

THE LIBRAS DISCIPLINE OFFERED IN THE SCIENCE AND BIOLOGY  
TEACHER TRAINING CURRICULA OF PERNAMBUCO

*DISCIPLINA DE LIBRAS OFERTADA NOS CURRÍCULOS DE FORMAÇÃO DE  
PROFESSORES DE CIÊNCIAS E BIOLOGIA DE PERNAMBUCO*

*LA DISCIPLINA DE LAS LIBRAS OFRECIDA EN LOS PROGRAMAS DE  
FORMACIÓN DE PROFESORES DE CIENCIAS Y BIOLOGÍA DE PERNAMBUCO*



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**How to reference this paper:**

BARROS, F. P.; OLIVEIRA, D. P.; ARAÚJO, G. C. The Libras discipline offered in the science and biology teacher training curricula of Pernambuco. **Revista Ibero-Americana de Estudos em Educação**, Araraquara, v. 18, n. 00, e, e023017, 2023. e-ISSN: 1982-5587. DOI: <https://doi.org/10.21723/riace.v18i00.16264>



| Submitted: 15/02/2022  
| Revisions required: 23/05/2022  
| Approved: 10/10/2022  
| Published: 01/01/2023

**Editor:** Prof. Dr. José Luís Bizelli  
**Deputy Executive Editor:** Prof. Dr. José Anderson Santos Cruz

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**ABSTRACT:** This study aimed to identify the supply of the discipline Libras in the Pedagogical Projects of Courses (PPC), as well as the period, workload and menus of the courses of the Undergraduate Degree in Biological Sciences of public and private Higher Education Institutions (HEIs) of Pernambuco. In this descriptive research, by means of document and content analysis, the PPCs and the course descriptions were searched in the websites of the HEIs that offer the Undergraduate Biological Sciences courses in the state. This research showed that of the 11 higher education institutions surveyed, only 5 (which were public) made available the course menus that offer the discipline of Libras in the curriculum. In the analysis, it was found that issues such as the historicity and culture of the deaf in education, as well as legislation about Libras in the Brazilian educational system, are mentioned more frequently in the analyzed menus.

**KEYWORDS:** Biological Sciences. Higher Education. Libras.

**RESUMO:** Este estudo objetivou identificar a oferta da disciplina Libras nos Projetos Pedagógicos de Cursos (PPC), bem como o período, carga-horária e ementas das disciplinas dos cursos de Licenciatura em Ciências Biológicas de Instituições de Ensino Superior (IES) públicas e privadas de Pernambuco. Nesta pesquisa de caráter descritivo, por meio de análise documental e de conteúdo, foi realizada a busca dos PPC e das ementas nas páginas das IES que ofertam os cursos de Licenciatura em Ciências Biológicas no referido estado. Esta pesquisa evidenciou que das 11 instituições de ensino superior pesquisadas, apenas 5 (sendo essas públicas) disponibilizaram as ementas dos cursos que ofertam a disciplina Libras na matriz curricular. Nas análises realizadas, constatou-se que assuntos como a historicidade e a cultura dos surdos na educação, bem como legislações acerca da Libras no sistema educacional brasileiro, são mencionados com maior frequência nas ementas analisadas.

**PALAVRAS-CHAVE:** Ciências Biológicas. Ensino Superior. Libras.

**RESUMEN:** Este estudio tuvo como objetivo identificar la oferta de la disciplina Libras en los Proyectos Pedagógicos de Cursos (PPC), así como el período, la carga de trabajo y los menús de las disciplinas de los Cursos de Pregrado en Ciencias Biológicas de las Instituciones de Educación Superior (IES) públicas y privadas de Pernambuco. En esta investigación descriptiva, mediante el análisis documental y de contenido, se realizó la búsqueda del PPC y los menús en las páginas de las IES que imparten las carreras de Licenciatura en Ciencias Biológicas en ese estado. Esta investigación mostró que de las 11 instituciones de educación superior encuestadas, sólo 5 (que eran públicas) proporcionaron los menús de los cursos que ofrecen la disciplina Libras en el plan de estudios. En el análisis, se encontró que temas como la historicidad y la cultura de los sordos en la educación, así como la legislación sobre Libras en el sistema educativo brasileño, son mencionados con mayor frecuencia en los menús analizados.

**PALABRAS CLAVE:** Ciencias Biológicas. La Educación Superior. Libras.

## Introduction

Learning the Brazilian Sign Language – Libras is essential not only for people with hearing impairments or deaf people, but also for everyone who is part of their life, including teachers. However, Libras was only recognized as a legal means of communication and expression from Law No. 10,436, of April 24, 2002 (BRAZIL, 2002).

Still according to this law,

[...] the federal educational system and the state, municipal, and Federal District educational systems must ensure the inclusion in the Special Education, Speech Therapy, and Teaching courses, in their medium and higher levels, of the teaching of the Brazilian Sign Language - Libras, as an integral part of the National Curriculum Parameters - PCN, according to the current legislation (BRASIL, 2002, art. 4º, our translation).

Santos and Campos (2013) emphasize the importance of Law nº 10.436/02 (BRAZIL, 2002) for Brazilian education. However, for these authors, this Law was only consolidated by means of people who believed in the importance of education for the hearing impaired/deaf. Thus, based on this Law, we can highlight that teacher training courses should provide the theoretical and practical foundation of Libras, enabling the future teacher to understand this component, so that together with the knowledge obtained in theory and in pedagogical practice, they can work in Basic Education.

According to the fourth general competence of Basic Education of the Common National Curricular Base (BNCC in the Portuguese acronym), it is necessary that teachers use

[...] different languages - verbal (oral or visual-motor, such as Libras, and written), body, visual, sound and digital -, as well as knowledge of artistic, mathematical and scientific languages, to express themselves and share information, experiences, ideas and feelings in different contexts and produce meanings that lead to mutual understanding (BRAZIL, 2018, p. 9, our translation).

The fragment above makes it clear that the BNCC embraces and recognizes the importance of different languages in the education of students in Basic Education. Thus, the inclusion of the discipline Libras in undergraduate courses, in addition to ensuring what is advocated by Law No. 10,436/02, allows an inclusive education, with the training of teachers capable of teaching people with hearing impairment/deafness, for example (DIAS, 2018), therefore, making effective the inclusion of people with disabilities in schools.

The school, parents, and even the community have great influence in preparing children and young people to live with diversity based on inclusion (VINÃL JUNIOR; BENTO, 2020).

However, we cannot fail to mention that the initial construction of teachers, including those who are able to work towards inclusion in the classroom, involves knowledge about the pedagogical part, as well as knowledge related to each area of knowledge (GUIMARÃES, 2009).

Given the importance of proper training of graduates, who will work in Basic Education, in the specific case of this study those of Biological Sciences, in addition to the reflections of this training for the quality of the teaching-learning process in this modality, some knowledge become essential for this proper training and, among them, we can list Libras.

Libras is a subject that has relevance in undergraduate courses in Brazilian HEIs (RECH *et al.*, 2019). Specifically in undergraduate courses in Biological Sciences, Libras can be taught as a compulsory and/or elective subject, and studying it enables future teachers to communicate in this language, and thus promote the social inclusion of the hearing impaired/deaf, besides allowing the elimination of barriers in communication between teachers and students in the classroom. Given this, this discipline within the higher education course enables the use of signs to elaborate accessible content and new techniques for interdisciplinary approaches (ABREU *et al.*, 2019).

With an average duration between 3 and 5 years, in general, each undergraduate course in Brazil has its own curricular matrix. These courses are offered in colleges, university centers and public and private universities, both in face-to-face and distance learning (DL) modality, and according to the 2019 Education Census, the undergraduate courses concentrated approximately 12.8% of the enrollments in face-to-face and 36.7% in DL education (INEP, 2019).

Based on these first considerations, this research aims to describe the supply of the discipline Libras in the Pedagogical Projects of Courses (PPC), as well as the period, workload, and menus of the disciplines of the Undergraduate courses in Biological Sciences of public and private Higher Education Institutions (HEIs) of Pernambuco.

## Methodological procedures

This research is descriptive in nature, conducted through documentary analysis (BOGDAN; BIKLEN, 2010). Regarding the documentary research, Gil (2017) clarifies that this type of research uses data that will be treated analytically, according to the objectives of the study, such as the systematization and analysis of the PPC used in this investigation.

Qualitative research is characterized by the understanding of something accompanied by doubt, despite theories for the substantiation of a particular object of study (MINAYO, 2001). With this, the perspective of content analysis was adopted, since it was necessary to describe and analyze the contents of the data from the documentary research from the systematization of the information obtained in the investigation, which enabled the reflections and inferences about the object of study of this research (BARDIN, 2011).

This study was conducted in four stages. In the first stage, a survey of public and private HEIs in Pernambuco was conducted in the National Register of Courses and Institutions of Higher Education - e-MEC<sup>4</sup>. Subsequently, we visited the institutional websites of these HEIs to verify which ones offered undergraduate courses in Biological Sciences. Then, a survey of the PPCs and the menus of the courses of the undergraduate programs in Biological Sciences of the selected institutions was carried out on the websites of these HEIs. In a third step, a preliminary analysis of the contents of these official curricular documents was performed, with special attention to the identification of the discipline Libras. In this step, information such as the names of the HEIs, campuses and municipalities that offered the undergraduate courses in Biological Sciences, periods and course hours of the discipline Libras were selected. The search and extraction of this information was done only by one of the authors of the article.

Finally, in a fourth step, and after the selection of official curriculum documents that fit the study objective, we developed a qualitative analysis of the data from the menus of the discipline Libras of the selected HEIs. From this systematization performed via content analysis, it was possible to generate the following category of analysis, namely: a) What do the menus of the Undergraduate Degree Programs in Biological Sciences of public and private HEIs in Pernambuco have to say about Libras?

According to Bardin (2011), this category refers to the description of data and the interpretation or analysis itself.

<sup>4</sup> Available at: <https://emec.mec.gov.br/emec/nova>. Access: 10 Aug. 2022.

## Results and discussion

Libras is a language that covers the gestural mode and vision of values, in which it is possible to communicate through gestures and facial expressions, facilitating the exchange of information between hearing impaired/deaf individuals and / or listeners. However, to effect this communication, a grammatical structure is required, as well as dialects that undergo modifications in certain regions of the country (COUTO; RUBIO, 2014).

In Brazil, the Constitution of the Federative Republic of Brazil of 1988 (BRAZIL, 1988), in its articles 205 and 208 (item III), and Law No. 9.394, of December 20, 1996, the Law of Directives and Bases of Education - LDB (BRAZIL, 1996), in its articles 4, 58, 59 and 60, guarantee people with disabilities the right to equality and opportunity in the educational process. However, it was only after the growing social mobilizations that the cause of the hearing impaired/ deaf people gained national relevance. In 2002, Law nº 10.436 was sanctioned (BRAZIL, 2002), which recognized Libras as a legal means of communication and expression. In 2005, through Decree No. 5.626 (BRAZIL, 2005), Libras was included as a curricular subject. Thus, the Law brings in its article 3 that

[...] Libras must be inserted as a mandatory curricular discipline in teacher training courses for the exercise of teaching, at medium and higher levels, and in Speech Therapy courses, of public and private educational institutions, the federal education system and the education systems of the States, the Federal District and the Municipalities. § 1 All undergraduate courses, in the different areas of knowledge, the normal high school course, the normal higher education course, the Pedagogy course, and the Special Education course are considered training courses for teachers and education professionals for the exercise of teaching. § 2 The Libras will constitute an optional curricular discipline in other courses of higher education and professional education, from one year of the publication of this Decree (BRAZIL, 2005, our translation).

In 2015, the Brazilian Law of Inclusion of the Person with Disability (*Estatuto da Pessoa com Deficiência*), Law No. 13.146 (BRAZIL, 2015), was instituted, which aims in its Article 1, "[...] to ensure and promote, in equal conditions, the exercise of rights and fundamental freedoms by people with disabilities, aiming at their social inclusion and citizenship. Regarding the rights to education, the aforementioned Law, in its Article 27, states that

[...] education is the right of the person with disabilities, ensured by an inclusive educational system at all levels and learning throughout life, in order to achieve the maximum possible development of their talents and physical,

sensory, intellectual and social abilities, according to their characteristics, interests and learning needs (BRAZIL, 2015, our translation).

In its Art. 28, it also states that

[...] The government is responsible for ensuring, creating, developing, implementing, encouraging, monitoring and evaluating: IV - offer of bilingual education, in Libras as a first language and in the written modality of the Portuguese language as a second language, in bilingual schools and classes and in inclusive schools; XII - offer of teaching of Libras, of the Braille System and of the use of assistive technology resources, in order to expand students' functional abilities, promoting their autonomy and participation; XIV - inclusion in curricular contents, in higher education courses and in technical and technological professional education, of themes related to the person with disabilities in the respective fields of knowledge (BRAZIL, 2015, our translation).

In this sense, it can be stated that these laws are important to positively pressure the schooling of hearing impaired/deaf students (and also with other disabilities) in Brazil, in addition to strengthening commitments signed in favor of the inclusion of people with disabilities in Brazilian education (CASTRO, 2011; SANTOS; CAMPOS, 2013; ROCHA-OLIVEIRA; DIAS; SIQUEIRA, 2019).

From the analyses of the PPCs and the menus of the Undergraduate Biological Sciences courses of two federal HEIs in Pernambuco (Federal University of Pernambuco - UFPE and Federal Rural University of Pernambuco - UFRPE), one state HEI (Universidade de Pernambuco - UPE) and five private HEIs (Faculdade Estácio, Centro Universitário Brasileiro - UNIBRAS, Universidade Paulista - UNIP, Centro Universitário Joaquim Nabuco - UNINABUCO and Faculdade Maurício de Nassau - UNINASSAU), it was found that all these HEIs offer the subject Libras as a requirement in their curricula. Thus, all these HEIs are complying with the Brazilian laws regarding the mandatory supply of the discipline Libras in undergraduate courses.

Regarding the offered period of the discipline Libras, 40% (n=4) of the HEIs analyzed in this study offer the discipline in the 8th period of the course, 20% (n=2) in the 3rd period, 10% (n=1), in the 5th, 6th, 9th, and 10th period respectively, and one course did not include this information in its PPC (Chart 1).

**Chart 1** - Information on the degree courses in Biological Sciences at public and private HEIs in the Brazilian state researched

HEIs		Campus/Municipality	Term offered of the discipline Libras	Workload
Federal HEIs	UFPE	Centro Acadêmico de Vitória/Recife	8º	60 h
	UFPE	Centro de Biociências/Recife	6º	60 h
	UFRPE	Campus Dois Irmãos	10º	60 h
State HEIs	UPE	Multicampi Garanhuns	8º	60 h
	UPE	Campus Mata Norte/Recife	8º	60 h
	UPE	Campus Petrolina	8º	60 h
Private HEIs	Estácio	Polo Recife	5º	36 h
	UNIBRAS	Polo Recife	9º	40 h
	UNIP	EaD Brasil	-	20 h
	UNINABUCO	Polo Recife	3º	60 h
	UNINASSAU	EaD Brasil	3º	60 h

Source: Prepared by the authors

As observed in this study, Libras courses are mostly offered in the last periods of the undergraduate courses in Biological Sciences at the institutions analyzed, which is in accordance with what is recommended by Reich *et al.* (2019), who recommend that the subject not be offered in the first periods of undergraduate courses, because for the authors

[...] When dealing with an undergraduate course and, therefore, of future teachers, to introduce the Brazilian Sign Language and the deaf universe, it is essential a minimum understanding on the part of undergraduates about their role and function as professionals in education [...]. It is necessary a basic understanding of the field of education and its operation as a whole so that undergraduates have a basis to see themselves minimally as teachers; as teachers of deaf students, therefore, and their functions within the school context [...] (REICH *et al.*, 2019, p. 166, our translation).

The subject Libras is offered in 60 hours in 72.7% (n = 8) of the undergraduate courses in Biological Sciences analyzed in this study, with 9.09% (n = 1) in 20, 36 and 40 hours, respectively (Chart 1). Given these data, it can be seen that there is no consensus among the institutions and courses of Biological Sciences analyzed in this study regarding the workload

of this discipline. On this issue, Adams (2017) found in his study that the definition of the workload of the discipline Libras is at the discretion of the undergraduate courses themselves, where greater or lesser importance is given to this discipline for teacher training.

According to Reich *et al.* (2019, p. 161), "Libras is a language and, like any other language, cannot be learned effectively in just one semester - it is essential that the subject assumes a training character. Thus, it should be noted that the continued study of a particular language, such as Libras, for example, becomes indispensable, since it takes time to reach high levels of reading and speaking. Moreover, depending on the amount of time, Libras may not be learned by all students who study the subject in their undergraduate courses. Still on this issue, Reich *et al.* (2019) state that the discipline of Libras in the undergraduate courses of a Brazilian public institution analyzed by them should comprise a workload of at least 72 hours, with a distribution of 36 hours in theoretical classes and 36 hours in practical classes.

Thus, we understand and advocate that, for a greater knowledge about Libras in education, in this case, in higher education, it is necessary that it has a workload above 60 hours in the curricularization of the course, since it will provide students with greater contact and knowledge about the specifics of this language, as well as the regulations that guide its use in Brazilian education. We also advocate that the subject be worked on transversally with the other curricular subjects. This is important to expand the possibilities for more students and teachers to know and understand the importance of Libras in the academic and even non-academic environment.

Of the total of 11 undergraduate courses in Biological Sciences in public and private HEIs analyzed in this study, which offer Libras, in only five institutions, all public, we had access to the course menus (Chart 2). Specifically for these HEIs, we emphasize the importance of making it clear how the discipline of Libras is being worked in the curricula of undergraduate courses, because otherwise, this gap can be understood as a reflection of a polarization.

In this regard, although Libras has had its recognition as an official language of people with hearing impairments/deafness in Brazil, in recent years there has been a polarization between those who advocate educational alternatives that unite hearing impaired/deaf and listeners, and those who advocate a specific space for hearing impaired/deaf students (SOARES; BAPTISTA, 2018).

On the other hand, from the analysis of these menus, it can be seen that students of the undergraduate courses in Biological Sciences at the selected institutions in Pernambuco, when studying the discipline Libras, will have information about the history and socioeducational and

cultural trajectory of the education of the hearing impaired/deaf and Libras, legislation, linguistic and grammatical structure, as presented in Chart 2.

**Chart 2** – Information on the menus of the undergraduate Biological Sciences courses at public and private HEIs in Pernambuco

HEI		Campus/Municipality	Course Program
Federal HEIs	UFPE	Centro Acadêmico de Vitória/Recife	Hearing impairment and education for deaf people: its socio-educational trajectory, history and policy in Brazil; Teacher training and its relations in teaching practice in the context of inclusion; the bilingual practice in the education of deaf students; writing, speech and signs; linguistics in LIBRAS; Theory of translation and interpretation; Basic dictionary of LIBRAS; manual alphabet; grammar of LIBRAS.
	UFPE	Centro de Biociências/Recife	Reflection on historical aspects of the inclusion of deaf people in society in general and in school; the Libras as a language of social communication in a context of communication between deaf people and as a language. Linguistic and grammatical structure of Libras. Specificities of the deaf student's writing in the production of text in Portuguese language. The interpreter and interpretation as a factor in inclusion and educational access for deaf students or students with low hearing.
	UFRPE	Campus Dois Irmãos	Historical studies of Deaf Education and Libras. Legislation and accessibility in the area of deafness. Acquisition of language of the deaf. Basics of the linguistic structure of Libras and its grammar. Specificities of the written text production of the deaf
State HEIs	UPE	Multicampi Garanhuns	The education of the deaf in its historical and cultural process. Study of the structure of Brazilian Sign Language for functional communication between listeners and deaf people in language teaching and their respective literatures. The education of the deaf in its historical and cultural process. Study of the structure of Brazilian Sign Language for functional communication between listeners and deaf people in language teaching and their respective literatures.
	UPE	Campus Mata Norte/Recife	Not available.
	UPE	Campus Petrolina	The education of the deaf in its historical and cultural process. Study of the structure of the Brazilian Sign Language for functional communication between listeners and deaf people in language teaching and their respective literatures.
Private HEIs	Estácio	Polo Recife	Not available.
	UNIBRAS	Polo Recife	Not available.
	UNIP	EaD Brasil	Not available.
	UNINABUCO	Polo Recife	Not available.

	UNINASSAU	EaD Brasil	Not available.
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Source: Prepared by the authors

As such, it should be considered in these analyses that the recognition of Libras as an official language of people with hearing impairments/deaf in Brazil has provided a greater dissemination of its presence in Basic and Higher Education, also indicating that greater investments are needed regarding the training of trained professionals who are able and able to teach Libras both in Basic Education and in HEIs (SOARES; BAPTISTA, 2018). However, it is still not enough to make the undergraduate courses that offer it in their curricula make it clear and publicize how this subject is taught in undergraduate courses, as shown in Chart 2.

Moreover, according to the Brazilian Institute of Geography and Statistics (IBGE), 61.1% of people with disabilities have no education, or have only complete elementary school; 14.2% complete elementary school and incomplete high school; and only 6.7% have higher education (IBGE, 2010). Resources, especially constructivist and methodological ones, are constantly pointed out as barriers for the admission of students with disabilities in HEIs (OMOTE, 2016).

Thus, for this category to be able to take full advantage of educational and teaching resources, basic education schools and HEIs need to fit into the requirements involving the promotion of inclusive education, as well as provide support to the entire community with disabilities (CABRAL; ORLANDO; MELLETI, 2020), and this also falls on the proper training of the undergraduate student to work with this specific audience. Thus, the offer of the discipline Libras in teacher training courses is essential for the inclusion that is expected in Brazilian education: an inclusion that combats any and all types of discrimination and devaluation of the individual who has some type of hearing impairment/deafness.

Moreover, strengthening inclusion, it is important and necessary that public policies be developed, reviewed and updated, seeking to contribute to the improvement of the teaching and learning process of hearing impaired/deaf students, considering their reality, besides being guided by the respect for people with some kind of disability (VINÃL JUNIOR; BENTO, 2020). We may also emphasize that the teacher, by adopting the sign language in his treatment with hearing impaired/deaf students, will strengthen the bond between teacher and student, besides enabling a greater autonomy and placing this student as the center of his own learning.

## **Final remarks**

For a good training of education professionals, it is necessary to ensure that future teachers have pedagogical knowledge and knowledge related to the specific area of their training. In addition, in a plural world such as ours, knowledge of an inclusive nature is also necessary. Thus, learning Libras in undergraduate courses can contribute to better teacher training, including for science and biology teachers. But for this, greater investments and incentives are needed, and the subject should be taught with a workload greater than 60 hours in the HEIs in the state of Pernambuco, the focus of this study, as well as in other Brazilian HEIs.

Studying Libras during graduation will allow the undergraduate student to enter the universe of sign language, even if initially, but already ensuring the necessary inclusion, so important and desired nowadays and recommended by Brazilian laws. However, it is recommended that teachers invest in continuing education in Libras, which will qualify them for a better performance and work with sign languages, both in Basic and Higher Education. This research also showed that of the 11 HEIs that offer the discipline Libras in Biological Sciences courses in Pernambuco, only five, which are public, made available the menus of this discipline in the curriculum. Thus, we can say that this factor was something that limited the knowledge of what was included in the menus of the other courses that offered the discipline Libras in undergraduate courses in Biological Sciences in Pernambuco. Thus, it is recommended that the menus, particularly of disciplines in Libras, are better publicized in HEIs in the state and also in Brazil.

Studies such as this one allow us to describe how the discipline Libras is found in the curricula of undergraduate courses that offer this discipline in Brazilian HEIs. In addition, they are a way to expand a little more knowledge about inclusive education and ensure the guarantee of public policies in favor of hearing impaired/deaf people in Brazil.

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### **CRedit Author Statement**

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**Acknowledgments:** Not applicable.

**Funding:** None.

**Conflicts of interest:** None.

**Ethical approval:** Not applicable.

**Data and material availability:** Not applicable.

**Authors' contributions:** The author **Fellipe Pereira Barros** was responsible for the conception, data collection and analysis, discussion of results, and drafting/editing the manuscript. The author **Deyla Paula de Oliveira** was responsible for the conception, data collection, data analysis, orientation, discussion of results, drafting/editing and revising the manuscript. The author **Gustavo Cunha de Araújo** was responsible for data discussion, drafting/editing, and revising the manuscript. All authors approved the final version of the paper.

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**Processing and editing: Editora Ibero-Americana de Educação.**  
Proofreading, formatting, normalization and translation.

