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# Strategies for reading in the process of establishing blind readers in Higher Education

*As estratégias para ler no processo de constituição do leitor cego no Ensino Superior*

*Estrategias de lectura en el proceso de constitución de lectores ciegos en la Educación Superior*

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## Abstract

For students to succeed in higher education, they must understand reading as a meaning-making activity that underpins learning. In this regard, like any other student, blind students also need to feel included in the academic discourse community, and this inclusion is, to a large extent, shaped by their development as readers. The central aim of this study, therefore, is to analyze how blind students relate to reading, describing the strategies they use to comprehend texts. To this end, we draw on theoretical frameworks from Inclusive Education to reflect on the experience of blind individuals in higher

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education, as well as from Text Linguistics and Discourse Analysis to explore reading from that perspective. The research follows a qualitative approach, and data were collected through semi-structured interviews with four blind students identified in the Student Management System of the State University of Montes Claros (Unimontes), where the study was conducted. During the interviews, participants were encouraged to share their reading experiences in higher education and to reflect on their reading trajectories within academic discourse. The results show that blind students gradually develop as readers in higher education, relying heavily on technology and specific reading strategies, such as frequently using the internet to support their background knowledge during the reading process.

Keywords: Reading strategies. Blind student. Reading. Higher level education.

## Resumo

*Para que o acadêmico seja inserido no Ensino Superior, faz-se necessário que ele perceba a leitura como uma atividade de atribuição de significados que funda a aprendizagem. Nesse sentido, como qualquer outro estudante, o acadêmico cego também precisa sentir-se incluído no domínio discursivo acadêmico e essa inclusão é perpassada, em boa medida, pela sua formação como sujeito leitor. Logo, estabelecemos como objetivo central dessa pesquisa analisar a relação dos acadêmicos cegos com a leitura, descrevendo as estratégias para ler de que se utilizam para a compreensão textual. Para tanto, partimos do aporte teórico da Educação Inclusiva, para pensar as pessoas cegas no âmbito do Ensino Superior, da Linguística Textual e da Análise do Discurso para discutir a leitura a partir dessa perspectiva. Para o alcance dos objetivos, adotamos uma abordagem qualitativa e a coleta de dados ocorreu por meio de entrevistas semiestruturada realizadas com quatro estudantes cegos identificados no Sistema de Gestão Discente da Universidade Estadual de Montes Claros — Unimontes, lócus desta pesquisa. Nas entrevistas, os acadêmicos foram estimulados a narrar experiências leitoras no Ensino Superior, oferecendo o seu entendimento sobre a sua história de leitura nesse domínio discursivo. Os resultados demostram que o acadêmico cego se constitui leitor no Ensino Superior progressivamente a partir do uso massivo da tecnologia como estratégias para ler e o uso de estratégias de leitura que adota, como a recorrência da internet para alicerçar o conhecimento prévio na leitura.*

***Palavras-chave**: Estratégias para ler. Estudante cego. Leitura. Ensino Superior.*

## Resumen

*Para que el estudiante sea incluido en la Educación Superior, es necesario que conciba la lectura como una actividad de atribución de significados que fundamenta el aprendizaje. En este sentido, al igual que cualquier otro estudiante, el estudiante ciego también necesita sentirse incluido en el ámbito discursivo académico, y dicha inclusión pasa, en buena medida, por su formación como sujeto lector. Por lo tanto, establecemos como objetivo central de esta investigación analizar la relación de los estudiantes ciegos con la lectura, describiendo las estrategias para leer que utilizan para la comprensión textual. Para ello, partimos del marco teórico de la Educación Inclusiva, con el fin de reflexionar sobre las personas ciegas en el contexto de la Educación Superior, así como de la Lingüística Textual y del Análisis del Discurso para discutir la lectura desde esta perspectiva. Para alcanzar los objetivos, adoptamos un enfoque cualitativo y la recolección de datos se realizó mediante entrevistas semiestructuradas con cuatro estudiantes ciegos identificados en el Sistema de Gestión Estudiantil de la Universidad Estadual de Montes Claros — Unimontes, lugar donde se llevó a cabo esta investigación. En las entrevistas, los estudiantes fueron invitados a relatar sus experiencias lectoras en la Educación Superior, ofreciendo su comprensión sobre su trayectoria de lectura en este ámbito discursivo. Los resultados demuestran que el estudiante ciego se constituye como lector en la Educación Superior de forma progresiva, a partir del uso intensivo de la tecnología como estrategia para leer y del empleo de estrategias de lectura, como la recurrencia a internet para fundamentar los conocimientos previos en la lectura.*

***Palabras clave**: Estrategias para la lectura. Estudiante ciego. Lectura. Enseñanza superior.*

## Introduction

As one means of democratizing access to cultural resources, entering higher education represents, for many, an important moment in feeling part of a literate society. In addition to broadening opportunities for social mobility, enrolling in a university program means gaining a variety of experiences through engagement with a world filled with new discursive practices. However, for students to be integrated into the academic discourse sphere, it is essential that they perceive reading at the university as a meaning-making activity that forms the basis of learning, enabling them to recognize themselves as agents of their own knowledge.

In this process, it is essential for university students to master reading, demonstrating fluency and the ability to engage in critical and creative analyses of knowledge, as noted by Cunha & Santos (2006). Otherwise, they risk being excluded from the academic process, since the knowledge circulating within the university is conveyed primarily through written language.

For these reasons, investigating how blind undergraduate students are constituted as reading subjects serves as a valuable means for higher education institutions to better understand this group of students. In doing so, institutions will be better equipped to support and guide them, recognizing that disability is not synonymous with incapacity and taking a stance against ableism in higher education. Ableism is manifested through prejudiced and discriminatory actions and attitudes that rank individuals according to their functional abilities and bodily characteristics, based on an ideal of beauty and perfection (Mello, 2016).

Thus, it becomes necessary to discuss reading and its importance in the constitution of the academic reader, especially the blind student, and to consider that, beyond the acquisition of knowledge, reading is related to the construction of worldviews and to our very sense of self, since it is "in language and through language that man constitutes himself as a subject" (Benveniste, 2006, p. 286).

Just like any other student, blind students need to feel included within the academic discourse domain. This inclusion is, to a large extent, shaped by their formation as reading subjects and by the reading strategies they adopt (or fail to adopt), forming a mosaic of belonging or displacement within higher education.

## Visual Impairment

People with disabilities increasingly seek autonomy and the elimination of all forms of prejudice. However, the challenges they face are not limited to pedagogical demands; they also involve the interpersonal difficulties encountered in daily life. In this regard, the understanding that a person with a disability is someone who has a long-term physical, mental, intellectual, or sensory impairment (Brasil, 2015) does not prevent us from seeing them beyond their specific needs.

Since disability should not be perceived negatively, either by the person with specific needs or by society, given that we all have potential that deserves to be meaningfully recognized, we aim to clarify the nature of visual impairment, one among many types of disabilities which, in recent times, has come to be treated as a specific category. This is the perspective we seek to elucidate, especially within educational contexts and in relation to inclusion.

Taking visual impairment as a starting point, we adopt the perspective of Sá *et al.* (2007), who state that this type of disability is divided into two distinct groups: blindness and low vision. According to the authors, blindness is a total alteration of one or more basic visual functions, which irreversibly affects the ability to perceive color, size, distance, shape, position, or movement within a more or less extensive visual field.

Complementing the authors' perspective, the series "Saberes e práticas da inclusão: desenvolvendo competências para o atendimento às necessidades educacionais especiais de alunos cegos e de alunos com baixa visão" ("Knowledge and Practices of Inclusion: Developing Competencies for Serving the Special Educational Needs of Blind Students and Students with Low Vision") (Brasil, 2006) notes that "blindness is the total loss of vision, including the

absence of light perception." From an educational standpoint, this document recommends disregarding the concept of legal blindness, "visual acuity equal to or less than 20/200 or a visual field smaller than 20° in the better eye, used only for social purposes, as it does not reflect the usable visual potential for task performance" (Brasil, 2006, p. 16). This understanding broadens the possibilities for engaging other senses in the learning process of blind students.

On the other hand, low vision is a milder condition that affects the functional capacity of vision due to various combined or isolated factors, such as: significantly reduced visual acuity; substantial narrowing of the visual field; cortical alterations and/or reduced contrast sensitivity, all of which interfere with or limit visual performance (Sá *et al.*, 2007).

Consequently, people with low vision are considered to be those who present "anywhere from the ability to detect light projection to the degree at which reduced visual acuity interferes with or limits their performance" (Brasil, 2006, p. 16). This document from the Ministry of Education clarifies that this understanding does not preclude the use of visual resources in the educational process.

For a more precise understanding, we have outlined an explanatory framework to clarify the types of blindness and, consequently, to explore congenital blindness as a category. In general terms, blindness is a visual impairment whose main characteristic is the inability of the individual to gather information about the world through sight. As previously noted, there are two types of visual impairment: blindness and low vision (Nunes & Lomônaco, 2008). According to the authors, the two most common methods for assessing visual capacity involve evaluating visual acuity and the visual field, that is, the ability to discriminate shapes and the ability to perceive the range of visual stimuli, respectively, identifying as blind any individual with a visual acuity below 0.1 or a visual field of less than 20 degrees. Low vision, in turn, is defined by a visual acuity of 6/60 and/or a visual field between 20 and 50 degrees.

Among individuals with visual impairments, there are those who are blind due to acquired conditions and those with low vision. Considering the role of visual memory, individuals with congenital blindness, who have been blind since birth, do not fit within this framework. This is because, when applying such classifications, the conditions of blindness determine the different ways in which a person engages with their environment, particularly in the context of this study, with reading.

According to Pitano & Noal (2018), many individuals are blind, including those born blind — known as congenitally blind — and those who lost their sight after having been able to see for a certain period, such as up to the age of five — referred to as persons with acquired blindness. In both cases, individuals are deprived of opportunities in various areas, such as social and even family life, education and employment, cultural activities, leisure, among others (Cunha & Enumo, 2003).

As González & Díaz (2007) observe, the fact that congenitally and adventitiously blind individuals are not the same also leads to differences in their memory patterns, as these are shaped in distinct ways. For this reason, the authors emphasize that

> subjects with visual impairments are heterogeneous, considering two important characteristics: on the one hand, the visual residue they retain, and on the other, the moment at which their impairment was acquired, since someone who has been blind since birth is not the same as someone who became blind later in life. Depending on that moment, their personal conditions and learning processes will be entirely different (González & Díaz, 2007, p. 102).

In this sense, understanding the heterogeneity of the blind reading subject is key to comprehending how this student has been shaped throughout the process of educational inclusion, through the projection of self- and other-images and the mobilization of strategies, particularly for text comprehension in higher education.

## Inclusive Education and the Inclusion of Blind Students in Higher Education

Before reflecting on Inclusive Education, it is important to understand Special Education as a distinct modality of teaching. In this regard, in accordance with the National Education Guidelines and Framework Law (Lei de Diretrizes e Bases da Educação Nacional — LDB), Law No. 9.394/96 (Brasil, 1996), Special Education is an educational modality preferably offered within the regular school system to students with specific needs.

Unlike the concept of Inclusive Education set forth in the Salamanca Statement (UNESCO, 1994), which affirms that children with special educational needs should be included in regular schools, Special Education is understood more as a process of modifying students with disabilities than as an inclusive process in which no child should be separated or isolated from others due to any type of disability.

School and education are rights guaranteed under Article 205 of the Constitution of the Federative Republic of Brasil of 1988 (Brasil, 1988), regardless of color, race, religion, age, or disability. Education, therefore, aims at the full development of the individual, preparing them for the exercise of citizenship and qualifying them for the workforce. In other words, the Constitution guarantees education for all, in its entirety and within the same environment, without separation, segregation, or isolation. To that end, educational institutions must be diverse, ensuring equal access to institutionalized knowledge and to quality human development for all.

In the context of human rights, and in compliance with Article 27 of the Brasilian Law for the Inclusion of Persons with Disabilities (Estatuto da Pessoa com Deficiência — EPD), education is established as “a right of persons with disabilities, with an inclusive educational system guaranteed at all levels and lifelong learning ensured” (Brasil, 2015, p. 19). Furthermore, specialized education is considered a right within the broader framework of inclusion for people with specific needs in higher education.

Thus, the inclusion of persons with disabilities in Brasilian higher education is the result of affirmative policies aimed at ensuring both access and permanence with educational autonomy. Article 27 establishes that, through Inclusive Education, students with disabilities must be supported in reaching the fullest possible development of their talents and physical, sensory, intellectual, and social abilities, according to their individual characteristics, interests, and learning needs (Brasil, 2015).

Therefore, the commitment to “universalize access to education and promote equity” (UNICEF, 1990, p. 04) has influenced recent Brasilian inclusion programs such as: the Programa de Financiamento Estudantil (Fies), the Programa de Apoio a Planos de Reestruturação e Expansão das Universidades Federais (Reuni), and the Programa Universidade para Todos (ProUni), contributing to the increase in the number of persons with disabilities in higher education (Barros, 2015). Other programs, such as the Exame Nacional do Ensino Médio (Enem) and the Plano Nacional de Assistência Estudantil (Pnaes), promote the appreciation of diversity as a condition for learning within the framework of Inclusive Education, thereby ensuring access to higher education for students with disabilities.

The increase in the number of students with disabilities in higher education took place mainly after the enactment of Law No. 13.409/2016, which provides for the reservation of spots for persons with disabilities in both upper-secondary technical courses and higher education programs at federal institutions. These students had not been covered by Law No. 12.711, enacted on August 29, 2012, known as the Lei de Cotas (“Quota Law”).

Although efforts have been made to broaden discussions on inclusion in higher education, studies that give any real prominence to the voices of persons with disabilities remain few, if not rare, particularly regarding their impressions of their own inclusion process within the university or their reflections on the challenges and possibilities related to performing academic activities (Martins & Silva, 2019).

According to Pacheco & Costas (2006), inclusion in higher education is a recent challenge, with expectations grounded in federal regulations still in their early stages, and in practice, the inclusion process remains in need of improvement. As these authors point out, support for students with disabilities in higher education is isolated and, for

the most part, insufficient, unsatisfactory, and perhaps even mediocre when it comes to meeting their specific psycho-pedagogical needs.

From a quantitative perspective, the most recent Higher Education Census report, according to INEP (2020), recorded 48,520 students with disabilities, global developmental disorders, or high abilities/giftedness enrolled in higher education in Brasil. Between 2009 and 2019, this represented a 0.22% increase in enrollment of such students in higher education, with 2,598 blind students recorded in 2019 alone. It is important to clarify that the types of disabilities are listed in the 2019 Higher Education Census System (INEP, 2020) as follows: blindness, low vision, deafness, hearing impairment, physical disability, deafblindness, multiple disabilities, intellectual disability, autism, Asperger's syndrome, Rett syndrome, childhood disintegrative disorder, and high abilities/giftedness.

Comparatively, the number of students with disabilities, global developmental disorders, or high abilities/giftedness enrolled in higher education has gradually increased, especially among blind students, with an increase of 395 students between the years 2017 and 2019.

This increase in the number of blind students enrolled can be attributed to policies aimed at democratizing access and promoting conditions that allow students with disabilities to remain in universities, as previously mentioned. However, higher education institutions must be aware of their responsibilities in the inclusion process and of the important role they play in communicating to government agencies the challenges they face, as well as the directions that need to be taken in order for inclusion to be effectively implemented (Moreira, 2005).

Martins *et al.* (2019, p. 20) state that there are "difficulties in implementing actions that can transform university spaces into inclusive environments." Therefore, overcoming the challenges related to the inclusion of students with disabilities in higher education — particularly blind students — requires their participation across the entire academic sphere, not just in the classroom. This is reinforced by the Brasilian Law for the Inclusion of Persons with Disabilities, in Article 28, which guarantees persons with disabilities a "fully inclusive educational system at all levels and in all modalities, as well as lifelong learning" (Brasil, 2015).

In this regard, and within the context of higher education, Ferreira (2007) argues that inclusion

> […] does not mean placing a person with limitations or difficulties into the educational system, but rather preparing that environment to receive them. Thus, […] to include means to organize and implement educational responses that enable the appropriation of knowledge, of practical skills, and of critical and reflective capacity; it involves the removal of architectural barriers, yes, but above all of attitudinal barriers — those related to the "gaze" of uninformed, so-called normal people — so as to promote the adaptation of the psychological space that will be shared by people who are very different from one another (Ferreira, 2007, p. 44).

That said, it must be emphasized that the university must never fail to welcome students with disabilities, since it is entirely possible to promote policies and, more importantly, their implementation, that foster Inclusive Education in ways that support these students and facilitate their access to scientific knowledge.

## Reflections on Reading

Research, debates, and approaches involving reading have grown significantly in recent decades. This is based on the fact that reading has taken on a central role both in academic success and in individuals' professional development.

To better understand reading as a process, Leffa (1996) points out that reading is, at its core, a representational process. Considering that this process involves the sense of sight, reading is, in essence, looking at one thing and seeing another. Along these lines, the author observes that

> […] reading does not occur through direct access to reality, but through the mediation of other elements of reality. In this triangulation of reading, the mediating element functions like a mirror; it shows a segment of the world that

> normally has nothing to do with its own physical consistency. Reading is, therefore, recognizing the world through mirrors. Since these mirrors offer fragmented images of the world, true reading is only possible when one has prior knowledge of that world (Leffa, 1996, p. 10).

Therefore, reading goes beyond the ability to interpret the conventional graphic signs of spoken language. Reading means understanding the message those signs contain; it means recognizing reality through a reflection that offers fragmented images of the world. Thus, "real" reading only becomes possible when one has prior knowledge of the world around them. It is in this sense that "the reading of the world precedes the reading of the word" (Freire, 2011, p. 09).

In this sense, Kleiman (2000, p. 10) considers that "reading is a social act between two subjects — reader and author — who interact with one another, guided by socially determined goals and needs". Thus, reading is understood as the result of meanings apprehended and mediated through language. The text, in turn, is a prior production by the author, presented to the reader as both an invitation and a challenge regarding its relevance and the act of reading itself. Reading is not simply about translating or repeating pre-established meanings; it is a sequential construction of meaning based on the clues and signals made available by the author within the text.

Furthermore, although reading is generally conceived as taking place through words, language, and verbal expression, it also clearly occurs through nonlinguistic signs and the rich, multifaceted realm of nonverbal language. According to Raimundo (2009), there are various ways of reading: through music (by hearing), a painting (by sight), and also through body language or other forms of nonverbal communication. These diverse modes of reading, through which the subject constructs meaning by engaging in the act of reading, strongly contribute to establishing reading as a social practice among individuals with specific needs — especially the blind subjects who participated in this study.

Following the reflections on the definition of reading, Freire (2011) distinguishes between the habit of reading and the act of reading. For him, habit refers to something mechanical, something imposed, whereas the act is broader, affirming reading as an action that transcends words. Moreover, in order to understand a text, there must be critical awareness, interpretation, and a rewriting of what is being read. Reading, therefore, must occur as a whole, involving reality and context rather than words alone, and we must remember that each reader is unique, with their own life history and personal preferences.

With regard to text comprehension, when Orlandi (1996, p. 186) states that reading "is the critical moment in the constitution of the text, the privileged moment of interaction, the one in which the interlocutors identify themselves as such and, by doing so, set in motion the process of meaning-making", it becomes clear that reading goes beyond the boundaries of the text and takes on broader dimensions of meaning, challenging the narrow notion of mechanized reading.

Considering that literacy is a continuous act in response to the demand to engage with the social practices of reading and writing (Soares, 2003), we seek, especially in higher education, continuous literacy development. This reflects both the social value attributed to reading and the pursuit of knowledge as a means of participating in a literate society. According to the author, increased schooling represents one possible path for individuals to become more literate. For this reason, there is an expectation that students' ability to read and comprehend texts will improve in higher education.

In this regard, we turn to Leffa (1996) to explore the possible actions readers take in order to comprehend what they read. According to the author, individuals make use of reading strategies to gain control over the process of text comprehension, taking into account the goals established for the reading activity. In other words, these reading strategies are specific resources, whether observable or not, that serve to assist the reader in understanding what is being read.

Regarding the development of reading strategies by the reader, Solé (1998) explains that reading "is an internal process, but one that must be taught", and adds:

> […] for a poor reader to stop being one, it is absolutely essential that they gradually take control of their own process and understand that they can draw on many types of knowledge to construct a plausible interpretation of what they are reading, decoding strategies, of course, but also comprehension strategies: predictions, inferences, etc. (Solé, 1998, p. 126).

In light of these considerations, it is important to distinguish between reading strategies and strategies for reading. While reading strategies are unconscious operations referring to individual, cognitive resources used by the reader to comprehend texts, strategies for reading are resources that enable the reader to access the text, a way, or rather, a means of reading. As an example, we may cite the braille system and audio applications, which are considered accessibility tools that allow blind individuals to access written texts.

Still within the scope of conceptual approaches, we highlight the discussions of Kleiman (2000, p. 13), who argues that "the comprehension of a text is a process characterized by the use of prior knowledge", mobilized by the reader in constructing the meaning of the text. This knowledge may be linguistic, textual, or related to world or encyclopedic knowledge.

Still within the scope of conceptual approaches, we highlight Kleiman's (2000, p. 13) assertion that "the comprehension of a text is a process characterized by the use of prior knowledge", which the reader draws upon to construct meaning. Such knowledge may be linguistic, textual, or related to world or encyclopedic knowledge.

Textual knowledge, in turn, is related to the set of notions concerning text types and genres. Kleiman (2000) clarifies this through an example that includes various textual types, such as narration, exposition, description, argumentation, as well as different forms of discourse.

According to Kleiman (2000), world or encyclopedic knowledge can be acquired both formally and informally. It encompasses, for example, the expertise a professional has in their field of work, as well as general knowledge about animal life. Some types of knowledge are extralinguistic, and textual comprehension occurs when we activate them through memory retrieval, thus characterizing them as encyclopedic knowledge (Kleiman, 2000).

Given that the author considers reading "an interactive process", linguistic knowledge, textual knowledge, and world knowledge must be activated during reading in order to achieve text comprehension. In other words, the apprehension of information and life experiences will contribute to making the reader an active subject who processes the text.

Thus, it is through reading that we access cultural assets in a process of expanding and understanding the world. This task is not completed in the early years of schooling alone, as it involves a continuous and long-term process that must be initiated, stimulated, sustained, and developed throughout the student's educational experience.

## Strategies for Reading and Reading Strategies in the Education of Blind Readers

Although we know that the process of inclusion for persons with disabilities is not centered on their limitations but rather on their abilities, when it comes to the reading formation of blind students, it is important to consider that, by the time a blind student enters higher education, they have likely already gone through a prior history of reading and personal development. This background will serve as a foundation when facing the new challenge of becoming literate within a universe of new knowledge that presents itself under the banner of "higher education". In the university context, reading purposes and developmental goals will differ, as will the accessibility resources involved.

In light of this, we ask: do blind students use reading strategies that differ from those used by sighted students? What one might assume in response to this question is that differences do arise when comparing the groups, given that vision is a highly significant sense for interacting with the external world and for guiding information received from the other senses (Lins & Alchieri, 2016).

The literature on the subject shows that the relationship between blind students and reading is shaped by the range of resources available to them. In this context, the use of human readers (*ledores*), braille texts, and screen-reading software has been identified as concrete forms of support provided in higher education (Souza, 2021). These resources constitute the primary means through which blind students access written academic content.

With regard to the roles of reader and human reader (*ledor*), Guimarães (2009) presents a set of distinctions, classifying them according to specific aspects. In terms of context, the reader is someone who reads in any setting, not necessarily an institutional one, whereas the *ledor* reads in institutional contexts and possesses specific skills for this function. In terms of participants, the reader reads for themselves, while the *ledor* reads for someone else. In terms of purpose, the reader encounters variability, while the *ledor* engages with variability as they access written content. In terms of interpretative norms, the reader interprets the text based on their prior knowledge, while the *ledor* adheres to institutional guidelines for supporting blind individuals. According to Souza (2021), the *ledor* functions as a translator — a decoder of written verbal language into spoken language — acting as a mediator between the author of the written text and the blind reader.

In this context, and understanding instrumentalization as the use of Assistive Technologies, we must underscore its importance, considering that Inclusive Education today should truly make a difference for students with specific educational needs. It is therefore relevant to revisit the ideas of Moran (2012), which prompt us to reflect on several aspects of the act of educating. To educate is to enable teachers and students to transform their lives through a continuous learning process; it is to contribute to the construction of their identities, a task that requires the development of communication, comprehension, and emotional skills, allowing them to take their place in the individual, social, and professional contexts in which they live.

Given this dimension of learning as both an individual and social process of transformation, we highlight the definition of Assistive Technology provided by the Technical Aids Committee (Brasil, 2009a):

> Assistive Technology is a field of knowledge with an interdisciplinary character that encompasses products, resources, methodologies, strategies, practices, and services aimed at promoting functionality, related to activity and participation, for persons with disabilities, impairments, or reduced mobility, with the goal of fostering their autonomy, independence, quality of life, and social inclusion (Brasil, 2009a, p. 9).

In order to address educational diversity in such a way that persons with disabilities can fully exercise their right to education at all levels of instruction, we consider the use of Assistive Technologies by all those involved in the teaching and learning process. Their use contributes to achieving full inclusion by equipping individuals with disabilities according to their specific needs.

With the rapid advancement of technology, one Assistive Technology option used by people with visual impairments is screen readers, which transmit the information displayed on a computer screen through voice synthesizers (Ferroni & Gasparetto, 2012). These software tools are part of what is known as “mobile device accessibility” and allow individuals with visual impairments to interact with the operating systems of mobile devices (Leporini *et al*., 2012).

Within this technological context, screen reader applications are an important tool that significantly support the reading demands of individuals with visual impairments by promoting inclusion, especially in higher education, as they enable access to the volume and complexity of readings that are part of the academic discourse domain, fostering autonomy and independence for blind students at the university level.

Even though the advancement of new digital technologies that enable reading for people with visual impairments is promising, it is important to recognize that the braille method was what first allowed blind individuals to be included in education, granting them autonomy in both writing and reading. Even today, it remains the primary method that provides blind people with direct contact with the written form of words.

According to Silva (2008), the braille method is a tactile reading and writing system for blind individuals. This system was created by Louis Braille [1]in 1825 and is based on the combination of six raised dots, as previously mentioned, arranged vertically in two columns of three dots each. The associations among these dots form 63 braille combinations or symbols. These six dots are called the "basic sign", and the space they occupy, or the space occupied by any other sign, is known as the "braille cell". Even when the space is empty, some specialists consider it a sign. Therefore, the system consists of 64 signs (Brasil, 2018), and the different arrangements of the dots within the cell allow for the formation of various combinations or symbols.

It is important to consider, however, that braille is now seen as an obsolete technology, surpassed by the widespread use of screen reader applications. Nevertheless, although these applications are faster, more dynamic, and agile, they cannot be accessed in all situations, as a digital file is required in order to convert it into audio. Braille, therefore, remains useful in public spaces, by all indications.

In the case of blind students and their relationship with reading through digital technology, it can be observed that this medium has enabled access to the world of reading and writing, helping them achieve a good level of independence in educational, academic, and even professional settings.

However, despite the technological advances and the benefits that their use provides to blind students, we must acknowledge the difficulties faced in Brazil regarding this type of access. A large portion of the education system does not provide the means or conditions necessary for the effective inclusion of blind individuals, which leads a significant part of this population to experience precarious inclusion or to remain outside the school system altogether (Silva, 1999).

Nonetheless, it is important to highlight that, unlike a machine, the human voice of a *ledor* — or of a family member, friend, classmate, etc. — is distinct, as it conveys and adds sensitivity, emotion, and human warmth to the messages, even though technology offers much-desired autonomy and independence.

## Strategies for Reading and the Construction of the Blind Reader

In this study, the formation of blind students as readers is considered primarily through the lens of the strategies for reading that are mobilized within reflections on their reading process. Accordingly, this study draws on theoretical frameworks from Inclusive Education to reflect on the experiences of blind individuals in higher education, as well as from Text Linguistics and French-oriented Discourse Analysis (DA) to examine reading from this perspective.

It is important to clarify that Discourse Analysis views the subject as a site of interface and crossings. In this sense, it can be said that discourse presupposes a transphrastic organization, although this does not mean that all discourse necessarily consists of sequences of words that go beyond the sentence. Rather, it mobilizes structures of a different order. It is a type of discourse oriented both by the speaker's intention and by its temporal development, with the aim of reaching a particular point in view of a communicative purpose (Charaudeau & Maingueneau, 2016).

This study was conducted at Unimontes, located in Montes Claros, in the northern region of the state of Minas Gerais. Data collection was carried out through a semi-structured interview using the Google Meet videoconferencing application, which made it possible to record participants' speech in both audio and video formats.

Since the research involved the participation of blind students, we chose not to include those enrolled in the first or second semester of their programs, as these stages were attended exclusively in remote format due to the Covid-19 pandemic. For this reason, the lack of participation by these students in various interactional situations within the academic discourse domain could compromise the information necessary to analyze how they become reading subjects at the university. To preserve participants' anonymity, we assigned pseudonyms to each of them: Joana, Joaquim, João, and José.

[1] Then a young blind man, born on January 4, 1809, in the small French town of Coupvray, located in the district of Seine-et-Marne, about forty-five kilometers from the city of Paris (Ling, 2015).

Thus, the research participants totaled four blind students enrolled between the third and sixth semesters of undergraduate programs in Physical Education, Portuguese Language and Literature, and Pedagogy at Unimontes. They initially identified themselves to the researcher as "congenitally blind". However, after individual conversations, it was found that two of the participants consider themselves congenitally blind because they lost their vision due to congenital illnesses, even though they had some degree of vision at some point in their lives.

Considering, according to Solé (1988), that reading strategies make it possible to comprehend and interpret texts independently, since the reader draws on their world knowledge and textual knowledge as cognitive reading skills and mobilizes small actions to overcome comprehension difficulties, we observed that blind students lack a clear understanding of what reading strategies actually are, even when the concept was explained using different terms. Thus, we noticed that the students tend to confuse reading strategies with accessibility resources used to read.

In the following interview excerpts (1, 2, and 3), we sought to identify how the participants go about understanding texts, that is, how they engage with or make use of cognitive aspects of reading, strategies for reading, or reading strategies.

> *1) Sometimes, when it's a text related to university content, we try to rely on other kinds of resources to help us understand it. In my case, I usually search for audio or video content related to the topic. Then, by listening to that material, I notice the points addressed in the text and go back to read it again. That way, I'm able to grasp what the text is asking* (José, 2021).

> *2) Back then, it was during the History program in 2006, I felt lost because we didn't have much accessibility at that time. Reading basically meant relying on classmates, getting help from one person or another. So, reading was really minimal — it was mostly about paying attention in class and trying to get something out of that. And sometimes comprehension, maybe also because I wasn't mature enough yet, was really difficult. I even ended up being affected by it sometimes* (Joana, 2021).

> *3) The tactic I use to understand is that sometimes I go over it two or three times. When the file is in PDF, the screen reader works well, and based on how I'm understanding what's there, if I don't get a good grasp, I sometimes search for information about the topic online — I check other texts on the subject. If something still isn't clear to me, I use those to figure out what it means"* (Joaquim, 2021).

We identify, in the response given by José (excerpt 1), that he uses the term "*read*" even when referring to material in which the text is heard — "*I go back to read the text again*" — which is still relevant, since, for blind individuals, reading is developed, in this case, through listening to texts (a resource that depends on oneself), through a human reader (a resource that depends on another person), or through braille reading (a technological resource that depends on the institution)[2].

The participant Joana shares José's perspective in recognizing the importance of accessibility and the absence of autonomy, which makes the self directly dependent on *others*. After all, at that time, reading was an activity controlled by *others*, not by the self, which led to limitations: "thus, reading was very limited".

We observe that Joaquim (excerpt 2) considers the reading of texts through voice applications as a reading strategy. Thus, by highlighting the use of voice applications to read, he seeks to show how he understands the texts, searching for complementary sources to expand his prior knowledge. When he says "[…] if I can't get a good interpretation, sometimes I'll search the topic on the internet, I do a quick search because some texts on the topic come up" (Joaquim, 2021), the student uses a reading strategy to feed the cognitive knowledge system.

Thus, the strategy aimed at feeding the knowledge system is emphasized — that is, watching (by listening to) videos in order to seek prior knowledge, which is also a strategy used by sighted individuals. From this perspective, it can be observed that the discussion sometimes concerns what stems from the disability and, at other times, what stems from activities inherent to higher education, as we will see below.

[2] We are considering three types of resources: those that, although technological, are self-operated (such as screen reader applications); those that come from others (such as reading by a classmate); and those that rely on technology not directly controlled by the student (such as a Braille printer).

According to Kleiman (2000, p. 13), "the comprehension of a text is a process characterized by the use of prior knowledge: the reader relies on what they already know, the knowledge acquired throughout their life." Thus, Joaquim seeks prior knowledge, which is essential for comprehension, since it is from this foundation that he will be able to make inferences and understand the information that is implicit in the texts.

In this sense, we can identify that the comprehension of texts by blind university students initially depends on listening (on making the text accessible). Only after that is it possible to consider strategies for comprehension — an activity that becomes de-emphasized due to the need for the former. It becomes clear that the pressing need for these individuals to access the content of the text — whether through technological resources such as apps or braille printers, or through classmates and professors — hinders the development of individual strategies that could support comprehension.

In the excerpts that follow, we emphasize the students' statements regarding the use of technologies as accessibility resources for reading.

> *4) I have screen readers installed on my laptop and my phone. On the phone, it's TalkBack, which comes pre-installed by the manufacturer. On the computer, I use two screen readers, Dozvox and NVDA, which are available through NUSI. I read documents in Word or TXT format to make reading easier. We can't convert them into searchable PDFs, but they work for reading and for use on the computer* (João, 2021).

> *5) I can say that some professors tried, looking for resources, even like those audio files […]. But it didn't work, so we ended up talking about how the converted audio files weren't effective and that I preferred reading through an app or with the help of a classmate in the classroom, as there's always a classmate willing to help with the reading* (José, 2021).

João (excerpt 4) specifies the voice applications he uses as a strategy for reading texts. In this excerpt, the NUSI at Unimontes is mentioned as a source of accessibility support for blind students, by providing one of these voice applications to convert written text into audio.

In this sense, we note that the student João understands the applications as a technological resource that enables him to have functional capacity to read, and the NUSI as a service that helps him use such resources to read as well. These are, therefore, strategies for reading, not precisely reading strategies.

In excerpt 5, although the professor took the initiative to provide the printed texts converted into audio, José was not successful in understanding the content and preferred to use another screen reader application or to rely on a human reader. This leads us to infer that the printed texts submitted to NUSI for audio conversion were of poor quality. As reading strategies, the student seeks out other resources, such as applications and a reader. Here, we understand the reader as a resource for reading; thus, the classmate also takes on this role occasionally, even if not professionally trained for it.

Silva (2013) explains that, in many cases, human readers are the only option for blind students to continue their studies or access certain types of knowledge, especially for those who are not fluent in Braille reading. The author also explains that reading aloud to a blind student requires techniques that enhance comprehension of the text. Voice intonation, the decoding of details in graphic and photographic resources, footnotes, and certain punctuation marks (such as quotation marks, parentheses and dashes) should be read aloud to highlight textual emphasis. When a classmate assumes the role of reader in the classroom, it is likely that these aspects are not taken into account, although this is arguably of little significance to the blind student given the voluntary support being provided.

As we can see, the participants express distinct feelings, with no clear pattern aligned with individual perceptions. José acknowledges the efforts of some professors to support them, such as seeking resources like audio transcription of materials, the relevance of screen reader applications, and even the participation of classmates acting as readers in the classroom. João, in turn, while emphasizing the role of NUSI, asserts that the institution's support is still insufficient.

In this regard, it is relevant to revisit Moran's (2012) insight that, in the act of educating, it is important to highlight not only the role of professors but also that of classmates who contribute to the learning process of blind students, that is, who participate in the process of enabling blind individuals to transform their own lives. Also evident, in this and other parts of the interviews, is a perception of the importance attributed to assistive technologies, in line with the ideas of Nogaro & Cerutti (2016), who emphasize the relevance of such technologies, especially in the present day, when the demands of an informational and global society prioritize knowledge, skills and competencies, particularly those of educators and learners.

Based on the accounts of the blind students interviewed, we present a summary of the strategies for reading and the reading strategies most commonly used by these students in higher education.

Table 1 – Strategies for reading used by blind students in higher education

| Strategies for reading |
|---|
| Reading by classmate (human reader/*ledor*). |
| Conversion of texts and books into audio by NUSI. |
| Various uses of computers and mobile phones. |
| Reading applications. |
| Screen reader applications. |
| Audiobooks. |
| Braille reading. |
| Support reading. |

Source: Authors (2022).

Table 2 – Reading strategies used by blind students in higher education

| Reading strategies |
|---|
| Watching videos related to the content. |
| Conducting internet research. |
| Observing the title of the text. |
| Reading the abstract. |
| Watching video lessons. |
| Searching for information on the topic. |
| Reading specific parts of the text. |
| Reading the full text. |
| Asking the professor for clarification. |
| Discussing the content of the text with classmates. |
| Summarizing based on the lecture. |
| Returning to the text. |
| Writing a summary. |
| Taking notes in Braille. |
| Taking notes while reading. |

Source: Authors (2022).

Tables 1 and 2 show that a variety of strategies are mobilized to help students comprehend and retain what they have read. While some strategies are employed even before reading begins (such as observing the title and reading the abstract), others take place during reading (rereading passages, discussing with classmates, taking notes while reading, etc.), and still others occur after finishing the text (summarizing, taking notes in Braille, etc.). This indicates that, like sighted students, blind students seek ways to increase their connection with texts and improve the quality of their learning outcomes, displaying many strategies in common with sighted peers and only one differentiating strategy

— that is, one not practiced by the latter: Braille writing, which likely has stronger appeal to memory due to its sensory nature.

Throughout the analysis, based on the selected excerpts, we observed a continuum in the formation of these students as readers in higher education. Gradually, they become more engaged in the university's reading activities and feel like an integral part of that environment — largely due to their ability to read and comprehend.

## Concluding Remarks

This study focused on the importance of understanding reading as one of the key factors for the inclusion of blind students in higher education and, consequently, for their process of academic literacy. In this context, understanding how such students constitute themselves as readers within a discursive domain in which reading determines either their access to knowledge or their metaphorical exclusion from that environment involves identifying the reading strategies they use to comprehend texts in higher education, given that the knowledge circulating within the university is conveyed primarily in written form.

When analyzing the strategies for reading employed by the students and the role these strategies play in their formation as readers, we initially observed a certain contradiction in the students' understanding between reading strategies and strategies to ensure accessibility to reading. In general, the students' main reading strategy is to seek prior knowledge in order to comprehend the text. To this end, they systematically turn to the internet, using screen reader applications and YouTube videos, which led the research participants to express, in their accounts, the need for professors to provide the texts in advance.

With regard to strategies for reading, screen reader applications have taken on a central role in promoting blind students' access to written texts, effectively functioning as an accessibility strategy, since the students' frequent use of such applications represents access to knowledge, activities and various environments. In their accounts, they emphasized the need for texts to be made available in PDF format and in well-scanned, high-quality digital versions, so as not to compromise the use of assistive Technologies with the aim of fostering these students' status as readers and promoting their educational inclusion.

Finally, in order to overcome the challenges of inclusion in higher education, we hope that this study fosters empathy and understanding, so that the academic community as a whole may adopt a new perspective on the inclusion of people with visual impairments, aiming to overcome both concrete and subjective difficulties and to deconstruct the stigmas and stereotypes that still surround students with disabilities in higher education.

## References

BARROS, Aparecida da Silva Xavier. Expansão da educação superior no Brasil: limites e possibilidades. *Educação & Sociedade*, v. 36, p. 361-390, 2015. Disponível em: http://www.scielo.br/pdf/es/v36n131/1678-4626-es-36-131-00361.pdf Acesso em: 16 jan. 2022.

BENVENISTE, Emile. *Problemas de linguística geral I*. Tradução de Eduardo Guimarães et. al. Rev. Eduardo Guimarães. 2. ed. Campinas: Pontes Editores, 2006.

BRASIL. Conselho Nacional de Educação. Câmara de Educação Básica. Resolução CNE/CBE nº 2, de 11 de setembro de 2001, que estabelece as diretrizes nacionais para educação especial na educação básica.

BRASIL. Constituição. Constituição da República Federativa do Brasil de 1988. Brasília, DF: Presidência da República, 1988. Disponível em: http://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm. Acesso em: 09 jan. 2022.

BRASIL. Congresso Nacional. Lei nº 13.146, de 6 de julho de 2015. Institui a Lei Brasileira de Inclusão da Pessoa com Deficiência (Estatuto da Pessoa com Deficiência). Brasília/DF: D. O. U., Seção 1, de 7/7/2015.

BRASIL. Lei 13.409, de 28 de dezembro de 2016. Dispõe sobre a reserva de vagas para pessoas com deficiência nos cursos técnico de nível médio e superior das instituições federais de ensino. Diário Oficial da União. Brasília, DF: Presidência da República, 2016.

BRASIL. Lei nº 9.394, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da educação nacional. Diário Oficial da União. Brasília, DF, 23 dez. 1996. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l9394.htm. Acesso em: 16 mar. 2021.

BRASIL. Ministério da Educação. Secretaria de Educação Continuada. Alfabetização, diversidade e inclusão: grafia braille para a língua portuguesa. 3. ed. Elaborado por Fernanda Christina dos Santos e Regina Fátima Caldeira de Oliveira. Brasília/DF: MEC, 2018. Disponível em: http://portal.mec.gov.br/docman/dezembro-2018-pdf/104041-anexo-grafia-braille-para-lingua-portguesa/file. Acesso em: 01 fev. 2021.

BRASIL. Ministério da Educação. Secretaria de Educação Especial. Saberes e práticas da inclusão: desenvolvendo competências para o atendimento às necessidades educacionais especiais de alunos cegos e de alunos com baixa visão. Brasília, DF: MEC, 2006.

BRASIL. Resolução nº 4, de 2 de outubro de 2009. Institui Diretrizes Operacionais para o Atendimento Educacional Especializado na Educação Básica, modalidade Educação Especial. Diário Oficial da União, Brasília, DF, Seção 1, p. 17, 5 out. 2009a. Disponível em: http://portal.mec.gov.br/dmdocuments/rceb004_09.pdf. Acesso em: 01 fev. 2021.

CHARAUDEAU, Patrick; MAINGUENEAU, Dominique. *Dicionário de análise do discurso*. Coordenação e tradução de Fabiana Komesu. 3. ed. São Paulo: Contexto, 2016.

CUNHA, Ana Cristina Barros da; ENUMO, Sónia Regina Fiorim. Desenvolvimento da Criança com Deficiência Visual (DV) e interacção mãe-criança: algumas considerações. *Psicologia, Saúde & Doenças*, Rio de Janeiro, v. 4, n. 1, p. 33-46, jul. 2003.

CUNHA, Neide de Brito; SANTOS, Acácia Angeli dos. Relação entre a compreensão da leitura e a produção escrita em universitários. *Psicologia*: Reflexão e Crítica. Porto Alegre, v. 19, n. 2, p. 237-245, 2006. Disponível em: https://www.scielo.br/j/prc/a/9hvpwSSZsMZv73QjhtMPL7r/abstract/?lang=pt Acesso em: 14 dez. 2021.

DIAS, Natália Martins; BUENO, Josenilda Oliveira dos Santos; Pontes, Juliana Martins; MECCA, Tatiana Pontrelli. Linguagem oral e escrita na educação infantil: relação com variáveis ambientais. *Psicologia Escolar e Educacional*, v. 23, p. 01-10. 2019.

FERREIRA, Solange Leme. Ingresso, permanência e competência: uma realidade possível para universitários com necessidades educacionais especiais. *Revista Brasileira de Educação Especial*, São Paulo, v. 13, n. 1, p. 43-60, 2007. Disponível em: https://www.scielo.br/j/rbee/a/HXsqCN6njz8ZSSnxKJHRnCp/abstract/?lang=pt. Acesso em: 15 mar. 2021.

FERRONI, Marília Costa Câmara; GASPARETTO, Maria Elisabete Rodrigues Freire. Escolares com baixa visão: percepção sobre as dificuldades visuais, opinião sobre as relações com comunidade escolar e o uso de recursos de tecnologia assistiva nas atividades cotidianas. *Revista Brasileira de Educação Especial*, [*s.l.*], v. 18, n. 2, p. 301-318, jun. 2012. FapUNIFESP (SciELO). Disponível em: https://bityli.com/Ntozu Acesso em: 26 jan. 2022.

FREIRE, Paulo. *A importância do ato de ler*: em três artigos que se completam. 51. ed. São Paulo: Cortez, 2011.

GONZÁLEZ, Eugenio; DÍAZ, Juana Morales. Deficiência visual: aspectos evolutivos e educacionais. *In*: GONZÁLEZ, Eugenio. (Org.). *Necessidades educacionais específicas*: intervenção psicoeducacional. Porto Alegre: Artmed, 2007.

GUIMARÃES, Zuleide Maria de Arruda Santiago. *O desempenho do/a ledor/a em situações de prova em tinta junto a pessoas cegas (PC)*. 2009 (131 p.). Dissertação (Mestrado em Linguagem e Ensino) – Programa de Pós-Graduação em Linguagem e Ensino, Centro de Humanidades, Universidade Federal de Campina Grande, Paraíba, 2009. Disponível em: http://dspace.sti.ufcg.edu.br:8080/jspui/handle/riufcg/3414. Acesso em: 14 dez. 2021.

INEP - Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. *Censo da Educação Superior 2018*: divulgação dos resultados. Brasília: MEC, 2020. Disponível em: https://download.inep.gov.br/educacao_superior/censo_superior/documentos/2019/apresentacao_censo_superior2018.pdf Acesso em: 14 dez. 2021.

INEP - Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. *Censo da Educação Superior 2019*: divulgação dos resultados. Brasília: MEC, 2020. Disponível em: https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/censo-da-educacao-superior/resultados. Acesso em: 14 dez. 2021.

KLEIMAN, Ângela. *Texto e leitor*: aspectos cognitivos da leitura: o conhecimento prévio da leitura. 11. ed. Campinas: Pontes, 2000.

LEFFA, Vilson J. *Aspectos da leitura*. Porto Alegre: Sagra Luzzatto, 1996.

LEPORINI, Barbara; BUZZI, Maria Claudia; BUZZI, Marina. Interacting with Mobile Devices via VoiceOver: Usability and Accessibility Issues. In Proceedings of the 24th Australian Computer-Human Interaction Conference. New York, NY, USA, 2012.

LINS, Manuela Ramos Caldas; ALCHIERI, João Carlos. Estratégias de aprendizagem utilizadas por estudantes cegos e videntes. RIAEE – *Revista Ibero-Americana de Estudos em Educação*, v. 11, n. 3, p. 1221-1241, 2016.

MARTINS, Lisiê Marlene da Silveira Melo; SILVA, Luzia Guacira dos Santos. Desafios e possibilidades para práticas educacionais inclusivas diante de alunos cegos na universidade. *In*: MACHADO, Danielle H. A.; CAZINI, Janaína. *Inclusão e Educação*. Ponta Grossa (PR): Atena, 2019, p. 23-33. v. 2.

MELLO, Anahi Guedes de. Deficiência, incapacidade e vulnerabilidade: do capacitismo ou a preeminência capacitista e biomédica do Comitê de Ética em Pesquisa da UFSC. *Ciência & Saúde Coletiva*, [*s.l.*], v. 21, n. 10, p. 3265-3276, out. 2016. FapUNIFESP (SciELO). Disponível em: https://www.scielo.br/j/csc/a/J959p5hgv5TYZgWbKvspRtF/?lang=pt. Acesso em: 14 dez. 2021.

MORAN, José Manuel. Ensino e aprendizagem inovadores com apoio de tecnologias. *In*: MORAN, José Manuel; MASETTO, Marcos T.; BEHRENS, Marilda Aparecida. *Novas tecnologias e mediação pedagógica*. Campinas: Ed. Papirus, 2012.

MOREIRA, Laura Ceretta. In(ex)clusão na universidade: o aluno com necessidades educacionais especiais em questão. *Revista Educação Especial*, Santa Maria, n. 25, p. 37-47, 2005.

NOGARO, Arnaldo; CERUTTI, Elizabete. *As Tics nos labirintos da prática educativa*. Curitiba: CRV, 2016.

NUNES, Sylvia da Silveira; LOMÔNACO, José Fernando Bitencourt. Desenvolvimento de conceitos em cegos congênitos: caminhos de aquisição do conhecimento. *Psicologia Escolar e Educacional*, [*s.l.*], v. 12, n. 1, jan./jun, 2008. Disponível em: https://www.scielo.br/j/pee/a/zvVp8FNBfyxH9b3FwJYskPx/abstract/?lang=pt. Acesso em: 3 jul. 2021.

ORLANDI, Eni Pulcinelli. *Interpretação*: autoria, leitura e efeitos do trabalho simbólico. Petrópolis: Vozes, 1996.

PACHECO, Renata Vaz; COSTAS, Fabiane Adela Tonetto. O processo de inclusão de acadêmicos com necessidades educacionais especiais na Universidade Federal de Santa Maria. *Revista Educação Especial*, Santa Maria, n. 27, 2006. Disponível em: https://periodicos.ufsm.br/educacaoespecial/article/view/4360. Acesso em: 20 maio 2021.

PITANO, Sandro de Castro; NOAL, Rosa Elena. Cegueira e representação mental do conhecimento por conceitos: comparação entre cegos congênitos e adquiridos. *Educação Unisinos*, São Leopoldo, v. 22, n. 2, p. 128-137, abr./jun. 2018. Disponível em: https://www.redalyc.org/journal/4496/449657611002/html/ Acesso em: 20 maio 2021.

RAIMUNDO, Ana Paula Peres. A mediação na formação do leitor. In: CELLI – *Colóquio de Estudos Linguísticos e Literários*. 2007, Maringá. Anais. Maringá, 2009.

SÁ, Elizabet Dias; CAMPOS, Izilda Maria de; SILVA, Myriam Beatriz Campolina. *Atendimento Educacional Especializado*: deficiência visual. São Paulo: MEC/SEESP, 2007.

SILVA, Luciene Maria da. Qualquer maneira de ler vale a pena: sobre leituras, ledores e leitores cegos, 2013. *Anais do I Simpósio Internacional de Estudos sobre a Deficiência* – SEDPcD/Diversitas/USP Legal – São Paulo, junho/2013.

SILVA, Luzia Guacira dos Santos. *Inclusão*: uma questão, também, de visão: o aluno cego na escola comum. João Pessoa: Editora Universitária da UFPB, 2008.

SILVA, Tomaz Tadeu. *O currículo como fetiche*: a poética e a política do texto curricular. Belo Horizonte: Autêntica, 1999.

SOARES, Magda. *Letramento*: um tema em três gêneros. Belo Horizonte: Autêntica, 2003.

SOLÉ, Isabel. *Estratégias de leitura*. Porto Alegre: Artmed, 1998.

SOUZA, Manuela Cunha de. *Ensino Superior, leitura e deficiência visual*: entre desafios e (super)ações. Salvador: Universidade do Estado da Bahia, 2021. Disponível em: http://alb.org.br/arquivo-morto/edicoes_anteriores/anais17/txtcompletos/sem03/COLE_4120. Acesso em: 17 jan. 2021.

UNESCO. Declaração de Salamanca. Sobre os princípios, políticas e práticas na área das necessidades educativas especiais. Salamanca, 1994. Disponível em: http://portal.mec.gov.br/seesp/arquivos/pdf/salamanca.pdf Acesso em: 23 jan. 2021.

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