

"WE ARE NOT THE SAME ANYMORE": AN ANALYSIS OF THE RELATIONS MEDIATED BY THE COLLABORATION FOLLOWING THE VIGOTSKIAN PRINCIPLES IN A TEACHING BRAZILIAN SIGN LANGUAGE (LIBRAS) CONTEXT FOR DEAF PEOPLE

"NÃO SOMOS MAIS OS MESMOS": UMA ANÁLISE DAS RELAÇÕES MEDIADAS PELA COLABORAÇÃO CRÍTICA À LUZ VIGOTSKIANA NO CONTEXTO DO ENSINO DE LIBRAS PARA SURDOS

"NO SOMOS MÁS LOS MISMOS": UN ANÁLISIS DE LAS RELACIONES MEDIADAS POR LA COLABORACIÓN SEGUIENDO LOS PRINCIPIOS VIGOTSKIANOS EN UN CONTEXTO DE ENSEÑO DE LA LENGUA BRASILEÑA DE SEÑALES (LIBRAS) PARA SORDOS

Viviane Nunes SARMENTO¹
Neiza de Lourdes Frederico FUMES²

ABSTRACT: This study aimed to analyze, mediated by collaboration, the software construction process (Lepê) with a focus on teaching Libras for the deaf. For this, we use the assumptions of critical collaborative research, as well as the guidelines brought by Vigotski to carry out the production and analysis of the data. A bilingual teacher (Portuguese / Libras) from the Specialized Educational Service working in Agreste Meridional de Pernambuco participated in this process. As a result, we built software (Lepê) for teaching Libras to deaf children in educational contexts, in addition to having contributed to the maturation of the concepts studied by the participants. We also highlight as a result that the participating teacher was able to build critical awareness, not only about the importance of collaborative work, but also in relation to his actions. We were able to conclude that the critical collaboration brought us a revolutionary ideal to be established in the daily teaching practices of Libras for the deaf since subsidized in its principles and actions, there were transformations of the participants in the search for the formulations of collective and historical units breaking with the individualization prevalent.

KEYWORDS: Critical collaborative research. Teaching Brazilian Sign Language (Libras). Socio-historical psychology.

RESUMO: *Este estudo teve por objetivo analisar, mediatizados pela colaboração, o processo de construção de software (Lepê) e o ensino de Libras para surdos. Para isso, utilizamos os pressupostos da pesquisa colaborativa crítica, assim como as orientações trazidas por Vigotski para realizar a produção e análise dos dados. Foi participante deste*

¹ Federal University of the Agreste of Pernambuco (UFAPE), Garanhuns – PE – Brazil. Coordinates research and extension groups that focus on teaching Libras. Doctorate in Education (UFAL). ORCID: <https://orcid.org/0000-0002-1594-5192>. E-mail: vivianesarmento2@gmail.com

² Federal University of Alagoas (UFAL), Maceió – AL – Brazil. Professor at the Institute of Physical Education and Sport (IEFE). Doctorate in Sport Science and Physical Education (U.PORTO) – Portugal. ORCID: <https://orcid.org/0000-0002-1913-4784>. E-mail: neiza.fumes@iefe.ufal.br

processo um professor bilingue (Português/Libras) atuante no Agreste Meridional de Pernambuco. Como resultados, construímos um software (Lepê) para o ensino de Libras para crianças surdas em contextos educativos, além de termos contribuído para o amadurecimento dos conceitos estudados pelos participantes relacionados a esse ensino. Também destacamos como resultado que o professor participante pôde construir uma consciência crítica, não apenas acerca da importância do trabalho colaborativo, mas também em relação às suas ações. Pudemos concluir que a colaboração crítica nos trouxe um ideal revolucionário a ser instaurado nas práticas diárias de ensino de Libras para surdos, visto que subsidiados em seus princípios e ações, houve transformações dos participantes na busca das formulações de unidades coletivas e históricas, rompendo com a individualização prevalente.

PALAVRAS-CHAVE: *Pesquisa colaborativa crítica. Ensino de Libras. Psicologia sócio-histórica.*

RESUMEN: *Este estudio tuvo como objetivo analizar, mediado por la colaboración, el proceso de construcción de software (Lepê) con un enfoque en la enseñanza de Libras para sordos. Para esto, utilizamos los supuestos de la investigación colaborativa crítica, así como las pautas aportadas por Vigotski para llevar a cabo la producción y el análisis de los datos. Un maestro bilingüe (portugués / Libras) que trabaja en Agreste Meridional de Pernambuco participaron en este proceso. Como resultado, creamos un software (Lepê) para enseñar Libras a niños sordos en contextos educativos, además de haber contribuido a la maduración de los conceptos estudiados por los participantes. Como resultado, también destacamos que el maestro participante fue capaz de crear una conciencia crítica, no solo sobre la importancia del trabajo colaborativo, sino también en relación con sus acciones. Pudimos concluir que la colaboración crítica nos trajo un ideal revolucionario para establecerse en las prácticas docentes diarias de Libras para sordos, ya que subsidiados en sus principios y acciones, hubo transformaciones de los participantes en la búsqueda de formulaciones de unidades colectivas e históricas que rompieran con la individualización prevalente.*

PALABRAS CLAVE: *Investigación colaborativa crítica. Enseñanza de la Lengua Brasileña de Señales (Libras). Psicología socio-histórica.*

Introduction

We understand that the organization of the linguistic environment is essential for the development and apprehension of generalizations. It so happens that the majority of deaf children, children of hearing families who do not know/use Libras, do not have, in their reality, access to dialogues and narratives within the family/social environment. Therefore, they only encounter this type of communicational relationship when they reach age and/or enter school.

For this group, it is through the bilingual school that their first contact with Libras will take place, enabling deaf subjects to situate the most diverse situations experienced/known before school admission to the generalized forms provided to them by the language.

However, there are many discussions in the deaf community, as well as academic, about the lack of effectiveness of the bilingual school in the perspective of inclusive education, putting into question the inclusion of deaf students in regular classrooms, mainly due to constant negative performances presented by them (SOUSA *et al.*, 2016).

In a study on the inclusion of deaf people in school, Lima (2012) brings us reports on how the teachers who make up the school argue about the theme, reaching the conclusion of the need for formative courses and changes in the conception of deafness and the deaf person.

This lack of clarity – linguistic, educational, social – calls our attention to the recurring concern about to who we are thinking this education. In this context, bearing in mind such conflicts, we understand the need for planning and developing a perspective in which this education is not carried out in an isolated way, having, therefore, the involvement of all participants.

Such consideration and necessity brought us to the knowledge of collaborative practices, which have been gaining increased space (BANDEIRA 2016; CAPELLINI, 2004; IBIAPINA, 2016; MAGALHÃES, 2009) in the context of Brazilian education and, more precisely, of Special Education.

That said, we found in this possibility – collaboratively researching – the mediating dialogues that resulted in the construction of a software, which we called Lepê, with a view to developing critical and transformative possibilities for the teaching of Libras in the education of the deaf. Thus, we proposed to analyze, through collaboration, the software construction process (Lepê), focusing on the teaching of Libras for the deaf.

Methodology

The qualitative research we developed was anchored in the collaboration proposal, following the guidelines of Ibiapina (2008), Magalhães (2009), Liberali, Magalhães, Lessa and Fidalgo (2009), Magalhães and Fidalgo (2010) and Ibiapina, Bandeira and Araújo (2016). In this sense, as explained by Magalhães (2009), in the collaborative research activity,

[...] when relating to the other through shared meanings, human beings are selecting, adapting, reducing, expanding their senses so that they can find ways to act collaboratively. Therein lies the essence of collaboration: taking risks by understanding the sharing of meanings as an exercise in conflict, sharing, appropriating, refusing, accepting, confronting and combining the various meanings exposed (MAGALHÃES, 2009, p. 02, our translation)

In this collaborative exercise, we had a teacher/instructor from the state education network of Garanhuns, to whom we will refer by the fictitious name of Akira, coming from Japanese culture, meaning 'believe in tomorrow'.

For the production of data, we used reflection sessions, which were recorded through filming and dealt with the entire process of building the Lepê software, aimed at teaching Libras to deaf students, as well as verifying and applying of the resource by teachers from the Specialized Educational Service of schools in the Agreste of Pernambuco region.

Regarding the analyzed software (Lepê), it is worth noting that its source code registration was carried out by the National Institute of Industrial Property - INPI, with the Federal Rural University of Pernambuco and the Federal University of Alagoas as an external partner/collaborator, with rights granted by the researchers. The issuance of the registration certificate consisted of a protocol under number: BR 51 2018 000608-6.

We also emphasize that, in relation to Lepê, it was necessary to build a database with signs in Libras, based on reflection sessions that took place over a year. With Akira, the meetings were held fortnightly, with some moments recorded through filming, and others through a field diary.

During the reflective sessions, in addition to discussing the emerging demands of the process, we filmed the software and debated the digital programming (screen interface, handling, gif options, photographs etc.). We also choose and recorded the vocabulary and contexts to be entered into the software.

Considering this data production, in this study we chose for analysis seven reflection sessions recorded by filming and ten sessions recorded in field journals.

We emphasize that this study was also approved by the Ethics and Research Committee of the Federal University of Alagoas, under opinion number: 2,636,956.

Data analysis and discussion

The proposition of the Lepê software came from the idea of expanding the contact of deaf students with Libras, since their meetings (from Meridional Agreste of Pernambuco and Professor Akira) were limited to a few days a week. Thus, we thought about the development of a resource that would allow the use of strategies beyond the teaching of “word lists”, naming and repetition of signs, as indicated by Lacerda, Santos and Martins (2016).

Initially, we pointed to two main issues: the first was the need to discuss the construction of thought and language in the context of the deaf person, considering the

objective reality, marked by the lack of fluency of teachers working in schools and the distance between these schools and the pole region where Akira attended them; the second question was the need to think about strategies to reach the students in their respective experiences, since it is necessary to know the demands of Libras teachers in the region, the daily lives of deaf students, the gestures used in their daily lives, and so on.

These elements were recognized by us as relevant in the construction of the Lepê software.

The dialogues, from seven reflective sessions, demonstrate how these possibilities were considered in the construction of thought and language in the context of deafness during schooling:

Viviane: *How do you think we should think about contexts, based on the experience you have with students in the region? What I have seen, within my experience, are many associations, but few works with meanings. Always image and sign. Do they really understand what they signal when these associations are made?*

Akira: *[...] If I'm going to talk, for example, about Frida [professor Akira's student]. She is 7 years old, yeah... And that I followed her for 1 year [...] So, if you do the duck sign for her, she knows what duck is, but there are other signs she does, but that she doesn't understand, she doesn't know what it is [...] She begins to add and signals. That's when you ask; what is it (referring to the meaning of the sign)? Explain to me or draw for me, show me; she doesn't know how to show it. [...] I know that there are a series of words that she cannot know what they are [...] I believe that contexts should explore this: the proximity to the experiences of these students. If necessary, we bring food, clothes, everything from home, as long as they are usual things. (our translation)*

This discussion invites us to return to Vygotski (2001), when explaining the gesture of "pointing". The gesture itself is nothing more than an unsuccessful attempt to catch something, a movement directed towards a certain object, which triggers the approaching activity. Thus, in triggering, the child tries to catch something, a movement directed towards a certain object, generating an approximation activity, in which the child fingers make movements that resemble picking up.

Until then, this gesture is just a direction to pick up something or touch something contained in that space, however, Vygotski (2001) warns that when the mother comes to the child's help and notices that her movement indicates something, the situation changes fundamentally. Pointing becomes a gesture for others. The child's unsuccessful attempt engenders a relationship, not with the object, but with the other person. Consequently, the primary meaning of that movement to the objective situation is that the child actually begins to understand that movement as the gesture of pointing.

From these reflections, the collaborative partners understood that the Frida student's signaling was based on an objective situation that surrounded her - and this should be considered - as well as "the other" and what this "will result" in him - in the proposition of the software. This resulted in the understanding that Lepê would not work with the association of signs and figures and that it would be aimed at children, since most students were. And, precisely for this reason, we had in mind the need for referentiality regarding the meanings of words.

Thus, it was necessary to discuss these properties so that we could supply the contents of Lepê and analyze the possibility of using it in the objective reality in which we were working. On this, we base ourselves on Vigotski (2001) when he argues that the concrete referentiality of the word manifests itself much more clearly and intensely in children than in adults. For the child, the word is part of the object, one of its properties, and it is more closely and indissolubly linked to the object than the adult's word. This is what ensures a greater specific weight of concrete referentiality in the child's word.

Also, according to the author, it is precisely because the word is more closely linked to the object in the child that it represents some sort of a part of the object. In turn, the adult can more easily separate from the object, replace it in thoughts and lead an autonomous life. Thus, the insufficient differentiation of the concrete referentiality and the meaning of the word results in the fact that the child's word is, at the same time, closer to reality and more distant from it than the adult's word.

Therefore, as part of the unfolding of the reflections between the researcher and Professor Akira, it was stipulated that the most important thing for the realization of the contexts would be the proximity to the reality of the region, so that this referentiality with the object would not be lost. However, we took steps so that it did not just become an association with an isolated object, but with a group or a class of them.

Still, based on Vigotski (2001), words do not play the role of signs from the beginning. At first, they are no different from another series of symbols that act on the experience of the objects to which they are related. Therefore, during the process of building Lepê, we were clear that just using an associative relationship between words and objects was insufficient for the emergence of meaning, so we would need to go further.

In these terms, the meaning of the word or the concept is not equivalent to an associative relationship between the sound complex/gestural form and the series of objects. This relationship is more complex, considering that the word/sign refers to a group of phenomena, which require a generalization. Furthermore, when we use a word or a sign, we

evoke an act of thought externalized by words or signs, which are a verbal/gestural thought act.

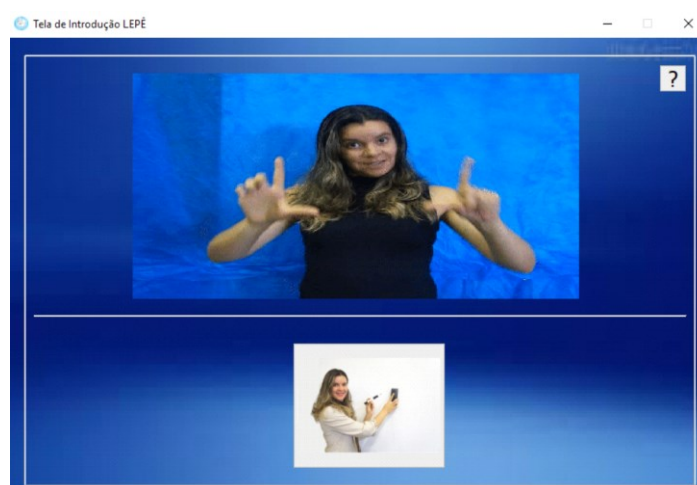
Considering these different aspects, the creation of the software sought to teach Libras in a way that not only used the visual reference and its signaling, as well as we avoided the use of avatars, as they are limited in terms of the meanings we intended to build, especially when using the source code when there are homonymous words.

Aware of this, in supplying Lepê, we sought to consider the possibilities of approximations with situations that were part of the students' daily life. Thus, for example, vocabularies related to foods sought to be closer to foods grown in the region and related to school lunches. Another example was the choices for signs related to more subjective elements, such as “*saudade*” (longing). For this, we sought to bring him closer to a farewell context, as most students from Garanhuns did not live specifically in the city and, in many cases, needed to leave part of the family to carry out the service with Professor Akira.

Thus, the way to build the software was guided by the premise that languages are constituted in social relationships between subjects, in particular, in the teacher-student relationship. With this, Lepê would be an instrument to be used in the teaching of sign language for deaf students.

Thus, for Lepê, we created some spaces, among which we highlight the presentation screen, in which the teacher, when opening for access, finds an area in which the purpose of the software is indicated in Libras, with subtitles in Portuguese, as shown in the shows Figure 1. In addition, he finds the help option, if necessary.

Figure 1 – Lepê's presentation screen



Source: Authors' archive

After advancing this screen, there is access to a new space, which we call "teaching screen", containing five comprehensive language options, as shown in Figure 2.

Figure 2 – Lepê home screen

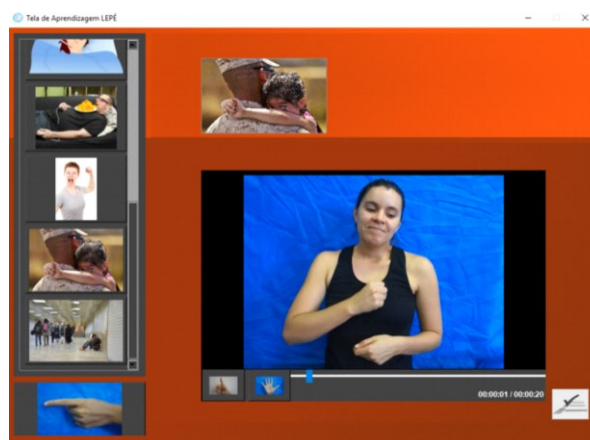


Source: Authors' archive

Such comprehensive language options were organized, according to Felipe (2007), regarding the organization of the vocabulary order, as well as by Quadros and Cruz (2011), regarding the suggestions for the formation of contexts and evaluation, especially in the use of verbs and pronouns. Despite this order, we stipulated that it would be up to the teacher to access according to the needs and experiences of the student they would be working with.

Each comprehensive language access was registered from 1 to 5 and contains vocabularies that present the signaling and the image corresponding to one or more contexts/possibility of experiences, as shown in Figures 3 and 4.

Figure 3 – Lepê's teaching screen with the vocabulary of feelings (sign of the feeling of longing (*saudade*))



Source: Authors' archive

Figure 4 – Screen with contextual situation of feeling longing (*saudade*)



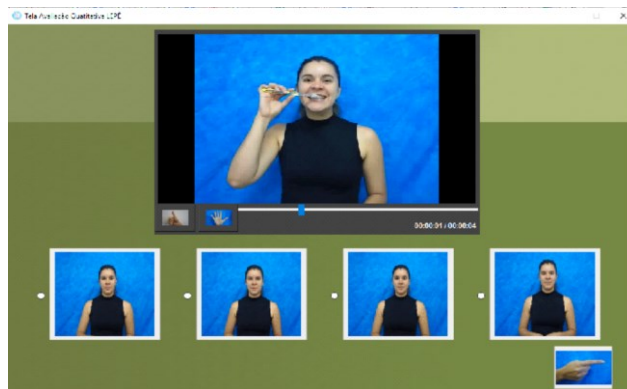
Source: Authors' archive

In addition, Lepê has, in each comprehensive language organization, an option for quantitative assessment. We think about this element based on the proposal of Vigotski (2001) about the importance of solving problems with ends within the reach of concepts.

According to Vigotski (2001), the central issue of this process is the functional use of the sign or word as a means to master the flow of the psychological processes themselves and solve the problems that lie ahead. Although we are aware that these problem solutions are linked to social situations, we realized, during the construction of Lepê, that we could propose a 'simulation' of these 'problem situations'.

In the option of evaluation of the tool there was the exposition of a situation from a context/reference – emphasizing that the contexts used were related to the vocabularies that made up Lepê. Next, multiple choices were presented, through signs, so that the student could choose the correct option. On this occasion, the percentage of errors and correct answers in the student's name was recorded by the software, as shown in Figure 5.

Figure 5 – Evaluation screen

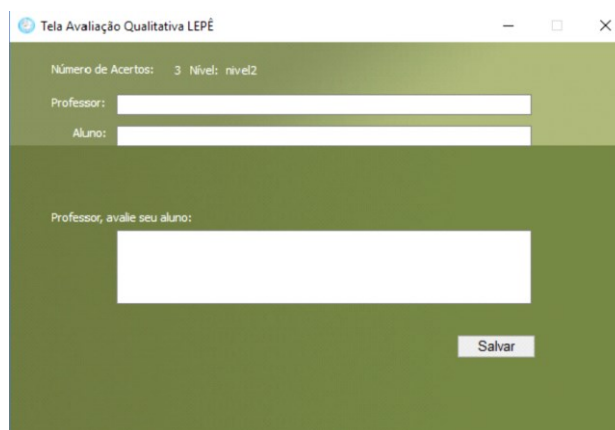


Source: Authors' archive

Thinking that teachers could use the tool in the Specialized Educational Service, Akira and the researcher reflected on another form of assessment, this time more in charge of monitoring the teacher. Thus, a space for qualitative assessment was created.

In this function, the teacher can make the records relevant to the development, potential and needs of his student, creating a file for each one and accessing it when he considers it appropriate, since the file with the records is saved in a folder generated after filling this space, as illustrated in Figure 6.

Figure 6 – Qualitative Assessment Screen



Source: Authors' archive

The previous description shows different stages and characteristics of Lepê, which we believe is an important tool for deaf students to learn Libras, as we believe that "the child will only have access to the meaning of cultural objects, that is, they can only become a cultural being, through the mediation of the other" (PINO, 2005, p. 67, our translation). We also emphasize the importance of the (social) environment and the teacher's work when

conducting teaching using the instrument, since "it is in this process that the mediation of the other - holder of meaning - is essential, even if the child is the agent of this process" (PINO, 2005, p. 168, our translation).

The reflective sessions that led to the construction of Lepê also favored other reflections on the teaching of Libras to deaf students. Mediated by collaborative experiences, Akira and the researcher revisited their practices regarding the teaching of Libras, as highlighted:

***Akira:** I can't go back to my practice anymore. To me, the context has to appear, experiences. To me, if this doesn't show up, teaching doesn't work [...] I could understand that this concept I used before the association is limiting. [...] So, today I know that the association is not able to internalize the language in several aspects, so it is limiting [...]. Because in language, home is not just house. The home has an experience for the subject, a relationship, a feeling, a particularity. When I think of home, do I think of my house initially? What does it mean? So, I try to bring this relationship closer to the subject's experience [...].*

***Viviane:** It's also a very important thing that changed my life. I thought a few years ago that it was specific to the whole [...].*

***Akira:** But it is not. It's from the whole to the specific!*

***Viviane:** And then, it was precisely in the construction of Vigotski's thought and language that I changed that [...]. And I also only understood in practice this question from the whole to the specific after our collaborative work [...].*

***Akira:** These actions came from the reflections I had from the construction of thought, construction of the language, the construction of the other, within what we had when we studied and the Lepê [...] And I can say that my practice at the school I work today has changed, because of these formations that we built together, through the process. (our translation)*

As Magalhães and Fidalgo (2010) assure, and we agree, critical collaborative research is inserted in a critical paradigm that aims to intervene and transform contexts, in order to enable participants to learn through collective participation in conducting the search.

In our case, we show a change in meanings in relation to the teaching of Libras by professor Akira and the researcher. Previously, they used a method of associations with images and signs and, based on the studies, the construction of the Lepê, and the reflection sessions, they began to question their own actions.

These data lead us to reflect on two points that deserve to be highlighted: the first, it is about the relevant apprehension of Professor Akira about the importance of considering the experiences of the subject at the time of teaching; the second, the media coverage of new meanings in relation to what is around them, providing opportunities for the materialization of thought, which, in the case of people with deafness, will be through Libras.

During this process, Akira and the researcher created Collective Development Zones (NEWMAN; HOLZMAN, 2002) and, through them, they promoted self-knowledge, reconstructed their practices and transformed their meanings, as explained in the previous excerpts and in what follows:

***Akira:** I had a restriction on working with Vigotski. I always found Vigotski difficult, complex and heavy [...]. The readings in Vigotski that we did about thought and language, even the discussions about perijivanie, gave me another perspective on Vigotski [...] The text does not change, but I change from the text [...] When you go back to reading, you get another perspective on the text. I think the texts that we have been using have been very well discussed and the understanding has been particularly good. I am being radiated by the theoretical question. It is very interesting [...] I improved with the process, learned with the process, grew with the process, changed [...] And in the practical line, whether we like it or not, Lepê fills us with hope. Of course, we know that it is essential that there is someone who teaches the language [...] but Lepê it gives me hope. So, Lepê is hope! Hope also that our project will continue. (our translation)*

These reflections bring us the conviction that the collaborative process and the construction of Proximal Development Zones does not mean a 'zone' with the simple mediation of someone more experienced, from a place or instrument, but rather an abstraction, "a space of life" that is inseparable from "we who produce it" (NEWMAN; HOLZMAN, 2002).

Based on the above, we understand that the word 'hope', mentioned by Akira, becomes just a generalization that carries with it the meanings of the entire process, since the development zone created from this study consists of a psychological unit of history and therefore a place of revolutionary activity.

Therefore, relying on Vigotski (1991), again, we state that it is here that the past and the present merge, and the present is seen in the light of history. So, to conclude - in fact, to continue - we use our lines/words, laden with 'liberation':

***Viviane:** In particular, I can say that we know that the imposing need around a community that [...] provides standardized, prejudiced education is one more consequence of all this social wound, of reaffirming current standards [...] That it hasn't changed so much from when I started or you started doing this research, but my senses, I can say they are different, my senses were completely transformed during the research, through my contact with you and the contact with the group as well, in which we create bonds, affections [...].*

***Akira:** We are not the same. That's funny, isn't it? If I take a step, I'm no longer in the same place, right? Someone told me this once and it stuck in my memory. We are not the same ones at the beginning of the research and, therefore, we had the same look of hope that we still have, but now the focus*

is different, the reason is different, the look is different. The same hope that education for the deaf works, that it grows, develops and that we can improve and reach the related objectives, but now the process is different from our beginning back there, at the start of the research. (our translation)

Final considerations

We conclude that, mediated by the collaboration, during the construction of Lepê, important concepts matured between Akira and the researcher about the teaching of Libras for the deaf. Therefore, we understand that this type of dialogue provoked by the construction of Lepê could be an important alternative for thinking about solutions to break with the objective conditions that deaf people experience in their schooling process.

This break with entrenched practices, in addition to the favorable meeting of new practices with Vigotski's ideas, caused participants to become critically aware, not only of the importance of collaborative work, but also of the reconstruction of their actions, causing an externalized motivation in the word 'hope', launched by Akira in the last reflective dialogue, when trying to define what she felt at the end of the reflections.

The constitution of praxis from the opportunity to understand the real through a historical and social dialecticism occurred not only through the relationships established by the researcher and Akira, but also through the understanding of the social and particular place of the other.

We defend this path because, even far from solving all the demands of teachers who teach the deaf and bilingual education in general, during the actions and reflections developed based on critical collaboration, it was possible to create development zones - collective - that walked towards the transformation of those involved, and this process can be an ally in the effective search to build this education.

Therefore, we hope that this perspective, based on critical collaboration, can be seen as a revolutionary day-to-day life for those – more precisely, teachers – who seek an active, social, historical education for the deaf, with otherness and liberating.

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