



DISABILITY AND ASSISTIVE TECHNOLOGY: MODELING ACCESSIBILITY DOMAIN FRAMES ON FRAMENET BRASIL

DISCAPACIDAD Y TECNOLOGÍA ASISTIVA: MODELADO DE MARCOS DEL DOMINIO DE LA ACCESIBILIDAD EN FRAMENET BRASIL

Iasmin Rabelo¹
Maucha Gamonal²
Adriana Pagano³

Abstract: This article investigates the lexical and conceptual structure of the Accessibility domain drawing on Frame Semantics (Fillmore, 1982) and the FrameNet model (Ruppenhoffer *et al.*, 2016). It aims to model Accessibility-related frames within FrameNet Brasil to improve the lexical representation of this domain. The study also incorporates Terminology (L’Homme, 2020) and Lexical Semantics (L’Homme, 2020) discussions to explore the role of language as a tool for social inclusion and constitution of social cognition. The corpus comprises glossaries, informational booklets, and other textual materials related to accessibility. Through corpus analysis, key lexical units were identified and used to model two primary frames — Disability and Assistive Technology. Lexicographic annotation enabled the identification of the main usage of the lexical units that evoke these frames, which informed the identification of Frame Elements and supported the modeling of a third frame, People_with_disability. This study contributes to the development of an inclusive and socially informed lexical resource, emphasizing the role of language in social cognition, combating ableism, and promoting equity in communicative practices.

Keywords: Frame Semantics; FrameNet Brasil; Accessibility.

Resumen: Este artículo investiga la estructura léxica y conceptual del dominio de la Accesibilidad a partir de la Semántica de Marcos (Fillmore, 1982) y del modelo FrameNet (Ruppenhoffer *et al.*, 2016). Su objetivo es modelar los marcos relacionados con la Accesibilidad dentro de FrameNet Brasil para mejorar la representación léxica de este dominio. El estudio también incorpora discusiones de Terminología (L’Homme, 2020) y Semántica Léxica (L’Homme, 2020) para explorar el papel del lenguaje como herramienta para la inclusión social y la constitución de la cognición social. El corpus comprende glosarios, folletos informativos y otros materiales textuales relacionados con la accesibilidad. Mediante el análisis del corpus, se identificaron unidades léxicas clave y se utilizaron para modelar dos marcos primarios: Discapacidad y Tecnología_de_apoyo. La anotación lexicográfica permitió identificar el uso principal de las unidades léxicas que evocan estos marcos, lo que sirvió de base para la identificación de los elementos del marco y apoyó el modelado de un tercer marco Personas_con_discapacidad. Este estudio contribuye al

¹ Translation Laboratory (LETRA) — Federal University of Minas Gerais (UFMG) - Belo Horizonte, MG – Brazil. E-mail: iasminvaleria@gmail.com. ORCID: <https://orcid.org/0009-0002-4938-8643>.

² PhD in Linguistics from the Federal University of Juiz de Fora (UFJF), Juiz de Fora, MG – Brazil. Postdoctoral Researcher at UFJF. E-mail: mauchaandrade@gmail.com. ORCID: <https://orcid.org/0000-0002-5810-3913>.

³ Full Professor in Applied Linguistics at Federal University of Minas Gerais, Brazil. E-mail: adriana.pagano@gmail.com. ORCID: <https://orcid.org/0000-0002-3150-3503>.

desarrollo de un recurso léxico inclusivo y socialmente informado, enfatizando el papel del lenguaje en la cognición social, combatiendo el capacitismo y promoviendo la equidad en las prácticas comunicativas.
Palabras clave: Semántica de Marcos; FrameNet Brasil; Accesibilidad.

1 INTRODUCTION

In recent decades, research on accessibility has expanded significantly, driven by paradigm shifts and social movements in favor of inclusion and the rights of people with disabilities. The new research models, which bring the perspective of interdisciplinarity, lead to reflections on how to address people with disabilities and the impact of language on maintaining a more inclusive society. In this context, language emerges as a key tool in promoting social inclusion and confronting ableism and systematic marginalization.

This study aims to expand the FrameNet Brasil database by modeling semantic frames from the Accessibility domain. Preliminary analysis revealed that existing frames and lexical units related to disability and assistive technologies offered limited coverage of the conceptual and lexical nuances necessary for representing this domain comprehensively. In response, this research undertakes a detailed analysis of lexical items and conceptual structures related to disability, assistive technologies, and inclusive discourse, with the goal of expanding FrameNet Brasil through new frame modeling and semantic annotation.

To contextualize the study, we first review the history of Accessibility and explore the role of language in constructing inclusive representations. We also draw on key concepts from Frame Semantics and Terminology to situate the linguistic modeling process within broader discussions in Cognitive Linguistics and Lexical Semantics.

2 THE ACCESSIBILITY DOMAIN THROUGH FRAME SEMANTICS

Understanding the modeling of semantic frames in the domain of Accessibility requires engaging with the theoretical foundations of Frame Semantics, the annotation methodology adopted by FrameNet Brasil for specialized domains, and its intersections with Terminology. This section explores the relevance of the historical trajectory of accessibility for this modeling, the socio-cognitive framing of disability from a linguistic standpoint, and the role of inclusive language as a tool for advancing social equity.

2.1 Frame Semantics

Cognitive Linguistics emerged in the 1980s as a challenge to generative linguistic theories: while generative grammar views language as a biological endowed and modular faculty, functionally independent from other cognitive capacities (Kenedy, 2008), Cognitive Linguistics argues for the integration of language with cognition and social experience (Ferrari, 2011; Martelota, Palomanes, 2008).

Within this paradigm, Charles Fillmore introduced Frame Semantics, a theory grounded in the idea that meaning arises from speakers' interactions with the world. Central to this framework is the concept of a frame, understood as a coherent structure of knowledge that underlies the interpretation of lexical items. As Fillmore defines:

By the term 'frame' I have in mind any system of concepts related in such a way that to understand anyone of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made available. (Fillmore, 1982, p.111)

For Frame Semantics, the meaning of words is understood through experiences and other sociocultural contexts evoked in the speakers' minds. In his proposal, lexical units (LUs) associate a lemma with a specific meaning. In this theory, the understanding of meaning is directly related to human experiences and factors external to language, such as speech communities and social contexts. In this way, the frame constitutes a network of meanings, connected by the meanings constructed through linguistic and extralinguistic elements, evoked by the lexical units. Therefore, language encodes values, expectations, and categorizations that are deeply situated on lived experience.

FrameNet is a lexicographic and computational initiative designed to implement Frame Semantics by cataloging and annotating these frames and their associated LUs. Through linguistic and computational modeling, the project provides a structured means to examine how language reflects and organizes knowledge about the world.

2.1.1 FrameNet Brasil

FrameNet⁴ is a semantic-lexical network founded in 1997 at the International Computer Science Institute (ICSI) in Berkeley, California. The initiatives of researchers Fillmore, Baker, Lowe and Atkins (Baker; Fillmore; Lowe, 1998; Fillmore; Atkins, 1992) helped design and implement Frame Semantics by cataloging and annotating frames and their associated LUs. Through linguistic and computational modeling, the project provides a structured means to examine how language reflects and organizes knowledge about the world. Its goal is to systematically document the syntactic and semantic behavior of lexical units in English. This is accomplished through a network of frames that enables a nuanced representation of meaning (Ruppenhoffer *et al.*, 2016).

Sharing this broader objective, several projects around the world have adapted the FrameNet model to other languages. One such project is FrameNet Brasil (FN-Br)⁵, developed at the Federal University of Juiz de Fora, Minas Gerais, conducted by an interdisciplinary team and in collaboration with national and international institutions.

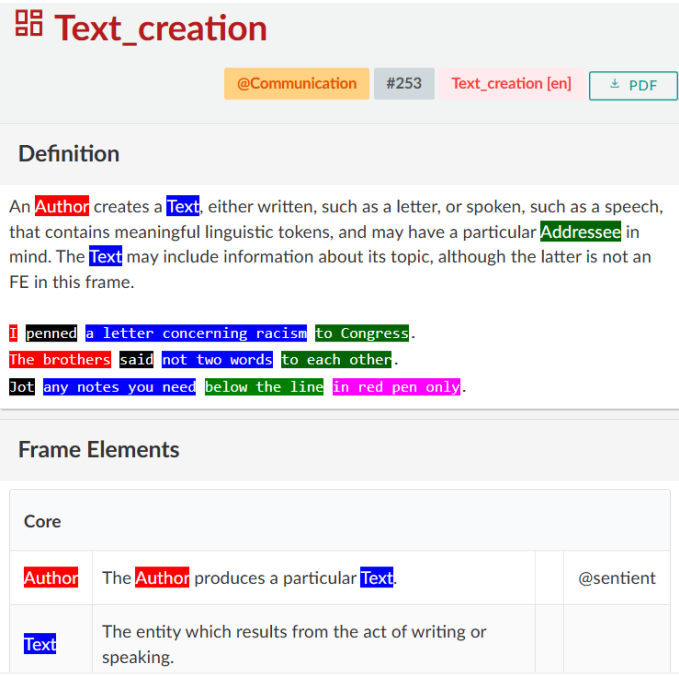
Since the structure of the Berkeley FrameNet serves as a model for other framenets, including FN-Br, it is important to outline its key concepts: lexical unit, frame, frame element, and frame-to-frame relations. In FrameNet, a Lexical Unit (LU) refers to a specific pairing of a lemma with a frame. Understanding the distinction between word forms, lexemes, and lemmas is essential for creating LUs. *Word forms* are inflected variants of a lexeme, e.g. “wrote” and “writing” are word forms of the lexeme “write”. The *lexeme* is the base form conveying core meaning. A *lemma* may comprise one or more lexemes and is marked with a part-of-speech tag, such as *textual creation.n*, which includes two lexemes (*creation.n* and *textual.a*).

The frame, as introduced in Section 2.1, represents a structured set of related concepts, typically arising from a particular type of event or scenario. Frames function as schematic representations — or “scenes” — evoked in the speaker’s mind via lexical units. Each frame includes a definition, a list of Frame Elements (FEs), associated lexical units, and its relations to other frames through structured links (relations).

⁴ FrameNet provides a repository that includes lexical units, frames, frame elements, frame-to-frame relations and a collection of annotation sets of the linguistic annotations made of lexical items. The resource is available at: <https://framenet.icsi.berkeley.edu/>. Access on May 3rd, 2025.

⁵ FrameNet Brasil is available on: <https://webtool.frame.net.br/>. Access on May 3rd, 2025.

Figure 1 — `Text_creation`⁶ frame on FrameNet Brasil



Source: Screen capture from Webtool 4.02.

Figure 1 shows the definition and core Frame Elements of the `Text_creation` frame represented in Webtool 4.0. The frame definition describes the event and identifies its key participants or components, known as Frame Elements (FEs). These are categorized into core and non-core elements. Core FEs are essential for the conceptualization of the frame — they define the structure of the event. Even if they don't appear explicitly in the sentence, core FEs are assumed to be present and may be instantiated in various ways, as discussed below. In contrast, non-core FEs enrich the scene by providing additional, often circumstantial, information, but are not required for the frame to be evoked. Lexical Units (LUs), typically realized as verbs, nouns, or adjectives, function as predicators that evoke frames. Their syntactic-semantic valency patterns are central to defining both the frame and its elements.

- (1) [I ^{AUTHOR}] **WROTE** [a book ^{TEXT}].
- (2) The teachers at my school encourage rewriting texts, so [we ^{AUTHOR}] **WROTE** [in pencil ^{MANNER}].
- (3) [A message ^{TEXT}] is **WRITTEN** [on the board ^{MEDIUM}].
- (4) **WRITE** [your answer ^{TEXT}] [on your notebook ^{MEDIUM}].

The valence pattern of the Portuguese verb *escrever* ("to write") typically involves a subject who performs the writing action and a direct object that corresponds to the resulting textual entity. Accordingly, Author and Text are identified as the core FEs of the `Text_creation` frame, necessary for its conceptualization. Other elements, such as Place and Medium, may enrich the scene but are not required for the frame to be evoked.

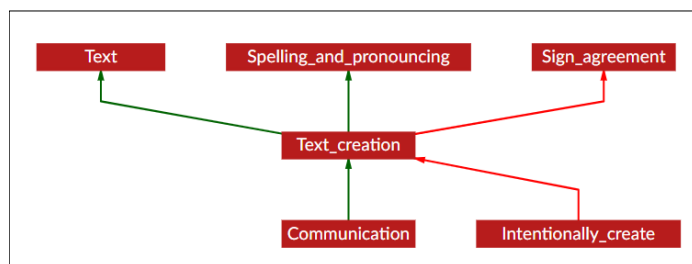
The examples discussed illustrate the different ways in which core FEs can be realized. In (1), both Author and Text are expressed. When this is not the case, the absent FEs are understood through Null Instantiations (NIs), which occur in three types: Definite, Indefinite, and Constructional. Definite Null Instantiation (DNI) arises when the

⁶ Following established conventions, frame names are set in Courier New and frame elements with the first letter capitalized.

missing FE can be inferred from the preceding discourse. In example (2), the Text FE is retrievable from earlier context. Indefinite Null Instantiation (INI) occurs when the missing FE cannot be inferred from context. In example (3), the Author of the message is unspecified and unrecoverable, thus functioning as an INI. Constructional Null Instantiation (CNI) results from the grammatical construction of the sentence. In example (4), the imperative mood prevents the expression of a subject, making the Author FE a CNI.

The FrameNet methodology also defines frame-to-frame relations, which organize frames into a structured network that represents shared knowledge and experience, events, and associated entities. These relations are essential for integrating newly developed frames into the broader database, ensuring conceptual coherence. The main frame-to-frame relations include Inheritance, Subframe, Perspective_on, Using, Causative_of, Inchoative_of and Precedes. In the present study, the most relevant relations for modeling frames in the Accessibility domain were Inheritance and Using. Figure 2 illustrates how these two relations operate in the *Text_creation* frame: red arrows indicate *Inheritance* relations, while green arrows indicate *Using* relations.

Figure 2 — Inheritance and Using Relations in FrameNet Brasil's Grapher



Source: Screen capture from Webtool 4.02⁷

Inheritance occurs when a child frame inherits the structure and core FEs of a more general parent frame, resulting in a more specific conceptualization. In this relation, each core FE in the parent frame must have a direct equivalent — identical or semantically compatible — in the child frame. For instance, the *Text_creation* frame inherits from *Intentionally_create*, which includes the core FEs *Creator* and *Created_entity*. In the more specific *Text_creation* frame, these elements are refined as *Author* and *Text*, respectively, preserving the semantic roles while specifying the domain of the frame. Similarly, the *Using* relation applies when a frame presupposes the conceptual structure of another, drawing on background knowledge to fully interpret the scene. As shown in Figure 2, the *Text_creation* frame relies on the *Communication* frame, assuming that speakers are already familiar with the communicative context in which a text is produced.

2.2 Disability and Assistive Technology as reflections of social cognition: context, characterization and socio-cognitive framework

To understand the semantic domain that includes Accessibility, it is essential to consider how society conceptualizes disabilities and interacts with people with disabilities. Different paradigms have emerged over time, shaped by distinct historical,

⁷ Available at: <https://webtool.frame.net.br/grapher/frame/>. Access on Jan. 10th 2025.

political, and socio-economic contexts. These frameworks influence not only public policy and scientific approaches but also the very language used to describe disability.

2.2.1 Historical context and inclusion practices for people with disabilities in Brazil

Historical and socioeconomic contexts shape worldviews and influence science, politics, and the behavior of individuals within a society (Silva, 2009). This also applies to issues of disability and accessibility which have been interpreted through different paradigms over the centuries: the medical, social, biopsychosocial, and the post-social models.

In the Middle Ages, disabilities were linked to demoniac forces or witchcraft (Silva, 2009). From the late 18th century, with the rise of modern medicine, science replaced religious explanations. Enlightenment and positivist principles reinforced a rational view of “healthy man”, giving rise to the medical model, which framed disability as an individual pathology requiring intervention (Bisol; Pegorini; Valentin, 2017). According to the authors, while this eliminated religious stigma, this perspective developed a view of disabilities as a deviation of human nature. In addition, the consolidation of capitalism contributed to the prominence of man as a productive being, valuing bodies that fit into this structure.

Institutionalization of people with disabilities, under the guise of care, often led to social exclusion (Silva, 2009). In the second half of the 20th century, civil rights movements fostered the social model, which challenged the notion of disability as defect and emphasized social barriers and discrimination instead (Bisol; Pegorini; Valentin, 2017). To integrate medical and social perspectives, the biopsychosocial model emerged, addressing biological, psychological, and social factors as presented by Francisco and González (2022).

More recently, Bisol, Pegorini, Valentin (2017) argue that the post-social model expands the discussion by incorporating feminist, queer, racial, and Marxist perspectives, highlighting the plurality of experiences and social roles of people with disabilities. This shift also emphasizes the role of language in shaping perceptions of disability, as noted by Amaral and Paulista (2021).

Despite progress, ableism remains widespread. Vendramin (2019) defines it as the assumption that physical conditions inherently make people less capable. Often subtle, ableist attitudes are rooted in historical segregation and reinforced through language (Lessa *et al.*, 2020), a topic explored further in Section 2.3.2.

In Brazil, 18.6 million people identify as having disabilities (IBGE, 2022). Yet accessibility has only recently become a concern in public policy (Costa *et al.*, 2005), and people with disabilities still face barriers due to prejudice and lack of awareness (Pereira; Saraiva, 2017). As Barboza and Junior (2017) argue, ensuring rights must go hand in hand with a cultural shift that favors inclusion over invisibility. According to Rodrigues and Alves (2013), Assistive Technology (AT) has been essential in expanding access to mobility, education, work, and communication. However, research on AT in Brazil remains limited, requiring interdisciplinary efforts, including linguistic approaches. These paradigm shifts impact not only policy and technology, but also how disability is expressed in language, a topic addressed in Section 2.3.2.

2.2.2 The socio-cognitive framing of disability and accessibility

Social cognition refers to the processes by which individuals interpret, store, and respond to social situations, drawing on external information to form judgments and

decisions (Travis, 2002). From a cognitive linguistic perspective, semantic frames, defined by Fillmore (1982) as structured representations of conceptual knowledge, play a crucial role in organizing speakers' experiences and contexts through lexicon and grammatical constructions.

The works of Parintins Lima and Morato (2020) and Bentes and Morato (2021) — while working with frames using different methodologies as those applied in FrameNet, in an approach closer to discourse studies — highlight the importance of frames in socio-cognitivism and the importance of inclusive language. Parintins Lima and Morato (2020) describe frames as a socio-cognitive framework of human experiences, capable of activating culturally shared knowledge. In their study of verbal violence and racism surrounding the #SomosTodosMacacos campaign, they illustrate how linguistic expressions trigger frames that reproduce discriminatory worldviews.

Similarly, Bentes and Morato (2021) examine how discursive strategies employed by the Bolsonaro administration during the Covid-19 pandemic shaped public understanding of the crisis. These cases underscore the role of language in constructing and reinforcing socio-cognitive models, including those grounded in prejudice. They also highlight the importance of fostering inclusive and responsible discourse, a topic explored further in Section 2.3.2.

Miranda and Bernardo (2013) and Miranda and Loures (2016) approach discourse analysis with a theoretical-methodological foundation built on Frame Semantics, focusing on education and school environment. Miranda and Bernardo (2013) explore the challenges in Brazilian education through a corpus composed of stories told by students who attend different public schools. The research analyses these discourses through semantic frames, identifying the frames evoked by the ULs and establishing relations between the most common frames and the experiences lived by the students.

Similarly, Miranda and Loures (2016) recognize the role of experience in language and cognition, as well as the relevance of Frame Semantics and the FrameNet methodology. The corpus consists of narratives told by Brazilian students of multiple public schools, specifically about their experiences during Portuguese lessons. The FrameNet Brasil network of frames, as well as the annotation tool, allowed for a more profound understanding of students' realities, perceptions and experiences. These works highlight the relations between social cognition and language, as well as the contributions of Frame Semantics and FrameNet methodologies within discourse analysis and understanding of speaker's contexts and experiences.

Salomão (2003), founder of FrameNet Brasil, emphasizes the fundamentally social nature of cognition. Meaning, she argues, emerges through cooperation among participants in communicative events. The ability to interpret complex or implicit meanings depends on the dynamic organization of cognitive spaces, which allows speakers to construct shared understandings. As Salomão puts it, cognition is shaped not only by individual experience but by the transmission of cultural models across generations, making knowledge itself a profoundly social phenomenon.

This perspective aligns with the foundational assumptions of Cognitive Linguistics and Frame Semantics: meaning is constructed through embodied experience, shaped by sociocultural context, and instantiated in language. Parintins (2023) reinforces this view by noting that both cognition and language are fundamentally shaped by social interactions and shared experience. As outlined in Section 2.2.1, historical paradigms have significantly shaped how disability is conceptualized, giving rise to socio-cognitive models that either sustain or resist ableist conceptions. The present study aims to model semantic frames within the Accessibility domain that reflect inclusive, non-ableist

conceptualizations, drawing primarily on the social, biopsychosocial and post-social models.

2.3 Dialogues between Lexical Semantics and Terminology

Lexical Semantics, as outlined by Arias and Ferrero (2019), investigates the semantic relationships among lexical units, addressing phenomena such as denotation, connotation, polysemy, and semantic shift. Terminology, by contrast, focuses on lexical items within specialized domains, emphasizing their conceptual structure and domain-specific usage (L’Homme, 2020). While traditionally treated as distinct disciplines, recent scholarship has emphasized the value of integrating these perspectives.

L’Homme (2020) advocates for applying tools from Lexical Semantics to terminological analysis by treating terms as lexical units. From this standpoint, the meaning of a term is not derived from formal linguistic properties alone, but from its relevance and function within a specialized domain. The identification of terms thus depends on extralinguistic criteria — such as communicative purpose and domain-specific knowledge — as well as on the specific goals of terminological practice (e.g., lexicography, translation, information retrieval).

2.3.1 Lexical Units and Terms

Within Terminology, definitions of “term” vary depending on the theoretical framework adopted. One consistent insight, however, is that terms cannot be identified solely through linguistic form. As L’Homme (2020) notes, a lexical unit becomes a term when it is analyzed from the perspective of specialized knowledge and performs a function within a domain-specific communicative context. The status of a lexical item as a term also depends on its practical application, such as in the construction of terminological resources or the indexing of technical content.

In Lexical Semantics, a lexical unit (LU) consists of a pairing between a lexical form and a specific sense (Cruse, 1986). L’Homme proposes that this definition can be extended to terms, treating them as LUs that contribute semantically to discourse based on their valence and syntactic flexibility. For example, multiword lexical units, such as *chair lift.n*, function as a single LU, whose components cannot be moved or removed without changing the meaning.

These relations established between term and LU allow Terminology to be brought closer to the semantic-lexical application of Frame Semantics for specialized domains. Frames, as L’Homme *et al.* (2014) point, assist in the analysis of terms that describe processes or events and the construction of their participants. The extralinguistic aspects needed to identify terms are applicable to Frame Semantics notions of constructing meaning from the speaker's contexts.

In this way, the relations between Terminology and Lexical Semantics can be explored in the study of specialized domains based on Frame Semantics. Thus, the concepts used in this work, through FrameNet Brasil, dialog with both areas.

2.3.2 Language as a tool for social inclusion

As Leal *et al.* (2024) argue, communication occurs within complex physical, psychological, and social environments shaped by pre-existing structures. Language is not a neutral conduit but a medium shaped by beliefs, values, and cultural norms that influence how individuals position themselves and others in society. It operates both as a reflection of social inequalities and as a mechanism through which such inequalities are

reinforced. As the authors describe, language both emerges from and perpetuates structural inequality, acting as a medium through which social differentiation is reproduced (Leal *et al.*, 2024).

This reciprocal relationship between language and social bias is further explored by Parintins Lima and Morato (2020), who examine the psychosocial dimensions of verbal violence. They demonstrate how violence is not limited to physical acts but is also enacted through linguistic practices. Insults, harassment, defamation, and exclusionary discourse are all forms of symbolic violence that undermine individual dignity and limit the autonomy and social participation of marginalized groups.

Bentes and Morato (2021) also address the role of language in perpetuating social violence, describing textual production as “an instrument, a product, and a mode of social action”⁸ (p. 20). They emphasize the importance of holding individuals and collectives accountable for harmful discourse and advocate for discursive practices that not only challenge stereotypes but also transform the social interactions in which those stereotypes are embedded. Their analysis draws attention to the socio-political and interactional contexts that enable hate speech, which disproportionately affects minority and vulnerable populations.

In the field of Lexical Semantics and language policy, Amaral and Paulista (2021) analyze how disability rights movements have influenced the terminology used to refer to people with disabilities. They argue that “words translate, organize, and challenge reality as it is”⁹ (p. 1707), highlighting that debates over terminology are not merely grammatical but deeply contextual and ideological. If language can serve as a tool of symbolic aggression, then the affective and socio-political implications of word choice must be examined.

Lessa *et al.* (2020) define social inclusion as “the process by which society adapts to include people with disabilities in its systems, while at the same time preparing them to take on their roles in society”¹⁰ (p. 122). They caution that this process is far from linear, as discrimination and ableist language continue to reflect and reinforce social exclusion.

Consequently, promoting inclusive language is not only a technological concern but a cognitive and social imperative. Language shapes how disability is perceived in everyday life. As such, fostering accessible and inclusive communication is essential for ensuring the participation and recognition of people with disabilities across all domains of social life.

3 METHODOLOGY

This section outlines the methodological procedures adopted for developing frames within the Accessibility domain in FrameNet Brasil. The process involved three main stages: corpus compilation and lexical analysis; extraction of example sentences; and lexicographic annotation of selected Lexical Units.

3.1 Corpus compilation and lexical analysis

The initial phase consisted of compiling a domain-specific corpus. Sardinha (2004) states that a corpus must present data that is representative of the language being analyzed.

⁸ In the original: “um instrumento, um produto e um modo de ação social.” (p.20).

⁹ In the original: “as palavras traduzem, ordenam e confrontam a realidade posta.” (p.1707).

¹⁰ In the original: “o processo pelo qual a sociedade se adapta para incluir as pessoas com deficiência em seus sistemas, ao mesmo tempo, que estas preparam-se para assumir seus papéis na sociedade.” (p. 122).

Following the compilation criteria in Corpus Linguistics (Sardinha, 2004), the corpus of this research is made up of texts written by native speakers of Brazilian Portuguese, and is not artificially created. Online materials such as booklets, glossaries, and other publicly available texts related to accessibility were collected. These genres were selected due to the reliability of the data. The texts selected were created by government agencies or institutions focused on accessibility issues. Thus, for the purposes of this research, the corpus has a representative function in line with inclusive vocabulary and awareness of ableist issues. Furthermore, Sardinha (2004) points out that the size of the corpus is also an important criterion for representation. The resulting corpus for this research comprised 37,774 tokens and 6,454 types, with the purpose of analyzing the specific lexicon of the Accessibility domain — not focusing on a quantitative approach. Lexical frequency was analyzed using AntConc, a concordance tool that ranks lexical types through its "Keywords" function, facilitating the identification of salient vocabulary.

This frequency-based analysis yielded a set of candidate LUs — lexical items likely to evoke meanings specific to the domain of Accessibility. Although FrameNet does not prescribe a frequency-based method for LU selection, this strategy proved effective for identifying lexical items with high relevance and representativeness. AntConc was also instrumental in detecting multi-word expressions (MWEs), a key consideration in FrameNet annotation. For instance, “people with disabilities” emerged as a high-frequency MWE, as did terms specifying types of disability, such as “physical disability,” “intellectual disability,” and “visual disability.”

The selected LUs were provisionally grouped into two thematic categories: *Disabilities* and *Assistive Technologies*. This initial classification provided a conceptual structure for frame development in subsequent phases. Authentic usage examples were then retrieved for each LU using Sketch Engine, a multilingual corpus analysis tool. Between 20 and 30 sentences were extracted per LU, resulting in a dataset of contextualized instances for 18 lexical items. These examples formed the empirical basis for semantic frame modeling.

The annotated sentences were imported into Webtool 4.0, the platform of FrameNet Brasil annotation. Lexicographic annotation was selected over running text annotation due to the project’s focus on individual LUs within a specialized semantic domain. This method enables detailed analysis of how a given LU behaves across diverse syntactic and semantic contexts, supporting the identification of valence patterns and associated Frame Elements (FEs).

In accordance with FrameNet’s annotation architecture, three representational layers are available: Frame Elements, Grammatical Functions, and Syntactic Realization Types. For this phase of the project, only the semantic layer — Frame Elements — was annotated. The incorporation of the remaining layers may be considered in future research to expand the descriptive and analytical depth of the annotated frames.

3.2 Guidelines for frame modeling for specialized domains

Specialized lexicons differ from general-purpose vocabularies in that they are not accessible or actively used by the entire speech community. Instead, their usage is typically confined to specific professional, social, or technical contexts (Arias; Ferrero, 2019). While the original Berkeley FrameNet project was developed with a focus on general language, both its theoretical foundation and its computational methodology can be effectively applied to specialized domains. Notable examples include L’Homme *et al.* (2020), who model frames related to environmental terminology in English and French. In Brazilian Portuguese, Lamberti (2022) conducts similar work by analyzing the

environmental lexicon from a lexical-semantic perspective grounded in Terminology, while also drawing on the principles of Frame Semantics and the FrameNet framework.

In FrameNet, frames serve as linguistic and computational representations of conceptual structures, defined in terms of their internal components (Gamonal; Torrent, 2015). Understanding the process of frame creation requires attention to the core elements that constitute a frame, as outlined in Section 2.1.2: the frame definition, its Frame Elements (FEs), and the set of Lexical Units (LUs) that evoke it.

Frame modeling in FrameNet Brasil combines two complementary methodologies: a top-down and a bottom-up approach (Gamonal; Torrent, 2015). The top-down approach relies on the intuition of native speakers or domain experts, who propose a frame based on conceptual knowledge and identify candidate LUs that may evoke it. The bottom-up approach, by contrast, is data-driven: lexical items are extracted from a corpus and grouped based on shared semantic properties that motivate their inclusion in the same frame, even when they belong to different parts of speech.

This study initially adopted a bottom-up strategy by identifying lemmas associated with accessibility-related meanings through corpus analysis. These lemmas provided the empirical foundation for constructing the `Disability` and `Assistive_Technology` frames. Subsequently, a combined approach — integrating both bottom-up corpus evidence and top-down conceptual modeling — was employed to develop the `People_with_disabilities` frame.

4 MODELING THE FRAMES `DISABILITY`, `ASSISTIVE_TECHNOLOGY` AND `PEOPLE_WITH_DISABILITIES`

Based on the considerations made in section 2.3, the proposal to create the frames had to consider the historical contexts and the socio-cognitive framing of disabilities. In line with the concepts of the social and post-social models, it is important that the definition of the frames consider not only the medical and health-related aspects but also issues of accessibility and autonomy for people with disabilities, aware of the discussions on ableism.

Valuing the contributions of language to the construction of a more inclusive society, it is essential that FrameNet Brasil presents a comprehensive database that understands the complexity of the field of accessibility. For this reason, the frames were modeled considering ethical, social, historical, and inclusion aspects.

4.1 Disability frame

The purpose of the `Disability` frame is to cover the disabilities themselves, understanding their different types and impacts. Figure 3 shows the `Disability` frame on FrameNet Brasil.

The glossary “Terminology on Disability in the Age of Inclusion” (Sassaki, 2011), made available by the Chamber of Deputies, indicates the use of the word “condition” to talk about disabilities, avoiding terms with a negative connotation such as “disease”. The specification of “long-term” and the nature of the different types of disabilities have been added to the definition of the frame. For example, a broken arm is a physical limitation, but because it is not a long-term condition, it does not qualify as a disability. In addition, it is important to mention the different types of disability to recognize that the nature of the condition has an impact on how that disability affects different areas of disabled people's lives. Furthermore, the definition addresses issues of accessibility, inclusion and

how different barriers prevent people with disabilities from participating equally in society.

In addition to the Condition Frame Element, which represents the disability itself, the Individual FE was identified as core. This decision is based on the understanding that a disability, by definition, necessarily exists by affecting a person.

Figure 3 — Disability frame on FrameNet Brasil


Disability

#1565

Disability [en]

PDF

Definition

A **Condition** of a physical, sensory, mental and/or intellectual nature that, in interaction with various barriers, can obstruct an **Individual**'s full and effective participation in society on equal terms with other people.

Frame Elements

Core	
Condition	The deficiency itself of some bodily function (whether physical, sensory, mental and/or intellectual nature) that may result in limitations and/or disabilities.
Individual	The person affected by some Condition .

Source: Screen capture from Webtool 4.02¹¹

Following the Inheritance relation, the Disability frame (more specific) inherits the FEs from the parent frame Health_Conditions (broader). In the Health_Conditions frame, the core FEs are Health Condition and Patient. In this case, people with disabilities are specific patients with a specific condition. The definition of the Health_Conditions frame and its core elements determines that a condition is always something that affects a patient, and this determination is maintained in the nuclear FEs of the Disability frame. Therefore, it is not possible for a disability to exist in the world or in a linguistic context without being linked to an individual. Even if the FE is not instantiated, the element is still core, as in the example below:

- (5) A retinoplastia diabética é uma causa evitável de **CEGUEIRA**^{CONDIÇÃO}.¹²

In sentence (5), there is no specification of who is the disabled person affected by blindness. However, for blindness to occur, it will necessarily be in an individual. This linguistic property is explained by Lamberti (2022) through the class of semantic quasi-predicates which “denote entities, but at the same time have a linking meaning, which implies the existence of participant(s)”¹³ (p. 1152). The author uses the term “fire” as an example, which, in the realm of environment and deforestation, requires two participants, the agent or cause and a patient.

Similarly, the LUs present in the Disability frame also require an obligatory participant, represented by the nuclear FE Individual. In the case of the example above,

¹¹ Available at: <https://webtool.frame.net.br/report/frame/1565/>. Access on Jan. 20 2025.

¹² “Diabetic retinopathy is a preventable cause of **BLINDNESS**^{CONDIÇÃO}.”

¹³ In the original: “denotam entidades, mas possuem ao mesmo tempo um sentido ligante, o que implica a existência de participante(s).” (p. 1152).

the FE Individual would be annotated as a null instantiation of the indefinite type, since it is not possible to recover it through the linguistic context. The FE Condition is annotated as Incorporation (INC), because the target LU *blindness.n* incorporates the lexical information of the FE Condition.

In addition to `Health_Conditions`, `Disability` is also an inheritor of the `Entity_State` frame, which has `Entity` as its core FE.

The definitions of the frames `Health_Conditions` and `Disability` show that these frames conceptualize situations in which a given entity (patient or person with a disability) is in a specific state (condition or disability). For this reason, an inheritance relation is established between the frames `Entity_State` and `Disability`, starting from the more generic to the more specific. This is because the FN frame hierarchy allows for multiple inheritances in its structure.

In the `Disability` frame, the FEs `Degree` and `Manifestation` were included due to the occurrence of FEs occupying these semantic roles during lexical analysis. The lexical study of the corpus allowed us to identify that disabilities are often classified as “mild” or “severe”, “partial” or “total”, “congenital” or “acquired”, among others. However, these components are not essential for the frame to occur, therefore classified as non-core.

4.2 Assistive_Technology frame

In 2009, the Brazilian Technical Aids Committee of the Secretariat for Human Rights of the Presidency of the Republic determined that “the term Assistive Technology should always be used in the singular, as it refers to an area of knowledge and not to a specific collection of products” (SDHPR — Technical Aids Committee, 2009). For this reason, in FrameNet Brasil, the frame was also modeled in singular, as shown in Figure 4.

Figure 4 — Assistive_Technology frame on FrameNet Brasil

Source: Screen capture from Webtool 4.02¹⁴

The definition of the frame includes the different types of resources that make up Assistive Technology and their importance for people with disabilities, again addressing issues of accessibility and inclusion. The Assistive Technology FE is the only core one

¹⁴ Available at: <https://webtool.frame.net.br/report/frame/1566/>. Access on Jan. 20th 2025.

because, unlike what happens with disabilities, AT resources are artifacts that exist in the world, created or improved so that they are useful to people with disabilities. This determination also reflects Inheritance with the `Artifact` frame, which has `Artifact` as its only core FE.

Again, the more specific child frame starts from a more generic frame. AT resources are artifacts developed for a specific use: to promote greater accessibility for people with disabilities. In the same way that `Artifact` is the only core FE in this frame, `Assistive Technology` was also stipulated as the only essential element in the `Assistive_Technology` frame.

(6) Placas de identificação de recintos em **BRaille**^{TECNOLOGIA_ASSISTIVA}.¹⁵

Sentence (6) is descriptive in nature and the *braille.n* resource does not need an individual using it to occur. Thus, the FE Descriptor was determined to be non-core, since it is not essential to the conceptualization of the frame, but can provide additional information.

4.3 People_with_disabilities frame

The purpose of the `People_with_disabilities` frame, shown in Figure 5, is to cover the LUs that name people with disabilities. Unlike the frames presented above, this one was developed from the lexicographic annotations discussed in item 5. The motivation for this frame was the identified frequency of LUs that designate people in the annotated sentences, which are not identified under `Disability` or `Assistive_Technology` and are also not completely covered by the existing frames in the FN-Br database.

The relations between frames established are `Use`, with the `Disability` frame, and `Inheritance`, with the `People_by_health_conditions` frame. In the hierarchy of frames, there is an extensive deepening of the `People` frame, which inherits from `Biological_Entity`. Some of the heirs of `People` are: `People_by_origin`, `People_by_age` and `People_by_religion`.

By naming the frame `People_with_disabilities`, the name of the frame differed from the pattern of all the others in the FrameNet network, `Person_by_X` for `Person_with_X`. This choice was made to signal the importance of considering disability as a characteristic, rather than as a defining aspect of the person.

¹⁵ “Venue nameplates in **BRaille**^{ASSISTIVE_TECHNOLOGY}.”

Figure 5 — `People_with_disabilities` frame on FrameNet Brasil

People_with_disabilities

#1591

People_with_disabilities [en]

PDF

Definition

A **Person** with a **Disability** who, depending on the circumstances, may need specific resources and/or legal rights capable of guaranteeing full and effective participation in society on an equal footing with other people.

Frame Elements

Core

Disability	Disability that affects a Person .		
Person	Person affected by Disability .		

Source: Screen capture from Webtool 4.02¹⁶

5 LEXICOGRAPHIC ANNOTATION AS A WAY OF ANALYZING THE LEXICON IN USE

FrameNet's lexicographic annotations provide empirical evidence about the LUs annotated in sentences. These syntactic and semantic analyses of the lexicon in use provide information used to define frames and Frame Elements. The table below shows the LUs annotated in each frame of the Accessibility domain in Brazilian Portuguese, focusing on the first (semantic) layer. For future computational tasks, it is important to expand on the work done in this research and address the other annotation layers, which provide a more complete view of ULs and their semantic and grammatical roles.

The `Disability` frame, as presented in section 4.1, aims to define the concept of disability, considering its complexities through the Frame Elements. Therefore, the LUs of this frame are the lexical items that evoke this structure of meanings in the speakers' minds. The sentences below exemplify some LUs from the `Disability` frame and their Frame Elements.

Figure 6 — Lexicographic annotation Webtool 4.0¹⁷

LU: Deficiência.nanismo.n

Alternative LUs

#156521

CNI

DNI

INI

INC

Condição

Vamos tratar de muitas modalidades paralímpicas e abordar paralisia cerebral, **nanismo**,

amputados, surdos e cegos.

Source: Screen capture from Webtool 4.02¹⁸

The sentence above features the LU *dwarfism.n*, which evokes the frame and occupies the nuclear FE Condition annotated as Incorporation (INC), since the word

¹⁶ Available at: <https://webtool.frame.net.br/report/frame/1591/>. Access on Jan. 20th 2025.

¹⁷ “We’re going to cover many paralympic categories and approach cerebral palsy, dwarfism, amputees, deaf and blind people.”

¹⁸ Available at: <https://webtool.frame.net.br/annotation/fullText/sentence/3112922/>. Access on Jan 22th 2025.

incorporates the linguistic material referring to the condition. Non-nuclear FEs did not appear, but they can be included in the frame definition as evidence emerges in the corpus to indicate the need, as shown in the sentences below.

- (7) Os participantes deveriam comprovar o diagnóstico de **CEGUEIRA**^{CONDIÇÃO} [congenita ou adquirida^{MANIFESTAÇÃO}] por meio de um relatório oftalmológico. (Condição: INC; Indivíduo: DNI)¹⁹
- (8) Doenças da retina são a causa mais comum de **CEGUEIRA**^{CONDIÇÃO} [em adultos em populações urbanas no Brasil^{INDIVÍDUO}]. (Condição: INC)²⁰

Sentences (7) and (8) show the annotation of the non-core Frame Elements Degree and Manifestation. The annotation of the LUs in the *Disability* frame made it possible to identify occurrences in which disabilities are more detailed or specified based on these elements, leading to the creation of these FEs.

Another analysis raised by the lexicographic annotation of these LUs was the question of MWEs. To determine whether multi-words such as “hearing disability” or “visual disability” should be a single LU or not, we return to L’Homme’s (2020) terminological approach and the principle of compositionality discussed in section 2.3.1.

- (9) No Brasil, o Decreto no 5296 de 02 de dezembro de 2004 define dois tipos de **DEFICIÊNCIA**^{CONDIÇÃO} [visual^{TIPO}]: cegueira e baixa visão. (Condição: INC)²¹

The sentence above focuses on the LU *disability.n*. The meaning of the term “visual disability”, according to the principle of compositionality, can be understood from the sum of its parts. In addition, it is possible to indicate in the sentence that “visual disability” does not indicate a single condition. Similar occurrences exist for “hearing disability”, “physical disability”, among others, where these MWE do not represent a single condition, but rather a spectrum. From this analysis, it was determined that these MWE do not constitute LUs and the non-nuclear FE Type was created to cover lexical items such as *visual.a*, *hearing.a* and *physical.a* as modifiers. The same considerations do not apply to MWE such as *tourette syndrome.n* or *down syndrome.n*, which represent unique conditions and are defined as LUs in the frame.

The *Assistive_Technology* frame was also initially created with the nuclear FE Assistive Technology. With the lexicographic annotation, the need for non-nuclear FE inclusion was identified based on the contexts in which the LUs are used. Thus, the FE Descriptor was included to add a greater level of detail to the annotations. The following sentences demonstrate the use of these FEs during annotation.

¹⁹ “Participants had to prove a diagnosis of congenital or acquired **BLINDNESS**^{CONDITION} through an eye report.”

²⁰ “Retinal diseases are the most common cause of **BLINDNESS**^{CONDITION} in adults in urban populations in Brazil.”

²¹ “In Brazil, Decree No. 5296 of December 2, 2004 defines two types of [visual^{TYPE}] **DISABILITIES**^{CONDITION}: blindness and low vision.”

- (10) **TECNOLOGIA ASSISTIVA**^{TECNOLOGIA_ASSISTIVA} pode ser especialmente útil em um ambiente educacional. (Tecnologia Assistiva: INC)²²
- (11) Reconhecimento de padrões auditivos de frequência e de duração em crianças usuárias de **IMPLANTE COCLEAR**^{TECNOLOGIA_ASSISTIVA} [multicanal^{DESCRITOR}]. (Tecnologia Assistiva: INC)²³

Sentence (10) shows an example in which the only FE needed to complete the frame is Assistive Technology, also annotated as INC, attesting to the decision to keep it as the only core FE. In sentence (11), we see a more complex sentence with a greater amount of detail represented by the non-core FE.

In addition, the lexicographic annotation also raised the need to create the *People_with_disabilities* frame. As presented in section 4.3, the goal is to cover LUs that evoke the concept of people with disabilities. The possible lexical items for this frame raise several discussions about issues of semantic and lexical change, terminology, accessibility, and ableism. Questions such as the acceptability of *deaf.n* or *blind.n* in certain contexts in Brazilian Portuguese, or even the lexicon now considered inappropriate such as *crippled.n*, raise the demand for new studies to explore the methodology of FN-Br to identify ableist language and semantic and lexical change.

In this context, the only LU selected for annotation was people with *disabilities.n*, shown in the sentence below:

- (12) Familiares de **PESSOAS COM DEFICIÊNCIA** e a sociedade de forma geral também eram seus leitores. (Deficiência: INC) (Pessoa: INC)²⁴

In this way, FrameNet Brasil's lexicographic annotation is a relevant tool for analyzing the lexicon in its various contexts of use. Using this methodology, it is possible to verify which linguistic aspects are important for the evocation of frames and for the socio-cognitive framing of human experiences through language.

6 CONCLUSION

The theoretical foundation of Frame Semantics and the FrameNet Brasil methodology present tools for the empirical analysis of the lexicon. Frames, networks of related concepts that categorize human experiences, highlight the importance of extralinguistic contexts in the construction of meaning. In this way, it is possible to establish the connection between language and social inclusion, based on the premise that communication is influenced by the ideals of a speech community and that language is a way of perpetuating these ideas in society.

In the context of Accessibility, language is an important aspect to be considered in discussions about ableism, inclusion, the history of disabilities and increasing the autonomy of people with disabilities. For this reason, this research was dedicated to modeling frames from this domain in FrameNet Brasil, with the goal of contributing to a database that represents this lexicon and offers space for these questions. The modeling work carried out highlighted the need to avoid perpetuating stigmas and prejudices, emphasizing the role of language in maintaining a more inclusive society.

Some aspects were not covered in depth in this work, such as the annotation in the three layers and an in-depth discussion on the insertion of the lexicon considered ableist

²² “**ASSISTIVE TECHNOLOGY**^{ASSISTIVE_TECHNOLOGY} can be especially useful in an educational setting.”

²³ “Recognition of frequency and duration auditory patterns in children with [multichannel^{DESCRITOR}] **COHCLEAR IMPLANTS**^{ASSISTIVE_TECHNOLOGY}”

²⁴ “Family members of **PEOPLE WITH DISABILITIES** and society in general were also his readers. (Disability: INC) (Person: INC)”

in the FN-Br database. Since the inclusion of the lexicon is a requirement for annotation in this network, it is worth considering inclusive ways of doing this. For example, how can ableist Brazilian Portuguese terms such as “aleijado” (crippled) be included in the FrameNet Brazil annotation? What is the best way to insert this inappropriate lexicon into the database? These limitations point to the need for future research and the expansion of the field of Accessibility in FrameNet Brasil. The FrameNet semantic network is applicable in the development of various language technologies, such as dictionaries, automatic translators, artificial intelligence modeling and Assistive Technology resources such as audio descriptions. In this way, the inclusion of this semantic-lexical domain in FrameNet Brasil represents a step towards the inclusion of other domains, guaranteeing a comprehensive and inclusive semantic network.

BIBLIOGRAPHY

- ABREU, Helen de Andrade; MATOS, E. E. S. A FrameNet Brasil approach to annotation of pragmatic frames evoked by turn organization gestures. *Caligrama: Revista de Estudos Românicos*, [S. l.], v. 30, n. 1, p. 94-109, 2025. DOI: 10.35699/2317-2096.2025.57543. Available at: <https://periodicos.ufmg.br/index.php/caligrama/article/view/57543>. Access on: 5 maio 2025.
- AMARAL, Shirlena Campos de Souza; PAULISTA, Bárbara Rangel. Mudanças terminológicas na referência feita à pessoa com deficiência: contribuições da Análise do Discurso. *Revista Philologus*, v. 27, n. 81, p. 1702-1715, 2021.
- ARIAS, Paz Battaner; FERRERO, Carmen López. *Introducción al léxico, componente transversal de la lengua*. Comercial Grupo ANAYA, SA, 2019.
- BAKER, Collin F.; FILLMORE, Charles J.; LOWE, John B. The Berkeley FrameNet project. In: PROCEEDINGS OF THE 17TH INTERNATIONAL CONFERENCE ON COMPUTATIONAL LINGUISTICS. Morristown, 1998. p. 86-90.
- BARBOZA, Heloisa Helena; JUNIOR, Vitor de Azevedo Almeida. Reconhecimento e inclusão das pessoas com deficiência. *Revista Brasileira de Direito Civil*, v. 13, n. 3, p. 17-38, 2017.
- BELCAVELLO, F. et al. Charon: a FrameNet annotation tool for multimodal corpora. In: PROCEEDINGS OF THE 16TH LINGUISTIC ANNOTATION WORKSHOP (LAW-XVI). Marseille, jun. 2022. p. 91-96. Available at: <https://arxiv.org/abs/2205.11836>. Access on: 28 jan. 2025.
- BENTES, Anna Christina; MORATO, Edwiges. Expressões de violência verbal e reflexividade face ao modelamento da pandemia de Covid-19. *Calidoscópio*, São Leopoldo, v. 19, n. 1, p. 18-31, 2021.
- BISOL, Cláudia Alquati; PEGORINI, Nicole Naji; VALENTINI, Carla Beatriz. Pensar a deficiência a partir dos modelos médico, social e pós-social. *Cadernos de Pesquisa*, v. 24, n. 1, p. 87-100, 24 maio 2017.
- BRASIL. Ministério da Justiça e Cidadania. Secretaria Especial dos Direitos da Pessoa com Deficiência. *Convenção sobre os direitos das pessoas com deficiência*. Brasília, 2016.
- BRASIL. Secretaria Especial dos Direitos Humanos. Subsecretaria Nacional de Promoção dos Direitos da Pessoa com Deficiência. Comitê de Ajudas Técnicas. *Tecnologia assistiva*. Brasília, 2009.
- COSTA, Gabriela RV; MAIOR, IMML; LIMA, NM de. Acessibilidade no Brasil: uma visão histórica. *CORDE ATIID*, 2005.
- CRUSE, David Alan. *Lexical semantics*. Nova York: Cambridge University Press, 1986.
- DUTRA, Livia Vicente. *Evaluating the contribution of framenet to gender-based violence identification: how semantic annotation can be used as a resource for identifying patterns of violence*. 2024. 87 f. Dissertação (Mestrado em Language Technology) – Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg, Gotemburgo, Suécia, 2024.
- FERRARI, Lilian. *Introdução à linguística cognitiva*. São Paulo: Contexto, 2011.
- FILLMORE, Charles J. Frame semantics. In: LINGUISTICS IN THE MORNING CALM. Seul: Hanshin Publishing, 1982. p. 111-137.
- FILLMORE, Charles J.; ATKINS, B. T. S. Towards a frame-based lexicon: the semantics of RISK and its neighbors. In: LEHRER, A.; LEHRER, R.; KITTAY, E. (org.). *Frames, fields, and contrast: new essays in semantics and lexical organization*. Hillsdale: Lawrence Erlbaum Associates, 1992. p. 75-102.
- FRANCISCO, Lucilene; GONÇALEZ, Paula Regina Ventura Amorim. Modelo biopsicossocial da deficiência: repositórios institucionais X acessibilidade. In: ANAIS DO 29º CONGRESSO BRASILEIRO DE BIBLIOTECONOMIA, DOCUMENTAÇÃO E CIÊNCIA DA INFORMAÇÃO, 2022. p. 1-11.

- GAMONAL, Maucha Andrade; TORRENT, Tiago Timponi. Diretrizes para a criação de um recurso lexical multilíngue a partir da semântica de frames: a experiência turística em foco. *Domínios de Linguagem*, v. 9, n. 2, p. 56-75, 2015.
- KENEDY, Eduardo. Gerativismo. In: MARTELOTTA, Mário Eduardo (org.). *Manual de linguística*. São Paulo: Contexto, 2011. p. 137-140.
- LAMBERTI ARRAES, Flávia Cristina Cruz. Descobrindo o léxico especializado do meio ambiente: uma abordagem léxico-semântica. *Domínios de Linguagem*, v. 16, n. 3, p. 1146-1172, 2022.
- LARRÉ, Lorena Tasca. *Modelagem dos domínios da saúde e da violência na FrameNet Brasil para identificação de casos de violência de gênero*. 2024. 99 f. Dissertação (Mestrado em Linguística) – Faculdade de Letras, Universidade Federal de Juiz de Fora, Juiz de Fora, 2024.
- LEAL, Daniela; FREITAS, Jorge Peixoto; MAGALHÃES, Sara Isabel; MATIAS, Marisa. Quem inclusivo fala, sempre acerta: uma discussão sobre linguagem inclusiva. *ex æquo*, n. 49, p. 19-34, 2024.
- LESSA, Thamires Gomes da Silva Amaral; FRAGA, Aline Guerra Manssour; LIONE, Viviane de Oliveira Freitas. A contextualização histórica das deficiências no Brasil: a linguagem que perpassa a todos. *Revista Philologus*, v. 26, n. 78, p. 109-125, 2020.
- L'HOMME, Marie-Claude. *Lexical semantics for terminology: an introduction*. Amsterdam; Philadelphia: John Benjamins Publishing, 2020.
- L'HOMME, Marie-Claude; ROBICHAUD, Benoît; RÜGGERBERG, Carlos Subirats. Discovering frames in specialized domains. In: LREC, 2014. p. 1364-1371.
- MARTELOTTA, Mário Eduardo; PALOMANES, Roza. [Título do capítulo não especificado]. In: MARTELOTTA, Mário Eduardo (org.). *Manual de linguística*. São Paulo: Contexto, 2011. p. 177-192.
- MIRANDA, N. S.; BERNARDO, F. C. Frames, discurso e valores. *Caderno de Estudos Linguísticos*, Campinas, v. 55, n. 1, p. 81-98, 2013.
- MIRANDA, N. S.; LOURES, L. F. Da análise semântica do discurso à ação educativa: um mapa da crise da sala de aula. *Linguagem em (Dis)curso*, p. 526-546, 2016.
- PARINTINS LIMA, Rafahel Jean. Algumas palavras sobre (socio)cognitivismo: para o estudo textual das fake news e da relação entre linguagem, cognição e sociedade. *Revista Saridh – Linguagem e Discurso*, v. 5, n. 2, 2023.
- PARINTINS LIMA, Rafahel Jean; MORATO, Edwiges. Racismo e violência verbal: a construção textual e sociocognitiva da #SomosTodosMacacos. *Revista de Estudos da Linguagem*, v. 28, n. 4, p. 1637-1666, 2020.
- PEREIRA, Jaquelline de Andrade; SARAIVA, Joseana Maria. Trajetória histórico social da população deficiente: da exclusão à inclusão social. *SER Social*, Brasília, v. 19, n. 40, p. 168-185, jan./jun. 2017.
- RODRIGUES, Patrícia Rocha; ALVES, Lynn Rosalina Gama. Tecnologia assistiva: uma revisão do tema. 2013.
- RUPPENHOFER, Josef et al. *FrameNet II: extended theory and practice*. International Computer Science Institute, 2016.
- SALOMÃO, Maria Margarida Martins. Razão, realismo e verdade: o que nos ensina o estudo sociocognitivo da referência. *Cadernos de Estudos Linguísticos*, v. 44, p. 71-84, 2003.
- SARDINHA, T. B. *Linguística de corpus*. São Paulo: Manole, 2004.
- SILVA, Maria Odete Emygdio da. Da exclusão à inclusão: concepções e práticas. *Revista Lusófona de Educação*, v. 13, p. 135-153, 2009.
- TRAVIS, Michelle A. Perceived disabilities, social cognition, and innocent mistakes. *Vand. L. Rev.*, v. 55, p. 481-577, 2002.
- VENDRAMIN, Carla. Repensando mitos contemporâneos: o capacitismo. *Simpósio Internacional Repensando Mitos Contemporâneos*, v. 2, p. 16-25, 2019.
- VIRIDIANO, M. et al. The case for perspective in multimodal datasets. In: PROCEEDINGS OF THE 1ST WORKSHOP ON PERSPECTIVIST APPROACHES TO NLP (NLPerspectives). Marseille, maio 2022. p. 108-116. DOI: 10.48550/arXiv.2205.10902. Available at: <https://arxiv.org/abs/2205.10902#:~:text=This%20paper%20argues%20in%20favor>. Access on: 28 jan. 2025.

Recebido: 6/5/2025

Aceito: 11/7/2025

Publicado: 9/10/2025