

**DIFFICULTIES IN READING, WRITING AND NUMERACY IN HIGHER EDUCATION: DISCUSSIONS ABOUT THE REPRODUCTION OF SOCIAL INEQUALITIES**

***DIFICULDADES DE LEITURA, ESCRITA E NUMERAMENTO NA EDUCAÇÃO SUPERIOR: DISCUSSÕES ACERCA DA REPRODUÇÃO DAS DESIGUALDADES SOCIAIS***

***DIFICULTADES DE LECTURA, ESCRITURA Y NUMERACIÓN EN LA ENSEÑANZA SUPERIOR: DISCUSIONES SOBRE LA REPRODUCCIÓN DE DESIGUALDADES SOCIALES***

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**ABSTRACT:** This article aims to understand how social inequalities cause difficulties in reading, writing, arithmetic and how these social issues are transformed into supposed clinical-biological diagnoses in higher education students. The methodological outlines involve a case study of a student referred to the speech therapist for clinical evaluation. The data demonstrate that the academic difficulties of university students are considered “alterations of a pathological nature” because they reflect mechanisms of maintenance and reproduction of social inequalities. The University, for its part, is unable to make the institutional pedagogical support account for the academic difficulties, due to the specificities of the undergraduate course. From this, it is concluded that a possible path to be built in the context of Higher Education is to (trans)form the courses from the perspective of Universal Design for Learning (UDL).

**KEYWORDS:** Mathematics. Writing. Reading. Literacy. University.

**RESUMO:** *Este artigo objetiva compreender como as desigualdades sociais originam dificuldades de leitura, escrita, aritmética e como essas questões de ordem social são transformadas em supostos diagnósticos clínico-biológicos em estudantes da Educação Superior. Os contornos metodológicos envolvem um estudo de caso de uma estudante encaminhada para a clínica fonoaudiológica para avaliação clínica. Os dados demonstram que as dificuldades acadêmicas da universitária são consideradas como “alterações de cunho patológico” por que refletem mecanismos de manutenção e reprodução de desigualdades sociais. A Universidade, por sua vez, não consegue fazer com que o apoio pedagógico institucional dê conta das dificuldades da acadêmica, devido às especificidades do curso de graduação. A partir disso, conclui-se que um possível caminho a ser construído*

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*no contexto da Educação Superior seja (trans)formar os cursos a partir da perspectiva do Desenho Universal para a Aprendizagem (DUA).*

**PALAVRAS-CHAVE:** *Matemática. Escrita. Leitura. Letramento. Universidade.*

**RESUMEN:** *Este artículo tiene como objetivo comprender cómo las desigualdades sociales causan dificultades en la lectura, la escritura, la aritmética y cómo estos problemas sociales se transforman en supuestos diagnósticos clínico-biológicos en estudiantes de Enseñanza Superior. Los esquemas metodológicos implican un estudio de caso de un estudiante referido a la clínica de logopedia para evaluación clínica. Los datos demuestran que las dificultades académicas se consideran “alteraciones de naturaleza patológica” porque reflejan mecanismos de mantenimiento y reproducción de las desigualdades sociales. La Universidad, por su parte, no puede hacer que el apoyo pedagógico institucional tenga en cuenta las dificultades académicas, debido a las especificidades del curso de pregrado. A partir de esto, se concluye que un posible camino a construir en el contexto de la Enseñanza Superior es (trans)formar los cursos desde la perspectiva del Diseño Universal para el Aprendizaje (DUA).*

**PALABRAS CLAVE:** *Matemáticas. Escritura. Lectura. Literacidad. Universidad.*

## Introduction

The requirements in the field of literacy practices in graphocentric societies are also constantly changing, since they accompany this economic-political and social development (NORONHA, 2019). With the scientific-technological advances that are occurring in our society, the domain of reading, writing and arithmetic become factors that influence the indicators considered as determinants in the development or not of a nation (UNESCO, 2016).

Thus, there is concern in quantifying the functional domains of reading, writing and numeracy practices by national and international organizations and institutions, which promote discussions about literacy and its social expressions (CAVACO, 2008; RODRIGUES, 2014). The censuses of the Brazilian Institute of Geography and Statistics (IBGE, Portuguese initials), through the National Household Survey (PNAD, Portuguese initials), indicate that Brazil has been reducing the illiteracy rates of the population aged 15 or over. Over the past few years, there has been a significant reduction, showing that it went from 12.4% in 2001 to 8.7% in 2012 (IBGE, 2012). But the data is still not satisfactory, as it reveals that there are still 13.2 million illiterates in the country (BRASIL, 2014). And despite the advances, educational differences are still significant when compared between the regions of the country, reflecting socioeconomic differences (IBGE, 2012).

Currently, the two main national indicators in which data related to university students are observed are: the Functional Illiteracy Indicator (INAF, Portuguese initials), which aims

to analyze the functional domains of the Brazilian population in terms of reading, writing and numbering; and the Scientific Literacy Indicator (SLI), which aims to “determine different levels of mastery of literacy skills in the use of language and concepts in the field of science in the daily lives of Brazilians” (IBLC, 2018, p. 5, our translation).

According to INAF (2018), the rate of people aged 15 to 64 who are functionally literate is high (71%), however, only 12% of the population is considered fully literate. In addition, at the University, although 96% of academics are considered functionally literate, only 34% of students have reached the proficient level, that is, they master the reading, writing and numeracy practices required by the level of education. According to the SLI (2018), only 5% of the Brazilian population has proficient scientific literacy. And, in relation to Higher Education, only 23% of academics reach the level of proficiency.

From this context, public access policies (BRASIL, 2007; 2010; 2012), as well as Public Inclusion Policies in the Inclusive Education Perspective (BRASIL, 2008), sought to democratize access to higher education to an extensive population segment that previously had no opportunity to enter and remain in this educational segment. Thus, although the last decade has been marked by the increase and expansion of courses and institutions of Higher Education and by changes in the forms of entry, if before only a minority managed to enter this level of education, there is now a contingent of students, with educational trajectories and distinct socioeconomic conditions, which modified the profile of Universities.

Consequently, difficulties are observed that until recently were hardly noticed: difficulties in arithmetic, lack of prior knowledge about the contents, few reading, writing and numeracy practices, difficulties with academic genres (abstracts, reports, final course assignment etc.), economic and cultural issues that influence permanence in institutions. In addition, educational institutions show actions based on the concern to serve the target audience of Special Education and those with previously neglected diagnoses, such as Specific Learning Disorders.

In the medical literature, evidenced by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (APA, 2014), “Learning Disorders” are a category of clinical diagnosis that describe the diagnostic and intervention processes in three main linguistic-cognitive impairment: difficulty with emphasis on writing (dysgraphia, dysortography), difficulty with emphasis on reading (dyslexia), and difficulty with emphasis on arithmetic (dyscalculia). In order for these diagnoses to be affirmed by competent professionals, there is a need to rule out a number of factors: poor literacy; family, emotional and health problems; cognitive-linguistic

impairments (like other disabilities); in addition to performing intensive therapeutic intervention without any evolution in learning.

These impairments, in turn, are understood as a “hidden audience” in educational institutions, and are defined within another large category, the so-called Specific Functional Disorders (hereinafter SFD). These are not understood as the target audience of Special Education but have specificities that are not considered within institutional actions to promote literacy practices. Therefore, SFD comprise people with dyslexia, dysortography, dysgraphia, dyscalculia, auditory processing disorder (central) - APDC, attention deficit hyperactivity disorder - ADHD, challenging-opposing disorder - COD (DONIDA, 2018).

Despite the specifications described in the literature, it is seen that many diagnoses end up being trivialized due to the lack of understanding about social aspects that influence the practices of Literacies and also in the formal school learning of individuals in our society. What is observed are diagnoses that are socially constructed from discourses (of teachers, colleagues, family members) within educational institutions and that aim to justify difficulties that would be “individual”, as well as justify the “failure” of student in the face of “not learning” (ELIASSEN, 2018). Thus, problems arising from social inequalities, from individual differences, from the standardization of human heterogeneity, are defined, classified, labeled, medicated and "remedied" in the context of the definitions of illnesses (diseases).

This theme brings up an important discussion about terms such as academic success and failure, in which students with reading, writing and numeracy difficulties who enter Higher Education end up suffering a process of “exclusion”, as there are still few actions in the academic environment to support these students (DONIDA; SANTANA, 2019). It is also observed that theoretical-epistemological aspects have been little discussed, such as the impact of literacy practices in the construction of academic difficulties.

The practices of reading, writing and orality are discussed by Street (2014), who defines them as social literacy practices. For the author, the social practices of using reading, writing and orality are multiple and depend on the historical and cultural context, as well as on the observation of how people use them in a given context. In other words, there is no social practice that overlaps the others. According to Donida *et al.* (2019), literacy practices would also involve signaling practices, that is, there is recognition of social practices in sign languages in parallel with orality practices in our society. These social practices, therefore, are functional practices for the subjects, which departs from the concept of functionality used by national indicators of functional literacy, for example.

In this sense, numeracy practices are also understood as those that are contextualized from a historical moment, defined within a given culture, as a manifestation of this, bringing to light all the historical and cultural artifacts of a given community. Numeracy is the social uses and expressions of these practices that use other signs to express acts in society (SILVA, 2012; D'AMBRÓSIO, 2018). Based on the above, the recognition of the social practices of reading, writing, speaking/signaling and numeracy are important sources of research to observe the difficulties presented by schoolchildren or academics and that reveal insufficient teaching and learning strategies to achieve the demands expected by educational institutions.

Based on the above, the present study aims to answer some questions, such as: Are educational difficulties obstacles that accompany participants since school or arose after entering the University? What were the literacy and numeracy practices before entering the Higher Education institution? And after? How did the family organize themselves in relation to the social practices of reading, writing, arithmetic and orality? Based on the above, the objective of this research is to understand how social inequalities cause difficulties in reading, writing, arithmetic and orality and how these social issues are transformed into supposed clinical-biological diagnoses in higher education students.

### **Methodological outlines**

This research is a case study involving a university student who sought the Speech Therapy School Clinic of the Federal University of Santa Catarina from the referral of other health professionals to conduct a speech evaluation due to academic difficulties. Her complaints for referral referred to an alleged diagnosis of dyscalculia, in which it reverberates in her statements:

*In anatomy I almost failed because we have dental anatomy, which is by number. In the test you see a tooth and say what number it is. And several times I wrote the opposite: if it was 16 I wrote 61. I did this inversion, but when I wrote it I saw it as if it were correct. I don't know how this is because I was tense or how much of a problem it is. And I realize that I had a lot of problems with numbers, inverting, doing this frequently, when I worked in a dental office and we had to organize the folders by the numbers on the medical records [...]. For example, the [anatomy] part of the heart, I switch very right and left [...]. (our translation).*

After that, a thorough investigation was carried out with the student, using the following instruments: i) Semi-directed interview; ii) Use of the Reading and Writing Habits Questionnaire (developed by the Study Group on Language, Cognition and Education -

GELCE, UFSC<sup>3</sup>); iii) Speech therapy clinical evaluation from an Enunciative-Discursive Neurolinguistics perspective (SENHORINI *et al.*, 2016; SANTANA; PIMENTEL, 2017).

The following were held: one session for jointly completing the questionnaire, lasting one hour; an interview session, lasting one hour; two sessions for speech therapy evaluation, lasting one hour each. The sessions were recorded in audio and later transcribed. The speech therapy evaluation was carried out in the GELCE room, located at the Health Sciences Center (CCS/UFSC).

To preserve the participant's identity, the fictitious name Alice will be used. The participant signed the Free and Informed Consent Form registered with the Ethics and Research Committee of the Federal University of Santa Catarina (CEP-UFSC) under number 55663716.7.0000.0121.

The data were analyzed based on the Sociology of Education by Pierre Bourdieu. Therefore, this is a movement that proposed a praxiological theory, an alternative path, which aims to analyze how the external social structures are internalized by the subjects and represented and reproduced by them in practice (NOGUEIRA; NOGUEIRA, 2014).

The concepts of **capital** that permeate the works of Pierre Bourdieu reflect how the structuring of capital is differentiated and is related to some specific social components. To this end, it defines four types: cultural capital, social capital, economic capital and symbolic capital.

According to Bourdieu (2012), the family is an institution that transmits to the descendants a certain **cultural capital**, that is, all the cultural and social symbolic goods that are transmitted are seen as a capital, which can be profitable (that is, valued socially, such as reading a particular book, appreciating a particular work of art) or discredited (making use of a particular reading, writing or numeracy practice that are not seen by people of higher socioeconomic classifications as being valuable<sup>4</sup>). An important data about a specific component of cultural capital is the information that is passed on about the structure and functioning of education systems (BOURDIEU, 2012)<sup>5</sup>.

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<sup>3</sup> This questionnaire is not yet published and is still being adapted based on research developed by the GELCE research group.

<sup>4</sup> This type of capital, in turn, manifests itself in three other forms: the incorporated state, the objectified state and the institutionalized state. The first, the **incorporated state**, concerns the **culture** to which the subject has his socialization in his first moments of life, incorporating himself and orienting his actions on the world, his language, his knowledge, his ideologies, his tastes. The **objectified state** starts to identify materialized, objectified possessions, having a character of belonging to the subject, such as books, films, pictures, etc. The **institutionalized capital or state**, in turn, refers to the acquisition of educational certificates or diplomas, granting a certain appreciation or social prestige to its holders and aspirants (BOURDIEU, 2012).

<sup>5</sup> Bourdieu (2012) becomes one of the main scholars who set out to observe how culture becomes a mechanism of **symbolic violence**, how social inequalities are maintained, especially in the face of educational institutions,



**Social capital** is described as a set of resources (linguistic, economic, material) that make people identify themselves as belonging to a certain social group, sharing certain beliefs, attitudes, tastes. **Economic capital** refers to financial income, profitability of labor, market shares, etc. Finally, **symbolic capital** is translated into the social prestige that the subjects have in relation to a certain field and can make use of social, economic and/or cultural capital (BOURDIEU, 2012).

Thus, we make use of a theoretical-methodological conception that understands the educational system as unequal, as a reproducer of social structures/classifications and that understands that the subjects' forms of socialization obey certain rules depending on the social group they belong to. In this way, the valuations given to education, how much is invested in it and how it occurs will vary depending on issues related to capital, be it economic, cultural, social or symbolic (BOURDIEU, 2012; 2011[1984]; BOURDIEU; PASSERON, 2014 [1964]).

## **Results and discussion**

Initially, it is relevant to point out that the data will be presented here in a succinct manner, given the need for adequacy for publication. Therefore, some clippings were made and it was decided to reveal and describe an overview of the case to the reader. As for the speech therapy assessment, it ruled out linguistic-cognitive impairments, however, it provided subsidies for thinking about both clinical and educational practices from the demand for this service by students with difficulties. From the above, some reflections on the case researched will be described.

The participant of this research, Alice, at the age of 27, decided to enter the Dentistry course at a federal University in southern Brazil. Briefly about her history, the student comments that she lived in the interior of the state located in the southern region of the country and had to move to the capital to be able to study.

Regarding the family, Alice mentions that her mother attended the 4th grade (currently the 5th year of elementary school), later completing her studies through Youth and Adult Education (EJA, Portuguese initials). The mother accompanied her throughout the journey, and they have no contact with the father. Alice also has two younger brothers, who have also decided to pursue their studies.

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how occur the struggles between social classifications, how and why they happen in a certain way and not in another and what are the structures, the dispositions, that influence the subjects/actors in their actions on the world, on the constitution of social fields and how they also guide their practices.

*My mother always encouraged me [to study]. The other people in my family... is like... you don't need to study. Because in my family, those close to me, like my first cousins, I am the first to enter college, the others did not want to study. They was more concerned with working. [...] [About the EJA course] I remember that I went to school with her [mother] because she had no one to leave me with. Then I was there in the other room, while she was having class. Then my mother would sometimes take a picture and send it to the group [of the family on WhatsApp]. So now she left the group because they [the family] think she wants to show off, that she has no need to study. My mother, who always worked hard for me to study because she was a housekeeper when she was a child and she also worked in a lumber mill. So she didn't want me to have this life and that's why we left there [the countryside]. Then I did my high school in Curitiba and then I came here (our translation).*

Alice reveals that she likes to read and has no difficulties, but these practices are focused on fun/leisure and to learn about religion. She claims that she reads mainly printed materials, with religious and educational genres being the most widely read throughout her life. In addition, other practices were described: reading pamphlets, plaques, children's magazines and science fiction, poetry, personal notes. However, when reading practices turn to academic materials, difficulties arise. The student reveals that she often reads the same text excerpt, that she uses study strategies such as the use of highlighters, abstracts, files, but that, even so, during the course evaluations, she ends up confusing some information or realizing that she did not understand content right.

During her childhood, the university student comments that there were mediation practices performed by her mother, when reading books borrowed from the school for her. The student also comments that she asked questions about the meaning of words and other questions, but that, after being literate, she started to study alone, without seeking help from other people. As for writing practices, Alice reveals that she does not like writing and her practices are restricted to academic work, personal reminders and to send a message to someone. During schooling, her mother and stepfather helped her with writing and mathematical calculations and she also wrote more diverse genres due to academic obligations.

After entering the University, however, her practices were reduced to academic activities and religious studies. But the difficulties she points out, relate to the difficulty in starting writing, organizing and finalizing the ideas in the text. In addition, she heard negative comments about her writing, her drawing of the letters throughout her life, just as no one encourages her to write.



Regarding the numeracy practices, Alice comments that she never had difficulties, since her school education did not “demand so much”. Her search is revealed by the fact that she changes the laterality of numbers and this is becoming very problematic in her course: she needs to prescribe medication and analyze the number of teeth and, because of this, she has been suffering reprisals from fellow students and teachers. Therefore, the search for the diagnosis of "dyscalculia" arose, a diagnosis that, possibly, would assist in her academic evaluations, removing the "burden" of "failure" that labels her until then. The referral reinforced by other health professionals inculcates in her the idea that her difficulties cannot be “normal”, they must be a “problem”. Regarding her difficulties, she reports that:

*I always had a hard time, I think. I only realized in college, because it was easier at school. Because at school the demands were lower. At school they had a lot more works, the tests were easier... There were subjects that I didn't study. Mathematics, I have had problems like this since the 8th grade... I never got it right [mathematics], to tell you the truth. In high school I had almost no teacher, because it was a public school. [In the 2nd grade of HS] the teacher [of mathematics] called my mother at school and the teacher was defending me to my mother: 'No, but she is a good student, she just has this difficulty. Don't rant with her, she sits here in the front, she doesn't talk'. Then I had to do reinforcement for a while. [...] When I went back to the course, on the first day of class the teacher gave a calculation and asked: 'what do you have to do here?' And general? 'lcm!'. And I didn't remember what lcm was! You know, the meaning of the word lcm, which was the least common multiple. And at home, people were not very good at math, nor was my mother good at math, and my stepfather knew simple calculus because he worked at a bus station selling tickets. So I didn't have to do high calculations like that. I didn't have much help at home. [...] Portuguese I was better, but now that the rules have changed I don't know how to write anymore (our translation).*

According to Bourdieu (2012), after entering Higher Education, there is a selection that is uneven and the “failures” would be more concentrated on students who have not inherited the cultural capital required by educational institutions. Thus, if at school they trace a median or above-average trajectory - as in the case described here, it is at the University that social inequalities and the heterogeneity of cultural transmission mark the distinction between academics. Thus, there is the selection of a culture that is considered legitimate and worthy of being transmitted, reproduced by education, becoming a currency of exchange that is held and distributed unevenly among social classifications (LAHIRE, 2008) and serves to maintain privileges of the social order. Therefore, educational institutions (school, University) would include students and keep them inside, even if they were already destined for failure. In other words, because they are not part of that required culture, students with difficulties would be somewhat excluded/marginalized.

In this sense, it is understood that the reading, writing and numeracy practices to which the student was exposed were not sufficient to prepare her for academic requirements. The mediations revealed by the participant, especially in relation to writing and numeracy, turn out to be succinct and scarce. These data can also be observed in another study by Donida (2018), which points out that the writing practices in University students who seek speech therapy are incipient and disregarded in the academy, since the writing of specific genres of undergraduate courses is prioritized due to the new social position the student occupies. Thus, although university students have different literacy practices, these are not enough for the difficulties related to differences in the contribution of cultural and symbolic capital to be perceived and become distinguishing factors, which, in this case, was translated as possible “pathological change”.

It is also perceived that both at the University and at school, certain symbolic domains of language would be instituted that would induce the teacher to evaluate, consciously or unconsciously, the student according to his linguistic repertoire, his *habitus*, his posture in the classroom, their ability to respond to the school/university game. This demonstrates that there is a vision of “good reader”, “good writer” and “good student” as the one who masters all the reading and writing practices imposed by the academy and has all the necessary knowledge for that particular field (BOURDIEU; PASSERON, 2014 [1964]; BOURDIEU, 2012)<sup>6</sup>.

Thus, social inequalities do not fail to mark the academic trajectories of these students, observed from the difference in cultural capital (BOURDIEU, 2012; BOURDIEU; PASSERON 2014 [1964]). Language as a cultural capital is reaffirmed by Bourdieu (2012) who reiterates that those coming from popular classifications end up failing in educational institutions, since they do not master the practices required in this context, which require a different cultural background and a linguistic repertoire which does not match the reality of those less disadvantaged. This would reflect on the quality of the student's trajectory, which also has difficulties with the language used by the teacher (BOURDIEU; PASSERON, 2014 [1964]). Language in this context is seen as an instrument of cultural domination and symbolic violence by the dominant classes towards the dominated classes. In the case of Alice, this distinction puts her in a delicate situation with teachers and colleagues:

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<sup>6</sup> “[...] the linguistic habitus refers to the set of dispositions acquired during a process in which one learns to speak in specific contexts (with family, friends, superiors and subordinates etc.). These dispositions lead the social agent to speak in a certain way (maintaining a specific relationship with the standard language and showing a certain accent, for example). In addition, these provisions constitute one of the dimensions of the body hexis, and also concern the way in which the mouth, lip, tone of voice, among others, are used in linguistic interactions, which implies a style, as well as the appreciation of that style (beautiful, ugly, elegant, inelegant, feminine, masculine, etc.)” (ALMEIDA, 2002, p. 19, our translation).

*So far it was pathology, but now we have a subject that I understand better. It's just that story... I think I understand, but then when I go to study it seems that it is not right. [...] And when you have to memorize a lot. For example, we had a subject of therapeutics... Therapeutic I was almost reprovado! Because therapeutics had some things that were anesthetic calculus and I had attended a lecture that I understood the calculus, but the teacher explained it in a different way and he confused me a lot and then I did not know how to calculate what he said, I know the calculation of the lecture, which was simple... And the proof of it was that you remember the name of the medication... it was just memorization... It had the name of the medication and dosage and it was a lot of medication... And I couldn't remember it... And he put some medication that the dentist doesn't usually use, so I was like 'I don't know'. Or else I got the medication right and missed the dosage. [...] It is more difficult to ask the teacher for help. Sometimes I ask for help from the monitor or from a colleague who understood better than me. [...] There is a teacher who seems to intimidate you. So, if you ask a question, he already looks at you with a face like 'Are you stupid? Don't you know that?' This happened to some teachers... it even happened to one here and it made me very angry... because I asked her like that and she said: 'But are you going to get a patient and you won't know?'. The desire I had was to look at her face and say: 'But I'm not in front of a patient, teacher. I'm asking you!' [...] The relationship with my colleagues... doesn't really exist. In fact, I have a friend, who is the one who was reprovado with me... [...] Then, in other courses, I usually don't talk to anyone. Dentistry by itself, when you fail, you end up being friends with those who failed, because the people in the classes are very closed, they already have groups [...] and you can hardly insert yourself in an already closed group (our translation).*

**Social fields** are spatial abstractions that define positions and relationships in which specific agents/subjects act. That said, it is understood that there are several fields in society and they can assume hierarchical positions in social classifications, of greater or lesser power, being historically constructed and situated (BOURDIEU, 2012). The Dentistry course, for example, occupies a place historically built and demarcated by a clinical-biological perspective. Therefore, the insertion of the student in this context requires acculturation. In other words, Alice needs to mobilize strategies to overcome her difficulties and adapt to the requirements of the course. It turns out, these strategies are resources learned from the mobilization of a certain type of cultural and symbolic capital that were not transmitted to them - the game of strategies to insert oneself in this social field was not the cultural heritage that she held (BOURDIEU, 2012). Regarding the uses of reading and writing, Bourdieu (2011 [1984]) points out that each university field determines the values of reading and writing practices, the more or less literary stylistic uses, more or less neutral and endowed with technical rigor and that they also circumscribe the subject's position within this field.

The fact is that those included remain in this system for a longer time, without, however, being able to ascend socially. They are the so-called **potentially excluded**, that is,

they are included in an educational system that tends to exclude them while the demands, the habitus, of educational institutions are close to that of the elites (BOURDIEU, 2001). Thus, the distancing of Literacy practices adopted by the University from those experienced in the family and school context and the modes of reproduction that perpetuate meanings about the *modus operandi* of educational institutions, increasingly alienate students who feel unprepared for this new situation of interaction and use of language (BOURDIEU; PASSERON, 2014[1964]). It is in this context that the Brazilian educational system also finds itself reproducing social inequalities, even when, in the heart of Higher Education, it is discussed about the inclusion of the “excluded”.

To meet the demands in view of the difficulties of staying at the institution and to reduce repetition and dropout, the National Student Assistance Program (PNAES) advises that Universities offer educational support (BRASIL, 2010). This “solution” is proposed in order to reduce the academic difficulties originated from different transmissions of cultural capital from these new students who enter Higher Education. However, Alice reveals that she is unaware of the pedagogical support work at the institution where she attends. And more: she recognizes that in her course there is no “general” support that can help her, since there are specificities that are specific to this field of university knowledge and that are not contemplated in workshops or general extensions aimed at the entire academic community. It is reiterated that there are monitoring actions in its course, however, it is believed that when the academic refers to “general support”, it is denoting that the difficulties go beyond a purely pedagogical character, obstacles that were mentioned above.

Despite the lack of knowledge, the clinical conduct after the speech-language assessment was to refer this student to the educational support of the institution, since her difficulties did not fall within the scope of clinical care, making herself available for joint actions and partnerships with pedagogical support and course coordination. It is relevant to emphasize that Speech Therapy has a specialty that is responsible for acting in the educational environment: Educational Speech Therapy. This professional can work in Higher Education, integrated with institutional teams, with the objective of proposing and developing strategies and actions that aim to improve the quality of permanence and educational trajectory of students, reducing dropout and adapting the teaching and learning processes (DONIDA; SANTANA, 2019). The institution to which the university is affiliated, however, does not have an educational speech therapist who works in Pedagogical Support, only in the Accessibility Center. Despite this, it is believed that this professional could promote actions

that address the specificities of the courses and the difficulties found in the heart of the present University (DONIDA; SANTANA, 2019).

In this sense, it is understood that for education to be inclusive, that is, to contemplate all differences and diversity found within educational institutions, it is necessary that new teaching and learning practices be adopted within the institution. In the meantime, it is conceived that Universal Design for Learning (UDL) emerges as a theoretical-epistemological instrument that aims to favor learning opportunities for all, in a collaborative process of teaching and learning between students and educators. Through strategies, practices and the development of efficient materials, methods and assessments, it offers educators an inclusive proposal that enhances the capacities and skills of each student. Thus, it minimizes “the barriers in the academic path of students with and without disabilities, not hierarchizing or privileging a single way of learning and, with that, creating flexible learning environments for students and teachers” (BOCK; GUESSER; NUERNBERG, 2018, p. 145, our translation).

Based on what Rose and Meyer (2002) propose about the principles of UDL, that each student have their own affective networks ("reason" to learn), recognition networks ("what" to learn) and strategic networks ("how" to learn") (CAST, 2018). In addition to the production of all material and pedagogical tools, the focus of UDL learning is on the student and his learning process, starting from the development of his skills both collectively and individually. For that, it is necessary that the teacher is attentive to the different learning needs of each student, I understand them from a heterogeneity of knowledge, experiences and how to expand this knowledge that students bring to school. Making the learning objectives clear, that is, from where you want to start to where you want to go, allows you to generate an expectation in the student that he will be able to achieve this goal from the different strategies used in this process (HOLLAND, 2014). It can be seen that the participant of this research could have improvements in her academic performance, based on what she mentions:

*Listening I understand better than just reading. I have to read the same thing over and over to understand. I have to do notes to study or there are some subjects that have the script. Then my script is all scribbled, because based on what I have to study, I end up writing over it, making arrows, using highlighters, things like that. When it is text that the teacher assigns, I prefer to print it to read it than read it on the computer, because then I can scribble it out. During classes, when there is a teacher who assign the material, I end up listening more than writing. When the teacher doesn't make it available, I end up writing more, writing down what he said, so that I can look in the book for something similar later. When I don't do that, I have more difficulty.*

With a UDL perspective, students could be offered improvements in teaching and learning processes, reduced dropout rates, increased quality in formation, decreased emotional problems among academics, among others. However, as Noronha (2019) points out, health courses are still in an embryonic phase when the subject refers to changes in curricula and in teaching and learning processes. According to the author, Digital Literacy - which are reading, writing and speaking/signaling practices used and promoted since the advent of Digital Communication and Information Technologies (DICTs) - is still little explored. Researches focused on the use of digital literacies (podcasts, e-Learning platforms, Youtube, Virtual and Augmented Reality, gamification, among others) are also few and incipient, revealing even a lack of knowledge in the health area about this theme.

The burden, however, lies in how these changes could be implemented in the institution. For teachers who have just joined, there is the possibility of formation through courses offered by the University. However, for many, there is still ignorance and prejudice about the difficulties present in the teaching environment: mechanisms for maintaining and reproducing social inequalities. According to research by Santana et al. (2017), there are professors in Higher Education who believe that students targeting Special Education or with Specific Functional Disorders should not have access to undergraduate courses. Or, still, they consider that the difficulties are restricted to “laziness” on the part of the academic and that their practices, evaluations and teaching and learning methodologies should not be modified in order not to be “privileging” one or another student.

In order to observe which practices are considered important in a given context and how they are constituted, it must be considered that there are different modes of cultural transmission, that there are social inequalities and that different forms of access and appropriation of written language can lead to exclusion from the educational system (BOURDIEU, 2012). Thus, when a university student does not master the expected reading, writing, speaking and numeracy practices, he may be marginalized and even excluded within the institution. Especially because the academic environment itself is configured according to its specificity and requires mastery of certain practices to the detriment of others. The challenge, therefore, is to consider this profile and think of strategies for permanence, for repair.



## **Final considerations**

This study aimed to understand how social inequalities cause difficulties in reading, writing, arithmetic and orality and how these social issues are transformed into supposed clinical-biological diagnoses in higher education students. Knowing that the difficulties are structural in our society and educational institutions reproduce ways of maintaining inequalities, this case study aims to reveal some mechanisms that permeate academic life and that are not (yet) perceived as forms of exclusion at the University.

From this, the case of student Alice reveals that her educational difficulties proved to be an obstacle to her studies after entering Higher Education. The complaint that justifies referral to a clinical speech therapy assessment refers to an alleged diagnosis of “dyscalculia”. However, after careful evaluation of her life trajectory, it was observed that her difficulties are, above all, a reflection of the social inequality that our country still faces: few significant teaching and learning practices during the school period; lack of teachers; deficits in basic school content; socioeconomic difficulties; distance with the acculturation of Literacy practices required at the University. It is also notable that the cultural capital transferred by the family was not enough for Alice to develop strategies to insert herself in the field of knowledge she entered: Dentistry. As a result, the maintenance of hierarchies of symbolic power (and, in a way, symbolic violence) by teachers and colleagues is also revealed.

Thus, there would be a need for changes in the structural structures of the educational institution, which support the reproduction of forms of exclusion. These changes could occur from the adoption of the Universal Design for Learning (UDL), in several senses: starting from the faculty of the course for curricular, teaching and learning changes; coordinating the course for curriculum restructuring and teacher formation; University, at the institutional level, restructuring curricula, formation of teachers and technicians, forming new proposals for actions that would meet the specific demands of each course, etc. However, knowing that social inequality is a structural problem in our society, there is a need for further research to be undertaken in depth to reveal what are the intrinsic mechanisms of each course that make the exclusion of students still something in force.

Thus, understanding and problematizing these issues in Higher Education is the main contribution of this work. This work is not expected to account for all the complexity of this academic universe, which is heterogeneous in its constitution, but rather, to provide subsidies for research that understand the difficulties of university students and not reduce them to merely medicalizing/biological issues.

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