

BRAZILIAN SIGN LANGUAGE (LIBRAS) AS A MANDATORY CURRICULAR COMPONENT: A LOOK AT THE CHEMISTRY UNDERGRADUATE COURSES ON THE THREE STATE UNIVERSITIES IN SÃO PAULO

LIBRAS COMO COMPONENTE CURRICULAR OBRIGATÓRIO: UM OLHAR PARA OS CURSOS DE LICENCIATURA EM QUÍMICA DAS TRÊS UNIVERSIDADES ESTADUAIS PAULISTAS

LINGUA BRASILEÑA DE SEÑALES (LIBRAS) COMO COMPONENTE CURRICULAR OBLIGATORIO: UNA MIRADA HACIA LOS CURSOS DE FORMACIÓN DE PROFESORES EN QUÍMICA EN LAS TRES UNIVERSIDADES ESTATALES DE SÃO PAULO

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ABSTRACT: The 5626/2005 Decree establishes Brazilian Sign Language (LIBRAS) as a mandatory curricular component in the Undergraduate Teaching Degree and Speech-Language Pathology courses. This work aims to understand how the three state Universities in São Paulo offer these subjects in Chemistry undergraduate courses. A total of eight courses were analyzed, since, except for Unicamp (University of Campinas), both USP (São Paulo University) and UNESP (São Paulo State University) present this modality on more than one campus. To collect the data, an online survey was carried out on the websites of the universities on the portal of the aforementioned courses, in which class schedules and the Pedagogical Political Project were consulted. To discuss the data, the Bereday method was chosen, going through the stages of definition, interpretation, juxtaposition, and comparison. As the Decree does not establish rules, the research was able to expose how each university developed the discipline and discuss weaknesses and strengths of the chosen methods.

KEYWORDS: Chemistry undergraduate courses. Brazilian Sign Language (LIBRAS). Comparative education. Public policies.

RESUMO: O Decreto 5.626/2005 estabelece a LIBRAS como componente curricular obrigatório nos cursos de licenciatura e fonoaudiologia. Este trabalho objetiva entender como as três universidades estaduais paulistas ofertam a disciplina nos cursos de licenciatura em Química. Foram analisados oito cursos no total, já que, tirando a Unicamp, tanto a USP quanto a UNESP apresentam essa modalidade em mais de um câmpus. Para

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coletar os dados, foi feita uma pesquisa online pelos sites das universidades no portal dos referidos cursos, onde foram consultados os horários de aulas e o Projeto Político Pedagógico. Para realizar a discussão dos dados, foi escolhido o método de Bereday, passando pelas etapas de definição, interpretação, justaposição e comparação. À medida que o Decreto não estabelece regras, a pesquisa conseguiu expor como cada universidade elaborou a disciplina e discutir fragilidades e pontos fortes dos métodos escolhidos.

PALAVRAS-CHAVE: Licenciatura em química. LIBRAS. Educação comparada. Políticas públicas.

RESUMEN: El Decreto 5626/2005 establece la Lengua Brasileña de Señales (LIBRAS) como componente curricular obligatorio en los cursos universitarios de formación de profesores y fonoaudiología. Este trabajo tiene como objetivo comprender cómo las tres universidades estatales de São Paulo ofrecen la disciplina en los cursos de formación de profesores en Química. Se analizaron un total de ocho cursos, ya que, excluyendo la Unicamp (Universidad Estatal de Campinas), tanto la USP (Universidad de São Paulo) como la UNESP (Universidad Estatal Paulista) presentan esta modalidad en más de un campus. Para la recolección de los datos, se realizó una encuesta en línea en los sitios web de las universidades en el portal de los cursos antes mencionados, en que se consultaron los horarios de clases y el Proyecto Político Pedagógico. Para discutir los datos se eligió el método Bereday, pasando por las etapas de definición, interpretación, yuxtaposición y comparación. Como el Decreto no establece reglas, la investigación pudo exponer cómo cada universidad desarrolló la disciplina y discutir las debilidades y fortalezas de los métodos elegidos.

PALABRAS CLAVE: Cursos de formación de profesores en Química. Lengua Brasileña de Señales (LIBRAS). Educación comparada. Políticas públicas.

Introduction

This article seeks to reflect on the historical context that provided the insertion of Brazilian Sign Language (LIBRAS) as a mandatory curricular subject in Teaching Degree courses throughout Brazil and the way in which Decree n. 5626/2005 is materialized in Teaching Degree courses in Chemistry from three public universities in São Paulo.

To start, we will make a brief historical review of the struggle of people with disabilities for their rights, highlighting their achievements and challenges, and focusing on people with deafness. Starting with the Renaissance, when Seneca, a philosopher of the Roman Empire, tells that they killed “[...] the monstrous fetuses and newborns. [...] It is not due to hatred, but to reason, to distinguish useless things from healthy things”. On this statement, Olizaroski (2013, p. 6, our translation) calls attention to a reflection, as this was the fate of many people with disabilities between the 13th and 16th centuries, “if the disabled did not even have the right to life, they would never arrive to have the right to education.”

If until the 16th century recognizing people with disabilities as holders of rights seemed impossible and unlikely, in the 19th century the Brazilian deaf community was able to celebrate a great achievement, at least for men: in 1857 it arrived in Brazil, at the invitation of D. Pedro II, a French deaf teacher named H Ernest Huet, who founded the first school for the deaf here in the country, currently known as INES – National Institute of Education for the Deaf. Huet was adept at sign language, which gave the opportunity for Brazilian deaf people to finally create LIBRAS. However, in the year 1880, the International Congress of Deaf and Mute took place in Milan, where sign language was banned in Europe, and only oral communication was allowed. This decision was accepted by Brazil in 1911, but LIBRAS survived in classrooms until 1957, when it was strictly prohibited (RAMOS; GOLDFELD, 1992).

In the late 1970s, Total Communication was created, which was “[...] the practice of using signs, lip reading, amplification and digital alphabet to provide linguistic inputs for deaf students, while they can express themselves in the modalities preferred” (STEWART, 1993, p. 118, our translation). In 1988, with the Federal Constitution, article 208 guaranteed “specialized educational assistance for people with disabilities, preferably in the regular school system” (BRASIL, 1988, our translation). In 1994, the Salamanca Declaration was adopted, which affirms the importance of sign language for deaf people.

Entering the 21st century, Law n. 10,436/2002 recognizes LIBRAS as the first language (L1) of people with deafness and guarantees bilingual education for the deaf. Decree n. 5,626/2005 regulates Law n. 10,436/02 and establishes the inclusion of Brazilian Sign Language as a mandatory subject in the Curriculum Matrix of Teaching Degree and Speech Therapy courses, also guarantees the student bilingual teachers or interpreters in the classroom, and the extra-time tutoring. In 2008, Decree n. 186/08 came into force, approving the Convention on the Rights of Persons with Disabilities. Finally, in 2010, Law n. 12,319 regulates the profession of translator and interpreter of LIBRAS. Since then, there has been a union of the Universities of the country to contemplate this new change and, little by little, the Teaching Degree and Speech Therapy courses have gained LIBRAS as a mandatory subject in their curricular matrix. In addition, as provided for in the decree, LIBRAS was also an optional subject for other higher education courses.

Throughout its chapters, Decree n. 5,626/2005 does not answer or explain how the discipline should be implemented. There is no mention of the minimum workload, rules that define its objectives, semester of completion, means of evaluation and whether it should be performed in person or online. Santos and Campos explain that "in this way, what can happen

is a trivialization of LIBRAS, so that its teaching only meets what is required by law but does not address the real needs of teachers in formation" (2013, p. 240). This work seeks to show how three state universities in São Paulo have included this discipline in their respective Teaching Degree in Chemistry. Through a comparative study, following the method of the "Total Approach" developed by Bereday (1972), we will study how LIBRAS, as a mandatory subject in undergraduate courses, is currently being offered, so that we can understand a little more about current teacher formation.

Methodology

As a way of methodological development Bereday (1972) presents his method of the "Total Approach" composed of four moments: Description, Interpretation, Juxtaposition and Comparison. The first moment is the description, marked by the detailed description of the collected pedagogical data/facts. It follows from the moment of interpretation, which performs the analysis of data/facts through the methods of different social sciences. The third moment is that of juxtaposition, at this moment the data previously described and analyzed are subjected to a preliminary comparison, their similarities and differences are highlighted and provide the basis for the formulation of hypotheses. At the last moment, that of comparison, comprises the testing of hypotheses with the final fusion of facts and comparative data.

After defining the method of analysis, the three public universities of São Paulo were chosen for this study: the São Paulo State University "Júlio de Mesquita Filho" (UNESP), the University of Campinas (UNICAMP), and the University of São Paulo (USP). The choice was based on what they have in common: they are statewide; are located in the state of São Paulo; they are universities with national and international prestige; they are among the top five universities in Brazil (QS World University Rankings, 2021). Together, they add up to more than 180,000 students. The interest in the Teaching Degree in Chemistry is due to the recent graduation of this researcher as a graduate in Chemistry at UNESP, in March 2020.

Data collection was performed online, analyzing the curriculum of the Teaching Degree in Chemistry courses in seven higher education institutions, four UNESP campuses, two USP campuses and one UNICAMP campus. The research was carried out on the website of each institution and the focuses were: a) semester of application; b) workload c) in person or online format. Simultaneously to data collection, a documental and bibliographic research was carried out, seeking to support the comparison and discussion of the results obtained,

pointing out criticisms, positive and/or negative, regarding the teacher's education in contemporary times. That way we will have all the steps and data that will allow us to present a picture of the implementation of the Decree by the São Paulo universities. But, much more than just guaranteeing what is required by law, we will be able to analyze the formation that has been offered and understand if it is enough to face the real needs of the teacher in the classroom.

According to Silva (2019, p. 3, our translation):

When it comes to Comparative Studies in education, some assumptions motivate the comparison process: academic, political, economic, cultural and social interests, which interrelate and dialogue, helping to build the education process.

The above quote reinforces our objective with the production of this work: to obtain results that allow us to assess the present, understand the situation and awaken to the needs, which may, in some way, help in the construction of a more complete educational process, which enables not only formation for professionals who are prepared to meet a deaf student in the classroom, but who can also guarantee that student a quality education and inclusion in the school environment.

Description

São Paulo State University “Júlio de Mesquita Filho” – UNESP

In 1976, the then Governor Paulo Egydio Martins, in agreement with the Secretary of Education, determined the creation of the São Paulo State University “Júlio de Mesquita Filho” from the union of Isolated Higher Education Institutes of the State of São Paulo. These Institutes were located in different parts of the State and comprised different areas of knowledge.

By the end of the 1980s, UNESP had 14 campuses. There are currently 24 campuses throughout the State of São Paulo, located in the cities of: Araçatuba, Araraquara, Assis, Bauru, Botucatu, Dracena, Franca, Guaratinguetá, Ilha Solteira, Itapeva, Jaboticabal, Marília, Ourinhos, Presidente Prudente, Registro, Rio Claro, Rosana, São João da Boa Vista, São José do Rio Preto, São José dos Campos, São Paulo, São Vicente, Sorocaba and Tupã. In 2019, UNESP offered 136 undergraduate courses, 263 postgraduate courses, and had a total of 53,578 students enrolled between undergraduate and graduate courses.

As in this study we seek to study only the Teaching Degree courses in Chemistry, we will have four UNESP campuses in evidence: Araraquara, Bauru, Presidente Prudente and São José do Rio Preto.

Araraquara

The Institute of Chemistry - Campus de Araraquara offers a Teaching Degree in Chemistry at night, with a minimum duration of five years, and offers 30 places per year. According to the current curriculum structure for freshman students from 2019, the LIBRAS subject is called "Libras, Special and Inclusive Education", held in the 10th period of the graduation (last semester), with a workload of 60 hours and in the format distance learning.

Bauru

The College of Sciences - Campus of Bauru offers the Teaching Degree in Chemistry also at night, with a minimum duration of four and a half years and offers 20 places per year. According to the current curricular structure, the subject is called "Libras, Special and Inclusive Education", it is mandatory, held in the 3rd period (first semester of the second year), with a workload of 30 hours, distance modality.

Presidente Prudente

The College of Science and Technology – Presidente Prudente Campus offers a Teaching Degree in Chemistry at night, with a minimum duration of four years and 40 places per year. According to the current curricular structure, since 2015, the subject entitled "Libras and Inclusive Education" is mandatory, held in the 5th period (first semester of the third year), with a workload of 60 hours, also distance education.

São José do Rio Preto

The Institute of Biosciences, Letters and Exact Sciences – São José do Rio Preto Campus offers a full-time Teaching Degree course in Chemistry, with a minimum duration of four years and 25 places per year. Although the curricular matrix does not show the LIBRAS subject, the current Pedagogical Political Project presents its entire structure, entitled "Libras and Inclusive Education", the subject is mandatory, must be carried out in the 7th period (first semester of the last year), with workload of 60 hours, distance education.

University of São Paulo – USP

Founded in 1934, USP offers 183 options for undergraduate courses, bringing together more than 58,000 students, and 239 postgraduate programs, with approximately 30,000 enrolled students. Currently, the University of São Paulo is responsible for more than 20% of the country's scientific production. The campuses are spread over the cities of Bauru, Lorena, Piracicaba, Pirassununga, Ribeirão Preto, Santos, São Carlos and São Paulo.

The two campuses that offer the Teaching Degree in Chemistry are Ribeirão Preto and São Paulo.

Ribeirão Preto

The College of Philosophy, Sciences and Letters of Ribeirão Preto offers a Teaching Degree in Chemistry with a minimum duration of five years, at night. The current curriculum presents the LIBRAS subject called “Introduction to Brazilian Sign Language”, mandatory, with a workload of 30 hours, held in the 10th period (second semester of the last year), in person.

São Paulo

The Chemistry Institute of the University of São Paulo offers a Teaching Degree course in Chemistry at night, with an ideal duration of five years, or a full course, with an ideal duration of four years. According to the current curriculum, both the evening and full-time courses have the subject “Special Education, Education for the Deaf, Brazilian Sign Language”, mandatory, with a workload of 60 hours, held in the 8th period, in person.

University of Campinas – UNICAMP

Founded in 1966, Unicamp offers 65 options for undergraduate courses and 158 postgraduate courses, bringing together 37,670 enrolled students. There are four cities that host the campuses of the State University of Campinas: Campinas, Limeira, Piracicaba and Paulínia. The Teaching Degree in Chemistry is offered by the Campinas campus (Barão Geraldo).

Campinas

Unicamp's Chemistry Institute offers a full-time Teaching Degree in Chemistry, with a minimum duration of four years. The LIBRAS course is entitled “LIBRAS and Education for

the Deaf”, mandatory, with a workload of 60 hours, held in the 7th period (first semester of the last year), in person.

Unifying the data

For a better analysis of the data collected with the online survey, we chose to create a graphic in order to favor a comparative analysis between the offer period, the course load of the discipline and the form of offer. Below we have Table 01.

Table 1 – Data from the Libras discipline of Teaching Degree courses in Chemistry at the three state public universities in São Paulo

University	Period	Workload	In person
UNESP			
Araraquara (Night)	10°	60 hours	No
Bauru (Night)	3°	30 hours	No
P. Prudente (Night)	5°	60 hours	No
S. J. do Rio Preto	7°	60 hours	No
USP			
Ribeirão Preto	10°	30 hours	Yes
São Paulo (integral)	8°	60 hours	Yes
São Paulo (Night)	8°	60 hours	Yes
UNICAMP			
Campinas	7°	60 hours	Yes

Source: Devised by the authors

From the analysis of the table above, it is possible to infer that five of the eight courses offer the LIBRAS discipline in the last year of graduation; that only UNESP Bauru and USP Ribeirão Preto offer the subject with a workload of less than 60 hours; that the four UNESP campuses offer the discipline in the distance learning modality, while USP and Unicamp work in the in person format.

Comparison

We will start this analysis by comparing the topic “period” in Table 1. Most courses choose to offer LIBRAS in the last two years of graduation, but two UNESP campuses place the subject in the initial years, which is the case of Araraquara and Bauru. There is nothing in the official documents that mentions the semester in which the discipline is offered, so we can say that there is no right or wrong. The political pedagogical projects of the UNESP courses clarify that the Dean's Office is responsible for thinking and carrying out the LIBRAS discipline, thus, the distance learning material offered is the same for all campuses of São Paulo State University, with tutors who help in reflections and discussions, and evaluate student activities. We believe that, for this reason, the UNESP campuses have semesters interspersed in the performance of the discipline, since the tutors team needs to help many students and here we are only talking about the Teaching Degree in Chemistry. At USP and Unicamp, those responsible for LIBRAS may be from different colleges, such as Education or Speech Therapy.

Focusing on the column “Hours”, UNESP Bauru and USP Ribeirão Preto are the only campuses that offer the discipline with a workload of 30 hours. As previously mentioned, the Decree neither stipulates nor suggests a workload. Personally, we believe that the minimum workload for this subject should be 60 hours, as in the other six institutions mentioned here. In the description of the discipline, the three universities present as topics to be studied: history of the deaf community, history of LIBRAS, laws and policies, and LIBRAS itself. In summary, we present here at least four complex and profound topics, which can hardly be worked on in 30 hours. Besides that, much more than learning the signs, it is necessary to practice the Sign Language.

The last, but not least, item in Table 1: the “in person” category. USP and UNICAMP offer the discipline in the in person mode. The four UNESP campuses offer distance education. We understand that, as a way of standardizing and guaranteeing discipline for all campuses, UNESP's measure was to make distance learning and unify the material. The other Universities, which have Colleges of Education and/or Speech Therapy in their headquarters, are able to offer LIBRAS in person. It should be said here that we do not want to delegitimize distance learning, but we believe that on-site education provides much more experiences, exchange, dynamism, practices, conversations, curiosities, interactions, and so a list of the infinite possibilities of the classroom follows. Such notes have already been investigated, one of the works found is by Santos *et al.* (2015, p. 219, our translation) who in their studies

showed that "the teaching provided in this way tends to be simplified, with a focus on theoretical contents and that value a more individualized and autonomous teaching of the student".

In general, the three Universities have a very similar teaching plan for LIBRAS, regardless of their workload, semester and form of application. The assessment methods are not very different either, nor are the names of the subjects themselves. The objectives that are described in the PPP of each course are very similar. What is incumbent on us now, in light of these results, is to try to understand whether the way in which the discipline is being designed and offered by Universities has had a result for graduates who work in the labor market.

We also know that the subject has become a mandatory curricular component so that students can learn about the topic and get to know other realities, which can open doors to creativity and learn a little more about diversity and inclusion. We are not here blaming the University for not granting formation for the bilingual student, because the school must offer a LIBRAS translator for the deaf student, but we are concerned with the deaf student-teacher interaction and with the awareness of this teacher about the struggle of the community that your student is part.

Conclusion

The aim of this article was to compare the LIBRAS disciplines of the three state public universities in the state of São Paulo, showing how they are offered: semester, workload and in-person or online modality. The results were compiled and displayed in Table 1, where we were able to analyze each topic and conclude that, although the discipline does not present itself in the same way among the Universities, they are quite similar in their goals and ideas.

Even though the Decree does not mention details of the discipline, UNESP, USP and UNICAMP seem to have the same purpose in mind and, despite having reservations about some particularities, we understand that the three are seeking the same path for their students. So, what could be complementary to the curriculum of these students? Numerous authors report and defend the importance of a supervised internship. Oliveira and Mourão (2012) report the supervised internship specifically carried out with deaf students and demonstrate how important it was for the academic to have this contact, how much it reinforced LIBRAS learning, provided new vocabularies, increased interest in the language and enabled the contact with the methods and classroom adaptations.

No subject has the power to prepare a student one hundred percent for life outside the walls of the university, but they guide, and the internship would be essential for professionals in formation to have contact with reality and thus be better prepared for the class and for the day-to-day with the deaf student.

Finally, Decree no. 5,625/2005 was an extremely precious achievement for the deaf community, having LIBRAS as a mandatory curricular component is not only transformative but also revolutionary. The way it is offered today may not yet be ideal, but we can get there. At the end of the research, only the question remains: is the deaf student the only student that the teacher can find at school? How many subjects should undergraduates actually take in order to be prepared for the surprises in the classroom? The answer: we do not know. But being a teacher is teaching and learning, the important thing is never to stop studying, to adapt, to never stop fighting.

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