Textbook Adaptation in Libras:
A Mirror to Our Educational Culture[1]

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Abstract:
The paper investigates the process of textbook adaptation from Portuguese to Brazilian Sign Language by treating textbooks as a pedagogic support which mirrors our educational culture. More specifically, it aims at reviewing the literature widely accepted as relevant to the topic. The paper is grounded on a framework — Basso (2003), Souza (2015), Moses, Golos e Holcomb (2018), Krusser (2017), Munakata (2016), Ramos (2013), Miranda (2010, 2019) and Silva et al. (2013) — which explores specifically pedagogic materials dedicated to deaf children. It goes on to offer some reflections on the following themes: the relation between schools and didactic materials adapted to Brazilian Sign Language; the introduction of Information and Communication Technologies (ICT) to the school environment; the way students read adaptations, and how adaptations to Brazilian Sign Language can build meanings as it becomes a new mode for reading. Lastly, the paper presents future possibilities for adapted didactic materials as they are described by relevant publications in the field.

Keywords:
Libras; Textbook; Deafness.

[1] Research focus from the dissertation written by MIRANDA, D.G The multimodality in teaching deaf people Portuguese as a second language: An analysis about the use of textbooks adapted in Libras. POSLING-CEFET/MG. 2019.

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Introduction

The textbook is more than a simple object in the school environment. It has an important place and is a fundamental didactic-pedagogical tool in education. The textbook is usually understood as some printed material written by specialists from different areas. It is composed of texts, systematizations, examples and exercises that help the teacher in their classroom dynamics. The textbook is supplemented by other media components as a result of technological advances in the educational field. Currently textbooks can be found in digital format and may vary from simple scans of the printed page to including animations, links and/or a CD-ROM.

From the vantage point of the social origins of language (see PREDIGER; KERSCH, 2013), the textbook of the last century was made up of words, sentences, and lines printed in black and/or blue ink with a white background and some black and white images. The "predominant language form was the written form, followed by visual language which illustrated or aided the written text" (PREDIGER; KERSCH, 2013, p. 211, our translation). Understanding the text meant it should be enough to only understand the written language's grammar.

The textbook can be seen as a means of human communication when analyzed by multimodal principles (KRESS, 2010, p. 1). It explores forms of signification and includes all semiotic modes involved in the process of representation and communication. In this perspective, written markings, signs, images and colors are used for different kinds of semiotic work, each with distinct potentials for representation. According to the Kress the reason for this lies in the networks of social, economic and cultural changes, intertwined by technology. The meaning is not global, it is built according to the effects of social change. The textbook representation is thusly shaped by social practices using these discursive modes and assumes a particular form of signification as a result of the specific interactions of a given social group.

The textbook is commonly defined as any book, in any format – printed, recorded on electronic media, etc. – produced explicitly to be used in the school for teaching purposes. Munakata (2016, p. 121) defends a more fluid concept stating that the textbook function is directly related to the place it takes in the school culture.

To understand what is "school culture", there is in Durkheim (1968), cited by Munakata (2016, p. 121), the definition "[...] all education consists of a continual effort to impose upon the children ways of seeing, thinking and acting which he himself would not have arrived at spontaneously". The school is directly associated with the concept of social reality. From the society's point of view, the school may look like a tiny dot, entirely marked by the determinations of the macrosocial sphere. In this school context, the normative aspects of the school are not so privileged as the multiplicity and creativity of the daily experiences of the participants in this educational space.

It is important to consider that the idea of scholar culture refers not only to rules — explicit or not — symbols and representations, besides the prescribed knowledge. But it also refers to practices, appropriations, attributions of new meanings, resistances, which produce multiple and varied configurations that happen topically at school. After all, it is impossible to deny that there are things that only exist at school. Not coincidentally, the notion of culture tends to apply to peculiar identities and to delimited communities — black culture, indigenous culture, gay culture — and, why not? — school culture (MUNAKATA, 2016, p. 122, our translation).

When discussing the deaf student's use of a textbook adapted to Sign Language (SL), it is important to consider the school that is part of the object of study, especially when the investigated object brings up the educational proposals for the deaf's attendance. Even though the reflection regards the deaf student and the adapted textbook, the teacher and school's internal characteristics will be reflected in the student's actions. It is also important to keep in mind that the textbook is an object endowed with a material existence, even when it is digital. As it is a material object (digital or otherwise), it has a visual that needs to be decodified according to its representative modality. In other words, when used in paper and ink the textbook establishes a relation of use different from that of a CD.

To Munakata (2016, p. 133) the textbook provides evidence to analyze the school as a place of aesthetic experience and considers the relation between the school culture and the inclusive society as polemic. In fact, it can be inferred that the admission of students with different educational needs impacts the school dynamics and demands a new paradigm for the school and the use of resources for pedagogical purposes. In such a context, we may ask: can the textbook adapted in Libras (Brazilian Sign Language) provide evidence that the school is properly prepared for the use of this visual modality? That is, are the school guidelines with the architectonic[2], technological[3], ideological[4], etc. changes to effect the inclusion of a specific student?

If we consider deafness, textbook adaptation into Libras and the use of didactic material as an instrument to create conditions for teaching and learning, then the two language modalities (Sign Language and Portuguese) flow in the product and are constituted for teaching purposes. However, there are other questions to be asked: is Portuguese legally constituted as a second language in the textbook? Is the textbook adapted to Libras a pedagogic resource proper for deaf children? Some answers can be found in the next sections of this article.

Textbook Adaptation: ICTs Accessibility for Deaf Student

There is a general assumption a textbook adapted to SL is a translation from a written Portuguese text into a Sign Language recorded on video. This way the translation is viewed from a perspective that is not only linguistic, but also intercultural.

It is important to understand Bakhtin's idea (2002) quoted by Miranda (2010, p. 67) regarding the enunciation, since it will support the understanding of the aspects that involve translation competence and the audience for which the translation is intended. Enunciation is seen as a model of social dialogue

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[2] School facilities.

[3] Technology: a tool used in favor of teaching. The term educational technology refers to the use of technological resources as a tool to improve teaching. It is about using technology in favor of education, promoting more socio-educational development and better access to information. Available (in Portuguese) at: https://www.portaleducacao.com.br/conteudo/artigos/direito/tecnologia-educacional-uma-ferramenta-a-favor-do-ensino. Accessed on nov. 5th, 2018.

[4] It is supported by Pimenta (2001) to conceptualize ideology as a set of versions of the world imposed by a social group on another group in the name of distincts or their own interests. Thus, it produces a control mechanism of a dominant group present in semiotic acts.

that is based on language. Its use reflects the social context where and for whom it is produced. The notion of enunciation is grounded on the idea that it is constituted in the socio-historical environment, completed, and that it lives on in a discursive dimension implicated in the process of the participants' interactive relationships.

These ideas are aligned with multimodality studies and communication is defined as a process in which a "product"[5] is both articulated and interpreted. All authors involved in producing a textbook — writers, editors, Libras interpreters, teachers and deaf students — depend on an interpretative communicative relationship, that is, that the final interpreter (deaf person) has knowledge of both Sign Language and the subject in order to understand the message. "Communication does not happen only on the producer's side, but also depends on the person who interprets the message; that way it is possible to understand that the social structure and process are inevitably present in communication" (NATIVIDADE; PIMENTA, 2009, p. 24, our translation).

Therefore, it is necessary to consider the translation of these materials. In the field of education there are actions involving communication, exchange of knowledge, discursive interactions — oral/written/signed. These actions imply an effort aimed at providing the person with the linguistic dispositions to achieve an understanding of the texbook. It is understood that language is a mechanism used as a teaching resource. However, language itself does not ensure the educational process. As a consequence, it cannot be guaranteed that the translation of teaching resources is sufficient to offer the condition of isonomy between deaf and hearing students.

From the perspective of proposing a reflection of the textbook adapted to Libras, it is relevant to pay attention to information and communication technologies, since the adaptation only happens when supported by these computational resources.

The technology makes the combination of several languages in the same material possible. Aiming at the target audience the message producers choose between these languages according to their communicative purpose. The target audience is the element that motivates, guides and gives meaning to any choice of a multimodal text. Hence, the defense of the textbook as this genre of meaningful discourse units is recapitulated.

At the same time as the deaf community is strengthened in its demands for rights and social justice, science advances into new technological discoveries. From this perspective, Basso (2003, p. 119) states that technological progress has allowed the emergence of new communication tools, especially from the internet, although it is observed that the preservation of Sign Language, identity and culture remain within the deaf community.

These new technological possibilities do not only affect people's daily lives, but alter all actions, conditions of thought, and the representation of reality. For Freire (2003, p. 195), the integration of different verbal and non-verbal resources, a characteristic of most multimedia programs, makes it possible to analyze the discursive functioning of language in a peculiar way. The author states that based on the conception of deafness as a visual experience, considering all the apparatus related to deafness (linguistic, cultural, intellectual, and others), the insertion of ICTs in deaf education can build a privileged space for narrative productions and for the deaf student's entry into the literate world.

In the article "Creating and Using Educational Media with a Cultural Perspective of Deaf People" (MOSES; GOLOS; HOLCOMB, 2018, p. 68-71) is argued that educational media for deaf children has the potential to display SL with accuracy and use. When deaf children do not see SL at home or in school, literature, or media, they feel inferior and ashamed and are led to question who they are. Something as simple as promoting the deaf children's representativity through deaf characters in the media can affirm

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[5] The translation of the textbooks to Sign Language.

and validate the very existence of these subjects and boost their motivation and learning.

Educational media can work as a mirror for the identity development of deaf children or as a gain regarding first and second language learning because it provides models of SL use. According to Moses, Golos and Holcomb (2018) deaf children who are in contact with the SL through ICTs show greater phonological awareness of the SL and gain greater phonological understanding of the oral language. Lastly, they argue that communication technology should incorporate deaf people's linguistic and cultural model, as well as ensure culturally appropriate media environments that promote interactions in SL.

Thus, facing these challenges, integrating ICTs and printed materials to the educational process of the deaf people as a pedagogical tool cannot be seen as a simple technological instrument, but as a condition to provide access by the user and, therefore, turn them into a critical and autonomous individual, who discovers and creates their own answers through this tool.

For Basso (2003, p. 121), it means understanding new codes of reading and writing, new languages and new ways of interpreting access to teaching and learning and its place in education. The possibility of having visual resources facilitates the inclusion of deaf people and favors these users. From this point of view one can assume that technologies enable a new textual vision, that is, multimodal aspects represent different discursive modes.

It is worth mentioning that regarding the experience in adapting textbooks for deaf students, the report of Celia Ramos, executive director of the publishing house Arara Azul, responsible for the adaptation to Libras of two collections for the first grades of elementary school — Pitanguá Collection, by the Moderna publishing house, and Porta Aberta, from FTD Educação publishing house:

> We always believed that the material we produced was only another tool, thinking that the *Digita Book[6]* was only and merely a Book on another media, but we were mistaken. It is necessary to rethink the whole background of deaf students' education, the specific deaf culture issues, and also the relationship of deaf and hearing students with the digital world. (RAMOS, 2013, p. 8, our translation).

In her paper about the adaptation of textbooks, she offers several arguments by teachers regarding the operability of the digital book and, thus, it was necessary to think about training the professionals to use this textbook. Many teachers said that the CD-ROM was not bilingual and that it only reproduced the book on paper (written Portuguese), because they did not know they could click on the video window that reproduces the content in Libras. According to Ramos (2013), some teachers did not believe that their deaf students could access the same content as listeners, and others requested a course in Libras for more interaction with the student.

Ramos (2013) points out that most schools do not have the means to offer a computer to each deaf student, thus making it difficult to use the material in an inclusive class. Another issue was that the hearing student did not use the Pitanguá Collection in some schools. The author states that these obstacles can be solved with public educational policies aimed at bilingual education. She points out that:

> [...] this action opened a door that will never close again, as the proposal of the Bilingual Digital Textbook (Portuguese and Libras) has become a reality and no longer a dream and its use, evaluation, adaptation and expansion will certainly be a matter of time (RAMOS, 2013, p. 8, our translation).

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[6] Digital book: term identified in Ramos' (2013) article, however not usual in articles that discuss the elaboration and use of textbooks. The use of the expression was maintained in respect to the term presented by the author.

Finally, regarding the ICTs, Freire (2003) guides us to a deeper reflection on the meaning of the terms adaptive or assistive technologies, as "hardware and/or software solutions that aim to remove obstacles that hinder the computer's use" (2003, p. 195, our translation).

However, Lins' (2012) reflects that often the issues concern not only adaptations of technological elements, but linguistic and discursive ones as well.

> [...] as it is necessary in the case of deaf Libras users (who are not proficient in written Portuguese) or in the case of listeners, in which any language different from that dominated by the user will prevent him from using all the technological resources available, that is, it would be a matter fundamentally of "translation". Regarding this issue, the resources for a hypertext (in the sense brought by GOMES (2010)), or software, for example, can be (re)articulated, obviously, from the understanding of the specificities of different users and their language(s). Therefore, in these cases, perhaps the best term would be, then, translated technologies (LINS, 2012, p. 3, our translation).

Reading Texts in Sign Language

The elaboration and adaptation of pedagogical materials are the most common actions to promote educational accessibility for deaf children. The inclusion of SL in the teaching materials enables new perspectives for thinking about other aspects that involve teaching-learning — in this specific case, reading in Sign Language.

Considering SL the first language (L1), a visual language represented by the moving image (videos/images) and foundation to reach the written oral language, it is possible to think that the transition from one language into another will only happen through visual means in the case of deafness. Thus, to enter the world of reading a second language, it is necessary to go through the reading of a first language. We may understand that deaf children read in SL.

Souza (2015), Krusser (2017) and Quevedo (2013) explore this understanding. They have investigated the interactions between deaf children/adults with ICTs. In this sense, there are researches that recommend online courses focused on the deaf audience, synthesized as a guide (SOUZA, 2015).

This paper was based on Krusser's (2017) studies, who proposed the identification of graphic resources and computational tools that can contribute to a fluid and pleasant reading and also developed an applied research focused on the translation from Portuguese into Libras of texts with didactic function. This paper was also based on Quevedo (2013), in a study for composing inclusive virtual learning environments aimed at deaf and hearing students by making similar content available in different narrative discourses. Although both authors emphasize the lack of research in the field of reading in Libras, when it comes to an article that proposes the reflection on the textbook adapted in Libras, it is impossible not to go through — even subtly — this issue.

The introduction of the ICTs in the educational field has provided the opportunity for new teaching resources. Writing, usually represented in printed form, moves to web environments configured in different discursive modes. However, for Quevedo (2013, p. 32), the new alternatives provided by the ICTs require some time for adaptation, technical development to adjust to the domain and to the potentialization of these new ways of reading.

The introduction of SL in educational audiovisual contents, the most part trough videos, is characterized by: (i) oral/written language videos, which have subtitles of the Portuguese oral text, the (oral/written) text translation in SL with human or virtual (avatars) interpreters and (oral text) subtitles

in sign writing. (SOUZA, 2015, p. 95-100); (ii) Sign Language video[7] interspersed with the written text (SL/Portuguese), the LS was used only for the written activity statements (BUSARELLO 2010, citado por QUEVEDO, 2013, p. 154); (iii) Sign Language video with interlinguistic translation[8] and written text translation to Sign Language (KRUSSER, 2017, p. 30); and (iv) videos signed by deaf people (MOSES et al., 2018, p. 67).

It is important to mention that in this research on textbooks adapted in Libras, the common characteristic found in every material was a digital screen in written and accessibility through translation of the (written) text in SL with human interpreters.

According to the National Curriculum Parameters (2001), reading is a teaching instrument:

> [...] it is a process in which the reader actively builds the text's meaning based on his/her goals, knowledge about the subject, about the author and everything he/she knows about the language: characteristics of the genre, bearer, writing system, etc. (PCN 2001, p. 53, our translation).

Reading is the basis to succeed in learning any subject. The development of a competent reader according to the National Curriculum Parameters (2001, p. 54, our translation), "can only be constituted through a constant practice of reading actual texts, based on a work that should be organized based on the diversity of texts that circulate socially".

Krusser (2017, p. 17) questions whether the deaf reader is comfortable when studying in the translated material, whether the reading flows comfortably and whether graphic interferences contribute to the purposes proposed by the text or by its different parts when a written text is presented in video by a SL interpreter. Reading videos in SL requires actions from the reader that are different and less studied so far than reading written texts.

Ramos (2000), quoted in Krusser (2017, p. 79), adopts the term "reader/viewer" and shows that some features of the signaled video configure the text in Libras as a "proto-writing". By translating a written text into Sign Language, we have a video that can be played, archived, and viewed at different times without requiring the presence of the one who speaks.

It must be emphasized that different types of text promote different readings. Different discursive modes demand different attitudes and engagement from the reader. Quevedo (2013) points out that the differences or similarities of a content, the language used, and its mode of articulation configure a specific narrativity. Therefore, the possibility of presenting the same instructional content in different languages composes differentiated discourses (QUEVEDO, 2013, p. 15).

This paper is aware of the complexity involved in the act of reading different types of texts and in the diversity of technical resources, and attention is maintained on the aspects that emphasize the deaf reader conditions to read and understand the videos in SL, a common resource when it comes to the adaptation of textbooks in Libras. The aspects presented by Krusser (2017, p. 81) are relevant since it concerns the effectiveness, efficiency and satisfaction of the deaf reader in reading videos in Libras, thus the base for this explanation will be guided by the research of this author, who clarifies that she does not intent to describe aspects involving the reading of written texts by deaf people; the focus is on reading videos in SL.

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[7] Writing modality available to deaf people.

[8] The translation process from the oral language to the SL is configured as an interlinguistic translation (the source and target texts are in different languages).

For Krusser (2017), within the assumptions of deafness, learning and understanding text can benefit from or depend on a more visual approach. Therefore, she considers that the efficacy of a text may be defined by its legibility, readability and visual intentionality. According to the author,

> To a comfortable reading, the legibility of Libra videos relies mainly on the colors, picture to background ratio, size and resolution. The video quality can result in very big files, which cause viewing problems in case of slow internet connections, a long download time, and considerable memory space for storage. Video compression can be done in spatial resolution, compressing the images of each frame, and in temporal resolution, decreasing the number of frames shown per second (KRUSSER, 2017, p. 88, our translation).

Krusser emphasizes that the divergence in Sign Language proficiency among deaf students at the same school level interferes with the understanding of reading conditions of texts in Sign Language, although a visible text, with recognizable signs, does not guarantee their understanding, nor that it can be pleasant and meaningful[9] (KRUSSER, 2017, p. 88).

From readings by Marschark et al. (2009), Quevedo, Busarello, and Vanzin (2011), Souza (2015, p. 81) states that regarding the reading of written scientific texts, the learning of deaf people who know SL was better from the printed text (oral language) than through Sign Language. This means that deaf students learned more from the printed texts than from SL. It reinforces the idea that to understand the meaning, it is not enough for the text to be readable. Still about the aspects that involve reading effectiveness, there is the readability, a characteristic that makes it possible to recognize the meaning that aids in the comprehension of the text.

The design can plan the interpreter's interaction with the images and enhance the organization of elements in space, which is a characteristic of Sign Language, regarding the readability of materials in Libras. When the interpreter visually describes a situation, a person or an object, he indicates his position in space, and when he refers again to this person or object, he addresses the place where he has located it. In page layout, it is possible to exploit these spatial references, movement, relative size, and graphic elements integrated with interpretation to highlight information and guide the receptor's gaze (KRUSSER, 2017, p. 90).

Krusser (2017, p. 93) points out that SL dictionaries and glossaries offer an option to look up words in the written text. However, deaf people have difficulty understanding the signs in the written text, because they have limited vocabulary and many technical terms still do not have signs.

According to Krusser, the lack of sign reading practice makes it difficult to recognize the structural characteristics of texts in Sign Language and may present reading misunderstandings. The last item, related to the effectiveness of texts in Sign Language, is the visual intentionality, which promotes the reader's interest in the text. In this field, Krusser (2017) focuses on the translation aspect and considers it pertinent to think about a translation that intends the target text to fulfill the same function as the source text, written, considering the aspects of the visual cognition of Sign Language users, the elaborate design planning in the translation into Libras and the composition of the elements that originate the sign text.

> When translating a written text into a Libras video, some form changes are necessary. Both the written text and the video in Sign Language have verbal content but in the translation into Libras the written text is presented by a video interpreter and the editorial project goes through a very radical change, requiring a design (re)creation, using other elements (KRUSSER, 2017, p. 106, our translation).

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[9] It deals with characteristics (design, clothing, sentence structure in Libras and others) that make it possible to recognize the content, i.e., contribute to understanding the meanings of the text (KRUSSER, 2017, our translation).

After the effectiveness, Krusser (2017) considers it important to analyze reading efficiency. It can be measured by the agility of reading, that is, the dedication to achieve the reading goal. The text is easily understood, the reading flows quickly and naturally and it provides better navigation and reading organization, making the reader heed its commands.

The effort spent by the reader in perceiving and understanding the text is also an aspect that must be analyzed regarding the reading efficiency. Considering the workload too much to complete the text meaning, the use of visual resources proposed for the Libra texts can help contextualize and clarify the concepts, and, in some cases, contribute to the reading agility. Some concepts — especially the ones that do not have an equivalent in Sign Language, may need examples or explanations and demand more time when presented in Libras than the time needed for the reading in written text. It seems pertinent to note whether the use of images, videos, animations, or infographics would facilitate comprehension or even decrease reading time (KRUSSER, 2017, p. 110).

There is, in Coscarelli (1996, p. 449), the statement that reading is understood as a complex process of inferring, from the perception of imagery and graphic resources, and adds the idea of aesthetic compositions of space for both text in Portuguese and in SL. The reader of media texts needs to understand its meanings beyond what is visually on the screen. The production of inferences is extremely important for the understanding of the text. According to the author, it is the process by which the readers (listener/deaf) link the textual information to items of their prior knowledge and establish their understanding of the text.

Regarding the reader satisfaction in texts in Sign Language, a relevant factor for this topic is the use of a visual identity directed to deaf children/adults (MOSES et al., 2018, p. 69). That can make the readers feel familiar with the material and experiment more with the interface options. It is also important that they appropriate the material and identify with its characteristics. It can also stimulate reading. Aspects such as identification with the interpreter and the feeling of omission of information may interfere with the satisfaction of the deaf reader.

The design resources used for the Sign Language reading can involve two aspects: one related to the interface where the text will be read, including the player elements that can or not offer specific SL reading tools; the other are the design elements of each translated text. The interface must contribute to clarify the text structure and order and offer the required functionalities for the reader's different purposes, while the translation of each material must contribute for the text flow and understanding (KRUSSER, 2017, p. 112).

Krusser considers it complex to promote enjoyable and meaningful reading. However, these SL videos must follow quality requirements to the communication in SL in its production. In the Sign Language videos the window position, orientation and size, as well as the use of cut-outs in the background to overlay the interpreter in integration with other elements, interfere with reading. Despite the restrictions, video communication in SL is more pleasant and intelligible, and its use is indicated because it respects the natural communication of deaf people in their first language. Finally, for Krusser (2017, p. 214–215), the observations pointed to the importance of developing specific translation work for the study in videos with texts in Libras involving teachers, translators and designers and considering not only the linguistic differences, but the didactic possibilities and the design contributions for a quality study in the visual modality.

Didactic Materials for the Teaching of
Second Language to Deaf People

Regarding the issues surrounding deafness, many educators believe that the absence of hearing is responsible for low reading and writing performance of deaf children. The SL is structured in a specific way that is not similar to the oral and/or writing of the Portuguese Language. The process of acquiring written Portuguese by deaf children is complex. The teaching practices of Portuguese in the education of deaf people are oriented by a conception of language as a code, and that resulted in the systematic and standardized teaching of portuguese sentence structures. That way the deaf students learned Portuguese mechanically and with no understanding of its functionality.

When the deaf education starts having a more pedagogical focus, moving away from the concept of language based on orality, the Portuguese teaching proposal changes its configuration and begins to present cultural characteristics and the influente of SL as these students' first language. The deaf pedagogy advocates the Portuguese language as a second language, oriented towards the teaching of a more usual and common language, as well as the use of SL as a mediator of access to knowledge and as a basis for learning Portuguese. That way, the Sign Language is a guide for the whole pedagogic process (SILVA, 2008, p. 37).

When examining the discussions on teaching materials for deaf students, the development of this pedagogic resource is still restricted. Miranda (2019, p. 241), interviewing bilingual teachers who teach deaf children, observed that the teachers themselves produce their teaching materials guided by images — taken from inserts, magazines and/or textbooks — and consider that the most important thing is the insertion of the SL.

Sticking to textbooks or didactic material for teaching Portuguese to deaf people, Silva et al. (2013, p. 221) indicate two books used for teaching Portuguese to this public, with a bilingual perspective: My first signs, by hearing professor Paulo Favalli (2000), and Playing and learning with Libras: Brazilian Language of Signs, developed by deaf professors Irene M. Stock and Karin Lilian Strobel (1999), from Universidade Tuiuti do Paraná.

The authors state that books with a bilingual perspective present activities that involve loose words and pictures or short, sometimes disconnected, statements, "which, most likely, is only intended to help teach the deaf people concrete concepts" (SILVA et al., 2011, p. 7, our translation).

Barbosa and Bartholomeu (2016, p. 26) analyzed unit 3 from the book Portuguese... I want to read and write, by Neiva Albres, published in 2010 and reported that their interest in analyzing it was because it is a material that can be used directly by the student and that it is not just guidelines or activities to be adapted by the teacher. They explain that the analysis was made by the graphic-editorial aspects. That way,

> [...] it was verified that the graphic aspects are well arranged on the pages, the content is appropriate for the target audience, and it was possible to verify the implementation of some deaf culture's elements. However, it was observed the need for contextualization of the activities related to lexical and grammatical aspects, as well as a better exploration of the used images. According to Salles et al. (2004), Sign Language is a way for the deaf to interact with the world and signify them. They perceive the world with their eyes, and therefore their culture is based on vision. Thus, it is important that the textbook aimed at the deaf audience makes the most of visual resources, so the student with these specificities can benefit more from it, regarding the Portuguese learning. (BARBOSA; BARTHOLOMEU, 2016, p. 26, our translation).

The authors conclude saying that the graphic-editorial aspects present in the didactic material contribute to the process of teaching-learning Portuguese as a second language. However, the production of textbooks that meet the needs and specificities of this student group (BARBOSA e BARTHOLOMEU, 2016, p. 27). In 2016, MORAIS e CRUZ (p. 108) presented an article[10] in which they reflect on the development of teaching material for the teaching of Portuguese as second language for deaf students in the bilingual pedagogy undergraduate course, in the distance learning modality. The final consideration suggests that the didactic material must be produced with specific content that meets the needs of deaf students, who should use Libras as their first language and understand Portuguese as their second language.

Giselli Silva, a professor at UFMG's Letters Course launched, in November of 2018, a textbook of Portuguese as a second language for deaf children. According to her, the idea came from the teachers' demand for materials that could be used to teach children a second language. This material is available on the UFMG's Letters Course's website[11].

Freitas (2018) defends a dissertation entitled "The multimodality in teaching Portuguese to deaf students in their early years: a proposal of didactic material" and proposes a teaching methodology through teaching material prepared by herself. This material's base is a children's story and it considers three modes of signification: the image, Libras and the written Portuguese. Regarding the results, the author stated that there was a positive response from the participating teachers, although she considers that the student's desire is the determining factor for the teaching success. Finally, she advocates the need for more research in the area and teacher training for teaching Portuguese as a second language.

Based on the researchers' statements, it is clear that bilingual or Libras accessible textbooks and/or didactic material are products developed by teachers from their own demands and by researchers or publishers specialized in the deafness area.

Final Considerations

Going back to the initial questions is possible to affirm: the textbook adapted in Libras for Portuguese teaching is not suitable as a support for second language teaching[12]. The translation from the written text (in Portuguese) to the text in Sign Language (SL), that is, the two languages present in the same material, demonstrated that SL and Portuguese can be simultaneously involved, associated on the same screen in a digital format. However, I reinforce that the SL must be considered only as basic support for teaching written Portuguese.

The analyzed textbooks adapted to Libras follow a single pattern of language development guided by the predominant language, the country's oral language. The textbook may present patterns that rule the social representations – writing/image/orality – because it is believed that these paradigms are part of the structure of knowledge. In this configuration, Libras represent a language that circulates in the textbook, but is not characterized as a language of teaching and learning.

Finally, within this educational horizon that deals with the textbook adapted in Libras, there is in Halliday (1998, p. 2) the argument that every educational process is mediated by language. The school, and the textbook, takes the place of teaching and learning being constituted by the various language modes, which must be composed by conceptions of what and how the students should learn. In this conjecture, it is possible to catalogue two assumptions: the main one is the belief that two circulating

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[10] Developed in the federal program "Viver sem Limite" for the Bilingual Pedagogy Course, offered online aiming at the pedagogues qualification to work in school management and teaching with focus on education for deaf people.

[11] Available at: http://www.letras.ufmg.br/portuguesl2surdos/. Accessed on: july 20th 2019.

[12] Portuguese Language

languages already say that the material is bilingual, therefore accessible; the second one is about the lack of knowledge and planning within the proposals that outline the bilingual education for deaf children.

Technologic resources have legitimized the use of Sign Language in educational spaces. However, it is necessary to rethink the use of this tool and its suitability to the aspects directed to teaching second languages in the written modality. The introduction of technologies into the deaf children's education enables a new textual vision, that is, it conceives to consider not only simple technological adaptations, but different linguistic and cultural approaches.

That way, the process of elaborating bilingual didactic material must legitimize the different discursive units (images/SL/Portuguese) that form the teaching activities, and must mean understanding new codes of reading and writing, new languages and new ways of interpreting the place in education and the access to teaching and learning.

The textbook adapted in Libras is a reality. Educators who are unfamiliar with the deafness scenario may use it to their benefit. There is no doubt that technology will take a central place in the different ways of designing teaching resources for deaf children and will effectively become an element of genuine use. Thus, it is believed that deaf and hearing children who are exposed to different language models gain empathy for similarity and difference. However, the deaf people's linguistic and cultural model must be incorporated, as well as provide appropriate midiatic environments that promote Sign Language interactions. The deaf reader needs to find his or her own visual identity, be familiarized with the material and try its interface, first of all through his or her first language.

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