

Sign Language and Deaf Students in Higher Education in Brazil: A Study of Academic Concepts

Terezinha Cristina da Costa Rocha
Universidade Federal de Minas Gerais (UFMG)

Abstract

In this text are presented and discussed some aspects of the inclusion process for deaf students in higher education in Brazil, as well as some accessibility policies. Then a study will be reported on towards the creation of new signs for the Brazilian Sign Language and aiming at the translation of academic concepts for deaf students. This was a participatory qualitative research, developed at a university in the state of Minas Gerais - Brazil, and had the participation and support of 23 deaf students, some translators, linguists and other professionals. The focus of the study was the negotiation of concepts of Philosophy, considered "more abstract" or intelligible, and a possible visual/signed representation of them. In addition to the knowledge production of the group, the research also resulted in the development of an electronic dictionary of Philosophy in Brazilian Sign Language.

1. Introduction

A series of public policies, social programs and actions have been discussed and implemented in Brazil, aiming to promote accessibility for people with 'special rights'. An example that concerns deaf individuals in higher education in particular is provided by the selection exams for public universities: since 2017, in every country this can be done on a computer, watching video questions made in Brazilian Sign Language (LIBRAS) and responding in Portuguese on paper. And since 2005, when they pass the exams, all deaf students have the right to be accompanied by a professional LIBRAS translator in all classes, free of charge, both in public and private institutions.

Although these and other actions have contributed significantly to accessibility for deaf people in Brazilian higher education, some issues still form a challenge, and cannot always be "solved" with accessibility policies. The linguistic differences and the specificities involving the communication in the classroom are some of them.

In this text, some issues involving inclusion and accessibility for deaf students in Brazilian higher education will be discussed and then a study will be presented. The research addressed the difficulty of translating academic concepts in the classroom,

particularly philosophical ideas, because there were no signs of LIBRAS to talk about them.

The study was developed at a university in the state of Minas Gerais - Brazil. The University has more than 60.000 students, and in recent years has had on average about 40 deaf students enrolled. They all have the right to have LIBRAS translators for all classes, but whenever it was not possible to translate a concept, the translators used to "spell" the word using the 'manual alphabet', as it is written in Portuguese. This strategy was not always understood by the students and generally, according to them, interrupted the way of thinking and the visual construction of ideas. In this sense some questions have arisen, such as: is it possible to visually construct abstract concepts, such as those of philosophy, for sign language? How can we discuss and negotiate the representation of these concepts within the deaf community? Is it possible to create a group and some resource that can support translators and students?

Guided by questions such as these, the present study was developed with the support and involvement of deaf students in a 'qualitative participatory research', which in the end gave rise to a Brazilian Sign Language Dictionary of Philosophy.

2. Deaf students in Brazilian higher education

Brazil has 207.7 million inhabitants, and only 14% have completed higher education. Data from the last Census of Higher Education showed that, in the general population, 7.828.013 students enrolled in higher education courses in the country, which represented an increase of 85.35% compared to 2004, for example. For students with special needs the number was 5.395 and it increased to 33.377 enrollments in the same period, which represents a growth of 618.6% and of this total 5.12% were deaf or hard of hearing students [20].

According to data from the last census of the Brazilian Institute of Geography and Statistics, about 9.7 million Brazilians have some level of hearing loss, representing 5.1% of the Brazilian population [19].

The presence of deaf students, in significant numbers, in Brazilian higher education institutions (i.e. universities, university centers and integrated faculties) is a relatively recent phenomenon. This growth is linked to the expansion of access to higher education in the country, which has been happening only in the last 15 years, both in enrollment and in the number of institutions.

This increase in the number of enrollments, and also in the number of higher education institutions in the country, was based on the implementation of social policies, especially in the early 2000s, of which the main ones were: (a) the Federal University Restructuring and Expansion Support Program (REUNI), which aimed to increase the number of places in public universities (free of charge in Brazil), make the best use of possible idle physical spaces in these institutions, start up evening classes, and encourage actions to reduce the number of "dropouts" (evulsion); (b) the University for All Program (PROUNI), which is a program for granting scholarships to private institutions. In this program students can apply for 50% or 100% of the monthly fee - provided they are in accordance with the established socio-economic criteria - and institutions get discounts in federal taxes to grant scholarships; and (c) the Student Financing Program (FIES), which aims at the installment of long-term tuition debt for students of private institutions [24].

Without deepening the discussion on these policies, which would exceed the limits and possibilities of this text, it is important to point out that for deaf students, who are the "focus subjects" of this study, other actions have also contributed to the expansion of their access to higher education in recent years. Some examples: (a) the Accessibility Law, enacted in the year 2000, which guaranteed, for the first time, the right to a professional translator of LIBRAS, to translate classes to deaf students; (b) the Law on the official recognition of LIBRAS as a language, in 2002, and initiated possibilities for signed communication in many spaces, such as schools; (c) a Decree in 2005, which regulated the LIBRAS Law and determined actions such as training and certification of sign language translators, teaching sign language in all undergraduate courses in the country, the right to communication in LIBRAS in schools and academic spaces, an incentive for the creation of schools with bilingual classes (LIBRAS-Portuguese), among other actions; (d) the National Education Plan (PNE-2014), a social policy that has expressed as one of its goals the offer of bilingual education (LIBRAS-Portuguese) to deaf students; and (e), more recently Law n° 13.409, enacted in 2016, which established the reservation of places for people with special needs in the secondary, technical and higher level courses of the federal [5, 6, 7, 8, 9].

Although the contribution of all these policies is striking, especially as regards the expansion and access of students in general and also to the deaf in higher education, the understanding of issues that arise in the classroom everyday is still not sufficiently evident or understood.

Some of the key issues are barriers in communication and accessibility in sign language in the classroom. The work of sign-language translators alone is not enough to promote accessibility for deaf students. Issues such as the access to new textual genres and, especially, new concepts, which is common in a university environment, are significant challenges for deaf students. Analyzing issues like these, the research problem presented in this article began to be thought about.

3. From schools to universities

Before approaching the academic issues in particular, it is important to analyze, albeit briefly, some aspects of the education of deaf people in Brazil.

Several studies report that most deaf children are born to hearing families, more than 90% in fact [4, 22, 23, 27]. Many of these families, in an attempt to take special care of the uniqueness of their deaf children, decide to opt for the exclusively "clinicopathological" approach and, without success in the "treatments", develop an improvised communication with their children, usually based on combined gestures or orality codes. In this way, these children have access to very little information about the world, often restricted to only the basic necessities of daily family life (dressing, feeding, house rules, etc.), and they depend on adults explaining things relatively simply. For example, it might be explained to them that a friendly person who sees them is their relative, through the conceptual meaning of what it is to be a relative and establishing an improvised "gesture" to talk about it. This linguistic restriction is common for many deaf people who are not children of deaf parents, and hinders the assimilation of habits and information of their social group.

Therefore, when deaf children begin their schooling process, most of them still have not developed a language to communicate and support learning to read and write to the same degree as a hearing child would have at the same age. Thus, the acquisition of language and the acquisition of a first language is a fundamental issue in their inclusion in a literate culture. This process goes along with the construction of the identity of deaf people, which happens through interactions with the other and with the world, and school is an important space for socialization and modeling, especially for children not to see themselves alone, but interacting with other deaf people and other sign language speakers.

In the current context, deaf Brazilian students have the option of studying in: (a) inclusive schools, which are more numerous, since national legislation requires that every school must enroll and ensure accessibility for students with special needs, free of charge; (b) special education schools, which are smaller in number and generally also serve people who have multiple disabilities or people with delicate specificities; and (c) a few schools or bilingual classes for deaf students, which have begun to emerge in some states of the country in the last five years.

However, while schools are beginning to be prepared to include deaf students - by translating lessons into LIBRAS, teaching sign language to teachers and broadening the discussion on bilingual education - in higher education it has not been the same way. Deaf students often encounter other challenges after they overcome school challenges and gain entry to higher education. One of them, analyzed in this study, is: how to understand academic concepts that do not yet exist in the lexicon/representation of Brazilian sign language? This was precisely the point that grounded the realization of this study, particularly philosophical concepts, as will be presented below.

4. The research issue

The initial problem that motivated the research in the first stage was the difficulty of translating philosophical concepts from Portuguese to LIBRAS, especially more abstract ideas, because there were no signs that represented them. This issue arose in 2006, at the university where I graduated in Philosophy and also worked as a translator for the Brazilian Language of Sign.

Because there is a nucleus of support for these students, the place became a space for interaction between the speakers of LIBRAS - the deaf, translators and some teachers - at the university. At some point, it was recurrent that some deaf students asked me about the meaning of terms like 'epistemology' or 'metaphysics'. At that moment, I looked for references or publications on how I could translate, and could not find any.

Other issues that motivated the study were: (i) the quoted significant increase of deaf students in Brazilian universities, which is a possible explanation for some public policies to expand this level of education and also for promulgating the law that guaranteed accessibility to LIBRAS for deaf people; (ii) the increase in the number of deaf students at the university where this study was developed, from 1 to 32. A possible explanation of this may be the well-known translation services for LIBRAS of the institution; (iii) the realization that philosophical issues were addressed in most Brazilian undergraduate courses and this was

perhaps hard for many deaf students; (iv) the approval of a national law in that period, which made teaching philosophy compulsory as part of the curriculum of all secondary schools; (v) the significant number of people with some level of deafness in the Brazilian population, as previously mentioned, which currently reaches 9.7 million [19]; and (vi) my own difficulty in answering the constant questions of my fellow translators on how we could translate some philosophical concepts into Brazilian Sign Language.

With these motivations, which later became the justification for the research, activities were started. The objectives of the study were to analyze, discuss, propose and elaborate new signs for Brazilian Sign Language, in the field of Philosophy, and then to synthesize the results into a resource to share with interested people. The research was developed in several stages, as explained below.

5. Methods

This was a 'participatory qualitative research', which can be regarded as a methodology that argues in favor of the possibility of involving all participants (researcher and researched) in the knowledge production process and the actions must be done 'with' people and not 'on' or 'for' people [13].

To begin the study a long list of terms was assembled, often used in the field of Philosophy. To do this, classic dictionaries were used - for example Abbagnano, Audi, Blackburn, Honderich, Voltaire, Santos, Brugge - as well as classic books of philosophy, notebooks of the classes, web pages, etc [1, 2, 3, 10, 18, 25, 29].

Afterwards, the concern was to know if there existed any sign in the Brazilian Sign Language for each of the terms. They were searched for in LIBRAS dictionaries and glossaries [11, 21, 26] internet pages, other universities that were doing research on the language were also contacted, emails were sent to clubs and associations of deaf and to the association of translators. The terms found could be removed from the initial list, of approximately 340 words. After this search it was possible to remove about 27 terms.

Secondly, a study group was established, attended to by about 23 deaf students, from such diverse courses as Education, Law, Architecture, Linguistic, Computer Science, History, Social Service and Accounting Sciences. What they all had in common was that everyone studied, or had already studied, the discipline of Philosophy I and/or Philosophy II. A group of LIBRAS translators was also invited and about 5 of them participated; two students of the Linguistic course, who were studying Brazilian Sign Language and methodology of mother-tongue teaching, volunteered to contribute; a linguistic professor, who worked with mother-tongue teaching

and translation issues and a professor of Brazilian Sign Language also volunteered. In addition to these internal participants of the institution, invitations were sent to clubs and associations of the deaf, the associations of translators of LIBRAS and also deaf high school students, (all of them sent one or more representatives and they themselves participated sporadically).

6. Results

In the study group, the terms/entries that would be up for discussion were chosen at the start of each meeting. The work methodology was as follows. Initially there was a period of reading about the term from an entry or set of texts made available on that day. During these meetings, a brief presentation could be made about the concept, and, depending on the complexity of the concept and the nature of its subsequent sign, professors of different topics of philosophy were invited to assist us in the discussion process. When this had been covered, we opened a debate and tried to identify the most well-known chains with which the term had become connected. Finally, the deaf members present suggested some signs, always respecting the grammatical parameters of Brazilian Sign Language. Usually it was negotiated in debate which signs best represented each concept. In the absence of consensus, we would vote. To record the result, a description of the movements was written down, according to the grammatical parameters of Brazilian Sign Language, and a video of the sign was made, to add to a collection.

This process lasted just over a year and a half, with one and sometimes two weekly meetings between 2007-2009. The review process occurred between 2010-2014. About 300 new signs were negotiated and elaborated. After completing this stage, the university's television channel registered each sign with better video quality.

To consolidate the resource a "Thematic Dictionary of the Brazilian Sign Language - Philosophy" was created in digital format, with the support of system programmers. The dictionary layout was organized with a list of words on the left, which could also be searched alphabetically and, by clicking on the term, a video with the corresponding sign would be shown. Furthermore, at the bottom of the screen the theoretical justification to which the sign was connected would appear, together with the description of the grammatical parameters of Brazilian Sign Language, formed by combining five "phonologic" parameters: hand configuration, articulation point, orientation, movement and facial expression.

To present an example, of the newly created LIBRAS signs, the 'metaphysics' concept will be shown.

As mentioned before, when it was necessary to translate this concept in the classroom the translators chose the option of "spelling", using the manual alphabet, as follows:



Figure 1. Metaphysics dactylogy

This strategy, however, according to the deaf students' account, promoted a rupture in the construction of signed/visual meaning, although "spelling" (fingerspelling or dactylogy) was important for them to know how to write the word. According to them the iconic, or imagery, representation of a sign and a phrase did not make sense when several letters were suddenly presented. On this question, the translators added that the expression of each letter of a word in the process of dactylogy took a little more time than the expression of a sign and caused a mismatch in translation time. That is, between the listening, understanding, making choices and making the sign.

Thus, returning to the example of the metaphysical lexicon, which had no sign, the translators agreed with the deaf students that whenever the teacher said this word, they would only show the letter 'M' of the manual alphabet, waving a hand in the space ahead to the body, and that would be an "agreement".

The translators said that this strategy, showing only one letter, enabled a better time in which to do the translation and the possibility of translators not missing the next parts of the 'professor's speech', or of other participants. However, these "agreements" were used in a restricted way, only in the translator-student interaction, and this worked differently from one class to another; and also from one professional to another, without overcoming the concern about the construction of meaning.

During group discussions, to prepare the signs, we were tempted to make maximum visual representations, or iconic signs of the concepts. With iconic signs, the signifier makes visual reference to the meaning. For example, the 'to think' signal is represented by the index finger against the upper side of the head. So how could we visually represent a sign for 'metaphysics'?

After many readings and discussions about the concept, the deaf students suggested some options for a sign and the one most voted for was elected:

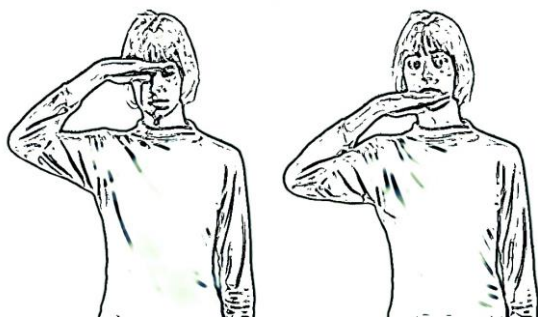


Figure 2. Metaphysics sign

This sign was chosen because it represents an approximation of Aristotle's conception of metaphysics: the first movement represents someone looking down at the "material/physical" things, and in the second movement the gaze is more distant/deep/upward, representing distancing from the physical and contemplating something immaterial/metaphysical. The sign also refers to the way in which Aristotle's study of metaphysics was cataloged, that is, after the studies about physics. This narrative is well known: it is quoted as work done by Andronicus of Rhodes (1st century B.C.) and became popular in the history of philosophy. In this way, the newly created sign represents first something physical and then metaphysics.

At the end of all the processes of negotiating the signs a large seminar was held with the participation of many deaf community representatives. The purpose of the seminar was to present the signs and to know if the speakers of the LIBRAS could agree and "officiate" the new signs.

After publication of the results, this study received an important national award for researchers and this may have contributed to making the dictionary a known resource. Perhaps because of this, the created signs became "popular" and much used by the LIBRAS speakers. Thus, perhaps because of this disclosure, the dictionary has been requested and distributed to many high schools, universities, and translator training courses.

However, it is absolutely clear that a resource and a study like this is only a very small contribution. The inclusion process happens in the daily life of universities and is not restricted to "new resources", this actually involves people and especially social interactions.

7. Future directions and considerations

As mentioned, although this study may have made some contribution to a particular process, there is still much to think about when it comes to promoting accessibility in an academic context. Some years ago, Brazilian universities did not place inclusion at the center of their discussions, perhaps because they did not even have students with special

rights. Due to the achievements of social movements, organized by individuals with special rights themselves and by their families, policies have changed, but within the classroom many issues need to be carefully considered.

Considering the processes of linguistic difference faced by deaf students in universities, currently - based on the New Literacy Studies and ethnographic approach [12, 14, 15, 16, 17, 28], other issues have arisen, such as: How are the negotiation processes around the terms? Is it possible to identify situations of understanding or incomprehension in this context? and: Is it possible to identify within this context that these are practices of literacy? How are the interactions between the deaf and the hearing in the classroom?

These and many other questions make us realize that many reflections and studies on these aspects are still necessary. It is not possible to have a unique model because we are talking about different languages, cultures and people. However, it is possible to engage in dialog with cultural practices, "with" people, not "to" them. Perhaps, in this way, we can be able to democratically deepen inclusion actions.

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9. References

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