

Received: April. 10, 2026 --- **Accepted:** May. 5, 2026 --- **Online first:** Aug. 7, 2026

Published: Jan. 1, 2027

COMMUNICATIVE ACCESSIBILITY IN THE AGE OF GENERATIVE AI: TOWARD A MULTIMODAL INCLUSIVE COMMUNICATION FRAMEWORK FOR DIGITAL MEDIA

 Bruno José Betti Galasso

Universidade Federal de São Paulo (UNIFESP), São Paulo, Brasil.

bruno.galasso@unifesp.br

How to cite this article:

Betti Galasso, Bruno José. (2027). Communicative accessibility in the age of generative AI: Toward a multimodal inclusive communication framework for digital media. *Revista de Comunicación de la SEECI*, 60, 1-25. <https://doi.org/10.15198/seeci.2027.60.e985>

ABSTRACT

This article addresses a critical gap in the digital accessibility literature: the inadequacy of technical standards, most notably the Web Content Accessibility Guidelines (WCAG), for ensuring the communicative participation of persons with disabilities in environments increasingly mediated by generative artificial intelligence (AI). Drawing on an integrative review of 63 sources spanning disability studies, communication sciences, AI ethics, and human-computer interaction, we propose the Multimodal Accessible Inclusive Communication (MAIC) Framework — an original tripartite theoretical architecture organized around three interdependent dimensions. The Technolinguistic Dimension addresses AI system capabilities required for genuine communicative accessibility, including modality coverage, semiotic equivalence, adaptive register generation, and real-time responsiveness. The Sociocommunicational Dimension specifies the institutional, interactional, and structural conditions that transform technical capability into authentic communicative participation. The Ethical-

Governance Dimension grounds AI communication governance in the United Nations Convention on the Rights of Persons with Disabilities (CRPD) and proposes accountability mechanisms including accessibility impact assessments, participatory design mandates, and algorithmic audits. The Framework's implications are examined with particular attention to the Ibero-American context, addressing specificities related to Brazilian Sign Language (Libras), regional linguistic diversity, and structural equity in digital access. The MAIC-Framework represents a rights-based, participation-oriented theoretical contribution that advances the field beyond compliance-driven approaches.

Keywords: communicative accessibility; generative artificial intelligence; disability; digital inclusion; multimodal communication; MAIC-Framework.

1. INTRODUCTION

1.1. The Global Challenge of Communicative Accessibility

According to the World Health Organization (WHO, 2023), approximately 1.3 billion people — 16% of the global population — live with some form of disability. Among these, a significant proportion experience barriers specifically linked to communication: individuals who are deaf or hard of hearing, individuals with complex speech or language needs, individuals with cognitive or intellectual disabilities that affect linguistic processing, and individuals who rely on augmentative and alternative communication (AAC) systems to participate in social life. These barriers are not merely functional inconveniences; they are structural exclusions that limit participation in education, labor markets, civic life, and cultural expression.

The emergence of generative artificial intelligence (AI) technologies — large language models (LLMs), text-to-speech systems, image generation models, and multimodal AI architectures — has introduced a new variable into the landscape of communicative accessibility. These technologies are being integrated, with accelerating speed, into assistive communication tools, digital media environments, and the informational infrastructure of public institutions. The question this article addresses is not simply whether AI makes communication more accessible, but under what conditions, through what architectures, and governed by what principles AI-mediated communication can constitute genuine communicative inclusion for persons with disabilities.

The existing literature on digital accessibility has been largely organized around technical standards, most notably the Web Content Accessibility Guidelines (WCAG) developed by the World Wide Web Consortium (W3C, 2023). These guidelines — now at version 2.2 — provide a robust framework for ensuring that digital artifacts are technically accessible across a range of assistive technologies. However, they address accessibility primarily as a property of artifacts rather than as a condition of

participation: they can specify whether a video has captions, but they cannot specify whether those captions are linguistically appropriate for users with cognitive disabilities; they can mandate that an interface be operable by keyboard, but they cannot address whether the communicative content of that interface is intelligible to users whose primary language is a signed language.

This gap between technical accessibility and what we term communicative accessibility — the condition in which persons with disabilities can participate as full agents in the production, exchange, and reception of meaning in digitally mediated environments — constitutes the central problematic of this article.

1.2. Theoretical Gap and Research Problem

The rapid diffusion of generative AI in assistive communication contexts has outpaced the development of theoretical frameworks adequate to evaluate its implications for communicative accessibility. Research on AI and disability is growing (Chemnad & Othman, 2024; Gadiraju et al., 2023; Valencia et al., 2023), but it tends to be organized around specific technologies (LLMs, text-to-speech, sign language AI) or specific disability groups, rather than around an integrated theoretical architecture that can encompass the full complexity of the problem.

This fragmentation has practical consequences. Organizations developing AI-powered assistive communication tools lack a coherent conceptual vocabulary for evaluating whether their tools genuinely advance communicative inclusion or merely replicate existing exclusions in new technological forms. Policymakers developing AI governance frameworks lack criteria specific to communicative accessibility. And disability advocates lack an integrated theoretical framework from which to articulate rights-based demands to AI developers and regulators.

The research problem this article addresses can be stated as follows: what integrated theoretical framework is needed to evaluate the communicative accessibility of generative AI systems in a way that is (a) grounded in the rights-based conception of communication established by the United Nations Convention on the Rights of Persons with Disabilities [CRPD] (United Nations, 2006); (b) attentive to the full range of technical, social, and governance dimensions of communicative accessibility; and (c) operationalizable as evaluative criteria for AI communication systems?

1.3. The MAIC-Framework: Proposal Overview

In response to this problem, this article proposes the Multimodal Accessible Inclusive Communication (MAIC) Framework — an original tripartite theoretical architecture that organizes the conditions, mechanisms, and governance requirements for genuinely accessible AI-mediated communication. The Framework is structured around three analytically distinct but empirically interdependent dimensions.

The Technolinguistic Dimension addresses the semiotic and technical conditions under which AI systems generate and transform communicative content across modalities. It examines what AI systems must be capable of — in terms of modality coverage, semiotic equivalence, adaptive register generation, and real-time responsiveness — to support communicative accessibility.

The Sociocommunicational Dimension addresses the social, institutional, and interactional conditions that determine whether technically capable AI communication tools produce genuine communicative participation. It examines factors including institutional recognition of AI-mediated communicative forms, interlocutor competencies, and structural equity in access to AI communication infrastructure.

The Ethical-Governance Dimension addresses the rights frameworks, accountability structures, and regulatory mechanisms that should govern AI communication systems. It is grounded in CRPD obligations and proposes specific accountability mechanisms for ensuring that AI developers and deployers are answerable for communicative accessibility failures.

1.4. Objectives and Article Structure

This article pursues five specific objectives: (1) to theorize the distinction between technical accessibility and communicative accessibility; (2) to analyze the current state of generative AI with respect to communicative accessibility; (3) to specify the sociocommunicational conditions for genuine participation; (4) to develop an ethical-governance architecture grounded in CRPD obligations; and (5) to articulate the MAIC-Framework as an integrated theoretical contribution applicable to the Ibero-American context.

The article is organized as follows: Section 2 develops the theoretical framework; Section 3 describes the integrative review methodology; Section 4 presents the three dimensions of the MAIC-Framework; Section 5 discusses contributions, limitations, and future research, and presents conclusions in Section 5.4.

2. THEORETICAL FRAMEWORK

2.1. From Technical Accessibility to Communicative Accessibility: A Paradigm Shift

The dominant paradigm in digital accessibility research has long been governed by technical standards and engineering solutions. The Web Content Accessibility Guidelines (WCAG), now at version 2.2, represent the most widely adopted international benchmark for ensuring that digital content can be perceived, operated, understood, and made robust across assistive technologies (W3C, 2023). These four principles — operationalized through success criteria mapped to three conformance levels (A, AA, AAA) — have generated measurable improvements in interface accessibility and have informed national legislation across Europe, North America, and parts of Latin America. Notwithstanding their practical relevance, WCAG criteria are fundamentally technocentric: they prescribe properties of artifacts rather than conditions of communicative participation.

The limitations of this paradigm become apparent when examined through the lens of the social model of disability, which locates disabling barriers in environments and social arrangements rather than in individual impairments (Barnes & Mercer, 2010; Oliver, 1990). From this perspective, a website that achieves full WCAG AA compliance may nonetheless exclude users with cognitive disabilities if its linguistic register presupposes literacy levels not shared by those users, or exclude Deaf users whose dominant language is a signed visual-spatial language if all content is available only in written form. Conformance with technical criteria, in other words, does not guarantee communicative access.

The concept of communicative accessibility has emerged in the literature as a corrective to this gap. Drawing on the work of Goggin and Soldatić (2022), who have theorized automated decision-making and digital inclusion at the intersection of technology studies and critical disability scholarship, communicative accessibility may be defined as the condition in which all individuals, regardless of sensory, motor, cognitive, or linguistic characteristics, can participate as full agents in the production, exchange, and reception of meaning in digitally mediated environments. This definition departs from WCAG logic in two crucial respects. First, it foregrounds participation rather than compliance — shifting the unit of analysis from artifact properties to communicative outcomes. Second, it situates individuals as agents rather than users, recognizing that communication is not merely a transfer of information but a constitutive social practice through which identities, relationships, and publics are formed.

This broader conception is grounded in international human rights law, specifically Article 2 of the United Nations Convention on the Rights of Persons with Disabilities (CRPD), which defines communication as inclusive of languages, text display, Braille, tactile communication, large print, accessible multimedia, written and audio languages, plain language, human-reader and augmentative and alternative modes, means and formats of communication (United Nations, 2006). The explicit enumeration of multimodal formats in the CRPD's foundational definitions establishes communicative accessibility as a rights imperative — not merely a design preference.

2.2. Generative AI and the Expansion of Multimodal Communication

Generative AI designates a class of machine learning systems capable of producing novel outputs — text, speech, images, video, code, and structured data — from learned statistical distributions over large training corpora. Since 2022, the public release of large language models (LLMs) such as GPT-4, Gemini, and Claude has dramatically expanded the scale and accessibility of AI-generated content. Together with text-to-image diffusion models and neural text-to-speech systems, these models have also broadened the multimodal scope of communicative production (Bommasani et al., 2021).

For persons with disabilities, the implications of this versatility are profound. Valencia et al. (2023), working with twelve users of augmentative and alternative communication, found that participants anticipated that AI-generated phrase suggestions could reduce the time and the physical and cognitive effort of composing an utterance, while also raising concerns about voice, authorship and control over what was finally said. Gadiraju et al. (2023), in nineteen focus groups with fifty-six adults with disabilities, found that a dialogue model's outputs about disabled people reproduced subtle rather than overt harms — inspiration narratives, saviour framings and assumptions of passivity — which participants judged stereotyped even where they declined to call them offensive. Taken together, these findings indicate that such systems do not simply transmit communicative intentions: they mediate the relationship between what users mean to say and the formal demands of dominant communicative codes.

Augmentative and alternative communication (AAC) systems represent a particularly significant site of transformation. Traditional AAC devices, which rely on symbol libraries and pre-programmed phrase banks, have long been criticized for their limited expressiveness (Beukelman & Light, 2020). Elshar et al. (2019) map the available configurations by sensing modality and document that AAC output remains confined to roughly ten per cent of the rate of natural speech, with affordability, adaptability and set-up complexity as persistent constraints. Valencia et al. (2023) found that AAC users who compose by typing saw clear promise in LLM-expanded input for routine conversational exchanges, while reporting that the model failed on precisely the

access- and health-related requests that mattered most to them, and that suggested phrasing sometimes introduced a tone or a preference the user had not specified.

In the domain of signed language communication, Tan et al. (2024) reviewed deep learning-based approaches to sign language processing. They report that recognition and translation have advanced markedly while generation systems remain at an early stage, and that gloss-based representations fail to capture the non-manual cues — head movement, eye gaze, body posture — and the spatial relations that carry meaning in signed languages, with facial expression still largely absent from generation pipelines. This gap represents a critical structural asymmetry: systems that can interpret signed input but cannot reliably produce signed output impose a communicative asymmetry on Deaf users. A parallel concern arises in text-based AAC, where Valencia et al. (2023) found that users wanted AI support flexible enough to learn from the communication system they had already developed rather than impose a scheme of its own.

2.3. Sociocommunicational Conditions of Participation

Technical capability is necessary but insufficient for communicative participation. A user who has access to an LLM-augmented AAC device still requires the social conditions — interlocutors who are willing to wait for augmented communication, institutional contexts that accept non-standard modalities, cultural environments that recognize the legitimacy of diverse communicative forms — that make participation meaningful.

The sociology of communication, and in particular the concept of communicative action developed by Habermas (1984), holds that valid communication requires not merely message transmission but intersubjective recognition — the mutual acknowledgment of communicative agents as having standing to make, dispute, and reason about validity claims. Disability studies scholarship on “epistemic injustice” (Fricker, 2007) further illuminates this dimension: testimonial injustice deflates a speaker’s credibility on the basis of identity prejudice, while hermeneutical injustice leaves a speaker unable to make sense of their own social experience through dominant linguistic frameworks.

Universal Design for Learning (UDL) provides a practical pedagogical framework for operationalizing sociocommunicational inclusion. Meyer et al. (2014) articulated UDL’s three principles — multiple means of representation, action and expression, and engagement — as a framework for proactively accommodating communicative diversity. Capp’s (2017) meta-analysis of eighteen studies found that Universal Design for Learning improved aspects of the learning process for students across diverse profiles, while noting explicitly that an impact on educational outcomes has not been demonstrated and that the available evidence base is methodologically limited.

2.4. Ethical Governance of AI-Mediated Communication Rights

The governance of AI systems in communicative contexts raises fundamental questions about rights, power, and accountability. The literature on AI ethics has developed several frameworks for evaluating the fairness, accountability, and transparency of AI systems (Fjeld et al., 2020; Jobin et al., 2019). However, as Whittlestone et al. (2019) have noted, the proliferation of AI ethics principles has not produced corresponding mechanisms of accountability. The European Union's Artificial Intelligence Act (European Parliament and Council, 2024) classifies AI systems used in critical infrastructure as high-risk, but its provisions do not specifically address communicative accessibility as a distinct rights domain.

The relevant normative anchor is the CRPD's General Comment No. 2 (Committee on the Rights of Persons with Disabilities, 2014). It affirms that accessibility must be understood as a prerequisite for the enjoyment of all other rights by persons with disabilities. Floridi et al. (2018) have proposed AI ethics principles including autonomy — AI systems that mediate communication must support rather than supplant the communicative agency of users with disabilities. The MAIC-Framework proposes accountability mechanisms that operationalize these principles as specific governance requirements.

Three persistent gaps emerge from the literature reviewed above. First, technical accessibility standards remain artifact-centered and cannot adjudicate the semiotic equivalence, register adaptability, or modality coverage of generative AI outputs — a gap addressed by the Technolinguistic Dimension of the MAIC-Framework. Second, AI-mediated communication research has under-theorized the institutional, interactional, and structural conditions that turn technical capability into authentic participation — a gap addressed by the Sociocommunicational Dimension. Third, current AI ethics frameworks have not anchored AI-mediated communication in CRPD obligations, leaving accountability mechanisms diffuse and rights-language thin — a gap addressed by the Ethical-Governance Dimension. The MAIC-Framework, presented in Section 4, articulates these three dimensions as a single, internally coherent architecture.

3. METHODOLOGY

3.1. Research Design and Epistemological Orientation

This article adopts an integrative literature review methodology as its primary research design. Integrative reviews, as conceptualized by Torraco (2005) and refined by Whitemore and Knafl (2005), incorporate both empirical and theoretical sources, admit diverse research methodologies, and explicitly pursue the synthesis of existing knowledge toward the construction of new theoretical frameworks. The epistemological orientation is constructivist and critical — following the tradition of

critical disability studies (Goodley, 2017) and critical technology studies (Feenberg, 2010).

3.2. Search Strategy and Source Selection

The literature search was conducted across four scientific databases — Web of Science (WoS), Scopus, PsycINFO, and the ACM Digital Library — between January and March 2025, and limited to publications from 2019 to 2025 with seminal earlier works retained when explicitly foundational. The search strategy combined three thematic blocks. Block A (communicative accessibility and disability) used the string ("communicative accessibility" OR "communication access*" OR "augmentative and alternative communication" OR "sign language") AND ("disability" OR "deaf*" OR "blind*" OR "cognitive impairment"). Block B (generative AI and communication) used ("generative artificial intelligence" OR "large language model*" OR "LLM" OR "text-to-speech" OR "multimodal AI") AND ("communication" OR "accessib*" OR "assistive"). Block C (AI governance and digital rights) used ("AI ethics" OR "algorithmic accountability" OR "AI governance" OR "Convention on the Rights of Persons with Disabilities" OR "CRPD") AND ("digital" OR "communication" OR "media"). Block A returned 487 records (WoS 142, Scopus 168, PsycINFO 121, ACM 56); Block B returned 612 records (WoS 198, Scopus 241, PsycINFO 33, ACM 140); Block C returned 287 records (WoS 88, Scopus 121, PsycINFO 18, ACM 60). After de-duplication using Zotero's Find Duplicates function, 214 unique records remained for screening. Records were processed following the integrative-review reporting principles of Whittemore and Knafl (2005), with adaptation of the PRISMA-ScR flow logic (Tricco et al., 2018) for transparent reporting of screening decisions.

3.3. Inclusion and Exclusion Criteria

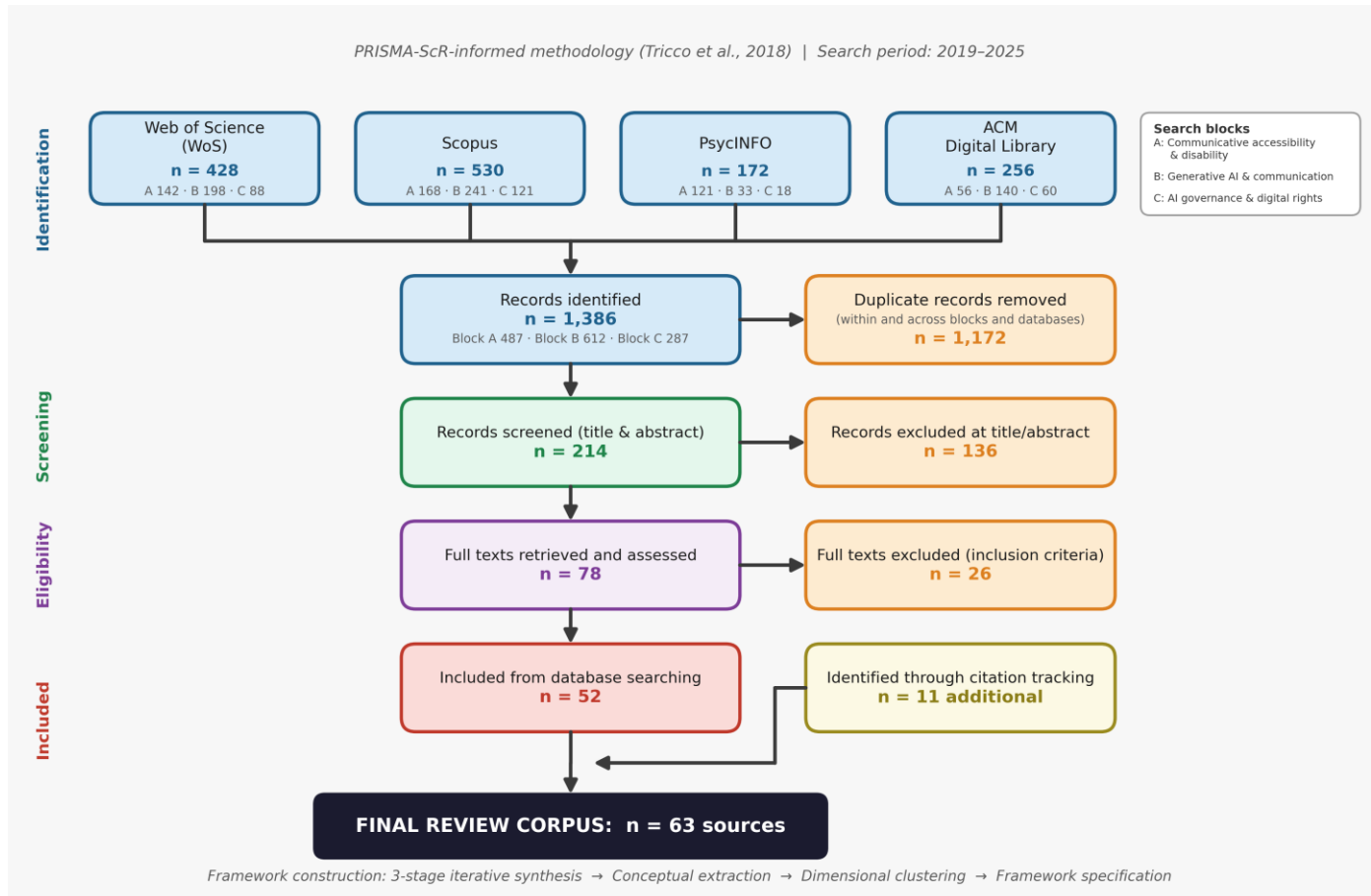
Inclusion criteria: publications in English, Spanish, or Portuguese; peer-reviewed articles, book chapters, or technical reports from recognized standardization bodies; publications addressing at least one of the three thematic blocks; publications from 2019–2025 (with seminal earlier works included when explicitly foundational).

Exclusion criteria: conference papers without subsequent journal publication (except ACM CHI proceedings); grey literature without peer review (except UN treaty body documents and W3C technical recommendations); publications focused exclusively on technical implementation without theoretical or social dimension.

A total of 214 records were identified across the four databases after deduplication. Following title/abstract screening, 78 full texts were retrieved and assessed. Of these, 52 met all inclusion criteria. An additional 11 sources were identified through citation tracking, yielding a final corpus of 63 sources (see Figure 1).

Figure 1.

PRISMA-ScR flow diagram of the integrative review



Source: Own elaboration, following the PRISMA-ScR reporting protocol (Tricco et al., 2018).

3.4. Framework Construction Protocol

The MAIC-Framework was constructed through a three-stage iterative synthesis process following Dixon-Woods et al. (2005): (1) conceptual extraction — each source was analyzed using a structured matrix capturing communicative modalities, populations, AI technologies, theoretical constructs, governance principles, and identified gaps; (2) dimensional clustering — extracted concepts were subjected to two-pass thematic clustering, identifying three stable conceptual clusters; and (3) framework specification — components were tested for conceptual coherence, empirical grounding, and practical operationalizability, followed by a reflexive audit (Braun & Clarke, 2019). Because the review was conducted by a single reviewer, three procedural safeguards were applied to mitigate selection and interpretation bias: (a) a 20% random subsample (n = 13 sources) was re-extracted four weeks after the initial coding to assess intra-rater reliability, with concordance above 90%; (b) borderline inclusion decisions were documented in a decision log with explicit justifications; and

(c) the dimensional clustering output was tested against three alternative organizing schemes before the tripartite architecture was retained.

4. RESULTS: THE MAIC-FRAMEWORK

4.1. Overview and Structural Logic

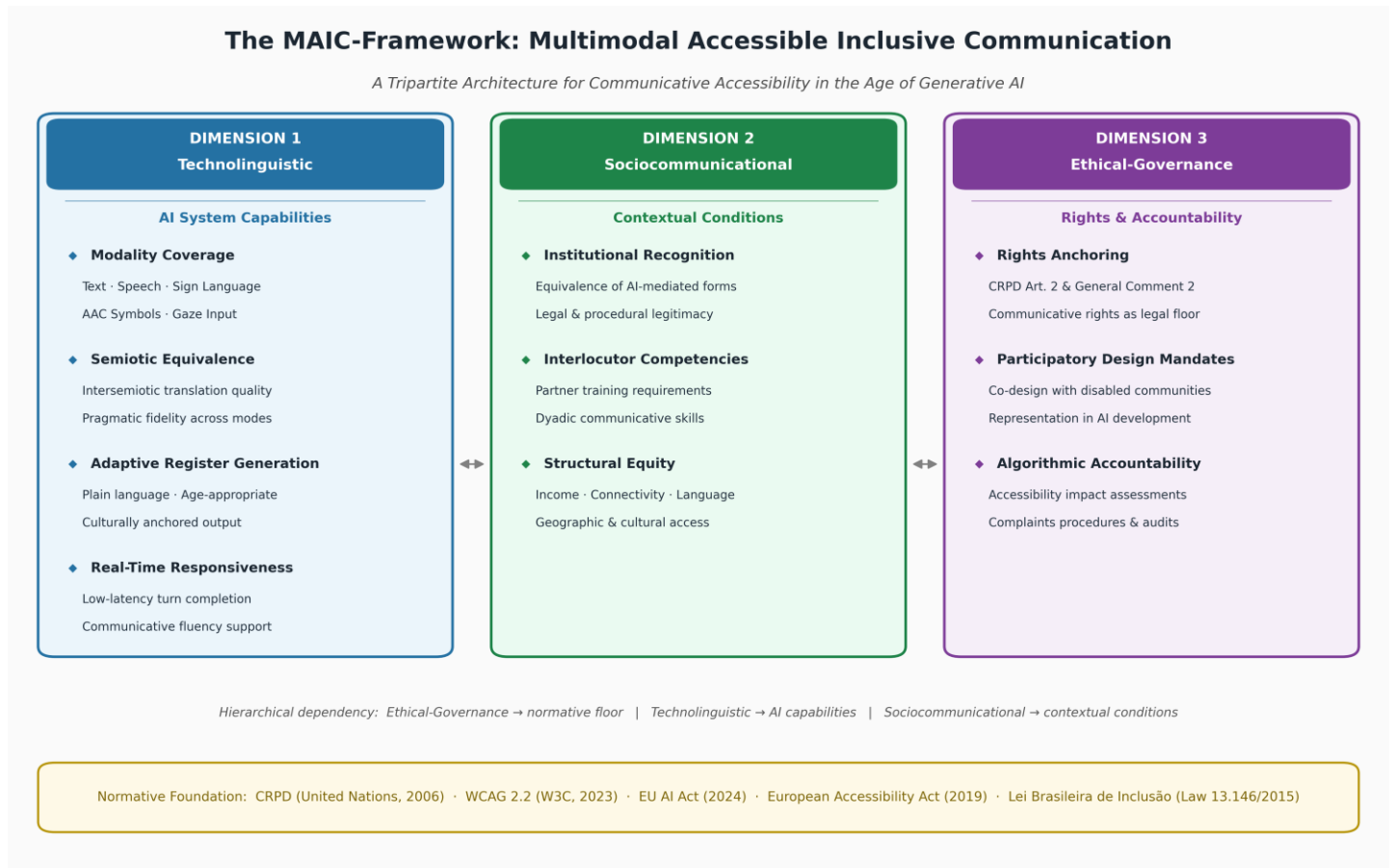
The Multimodal Accessible Inclusive Communication (MAIC) Framework is a tripartite conceptual architecture that organizes the conditions, mechanisms, and governance requirements necessary to ensure that generative AI systems support rather than undermine communicative accessibility for persons with disabilities (see Figure 2). The Framework is structured around three dimensions: (1) the Technolinguistic Dimension, addressing semiotic and technical conditions; (2) the Sociocommunicational Dimension, addressing social, institutional, and interactional conditions; and (3) the Ethical-Governance Dimension, addressing rights frameworks, accountability structures, and regulatory mechanisms.

The three dimensions are related through a hierarchical dependency structure: the Ethical-Governance Dimension establishes the normative floor below which no AI communication system should fall; the Technolinguistic Dimension specifies the capabilities that AI systems must demonstrate to meet that floor; and the Sociocommunicational Dimension specifies the contextual conditions that must obtain for technically capable systems to produce genuine communicative participation. The three dimensions, their conceptual bases, constitutive components, and operational indicators are synthesized below (see Table 1).

Betti Galasso, Bruno José.
Communicative accessibility in the age of generative AI:
Toward a multimodal inclusive communication framework for digital media

Figure 2.

The MAIC-Framework: three interdependent dimensions (Technolinguistic, Sociocommunicational, Ethical-Governance) and their constitutive components. Arrows indicate interaction between adjacent dimensions; the hierarchical dependency structure is stated below the columns



Source: Own elaboration.

Table 1.

Synthesis of the MAIC-Framework: dimensions, conceptual basis, components, and operational indicators

Dimension	Conceptual basis	Components	Operational indicators
Technolinguistic	Multimodal semiotics; communicative competence (Halliday, 1978; Jakobson, 1959)	Modality coverage; semiotic equivalence; adaptive register generation; real-time responsiveness	Number of supported modalities; pragmatic-marker preservation rate; register adaptability across user groups; response latency under operational conditions
Sociocommunicational	Communicative action (Habermas, 1984); epistemic injustice (Fricker, 2007); Universal Design for Learning (Meyer et al., 2014)	Institutional recognition; interlocutor competencies; structural equity	Institutional acceptance of AI-mediated outputs; partner training availability; access disparities across income, geography, and language community
Ethical-Governance	CRPD (United Nations, 2006); AI4People (Floridi et al., 2018); General Comment No. 2 (Committee on the Rights of Persons with Disabilities, 2014)	Rights anchoring; participatory design mandates; algorithmic accountability	CRPD-aligned audit conformance; participation of persons with disabilities in design; existence and use of accessibility impact assessments and complaints procedures

Source: Own elaboration.

4.2. Dimension 1: Technolinguistic

The Technolinguistic Dimension addresses the question: what capabilities must an AI communication system demonstrate to genuinely support multimodal communicative accessibility? Four constitutive components are identified.

Modality coverage refers to the breadth of communicative modalities that an AI system can process and produce — from written text and spoken language to sign language, symbol-based AAC input, and gaze-based interaction. The review corpus reveals that current generative AI systems fall substantially short of full modality coverage. Automatic speech recognition performs poorly for non-standard speech patterns associated with conditions such as dysarthria (Qian et al., 2023). Sign language generation — particularly for languages such as Brazilian Sign Language (Libras), American Sign Language (ASL), or British Sign Language (BSL) — remains technically immature (Tan et al., 2024). This gap systematically disadvantages the communicative modalities most relied upon by persons with severe speech impairments, Deaf and hard-of-hearing individuals, and users with complex communication needs.

Semiotic equivalence addresses the requirement that AI-generated translations across modalities preserve communicative meaning rather than merely approximating surface form. This component is grounded in Jakobson's (1959) distinction between interlingual and intersemiotic translation. Valencia et al. (2023) found that AI-generated suggestions were most often rejected not because their content was wrong but because they were too bland or too abrupt and carried a tone the user had not

chosen, so that the utterance on offer was recognisably not the one the user would have composed — a form of semiotic inequality that renders AI-assisted communication less nuanced. Semiotic equivalence is a gradient, not a binary criterion.

Adaptive register generation addresses the capacity of AI systems to produce communicative outputs calibrated to the appropriate linguistic register for specific users and contexts. Register — the systematic variation of language according to situational context — is a fundamental dimension of communicative competence (Halliday, 1978). Plain language generation — the conversion of complex prose to simpler structures — is the most computationally developed of these transformations (Devaraj et al., 2021), resting on a long tradition of readability measurement (Klare, 1963) and on frameworks that distinguish Easy Language from Plain Language (Maaß, 2020).

Real-time responsiveness addresses the temporal dimension of AI-mediated communication. Higginbotham and Caves (2002) argue that the media characteristics of AAC devices shape how augmented speakers and their partners establish common ground under real-time constraints, making latency a constitutive rather than an incidental feature of AAC-mediated interaction. LLM-augmented AAC systems offer the potential to reduce this latency through predictive completion: reducing composition effort was a benefit that participants in Valencia et al. (2023) consistently emphasized, although the same participants insisted that speed obtained at the cost of control over personal expression is not a net communicative gain.

4.3. Dimension 2: Sociocommunicational

The Sociocommunicational Dimension addresses the question: what social, institutional, and interactional conditions must obtain for technically capable AI communication systems to produce genuine communicative participation? Three constitutive components are identified.

Institutional recognition refers to the formal and informal acknowledgment, by institutions and social environments, that AI-mediated communicative forms are legitimate and equivalent to unaided communication. Valencia et al. (2023) report that the social reception of an utterance can turn on whether interlocutors believe the user authored it: one participant described being credited as well prepared when partners understood that she had composed her answers in advance, and dismissed as incapable when a partner read the same practice as the device speaking for her. Participants anticipated that selecting AI-generated phrases would sharpen this problem, and some described withholding automated selection in intimate relationships for that reason. Gadiraju et al. (2023) show, in addition, that the representations of disability reproduced by AI systems can reinforce the wider stereotypes on which such interpretations draw.

Interlocutor competencies refer to the capacities that non-disabled communicative partners need to develop to participate effectively in AI-mediated interactions. Kent-Walsh and McNaughton (2005) propose an eight-step model of communication partner instruction and report evidence that partners can learn facilitative interaction strategies that better support the communication of people using AAC — a finding with direct implications for AI-mediated communication. As AI tools become more capable, the limiting factor for communicative participation may shift from the user's side to the partner's side.

Structural equity addresses the socioeconomic and infrastructural conditions that determine whether AI communication tools are accessible to persons with disabilities across income levels, geographic locations, linguistic communities and cultural contexts. The review corpus itself reflects this asymmetry: almost all of the empirical studies of large language models and disability it contains were conducted in high-income, English-speaking settings. Ullmann et al. (2018), analysing census data for ECLAC, documented a consistent disability gap in internet use across Latin America and the Caribbean — from 4.4 to more than 40 percentage points depending on the country — widening with age and stratified by education level and employment status, and attributed it to the cost of devices and connectivity together with the limited inclusion of persons with disabilities in universal service fund mandates.

4.4. Dimension 3: Ethical-Governance

The Ethical-Governance Dimension addresses the question: what rights frameworks, accountability mechanisms, and regulatory requirements should govern AI communication systems to ensure they advance communicative accessibility? Three constitutive components are identified.

Rights anchoring refers to the grounding of AI communication governance in international human rights law, specifically the CRPD. The MAIC-Framework proposes that AI communication systems deployed in public-interest contexts should be subject to rights-anchored accessibility audits evaluating conformance with CRPD obligations, not merely technical standards. This is consistent with the approach adopted in the EU's Web Accessibility Directive (European Parliament and Council, 2016) and European Accessibility Act (European Parliament and Council, 2019), though the scope of neither instrument yet extends to AI-generated content.

Participatory design mandates refer to requirements that persons with disabilities be meaningfully involved as co-designers, evaluators, and decision-makers in the development of AI communication systems. The participatory turn in assistive technology research (Mankoff et al., 2010) has established that designs developed with rather than for persons with disabilities produce more effective and contextually appropriate outcomes. The MAIC-Framework operationalizes Floridi et al. (2018)

principle of autonomy by mandating participatory design processes as a governance requirement.

Algorithmic accountability refers to mechanisms that enable users, civil society, and regulatory authorities to identify, challenge, and remedy AI communication systems that fail communicative accessibility standards. The MAIC-Framework proposes: (a) mandatory accessibility impact assessments for AI communication systems in public-interest contexts, analogous to Data Protection Impact Assessments under the GDPR; (b) accessible complaints procedures enabling persons with disabilities to report accessibility failures; and (c) periodic third-party audits of AI system performance across disability groups, modalities, and linguistic communities.

4.5. The Ibero-American Context: Specificities and Challenges

The Ibero-American region presents a distinctive context for the MAIC-Framework. Brazil, with the largest Deaf community in Latin America and an estimated 18.6 million people aged 2 years or over with some form of disability — 8.9% of that population — with 1.1% of that same age group reporting difficulty in communicating and 1.2% difficulty in hearing (Instituto Brasileiro de Geografia e Estatística [IBGE], 2023), presents a paradigmatic case: Libras was recognized as an official language in 2002, yet AI support for Libras communication remains substantially less developed than for spoken Portuguese — a modality coverage failure with direct legal implications under the Lei Brasileira de Inclusão (Lei nº 13.146/2015; Brasil, 2015) and the Brazilian Sign Language Act (Lei nº 10.436/2002; Brasil, 2002).

Spain and Portugal face analogous challenges at the intersection of regional linguistic diversity and communicative accessibility. The presence of significant communities of speakers of Catalan, Galician, Basque, and Mirandese — many of whom include persons with disabilities — raises questions about whether AI communication systems developed primarily for Castilian Spanish or European Portuguese can achieve genuine communicative accessibility for these communities.

Latin American countries, despite advances in disability rights legislation, continue to exhibit deep disparities in digital inclusion (CEPAL, 2022). The rapid adoption of cloud-dependent generative AI in assistive technology contexts raises concerns about accessibility for users in rural or peri-urban areas with limited connectivity (see Figure 3 for framework comparison with WCAG paradigm).

Two recent empirical contributions from the Iberian Peninsula illustrate both the affordances and the limits of generative AI for communicative accessibility in the region. Perea-Trigo et al. (2024), at the Universidad de Sevilla, showed that a rule-based synthetic-corpus generator can supply training data for Transformer models translating between written Spanish and Spanish Sign Language (LSE) glosses in both

directions, while reporting that performance degrades sharply on interpreter-validated material and that their rule set does not yet cover spatial-locative constructions. Štajner et al. (2022), with co-authorship at Universitat Pompeu Fabra, built the first comparable multilingual benchmark for lexical simplification in English, Spanish and Brazilian Portuguese; a neural system outperformed a non-neural one in all three languages, but performance fell sharply outside English, leading the authors to question whether such architectures transfer to less-resourced languages — a result with direct implications for adaptive register generation in Ibero-American digital media. Together, these two studies confirm the MAIC-Framework’s technolinguistic emphasis on modality coverage and semiotic equivalence as decisive evaluation criteria, which are applied systematically to an Ibero-American case in the analysis that follows (see Table 2).

Table 2.
Illustrative application of the MAIC-Framework to a generative AI Portuguese↔Libras translator

MAIC dimension	Evaluation question	Illustrative finding for a Portuguese↔Libras AI translator	Implication
Technolinguistic	Does the system meet the four technolinguistic criteria?	Modality coverage: partial (high-quality Portuguese-to-text but limited Libras generation, with spatial grammar and non-manual marking simplified — Tan et al., 2024). Semiotic equivalence: low for facial-expression markers and classifier predicates, which gloss-based notation does not encode (cf. Perea-Trigo et al., 2024, whose LSE generator covers manual glosses only). Register: untuned to formal vs. familial registers. Latency: acceptable for short utterances; degrades in real conversation.	The technolinguistic floor is not yet reached for full educational or legal use; suitable for asynchronous, short-turn contexts.
Sociocommunicational	Are institutional and interactional conditions in place?	Institutional recognition: Libras is an official Brazilian language (Lei nº 10.436/2002; Brasil, 2002) but AI-mediated outputs are rarely accepted as evidentiary in legal or healthcare proceedings. Partner competencies: hearing interlocutors typically lack Libras receptive skills, deferring communicative effort to the Deaf user. Structural equity: cloud-dependent inference excludes users with intermittent connectivity (CEPAL, 2022).	Even a perfect translator would not produce participation without reciprocal partner training and offline-capable deployment.
Ethical-Governance	Are rights, participation, and accountability requirements satisfied?	Rights anchoring: the tool is not subjected to a CRPD-aligned accessibility impact assessment. Participatory design: Deaf-community involvement is typically post-hoc usability testing, not co-design. Algorithmic accountability: no public audit reports are available for known commercial Libras translators; complaints procedures are absent.	Deployment without participatory design and CRPD-aligned audit risks reinforcing the same exclusions it claims to remedy.

Source: Own elaboration.

Figure 3.
Comparative analysis of the WCAG 2.2 paradigm and the MAIC-Framework

Paradigm comparison: WCAG 2.2 framework vs. MAIC-Framework approach

WCAG 2.2 Paradigm	Dimension	MAIC-Framework
Properties of digital artifacts (perceivable, operable, understandable, robust interface elements)	Unit of Analysis	Conditions of communicative participation (agency, recognition, structural access to meaning-making)
Compliance with technical criteria (conformance levels A, AA, AAA) Binary pass/fail evaluation	Conception of Accessibility	Gradient of communicative inclusion (modality coverage, semiotic equivalence, participation quality)
End-users / beneficiaries of accessible design	Role of Persons with Disabilities	Co-designers, evaluators, and rights-holders in governance processes
Not addressed — applies to static/dynamic web content; gap for GenAI outputs	AI Systems <i>paradigm shift</i>	Central focus — evaluates GenAI capabilities across modalities, registers, and languages
Technical conformance audits; legal compliance (national law based on WCAG)	Governance Mechanism	Rights-anchored (CRPD) impact assessments, participatory mandates, algorithmic accountability audits
Adopted by reference in national law but not adapted to signed languages or linguistic diversity	Ibero-American Applicability	Explicitly addresses Libras, LSE, LGP; structural equity across Latin American contexts

Note: WCAG 2.2 remains a necessary baseline. The MAIC-Framework is a complementary architecture addressing dimensions beyond technical conformance.

Source: Own elaboration, based on W3C (2023).

4.6. Discussion

The MAIC-Framework makes three principal contributions to the literature. First, it offers an integrated tripartite architecture bridging the fragmented bodies of literature on technical AI accessibility, social conditions of communicative participation, and AI ethics governance. Second, it foregrounds the rights-based dimension of communicative accessibility by anchoring the Ethical-Governance Dimension in CRPD obligations and proposing specific accountability mechanisms. Third, it attends specifically to the Ibero-American context, resisting the tendency in AI accessibility research to universalize findings from high-income, English-speaking settings.

5. FINAL CONSIDERATIONS

5.1. Synthesis of Contributions

This article has argued that communicative accessibility in the age of generative AI cannot be adequately conceptualized through technical standards alone. The WCAG conformance paradigm, while valuable as a baseline, does not capture the full scope

of conditions necessary for persons with disabilities to exercise genuine communicative participation. The MAIC-Framework's three dimensions address communicative accessibility at technical, social, and governance levels simultaneously — a tripartite architecture that is more comprehensive, more rights-sensitive, and more contextually attentive than existing approaches.

5.2. Theoretical and Practical Implications

The MAIC-Framework's differentiation between communicative capability (Technolinguistic Dimension) and communicative participation (Sociocommunicational Dimension) implies that research in this area should measure participation outcomes — not merely technical performance metrics such as accuracy or latency. For AI developers, the Technolinguistic Dimension specifies capabilities to prioritize, with particular urgency around signed language generation and adaptive register generation. For policy makers, the Ethical-Governance Dimension provides a template for regulatory development that can be incorporated into existing frameworks including the EU AI Act and national disability rights legislation.

5.3. Limitations and Future Research Agenda

Three limitations merit acknowledgment. First, the integrative review methodology introduces interpretive choices that could be made differently by different researchers, notwithstanding the procedural safeguards described in Section 3.4. Second, the Framework is at present a conceptual rather than an empirical contribution requiring operationalization into a MAIC-Framework Evaluation Tool (MAIC-ET). Third, the Ibero-American specificities discussed are inferred largely from secondary sources and general indicators, with primary empirical evidence limited to a small set of recent studies focused on Spanish Sign Language (Perea-Trigo et al., 2024) and on lexical simplification across Spanish and Brazilian Portuguese (Štajner et al., 2022); empirical research on Portuguese Sign Language (LGP), regional minority languages of the Iberian Peninsula, and indigenous languages of Latin America remains scarce in the AI-accessibility literature and constitutes a priority for future work.

A future research agenda should include: (a) empirical evaluation of commercial generative AI communication tools against the Technolinguistic criteria; (b) institutional ethnographies documenting recognition of AI-mediated communication; (c) policy analysis comparing AI governance frameworks against the Ethical-Governance criteria; and (d) participatory design studies with disability communities in the Global South.

5.4. Conclusion

The communicative rights of persons with disabilities are a foundational dimension of the right to participate in public life, access information, pursue education, and engage

in cultural life. The MAIC-Framework proposed in this article is an invitation to the research community, to AI developers, and to policy makers to take the communicative dimension of digital accessibility seriously — not as an afterthought to be addressed through compliance checklists, but as a substantive rights challenge. The generative AI moment presents a genuine opportunity to build communicative infrastructure that is, from the ground up, multimodal, accessible, and inclusive.

6. REFERENCES

- Barnes, C., & Mercer, G. (2010). *Exploring disability: A sociological introduction* (2nd ed.). Polity.
- Beukelman, D. R., & Light, J. C. (2020). *Augmentative and alternative communication: Supporting children and adults with complex communication needs* (5th ed.). Paul H. Brookes.
- Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., Bernstein, M. S., Bohg, J., Bosselut, A., Brunskill, E., Brynjolfsson, E., Buch, S., Card, D., Castellon, R., Chatterji, N. S., Chen, A. S., Creel, K. A., Davis, J., Demszky, D., ... Liang, P. (2021). *On the opportunities and risks of foundation models*. Center for Research on Foundation Models, Stanford University. <https://crfm.stanford.edu/assets/report.pdf>
- Brasil. (2002). *Lei nº 10.436, de 24 de abril de 2002: Dispõe sobre a Língua Brasileira de Sinais—Libras e dá outras providências*. Presidência da República. https://www.planalto.gov.br/ccivil_03/leis/2002/l10436.htm
- Brasil. (2015). *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)*. Presidência da República. https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13146.htm
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Capp, M. J. (2017). The effectiveness of universal design for learning: A meta-analysis of literature between 2013 and 2016. *International Journal of Inclusive Education*, 21(8), 791–807. <https://doi.org/10.1080/13603116.2017.1325074>
- CEPAL. (2022). *Un camino digital para el desarrollo sostenible de América Latina y el Caribe* (LC/CMSI.8/3). Naciones Unidas. <https://hdl.handle.net/11362/48460>
- Chemnad, K., & Othman, A. (2024). Digital accessibility in the era of artificial intelligence—Bibliometric analysis and systematic review. *Frontiers in Artificial Intelligence*, 7, Article 1349668. <https://doi.org/10.3389/frai.2024.1349668>

- Committee on the Rights of Persons with Disabilities. (2014). *General comment No. 2 (2014): Article 9: Accessibility* (CRPD/C/GC/2). United Nations. <https://docs.un.org/en/CRPD/C/GC/2>
- Devaraj, A., Marshall, I. J., Wallace, B. C., & Li, J. J. (2021). Paragraph-level simplification of medical texts. In *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies* (pp. 4972–4984). Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.naacl-main.395>
- Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, 10(1), 45–53. <https://doi.org/10.1177/135581960501000110>
- Elsahar, Y., Hu, S., Bouazza-Marouf, K., Kerr, D., & Mansor, A. (2019). Augmentative and alternative communication (AAC) advances: A review of configurations for individuals with a speech disability. *Sensors*, 19(8), Article 1911. <https://doi.org/10.3390/s19081911>
- European Parliament and Council. (2016). Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies. *Official Journal of the European Union*, L 327, 1–15. <http://data.europa.eu/eli/dir/2016/2102/oj>
- European Parliament and Council. (2019). Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act). *Official Journal of the European Union*, L 151, 70–115. <http://data.europa.eu/eli/dir/2019/882/oj>
- European Parliament and Council. (2024). Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). *Official Journal of the European Union*, L, 2024/1689, 12 July 2024. <http://data.europa.eu/eli/reg/2024/1689/oj>
- Feenberg, A. (2010). *Between reason and experience: Essays in technology and modernity*. MIT Press.
- Fjeld, J., Achten, N., Hilligoss, H., Nagy, A., & Srikumar, M. (2020). *Principled artificial intelligence: Mapping consensus in ethical and rights-based approaches to principles for AI* (Berkman Klein Center Research Publication No. 2020-1). <https://doi.org/10.2139/ssrn.3518482>
- Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F., Schafer, B., Valcke, P., & Vayena, E. (2018). AI4People—An ethical framework for a good AI society: Opportunities,

- risks, principles, and recommendations. *Minds and Machines*, 28(4), 689–707. <https://doi.org/10.1007/s11023-018-9482-5>
- Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.
- Gadiraju, V., Kane, S., Dev, S., Taylor, A., Wang, D., Denton, R., & Brewer, R. (2023). "I wouldn't say offensive but...": Disability-centered perspectives on large language models. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency* (pp. 205–216). Association for Computing Machinery. <https://doi.org/10.1145/3593013.3593989>
- Goggin, G., & Soldatić, K. (2022). Automated decision-making, digital inclusion and intersectional disabilities. *New Media & Society*, 24(2), 384–400. <https://doi.org/10.1177/14614448211063173>
- Goodley, D. (2017). *Disability studies: An interdisciplinary introduction* (2nd ed.). Sage.
- Habermas, J. (1984). *The theory of communicative action: Vol. 1. Reason and the rationalization of society* (T. McCarthy, Trans.). Beacon Press. (Original work published 1981)
- Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning*. Edward Arnold.
- Higginbotham, D. J., & Caves, K. (2002). AAC performance and usability issues: The effect of AAC technology on the communicative process. *Assistive Technology*, 14(1), 45–57. <https://doi.org/10.1080/10400435.2002.10132054>
- Instituto Brasileiro de Geografia e Estatística [IBGE]. (2023). *Pesquisa Nacional por Amostra de Domicílios Contínua: Pessoas com deficiência 2022*. IBGE. https://biblioteca.ibge.gov.br/visualizacao/livros/liv102013_informativo.pdf
- Jakobson, R. (1959). On linguistic aspects of translation. In R. A. Brower (Ed.), *On translation* (pp. 232–239). Harvard University Press.
- Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*, 1(9), 389–399. <https://doi.org/10.1038/s42256-019-0088-2>
- Kent-Walsh, J., & McNaughton, D. (2005). Communication partner instruction in AAC: Present practices and future directions. *Augmentative and Alternative Communication*, 21(3), 195–204. <https://doi.org/10.1080/07434610400006646>
- Klare, G. R. (1963). *The measurement of readability*. Iowa State University Press.
- Maaß, C. (2020). *Easy language – Plain language – Easy language plus: Balancing comprehensibility and acceptability* (Easy – Plain – Accessible, Vol. 3). Frank & Timme. <https://doi.org/10.26530/20.500.12657/42089>

- Mankoff, J., Hayes, G. R., & Kasnitz, D. (2010). Disability studies as a source of critical inquiry for the field of assistive technology. In *Proceedings of the 12th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '10)* (pp. 3–10). Association for Computing Machinery. <https://doi.org/10.1145/1878803.1878807>
- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST Professional Publishing.
- Oliver, M. (1990). *The politics of disablement*. Macmillan.
- Perea-Trigo, M., Botella-López, C., Martínez-del-Amor, M. Á., Álvarez-García, J. A., Soria-Morillo, L. M., & Vegas-Olmos, J. J. (2024). Synthetic corpus generation for deep learning-based translation of Spanish Sign Language. *Sensors*, 24(5), Article 1472. <https://doi.org/10.3390/s24051472>
- Qian, Z., Xiao, K., & Yu, C. (2023). A survey of technologies for automatic dysarthric speech recognition. *EURASIP Journal on Audio, Speech, and Music Processing*, 2023(1), Article 48. <https://doi.org/10.1186/s13636-023-00318-2>
- Štajner, S., Ferrés, D., Shardlow, M., North, K., Zampieri, M., & Saggion, H. (2022). Lexical simplification benchmarks for English, Portuguese, and Spanish. *Frontiers in Artificial Intelligence*, 5, Article 991242. <https://doi.org/10.3389/frai.2022.991242>
- Tan, S., Khan, N., An, Z., Ando, Y., Kawakami, R., & Nakadai, K. (2024). A review of deep learning-based approaches to sign language processing. *Advanced Robotics*, 38(23), 1649–1667. <https://doi.org/10.1080/01691864.2024.2442721>
- Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review*, 4(3), 356–367. <https://doi.org/10.1177/1534484305278283>
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M18-0850>
- Ullmann, H., Williams, D., Williams, R. C., & Jones, F. (2018). *Information and communications technologies for the inclusion and empowerment of persons with disabilities in Latin America and the Caribbean* (Project Documents, LC/TS.2018/48). Economic Commission for Latin America and the Caribbean. <https://hdl.handle.net/11362/43744>

- United Nations. (2006). *Convention on the Rights of Persons with Disabilities and Optional Protocol*.
<https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>
- Valencia, S., Cave, R., Kallarackal, K., Seaver, K., Terry, M., & Kane, S. K. (2023). "The less I type, the better": How AI language models can enhance or impede communication for AAC users. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Article 830, pp. 1–14). Association for Computing Machinery. <https://doi.org/10.1145/3544548.3581560>
- W3C. (2023, October 5). *Web Content Accessibility Guidelines (WCAG) 2.2* (W3C Recommendation). World Wide Web Consortium.
<https://www.w3.org/TR/2023/REC-WCAG22-20231005/>
- Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, 52(5), 546–553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>
- Whittlestone, J., Nyrup, R., Alexandrova, A., & Cave, S. (2019). The role and limits of principles in AI ethics: Towards a focus on tensions. In *Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society (AIES '19)* (pp. 195–200). Association for Computing Machinery.
<https://doi.org/10.1145/3306618.3314289>
- World Health Organization [WHO]. (2023, March 7). *Disability*.
<https://www.who.int/news-room/fact-sheets/detail/disability-and-health>

AUTHORS' CONTRIBUTIONS, FUNDING AND ACKNOWLEDGEMENTS

Funding: This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

AUTHOR:

Bruno José Betti Galasso

Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brasil

Associate Professor at the Federal University of São Paulo (UNIFESP). PhD in Education from the University of São Paulo with a sandwich scholarship at the University of Minho (Portugal), granted by the Erasmus Mundus External Cooperation program (Emundus15). Master's degree in Latin American Integration from the University of São Paulo, with an internship at Harvard University (USA). Specialist in Planning, Implementation and Management of Distance Education from the Federal Fluminense University (UFF). Master of Business Administration in Strategic and Economic Project Management from FGV. Specialist in the Development of Innovative Solutions for Distance Education from UNIFESP. Master of Business Administration in Public Institution Management from the Federal Institute of Education, Science and Technology of Rondônia. Specialist in Curriculum and Teaching Practice in the early years of Elementary Education from the Federal University of Piauí. Graduated in Pedagogy, Social Communication and Letters. Academic consultant and project manager in the area of Digital Education. Responsible for the implementation of the UAB model at the National Institute of Education for the Deaf (INES), being the first general coordinator at the institution. Founder of the Online Education Center (NEO) at the National Institute for Deaf Education. Responsible for the didactic-pedagogical design, implementation, and management of the Bilingual Pedagogy Course in the five macro-regions of Brazil. Consultant for INEP (National Institute for Educational Studies and Research) for the construction of the 2025 Institutional Evaluation Instrument. External Institutional Evaluator for SINAES (INEP). Leader of the project that won the Reimagine Education 2018 award (USA). Served as a public policy manager at the Ministry of Culture (MinC) in 2023 and 2024 at the invitation of the Minister of State. Has been a visiting professor at the Polytechnic Institute of Porto - Portugal (IPP) since 2019.

bruno.galasso@unifesp.br

H-index: 8

Orcid ID: <https://orcid.org/0000-0002-3677-7650>

Google Scholar: <https://scholar.google.es/citations?hl=es&user=53PuuYgAAAAJ>

ResearchGate: <https://www.researchgate.net/profile/Bruno-Galasso-2>

Academia.edu: <https://ipp.academia.edu/BRUNOJOSEBETTIGALASSO>

RELATED ARTICLES:

- Aramburú Moncada, L. G., López Redondo, I., & López Hidalgo, A. (2023). Inteligencia artificial en RTVE al servicio de la España vacía. Proyecto de cobertura informativa con redacción automatizada para las elecciones municipales de 2023. *Revista Latina de Comunicación Social*, 81, 1-16. <https://doi.org/10.4185/RLCS-2023-1550>
- Badaraco, J. A. V. (2025). Integrating artificial intelligence into communicative language teaching: An experimental case study on personalized chatbots in a multilingual undergraduate classroom. *Sinergia Académica*, 8(9), 222-242. <https://doi.org/10.51736/sa843>
- Baloğlu, E., & Budak, E. (2025). Cómo integrar la inteligencia artificial en las prácticas periodísticas. *Vivat Academia*, 158, 1-21. <https://doi.org/10.15178/va.2025.158.e1604>
- Betancourt, B. L. C., Perdomo, E. J., Contreras, N. M., & Calderón, R. A. (2025). The contribution of artificial intelligence to the teaching of communicative skills in the EFL Class: A theoretical review. *Revista Científica de Salud y Desarrollo Humano*, 6(3), 114-145. <http://revistavitalia.org/index.php/vitalia/article/view/764>
- Díaz-Bajo Rodríguez, J. (2025). Tendencias emergentes en el uso de la inteligencia virtual: la industria de influencers virtuales. *European Public & Social Innovation Review*, 10, 1-20. <https://doi.org/10.31637/epsir-2025-2135>