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Semantic awareness and the conceptual foundations of semantics teaching in Basic Education

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Abstract: Semantics plays a central role in the development of reading and writing skills, as it directly engages the human capacity to construct, negotiate, and interpret meaning. Accordingly, educational systems should systematically foster students' interpretive and expressive competences throughout Basic Education. Despite its relevance, however, the study of meaning remains largely absent from curricular guidelines and pedagogical practices, often appearing only in fragmented discussions of lexical relations. This gap may stem from the absence of a clearly articulated framework capable of defining what semantic knowledge should be explicitly taught in schools. This study addresses this issue by proposing a conceptual foundation for semantics instruction grounded in Pilati (2017, 2021). It builds on the assumption that effective pedagogical practice depends on a coherent theoretical framework capable of systematizing linguistic reasoning and, consequently, enhancing students' proficiency in linguistic analysis, reading, and text production (Pilati, 2021). More specifically, the paper argues that semantic awareness should be developed through the explicit understanding of three core domains of semantic knowledge, organized in increasing levels of complexity: signification, which concerns the relationship between language and reference; categorization, which involves the attribution of properties and predication; and referentiation, which concerns the introduction, maintenance, and tracking of referents throughout textual construction.

Keywords: Semantics Teaching. Semantic Awareness. Conceptual Basis for teaching.

Introduction

The goal of this study is to discuss how semantics can be systematically integrated into Basic Education. More specifically, it seeks to outline a structured approach to semantic knowledge that moves beyond isolated topics and instead provides a coherent framework for developing students' interpretive and expressive competences. This proposal is grounded in the assumption that, if the ultimate aim of education is the comprehensive development of reading and writing skills that enable individuals to fully participate in social life and exercise their citizenship, then

the semantic component must be treated as its foundation, since inhabiting the world necessarily involves the ability to construct and interpret meaning.

This claim becomes particularly urgent when considered in the light of current educational outcomes. Reading and writing skills are widely recognized as the “foundation for other learning, for individual empowerment and wellbeing, as well as for social, political and economic outcomes” (UNESCO, 2024, n.p.). Yet, despite this consensus, learning results often fall short of expectations. In Brazil, for example, UNESCO’s Global Education Monitoring Report (2024) indicates that only 44% of students reach the minimum level of reading proficiency by the end of primary education. This gap between educational goals and actual performance highlights the need for more robust and systematic approaches to language teaching, among which the explicit and structured treatment of semantics plays a central role.

In order to effectively address this scenario, three key elements are required: (i) a fine-grained methodology, capable of capturing the complexity of linguistic phenomena in a pedagogically accessible way; (ii) a solid conceptual basis for teaching, which organizes and guides the development of linguistic knowledge; and (iii) continuing education programs, ensuring that teachers are adequately prepared to implement such an approach in the classroom. While all three dimensions are crucial, this study concentrates specifically on the second. The decision to focus on the conceptual basis of teaching draws on Pilati’s (2021) proposal, which emphasizes that grammar instruction should be anchored in a clearly defined conceptual framework. Such a framework enables the systematization of linguistic reasoning and, consequently, fosters the development of students’ reading and writing skills. From this perspective, effective pedagogical practice depends on a solid theoretical foundation for teachers; without it, teaching tends to remain fragmented and confined to isolated topics, lacking coherence and continuity (cf. Pilati, 2017, 2021).

The central question guiding this study is therefore the following: what constitutes the semantic conceptual domain that is relevant for classroom practice? To address this question, the paper is organized as follows: first, we discuss the nature of semantic awareness, arguing that if meaning is central to language use, it is necessary to determine what aspects of meaning should be made explicit to learners. We then advance the proposal that three core semantic domains are essential for structuring such knowledge. More specifically, the semantic conceptual domain is taken to involve an understanding of reference, predication, and textual construction, presented in increasing order of complexity. Finally, drawing on a survey of semantic topics included in Basic

Education in Brazil, as defined by the National Common Curricular Base (BNCC) (Brasil, 2018), we illustrate how these three domains can be systematically articulated with classroom content.

Although the proposal is articulated with reference to themes and competencies central to Basic Education in Brazil, its underlying structure is not language specific. The organization of these semantic domains reflects general properties of human language and cognition, making it applicable to the teaching of any language. By integrating theory and practice, the proposal contributes to advancing semantics instruction and strengthening linguistic competences in diverse educational contexts.

Semantic awareness

By the time students begin formal schooling, they have already acquired a sophisticated command of the linguistic system used in their everyday interactions. This knowledge, however, is largely deployed unconsciously. According to Pilati (2017), one of the central roles of grammar instruction in school should be precisely to systematize and make explicit the linguistic knowledge that students already possess. Rendering this internalized and implicit knowledge conscious allows learners, ultimately, to manipulate the linguistic system more effectively across a wide range of communicative contexts. As Pilati (2017, p. 18) argues, grammatical awareness serves as a tool “to expand expressive capacity in writing, reading proficiency, and the ability to deal with speaking situations that require more complex planning.”¹

While the notion of grammatical awareness has been explored in relation to phonology, morphology, and syntax, as illustrated in the excerpts below, far less attention has been devoted to defining what may be understood as semantic awareness. This gap raises a central question for the present study: what constitutes students’ prior semantic knowledge, and how can it be activated in the process of grammatical learning?

Table 1 – Definitions of grammatical awareness

Grammatical awareness	Definition
Phonological	1. Phonological awareness is “the sensitivity and ability to manipulate the sounds in words (Wagner & Torgesen, 1987); the sounds may be syllables, onsets and rimes, or phonemes.” (Kirb et al., 2025, p. 3)

¹ In the original: “para ampliar a capacidade de expressão na escrita, a proficiência na leitura e a habilidade de lidar com situações de fala que requeiram planejamento mais complexo.”

	2. “Phonological awareness can be defined as conscious sensitivity to the sound structure of language.” (Lane et al., 2002, p. 101)
Morphological	1. “Morphological awareness focuses on children's conscious awareness of the morphemic structure of words and their ability to reflect on and manipulate that structure.” (Carlisle, 1995, p. 194) 2. “Morphological awareness [...] refers to the ability to identify and manipulate morphemes, the smallest meaningful units in words [...].” (Kirb et al., 2025, p. 4)
Syntactic	1. “Syntactic awareness [...] consists of the ability to (i) identify and manipulate syntactic units (sentences, phrases, and words), as well as the relationships established among them (such as agreement and dependency relations), and (ii) make judgments about the grammaticality of a sentence and revise it accordingly.”² (Sim-Sim, 1998; Duarte, 2008 apud Costa et al., 2017, p. 417) 2. “Metasyntactic competence refers to the ability to reason consciously about the syntactic aspects of language, and to exercise intentional control over the application of grammatical rules.” (Gombert, 1992, p. 39)

Source: elaborated by the author.

Semantic awareness has not been defined in the literature with the same degree of precision as other metalinguistic abilities. This does not mean, however, that discussions of what semantic awareness might entail are entirely inexistent. Gombert (1992), for instance, in his seminal work on metalinguistic awareness, explicitly proposes the existence of “metasemantic awareness”, which he defines as referring to “both the ability to recognize the language system as a conventional and arbitrary code and the ability to manipulate words or more extensive signifying elements, without the signified correspondents being automatically affected by this.” (Gombert, 1992, p. 63).

Gombert’s definition is relatively broad, but it offers two insights that are particularly important for the present discussion. First, by characterizing language as a conventional and arbitrary code (a view deeply rooted in saussurean thought), Gombert highlights that semantic development requires learners to understand that linguistic expressions do not map onto reality in a natural or transparent manner, even though they are ultimately used to represent and engage with it. Second, by suggesting that metasemantic awareness involves the manipulation of meaning-bearing units of different sizes, Gombert (1992) opens the possibility that semantic knowledge operates across multiple levels of linguistic organization, from words to larger textual structures.

² In the original: “A consciência sintática [...] consiste na capacidade de (i) identificar e manipular as unidades sintáticas (frases, sintagmas e palavras), bem como as relações que entre elas se estabelecem (como as relações de concordância e de dependência), e (ii) elaborar juízos sobre a gramaticalidade de uma frase e proceder à sua correção.”

These two insights are crucial because they challenge the common tendency to reduce semantic instruction to vocabulary teaching or lexical relations alone. Instead, they support the need for a broader and more systematic model of semantic knowledge, precisely the gap this study seeks to address. The question, though, remains the same: what does our semantic knowledge consist of? And how can semantic awareness be defined?

Although semantic knowledge has been defined in different ways across disciplines (cf. Pires de Oliveira, 2012; Kintz & Wright, 2017; Carvalho et al., 2021), existing definitions tend to converge around three broad dimensions: the relationship between linguistic expressions and the world they refer to, the conceptual content encoded by linguistic structures, and the combination of meanings in larger units. Building on these insights, this paper argues that semantic knowledge can be systematically organized around three core domains: reference, predication, and textual meaning construction. Considering this, semantic awareness can be defined as the ability to consciously reflect on how language constructs meaning across different levels of linguistic organization. It involves understanding how linguistic expressions establish reference to entities in the world, how predicative structures assign properties and relations to those entities, and how meanings are integrated and negotiated in larger textual units.

If students are expected to develop greater control over meaning in reading and writing practices, they must first develop semantic awareness. Such development, however, cannot rely on fragmented pedagogical practices. It requires systematic instruction grounded in a clear conceptual foundation that enables both teachers and students to organize semantic knowledge in a coherent way. The following section addresses this issue by outlining the conceptual basis that, we argue, should guide the teaching of semantics in the classroom.

The conceptual basis for teaching semantics in Basic Education

As argued in the previous section, theoretical anchoring is a necessary condition for ensuring that pedagogical practice is both coherent and effective. If semantics is to be systematically integrated into language teaching, it is essential to identify the core dimensions of semantic knowledge that should be made explicit in the classroom. We argue that this knowledge is structured around three fundamental components. First, learners must understand how language relates to the world. That is, how linguistic expressions establish reference and how speakers may access the same referent through different forms of conceptualization. Second, they must

understand how language attributes properties and relations to those referents, thereby organizing both our conceptual representation of the world and the discursive universe. Third, they must understand how referents are introduced, maintained, and reactivated throughout the unfolding of discourse, allowing meaning to be constructed across larger textual units.

These dimensions give rise to three core semantic domains: Signification (Domain of Reference), Categorization (Domain of Predication), and Referentiation (Domain of textual meaning construction). Each domain encompasses specific concepts and phenomena and plays a distinct role in the broader architecture of meaning.

Table 2 – Semantic conceptual basis

Domain	Main concepts	Role
Signification	1. Meaning; 2. Reference;	The understanding of the relationships between language and the world, and of the constitution of meaning.
Categorization	1. Descriptive properties; 2. Predication;	The characterization of the attributes of objects and events and the conceptual organization of both the world and the discursive universe.
Referentiation	1. Introduction; 2. Retrieval; 3. Progression.	The introduction, consolidation, and maintenance of a referent across the unfolding of textual construction.

Source: elaborated by the author.

The first semantic domain (**Signification**) encompasses the core concepts of meaning and reference. At this level, students are introduced to the fundamental relationship between language and the world: how linguistic expressions come to represent entities, objects, events, and states of affairs, and how meaning is constituted through this relation. Developing competence in this domain requires understanding that linguistic signs do not correspond to reality in a natural way but rather establish conventional links between forms and the meanings they evoke. It also involves recognizing that the same referent may be accessed through different linguistic expressions, depending on perspective, context, or communicative intention, as well as understanding that the same linguistic meaning may correspond to different referents across contexts. Definite descriptions such as “the president of Brazil”, for instance, maintain a stable semantic content while referring to different individuals depending on the historical moment in which they are uttered. By making these mechanisms explicit, the domain of signification enables students to reflect on how

language constructs representations of reality and establishes referential anchors that will help to organize the world (extensional or intensional).

Whereas the domain of signification concerns how linguistic expressions establish reference, the second semantic domain (**Categorization**) addresses how those referents are conceptually structured once they are introduced into discourse. Meaning construction is not exhausted by identifying entities in the world; it also requires enriching those entities with descriptive content that makes them more precisely identifiable and conceptually differentiated. At this level, descriptive properties refer to the semantic features that characterize entities and contribute to their categorization.

The notion of predication, in its turn, becomes particularly central to this proposal. In both semantics and syntax, predication is a foundational mechanism through which linguistic expressions assign properties to individuals, establish relations between entities, and structure events and states of affairs. Predicates allow language users to characterize referents by specifying what they are like (“the tall student”), what they do (“the tall student runs”), or how they relate to other entities (“Anna is the sister of the tall student”). Because it focuses on how linguistic expressions encode properties and relations, this domain also plays a fundamental role in pattern recognition, enabling students to identify recurring semantic regularities across grammatical categories, such as types of verbs, classes of adjectives, and different kinds of modifiers, for example. Through categorization then language moves beyond merely identifying referents and enables increasingly richer representations of them. This domain therefore helps structuring both our understanding of the external world and the internal architecture of discourse.

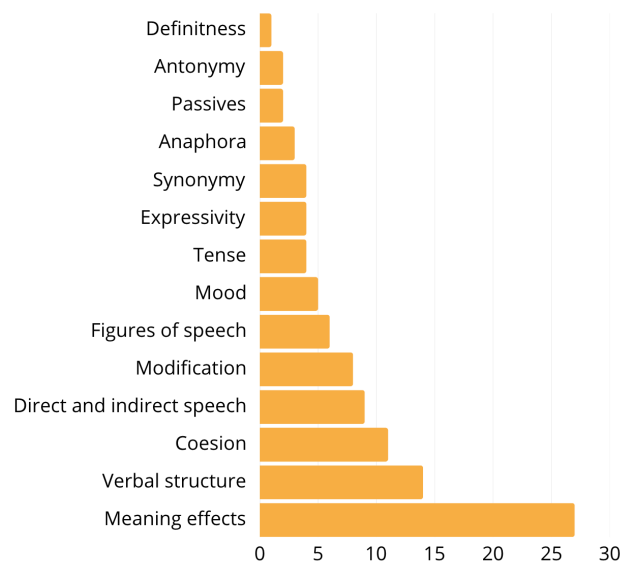
The last semantic domain (**Referentiation**) concerns how meaning is constructed and maintained across larger stretches of text/discourse. While signification establishes referential links between language and the world, and categorization enriches those referents through predicative content, referentiation addresses what happens once discourse unfolds over time. That is, this domain refers to how referents are introduced, retrieved, and developed throughout textual progression. First, speakers must introduce referents into discourse, making them available for subsequent interpretation. Second, these referents need to be retrieved through linguistic mechanisms such as pronouns, definite descriptions, ellipsis, and other cohesive devices that allow interlocutors to recover previously established information. Third, discourse must ensure referential progression, in which previously introduced entities are maintained, transformed, or

expanded as the text develops. This domain is therefore fundamental to textual coherence, since speakers must continuously track referents across sentences and paragraphs to construct global meaning. By making these processes explicit, referentiation helps students understand how texts are semantically organized and how meaning emerges not only from isolated sentences, but from the dynamic interaction of referents throughout discourse.

These three semantic domains make it possible to examine meaning construction across different levels of linguistic organization, ranging from isolated lexical items to broader textual structures. In doing so, they also respond to a central principle emphasized by basic education: the need to overcome the traditional separation between grammar instruction and text-based practices. By linking semantic phenomena at the word, sentence, and discourse levels, this framework allows grammatical reflection to be integrated with reading and writing activities, showing students how linguistic structures actively contribute to meaning construction in real communicative contexts. In the next section, we illustrate how school semantic content can benefit from this organizational framework.

How can this basis be related to actual content in Basic Education?

To illustrate how this conceptual framework can be effectively implemented in classroom practice, we conducted a survey of the semantic topics included in the Brazilian National Common Curricular Base (BNCC) (Brazil, 2018). The purpose of this survey is to demonstrate how core school-level semantic content can be systematically situated within one of the three domains proposed here. As a result, the teaching of specific linguistic phenomena is no longer approached as a set of disconnected topics, but rather as part of an integrated framework in which students' semantic awareness is explicitly taken into account and progressively developed. The survey is presented in Figure 1 in graphical form, using a scale that indicates the frequency with which each phenomenon appears in the document, ranging from 0 to 30 occurrences.

Figure 1 – Semantic contents in the Brazilian National Common Curricular Base (BNCC)

Source: elaborated by the author.

Notably, Figure 1 reveals an imbalance in the distribution of semantic content within the BNCC document. The most frequent topic by a considerable margin is meaning effects, with approximately 27 occurrences, which suggests a strong emphasis on interpretive practices related to context, stylistic choices, and pragmatic inference. This prominence indicates that the curriculum tends to approach meaning primarily through discourse interpretation rather than through explicit reflection on underlying semantic structures. A second cluster of relatively frequent topics includes verbal structure (14 occurrences), cohesion (11 occurrences), direct and indirect speech (9 occurrences), modification (8 occurrences), and figures of speech (6 occurrences). These phenomena also point toward a predominantly discourse-functional orientation, as they are closely related to textual organization, communicative effects, and contextual interpretation, although verbal structure and modification may also involve more formal aspects of semantic composition.

By contrast, phenomena traditionally associated with lexical semantics appear less frequently, such as synonymy (4 occurrences) and antonymy (2 occurrences). Even more striking is the limited presence of explicitly formal-semantic topics, such as definiteness (1 occurrence), anaphora (3 occurrences), tense (4 occurrences), mood (5 occurrences), and passives (2 occurrences), despite their relevance to reference, predication, and meaning composition.

Overall, the graph suggests that semantic instruction in the BNCC is heavily concentrated on discourse-functional interpretation, with some attention to lexical relations, while more formal-semantic phenomena remain comparatively underrepresented. This distribution reinforces the need for a more systematic framework capable of integrating these dispersed contents into a coherent model of semantic knowledge. A preliminary proposal for such integration is presented below, illustrating how these seemingly fragmented topics can be organized within a unified conceptual framework for semantics teaching.

Table 3 – Semantic conceptual basis and semantic contents in basic school

Domain	Main concepts	Role	Semantic contents
Signification	1. Meaning; 2. Reference;	The understanding of the relationships between language and the world, and of the constitution of meaning.	a) Antonymy b) Synonymy
Categorization	1. Descriptive properties; 2. Predication;	The characterization of the attributes of objects and events and the conceptual organization of both the world and the discursive universe.	a) Definiteness b) Figures of speech c) Modification d) Mood e) Passives f) Tense g) Verbal structure
Referentiation	1. Introduction; 2. Retrieval; 3. Progression.	The introduction, consolidation, and maintenance of a referent across the unfolding of textual construction.	a) Anaphora b) Cohesion c) Definiteness d) Direct and indirect speech e) Expressivity

Source: elaborated by the author.

The purpose of this reorganization is to demonstrate that these curricular contents need not be treated as isolated or disconnected topics. By associating them with broader semantic domains, teachers gain a clearer framework for planning instruction, identifying conceptual connections across different linguistic phenomena, and avoiding fragmented pedagogical practices. Students, in turn, benefit from a more systematic understanding of how meaning is constructed at different levels of language, which can strengthen their semantic awareness and provide greater control over reading, writing, and linguistic analysis.

This article does not present specific pedagogical proposals for how these topics can be taught in light of the semantic domains discussed here. For an example of how such practices may

be implemented in classroom settings, we refer the reader to Ferreira (2025). The organization of topics proposed in this study should be understood as an initial exploration of a highly complex domain that seeks to bridge linguistic theory and educational practice. The survey conducted here was intended primarily to illustrate how any semantic topic addressed in Basic Education can be situated within one of the proposed semantic domains. An explicit engagement with this conceptual framework may contribute to improving students' reading and writing skills by enabling them to develop greater control over the linguistic structures they already intuitively command.

Final remarks

Although this was primarily a theoretical study, its objectives were closely connected to pedagogical practice. As argued by Pilati (2021), effective teaching depends on solid theoretical foundations, since coherent classroom methodologies can only emerge when teachers have access to clearly organized conceptual knowledge. Without such theoretical grounding, pedagogical practices tend to become fragmented and restricted to isolated topics. In this sense, the present research sought to contribute to educational practice precisely through theoretical reflection by offering a systematic framework that may support future teaching interventions.

More specifically, this study set out to address a central question: what constitutes the semantic knowledge that should be made explicit in school contexts in order to foster students' reading and writing development? In response to this problem, we argued that semantics teaching requires a systematic conceptual foundation and proposed that such knowledge could be organized around three core domains: signification, categorization, and referentiation. By articulating these domains with semantic topics currently addressed in the Brazilian National Common Curricular Base (BNCC) (Brazil, 2018), the study demonstrated that school-based semantic content could be understood as part of a broader and more coherent framework of meaning construction, rather than as a fragmented set of isolated topics.

Finally, we hope that this discussion can also contribute to the literature by engaging with the notion of semantic awareness, a dimension of metalinguistic development that has received comparatively little attention when contrasted with phonological, morphological, and syntactic awareness. By proposing a more explicit account of what semantic awareness is, we hope that this study has made a meaningful contribution to both linguistic and educational scholarship. In doing

so, it sought to address an important theoretical and pedagogical gap while opening new avenues for research. Future studies may build on this proposal by developing specific teaching methodologies, classroom activities, and assessment tools capable of operationalizing these domains across different educational contexts and languages.

Conflict of Interest

The author declare that there are no conflicts of interest related to the research, preparation, or publication of this work.

Data Availability Statement

The data are published within the article itself or in the supplementary materials, also cited in the paper.

AI Use Statement

The authors declare that no AI were used in the manuscript.

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