

In this context, our research seeks to answer the following question: how does the video channel Ôxe dialogue with the debate on accessibility and social inclusion of the deaf and what innovations does it bring to the field of Communication?

Ôxe channel: an accessible communication experience

The Ôxe channel was created in 2015 by a group of young people from the city of Maceió, capital of Alagoas, Brazil, that had as their proposal to produce humorous videos accessible in Libras. Searching for the terms *humour on Libras* on YouTube, platform on which the channel is available, we did not find, at the time[4], similar initiatives, which aroused our curiosity for the contributions that this channel could bring to the field of Communication, especially with regard to the discussion on accessibility and social inclusion of deaf people.

We start from the premise that this public is quantitatively expressive in Brazil, and has specific communication demands, such as the use of Libras and the difficulties of understanding Portuguese as a second language, which need to be considered by content producers to make their products accessible. This need is all the more relevant in view of the various regulations, such as the already mentioned Laws 10.436/2002, 13.146/2015 and the normative instruction nº. 116 of Ancine, which assure deaf people the right of access to culture and communication in an accessible format.

Methodologically, we chose the case study, with description and analysis of the proposal and characteristics of the channel, to identify how it dialogues with the debate about accessibility, and what innovations its experience adds to the field of Communication. The data was collected in OXE reports posted on the Internet, and on the YouTube channel page, considering the videos published between July 2015 and January 2016.

Regarding the proposal, we identified the following aspects:

1- Ôxe channel launched the idea of offering humorous videos that are accessible to the deaf on the web, with the aim of including these subjects among their audience and encouraging other channels to produce content with accessibility, as expressed in the description of the first accessible video.

4 Research carried out on October 10, 2015.

> We are launching this new material and our previous videos with the idea of taking our message to all audiences, now with the project "HUMOR FOR ALL" aims to make it more accessible to the deaf community, stay connected in #CANALOXE, we launched it with this view of stimulating the production of content with accessibility to other channels (MATUTO ..., 2015 – Our translation).

2 - The channel adopted the Libras window as an accessible technology, using this tool in ten of the twelve videos published between July 2015 and January 2016. It is a resource in which the content of each video is translated to Libras by one interpreter on the corner of the screen.

> It all started when we had already released two videos. Abner [Antonio, 23, art director] told us about this idea of implanting Libras in our materials. We all supported the idea right away. From there, we stopped producing new videos for two weeks to study the best strategy to create this content (ALVES, 2015 – Our translation).

3 - The accessibility proposal was highlighted in the title of each video with the hashtag[5] #LIBRAS "HUMOR PARA TODOS", to draw the attention of the deaf who frequented the channel. With this, creators intended to encourage the audience to interact and suggest content.

> We hope the deaf community can relate to what we release and share with us their funny stories to help us generate content. We want this to be an incentive for other channels to also launch their content with accessibility, without those barriers that we insist on creating (ALVES, 2015 – Our translation).

Regarding the characteristics of the channel, we notice that:
1 - It sought to produce humorous videos based on different topics related to everyday life, such as riding a bus, getting a job, voting and gossiping.
2 - It highlighted the accessibility proposal in the titles of the videos, using capital letters and the hashtag #LIBRAS "HUMOR PARA TODOS"
3 - It did not maintain periodicity in the update of the videos, although it was stated on the channel's page on YouTube that they would be published weekly, being that of the 12 published in the studied period, six were released with a gap of seven days, one with eight days, one with ten days, one with 14 days, one with 18 days and one with 19 days.

5 Hashtag is the # symbol followed by a word or a phrase. The technology allows users to meet around common themes and because of that it has been used in a systematic way as a new way of activism and protesting online (SILVA, 2012).

4 – It obtained 851 subscribers (people who register in the channel to receive updated content) and a total number of views over 18,000.

Table 1 – List of videos produced by the Ôxe channel, with publication date and number of views (un.)[6]

Videos	Publication date	Views (un.)
Last time i was drunk	04/07/2015	2.685
Material fight	11/07/2015	1.738
Fun at the bus	18/07/2015	2.755
Judith Ball Cat	05/08/2015	1.787
Matuto in the city	15/08/2015	1.916
My first attack	22/08/2015	1.259
Snapchat difilculting my life	29/08/2015	796
Gossip girls	05/09/2015	2.082
I love my job	19/09/2015	437
Benedito Bentes	26/09/2015	1.113
Who elected Dilma	03/10/2015	833
Coisas constrangedoras	22/10/2015	975
Total	12	18.376

Source: YouTube. Elaborated by the authors.

From the data presented, we conclude that, among the perceived potentialities of the Ôxe experience, the channel innovated by proposing accessibility in adopting the Libras window as a resource, rather than the Portuguese subtitles, as we mentioned that it happens commonly among site developers and content. This experience also demonstrated the need for planning in the creation of the contents to be translated into Libras due to the time required for translation and insertion of the window, and also drew attention to the possibility of promoting the inclusion of deaf people by encouraging them to suggest themes that are of their interest.

Among the identified limitations, we highlight the lack of regular periodicity in the publications, noticeable in Table 1, and the absence of a video, with translation, that explicitly invited the deaf to send suggestions of themes, since this possibility was only mentioned in Portuguese, in the description of the first video posted with Libras window, which does not fully comply with the accessibility proposal.

6 The titles of the videos were translated by the authors of this paper.

Final considerations

Discussions on accessibility and rights of persons with disabilities have been gaining momentum throughout the world, but especially in the national context, in recent years, with the approval of Law 10.436 of April 24, 2002, which recognized Libras as the language of the deaf and the second official of Brazil; and Law 13.146 of July 6, 2015, known as the Disability Statute, which reaffirms accessibility as a right of the people and the elimination of barriers, among other aspects, to information and communication, as a duty of the State.

These legal frameworks paved the way for people with disabilities to increase their participation in society by facilitating access to education, employment and services such as the use of new Information and Communication Technologies (ICTs). Many discussions have been made since then highlighting the potential of technology both in the individual's development of the subject, providing the overcoming of physical and cognitive limits, and in the growth of society as a collective body, as ICT allow the user to learn, interact and transform, transforming the other into a continuous and infinite movement.

The result of this is the creation of a series of tools, such as translators and applications, that facilitate the PCD's interaction and access to social life and draw attention to the need to offer diverse and adequate services to the consumer interests of this expressive portion of the population. In this context, the production of content is a challenge in the field of Communication Sciences, as it becomes increasingly urgent to meet the demand of the public PCD, not only in terms of usability, but especially in the production process of information, which needs to be considered tastes and profiles of these demanding consumers, no longer dealing only with overcoming the limitation caused by disability.

To illustrate the discussion, this research analyzed the Ôxe channel, created by a group of Alagoans in 2015, on the YouTube platform, with the purpose of sending humor jokes and videos, adopting the Libras window as an accessibility tool for the deaf. The Ôxe channel presented a proposal to promote accessibility for the deaf on the web that brought interesting elements to the field of communication, such as encouraging the participation of these subjects in the process of creating content, by sending suggestions of themes that reflect their interests. The adoption of the Libras window as an accessible resource, replacing the traditional Portuguese subtitles, was another innovation that, in our view, contributes to the recognition of the communicational demands of this public.

However, we also identified some limitations, such as the lack of regular periodicity in the publications, which resulted in very different intervals between the availability of the videos in the channel, diverging from the proposal of weekly content publication, announced on the YouTube channel.

Another limitation observed was the absence of an accessible format for the invitation made to the deaf to participate in the process of creating content for the channel, sending suggestions of topics. The invitation was made by text when the first video with Libras

window was published, with no translation of that message into sign language. Since the channel's proposal was to offer accessible content and invite the deaf to relate to it and participate in its construction, we believe that it would have been more appropriate to make the invitation available in Libras.

In general, we perceive that the Canal proposal reflected the discussions about the importance of making available accessible resources for deaf people, as well as expanding their participation in society, having their communicational needs and demands recognized and considered in the information production process.

In this way, we believe that the experience of the Ôxe channel reflected a current and important theme for the field of Communication that can be used by other digital content producers to increase the availability of affordable and quality communication products for deaf people.

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