

From Freire's Critical Pedagogy to the Age of Artificial Intelligence: Continuities, Ruptures, and New Educational Challenges

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Abstract: This article examines the historical and contemporary relevance of critical pedagogy for language education in the digital age. Grounded in Paulo Freire's conception of education as the practice of freedom, it traces the global evolution of this pedagogical tradition and discusses its encounters with digital technologies and artificial intelligence. Drawing on a conceptual, literature-based analytical approach, the article articulates a clearer research focus by examining how critical literacy, critical digital literacy, and emerging forms of critical AI literacy can inform language learning in technologically mediated contexts. Within this landscape, we explore how AI-based activities can support reflective engagement and serve as mediating resources for contextualized, interest-driven language learning connected to students' realities. Rather than presenting empirical cases, we propose a pedagogical framework grounded in critical pedagogy for analyzing and designing AI-mediated language practices. Building on Freirean traditions of dialogue, praxis, and critical consciousness, we argue that engaging with AI and digital media, through analysis and pedagogical design, can open new spaces for inquiry and dialogue in language teacher education. The aim is to foreground how critical pedagogy can guide ethical, dialogic, and humanizing approaches to language education in digitally and algorithmically saturated contexts.

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Introduction

SINCE its emergence in the late 1960s, critical pedagogy has stood as one of the most influential intellectual and political movements in education. Originating in the context of Latin American struggles for democracy and social justice, it has provided educators around the world with a framework for understanding education not as transmission, but as transformation. Paulo Freire's seminal *Pedagogy of the Oppressed* (2014) articulated education as the practice of freedom, rooted in dialogue, hope, and collective action. For Freire, literacy was never a neutral skill; it was a political and ethical act of reading and rewriting the world. His concept of *conscientizaçã* (critical consciousness) invited teachers and learners to recognize the historical and ideological structures that shape their lives and to act upon them. In this sense, pedagogy becomes an ongoing process of humanization and social change, grounded in reflection (*reflexã*) and action (*açã*) as inseparable moments of praxis (Freire, 2006; 2014).

The impact of Freire's ideas quickly transcended the Brazilian context. In North America and Europe during the 1980s, his work inspired scholars who reimagined schools as cultural and ideological institutions. Henry Giroux (1983) developed a theory of teachers as transformative intellectuals, arguing that pedagogy is a form of cultural politics through which domination and resistance are enacted. Within language education, this also involves making explicit the values, philosophies, and beliefs that underpin teachers' practices (Crookes, 2009). Michael Apple (1995) explored how curricula reproduce class and gender inequalities, while Peter McLaren (1989) connected critical pedagogy to Marxist and postmodern theories of ideology. Together, these contributions positioned education as a site where power circulates through discourse and institutions, shaping knowledge. By linking Freire's dialogic ethics with critical social theory, they established pedagogy as a practice of cultural critique and democratic renewal.

During the 1990s, feminist and poststructural perspectives further expanded the scope of critical pedagogy. bell hooks (1994, 2003) advanced a pedagogy of love and transgression, insisting that the classroom is a space where difference, emotion, and vulnerability must be embraced as sources of critical insight. Patti Lather (1991) and Elizabeth Ellsworth (1989) problematized the claims of authority and universality often implicit in radical teaching, emphasizing relationality and self-reflexivity. These interventions broadened the meaning of "critical," shifting attention beyond ideology critique toward embodiment, identity, and intersectionality. As hooks (1994) argued, freedom in education arises not only from critique but from care, the capacity to listen, to risk, and to build community across differences.

In parallel, postcolonial and decolonial thinkers reframed critical pedagogy within the geopolitics of knowledge. Catherine Walsh (2013) and

Walter Mignolo (2011) located critical pedagogy within the broader project of decoloniality, calling for epistemic plurality and recognition of Indigenous and local ways of knowing. Boaventura de Sousa Santos (2014) described this as the creation of an “ecology of knowledge,” where the pedagogical act becomes an encounter between worldviews rather than an imposition of one over another. These interventions decentered Eurocentric conceptions of emancipation and re-situated Freire’s project as a pluriversal endeavor.

Across these developments, critical pedagogy evolved as both theory and movement, responding to shifting historical conditions while preserving its ethical core. It affirmed that education must unveil the relations of domination that structure social life and cultivate the collective capacity to transform them (Giroux, 1983; Darder, 2017). As Antonia Darder (2018) reminds us, the heart of Freirean pedagogy lies in the belief that education is an act of love and courage, grounded in hope rather than despair, in dialogue rather than imposition. This commitment continues to guide educators who see learning not as adaptation to the world as it is, but as participation in the making of a more just and humane Society, a view that acquires new relevance in the context of digital and algorithmic mediation.

In the twenty-first century, new forms of power and mediation have reshaped the social terrain of education. Globalization, digital capitalism, and the rise of algorithmic systems have altered how people read, write, and learn. Scholars such as Zuboff (2019), Couldry and Mejias (2019), and Crawford (2021) describe these transformations as processes of datafication and surveillance capitalism, in which human experience is commodified and circulated as information. Language education, increasingly reliant on digital platforms and automated systems, is deeply entangled in these dynamics. Algorithms determine what is visible, legitimate, or valuable in digital spaces, subtly influencing the epistemological foundations of pedagogy itself.

These shifts invite a renewed dialogue between critical pedagogy and traditions of critical literacy (Janks, 2010; Ávila & Pandya, 2013; Luke, 2014). Building on Freire’s legacy, critical literacy understands reading, writing, and speaking as social practices that involve interpretation, dialogue, and ethical positioning toward texts and discourses. In the digital age, these practices extend to multimodal and algorithmic environments, where language circulates through systems that shape what becomes visible or credible. For language education in particular, this situates literacy as an encounter with digitally mediated discourses that encode power, legitimacy, and inequality. Education, in this view, cultivates a critical awareness of how discourse and technology co-construct social realities while affirming the human capacity to read and rewrite the world.

Building on these trajectories, this article examines how critical pedagogy can inform language education in digitally saturated contexts, with particular attention to artificial intelligence. The study asks: How can

Freirean (principles dialogue, praxis, and critical consciousness) guide the pedagogical use of AI in language learning? And in what ways can AI function not only as a tool but also as a text that reveals ideological, epistemic, and linguistic assumptions? The scope is limited to language education as practiced in higher education, where digital mediation intersects with issues of authorship, visibility, and linguistic legitimacy. By articulating these questions, the article aims to contribute to ongoing debates on critical, ethically grounded approaches to technology in language education.

To situate these questions analytically, the article adopts a conceptual and literature-based approach grounded in traditions of critical pedagogy, critical literacy, and critical digital studies. Rather than proposing an empirical investigation, the analysis proceeds through a theoretically oriented reading of key texts and debates, identifying how different strands of critical educational thought illuminate the challenges posed by AI-mediated language practices. This methodological orientation allows the argument to foreground conceptual connections, between language, power, and technological mediation, while also tracing how these frameworks can guide pedagogical decision-making in contemporary language education.

Therefore, the question that guides this article is not whether digital innovation belongs in education, but how critical pedagogy can shape the ways we live, teach, and learn within digitally driven societies, especially in language education. Rather than assuming AI tools to be neutral or inherently beneficial, we treat them as cultural and ideological constructs that invite critique. In this view, classroom encounters with technology become occasions for reading, questioning, and rewriting these constructs through dialogic inquiry (Freire, 2014; hooks, 1994). For language educators, this entails engaging AI-mediated texts, translations, and discursive ecologies students inhabit, attending to whose language varieties are legitimized, which perspectives are erased, and how meanings travel across platforms (Janks, 2010; Luke, 2014; Wodak, 2015). Treating technologies as discursive systems aligns with critical pedagogy's emancipatory vocation: fostering reflection, responsibility, and collective engagement.

The article is structured into four sections: Section 2 reviews the historical trajectory of critical pedagogy and its relation to language, power, and schooling. Section 3 discusses critical literacy in the digital and AI age, offering tools for analyzing technologically mediated language practices. Section 4 presents a pedagogical framework for integrating AI in the context of German as an additional language (GAL) in Brazil. The conclusion synthesizes these discussions and explores future challenges for sustaining Freirean principles in digital contexts.

The Historical Trajectory of Critical Pedagogy

The emergence of critical pedagogy in the second half of the twentieth century marked a decisive shift away from technocratic models of education toward an understanding of learning as a historically situated practice shaped by power, culture, and ideology. Rooted in the political and social struggles of Latin America, Paulo Freire's theory of education as the practice of freedom established dialogue, critical consciousness, and collective action as the ethical foundations of pedagogy. Freire's insistence that literacy involves reading both the word and the world reframed education as a political and epistemological process through which learners become authors of their own histories rather than passive recipients of information (Freire, 2006; 2014). Emerging from contexts of inequality, dictatorship, and decolonial aspirations, this foundational moment positioned language as central to humanization and social transformation.

As Freire's work circulated globally during the 1970s and 1980s, scholars in North America and Europe extended his ideas to contexts marked by neoliberal reforms, cultural fragmentation, and new forms of social regulation. Henry Giroux (1983), Michael Apple (1995), and Peter McLaren (1989) reinterpreted pedagogy as a form of cultural politics, arguing that schools function simultaneously as sites of reproduction and resistance. Their work connected Freirean dialogism with critical theory and cultural studies, emphasizing the ideological dimensions of curriculum, the political role of teachers, and the discursive nature of power. Within language education, this shift foregrounded the need to examine how linguistic norms, communicative practices, and classroom interactions reproduce or contest inequities.

During the 1990s, feminist and poststructural perspectives broadened critical pedagogy's conceptual terrain by focusing on identity, embodiment, and difference. Writers such as bell hooks (1994; 2003), Patti Lather (1991), and Elizabeth Ellsworth (1989) challenged universalizing tendencies in earlier formulations and emphasized the emotional, relational, and intersectional dimensions of teaching and learning. This movement reframed criticality not only as unveiling ideology but as engaging with the complexities of subjectivity, affect, and positionality. For multilingual and multicultural classrooms, these insights highlighted the importance of care, voice, and belonging as integral to the development of critical agency.

From the late 1990s onward, postcolonial and decolonial contributors expanded critical pedagogy's epistemological horizon by challenging the dominance of Western knowledge systems. Catherine Walsh (2013), Walter D. Mignolo (2011), and Boaventura de Sousa Santos (2014) articulated a pedagogy grounded in epistemic plurality, intercultural dialogue, and the recognition of Indigenous and local modes of knowing. Their work repositioned critical pedagogy as a pluriversal project that confronts colonial power structures and authorizes diverse linguistic and cultural repertoires. This shift is

Table 1. Evolution of Critical Pedagogy: Movements, Contexts, and Contributions.

Historical Movement	Scholars	Context	Contributions	Language Education
1960s–1970s Foundational Latin American Pedagogy of Liberation	Paulo Freire	Brazil; Latin America; liberation theology; postcolonial struggles	Education as practice of freedom; dialogue and conscientização; critique of banking education; literacy as political act.	Positions language and dialogue as tools for social transformation; informs participatory approaches in language classrooms.
1980s Critical and Cultural Pedagogy in the Global North	Henry Giroux; Michael Apple; Peter McLaren	North America; rise of neoliberalism and cultural studies	Teachers as transformative intellectuals; ideological teaching; cultural politics of education.	Frames language learning as a process of cultural negotiation; situates teachers as mediators of discourse and power.
1990s Feminist and Intersectional Pedagogies	bell hooks; Patti Lather; Elizabeth Ellsworth	Feminist theory; intersectionality; poststructural thought	Pedagogy of love and transgression; embodiment and affect; critique of authority and representation.	Highlights emotion, identity, and care in multilingual classrooms; fosters inclusive and dialogic approaches to language learning.
2000s Postcolonial and Decolonial Perspectives	Catherine Walsh; Walter D. Mignolo; Boaventura Santos	Latin America; Global South; epistemologies of the South	Epistemic justice; ecology of knowledges; pluriversality; intercultural dialogue.	Encourages recognition of diverse linguistic and cultural repertoires; challenges colonial hierarchies in language teaching.
2010s Critical Digital and Algorithmic Pedagogies	Giroux; Zuboff; Williamson; Morris and Stommel	Global digital capitalism; platformization; AI-mediated communication	Critique of capitalism; digital pedagogy; algorithmic governance; ethics of technology.	Grounds critical AI literacy in language education; connects dialogue and critique to digital and algorithmic contexts.
2020s: Multilingual, Localized, and AI-Mediated Pedagogies	Gerlach; García and Wei; Pennycook; Canagarajah; Darwin	Global South and Global North; multilingual education; digital and AI-mediated learning contexts	Multilingual and translanguaging pedagogies; localized curriculum design; integration of critical digital literacies; decolonial and situated material development	Reinforces the connection between critical pedagogy and multilingual, locally grounded language education; promotes contextualized and ethically reflective uses of digital tools.

especially salient for language education, where issues of legitimacy, accent, ownership, and linguistic hierarchies are deeply embedded in broader colonial histories.

In the early twenty-first century, new socio-technical conditions (globalization, platformization, surveillance capitalism, and algorithmic governance) reshaped the landscape of communication and learning. Scholars of critical digital pedagogy and critical data studies (Giroux, 2011; Zuboff, 2019; Coudry & Mejias, 2019; Morris & Stommel, 2018) demonstrated how digital infrastructures mediate knowledge, identity, and participation, demanding renewed attention to the interplay between ideology, technology, and education. For language educators, these transformations are particularly significant: digital platforms structure the circulation of linguistic norms, AI systems generate and evaluate language, and algorithmic visibility shapes whose discourses become legible or authoritative. In this context, critical pedagogy provides conceptual tools for examining these mediations and understanding how digital systems both constrain and enable communicative practice.

The evolution of critical pedagogy across these movements demonstrates a pattern of continuity through reinvention: each generation reinter-

prets its ethical foundations (dialogue, humanization, and social transformation) while responding to the emergent forms of power that shape educational life. **Table 1** synthesizes this trajectory, outlining how foundational, cultural, feminist, decolonial, digital, and multilingual strands have contributed to contemporary understandings of critical pedagogy in education. The most recent developments, particularly those emerging in the 2020s, highlight the integration of critical digital literacies, multilingual and locally grounded pedagogies, and critical engagements with AI-mediated communication. These approaches underline the growing recognition that technologies are not neutral tools but discursive systems that structure meaning, agency, and possibility.

Taken together, these historical movements position critical pedagogy as a dynamic framework for rethinking language education in digitally and algorithmically mediated environments. Because language is always embedded in relations of power and ideology, a critical pedagogy of language must attend to how linguistic practices are shaped by technological infrastructures and how learners can develop agency within them. This sets the stage for the following section, which examines how critical literacy can extend Freirean commitments into the digital and AI age and explores pedagogical practices that cultivate ethically grounded, dialogic, and reflective engagement with technology in language learning.

Critical Literacy and Language Education in the Digital Era

The historical trajectory of critical pedagogy reveals an enduring commitment to uncovering how language, power, and ideology shape educational processes. In the digital age, however, these concerns acquire new contours as communication becomes increasingly mediated by platforms, algorithms, and AI systems that structure what can be seen, said, or known. Within this landscape, traditions of critical literacy and critical digital literacy offer conceptual tools for examining how meaning is produced and contested in technologically saturated environments.

Critical literacy emerged in the late twentieth century as an expansion of Freirean ideas into the analysis of texts, media, and discourse. Rather than reiterating its full genealogy, we highlight its core principle: literacy involves reading and rewriting the world by interrogating how texts position readers, legitimize ideologies, and shape social relations (Janks, 2010; Luke, 2014). For language education, this means understanding reading, writing, and speaking as socially situated practices through which identities and power relations are negotiated.

As digital technologies reconfigured how texts circulate, critical digital literacy developed to address the political and ideological dimensions of

online communication, platform architectures, and data-driven systems (Buckingham, 2007; Kellner & Share, 2007). This framework extends critical literacy by shifting attention from isolated texts to the socio-technical infrastructures that mediate communication, including visibility algorithms, platform governance, and commercialization of user activity. For additional language learners, this includes understanding how digital environments privilege certain linguistic norms and varieties while marginalizing others.

Recent scholarship has introduced the notion of critical AI literacy, responding to the rise of generative AI, automated translation, and algorithmic writing tools (Godwin-Jones, 2023; Williamson, 2023; Veldhuis et al., 2024). Critical AI literacy moves beyond digital literacy by addressing how AI systems generate language, encode biases, and enact epistemic assumptions about knowledge, authorship, and credibility. While critical digital literacy focuses on platforms and media ecosystems, critical AI literacy examines the internal logics and discursive effects of algorithmic systems that increasingly participate in meaning-making.

This conceptual progression, from critical literacy to critical digital literacy to critical AI literacy, provides a coherent framework for analyzing linguistic and educational practices in the age of artificial intelligence. It highlights how each historical moment introduces new forms of mediation: texts, platforms, and now generative systems that produce language themselves. For educators, this progression underscores the need to teach not only how to interpret texts, but also how to interrogate the socio-technical conditions under which texts, prompts, and algorithmic outputs are produced.

Within language education, these transformations have deep implications. AI-mediated tools shape linguistic norms, provide feedback, filter information, and generate discourses that learners encounter as authoritative or “neutral,” even though they embed cultural, ideological, and epistemological assumptions. Scholars such as Pennycook (2021) and Canagarajah (2013) emphasize that language learning must account for these dynamics by situating linguistic practices within broader systems of power, representation, and technological mediation.

Recent research in applied linguistics has investigated how AI systems influence authorship, legitimacy, and communicative agency in additional language contexts (Godwin-Jones, 2023; Li, 2023). Approaching AI not merely as a resource but as a discursive artifact allows educators and learners to analyze its assumptions about correctness, clarity, register, and cultural relevance. This aligns with a Freirean perspective, where technologies become objects of reflection and dialogue rather than instruments of passive consumption.

For teacher education, these orientations translate into creating reflective spaces where future educators examine how AI-mediated practices shape classroom dynamics, expectations of linguistic performance, and no-

tions of creativity and authorship. Critical AI literacy facilitates such reflection by foregrounding ethical, epistemological, and pedagogical questions about the role of technology in language learning.

In this sense, AI-mediated language education becomes a site for developing critical consciousness: learners and teachers analyze not only linguistic form but also how technologies participate in producing meaning, privilege certain voices, and circulate particular worldviews. By connecting the pedagogical uses of AI with traditions of critical literacy, the section lays the conceptual foundation for the examples discussed in the following part of the article.

Working with AI in Academic German Language Classrooms

In the Brazilian context of academic German teaching, the exercise of criticality entails more than questioning Eurocentric hierarchies embedded in curricula and pedagogical materials. It also requires reimagining how emerging technologies such as artificial intelligence can become part of learners' linguistic and cultural repertoires. Most students begin with limited or no prior knowledge of German, which means that the central challenge is not only linguistic but epistemological: how to learn a new language while interrogating the discourses, ideologies, and technologies that mediate that learning (Aquino, 2023). Building on the conceptual progression outlined earlier, i.e., critical literacy, critical digital literacy, and critical AI literacy, this section reframes AI-mediated practices as opportunities for dialogic, reflective, and ethically aware language learning.

From a Freirean perspective, the aim is not to regulate or prohibit the use of AI but to transform it into a space of dialogue, curiosity, and collective meaning-making. Within this framework, critical AI literacy functions as the operational layer through which Freirean principles (dialogue, conscientização, praxis) are enacted in technologically mediated environments. The teacher's role, therefore, is to help students interrogate how language models articulate meaning, whose voices they echo, what ideologies they reproduce, and what discursive possibilities they foreclose. When learners treat AI outputs as cultural texts, they begin to ask who is represented, who remains absent, and how language, power, and identity intersect in algorithmic environments.

For example, prompting ChatGPT to describe Migration und Sprache in Deutschland may open discussions about inclusion, representation, and linguistic ideologies, revealing both the strengths and limitations of algorithmic knowledge. Such tasks exemplify how critical AI literacy extends traditional critical literacy: learners shift from analyzing texts to analyzing

text-generating systems and the epistemic assumptions embedded within them.

At the same time, AI can be harnessed to expand the space of learning by scaffolding argumentation, dialogue, and multimodal expression. Students may employ AI tools to formulate claims, structure arguments, or generate counterarguments on themes such as *Umweltschutz*, *Künstliche Intelligenz in der Bildung*, or *soziale Medien und Identität*. This practice operationalizes critical digital literacy by foregrounding how digital tools mediate voice, stance, and rhetorical structure. For hesitant learners, this scaffolding increases participation and linguistic confidence while provoking reflection on reasoning patterns and the authority of machine-generated discourse.

AI can also support the negotiation of meaning in interpersonal communication. Simulated dialogues allow students to observe how tone, register, and idiomaticity shift across contexts and social relationships. This can be done orally or in writing, accompanied by reflective questions about politeness, intercultural nuances, and pragmatic appropriateness. These activities push learners to examine how AI models internalize and reproduce sociocultural conventions of German, thus linking pragmatic competence with the critical analysis of technological mediation.

Another productive practice is the simplification or paraphrasing of authentic texts. Students may input excerpts from academic or journalistic sources and ask AI to produce accessible reformulations. This not only helps learners engage with complex material but also highlights how meaning shifts across linguistic choices, a core dimension of critical literacy. Comparing original and simplified versions allows students to analyze lexical substitutions, semantic shifts, and tone modulation, questioning whether essential nuances are preserved or lost.

AI systems also serve as tools for material design and pedagogical critique. Students in teacher education programs may prompt AI to generate grammar tasks or vocabulary activities and then evaluate their pedagogical validity, inclusivity, and contextual relevance. This reframes AI not as a shortcut for task creation but as an object of teacherly analysis, supporting the development of reflective, ethically grounded pedagogical judgment.

Beyond grammar and stylistic work, AI provides a powerful entry point into critical digital literacy, especially in exercises that examine misinformation, framing, and ideological patterns in news discourse. A feasible same-language procedure is to compare two or three reports from different outlets about the same event and prompt AI to identify micro-variations in framing, lexical choices, verbs of agency, modality, sourcing, data inclusion, and headline tone. Students then verify the machine's analysis and reflect on prompt design. This process activates all three literacies: critical literacy

Table 2. Examples of Integrated Critical AI Practices in Academic GAL.

Type of Activity	Description	Critical Focus	Learning Outcomes
Argument Building for Debates	Students use ChatGPT to generate arguments and counterarguments for debates on social or ethical issues (e.g., "Should AI be used in education?").	Analyze reasoning patterns and rhetorical strategies; question authority of machine-generated logic.	Develop argumentation skills; increase participation and fluency in German.
Dialogic Text Analysis	Use ChatGPT to generate short German texts about student-chosen themes (e.g., "Climate activism in Brazil").	Surface how prompts shape voice and stance; identify stereotypes, omissions, or cultural framing	Develop interpretive awareness; improve sensitivity to pragmatic nuance in German; build prompt revision skills and source-checking habits
Negotiating Meaning and Emotion	Simulate informal conversations with ChatGPT to explore expressions, tone, and emotion in everyday communication.	Reflect on register, empathy, and authenticity in language use.	Enhance communicative competence and pragmatic awareness.
Simplifying Complex Texts	Students ask AI to paraphrase or simplify authentic German texts, maintaining meaning but changing complexity.	Examine how AI mediates meaning and accessibility.	Strengthen reading comprehension; expand vocabulary; analyze lexical choices.
Exercise Creation and Critique	Learners prompt ChatGPT to generate grammar or vocabulary activities and analyze their structure, examples, and answers.	Question pedagogical validity; assess inclusivity and context-sensitivity.	Develop materials-design skills; critical reflection in teacher education.
Critical News Analysis	Students use AI to compare authentic and fabricated news in German and Portuguese on the same topic (e.g., migration, climate).	Identify linguistic markers of manipulation; connect discourse, ideology, and power.	Strengthen critical digital literacy; expand vocabulary and intercultural understanding.
Ethical Reflection Logs	After AI use, students write reflections on what the tool "taught" them and what they questioned in return.	Explore ethics of authorship and dependence.	Strengthen metacognitive and ethical awareness.
Production Task: AI Debate	Learners prepare and present arguments for and against using ChatGPT in language learning.	Reflect on autonomy, creativity, and responsibility in digital learning.	Integrate linguistic production with critical thinking and ethical reasoning.

(text interpretation), critical digital literacy (platform and discourse awareness), and critical AI literacy (evaluating the machine’s mediation).

To close the learning cycle, students may produce argumentative essays, oral presentations, or debates for and against the pedagogical use of AI, drawing on their previous analytical findings. They may also use AI features (guided outlining, question generation, idea clustering) while maintaining reflective logs on authorship, reliance, and privacy. In doing so, learners become co-authors in a dialogic process that problematizes rather than normalizes technological mediation. **Table 2** synthesizes these proposal-based activities that integrate critical AI literacy into academic German language learning.

Taken together, these proposals constitute a pedagogical framework rather than a set of empirical cases: the aim is to illustrate how critical literacy, critical digital literacy, and critical AI literacy can be operationalized in additional-language classrooms informed by Freirean principles. By positioning AI as both resource and object of inquiry, the approach aligns conceptual, methodological, and pedagogical dimensions of the article, fore-

grounding how technology can mediate (not replace) dialogue, agency, and ethical reflection in language education.

Conclusion

From its origins in the emancipatory struggles of Latin America, critical pedagogy has evolved through multiple intellectual and social contexts (liberatory, cultural, feminist, decolonial, and now digital) without losing its foundational commitment to humanization, dialogue, and transformation. Across these moments, what endures is the belief that education must unveil the social conditions of knowledge and empower learners to act upon them. Paulo Freire's vision of literacy as the practice of freedom remains profoundly relevant in the twenty-first century, as education once again faces structures of control and alienation, this time not only through political forces, but also through pervasive algorithmic and data-driven mediation.

The historical journey of critical pedagogy reveals a constant process of renewal. In the 1980s, scholars such as Giroux, Apple, and McLaren re-framed Freire's ideas for industrial democracies; in the 1990s, feminist voices like hooks and Lather foregrounded care, embodiment, and intersectionality; in the 2000s, decolonial thinkers such as Walsh and Santos expanded its epistemological horizons to the Global South. Each reinvention reflected the social contradictions of its time. Today, in the 2020s, the frontier of this renewal is technological: the need to critically engage with artificial intelligence and digital mediation as both objects and agents of education. This study has shown that this engagement requires a coherent conceptual progression from critical literacy to critical digital literacy and, more recently, to critical AI literacy, each addressing new forms of textuality, mediation, and power.

In this emerging landscape, technology is not a neutral tool but a site of ideological production. The rise of generative AI invites educators to reconsider how meaning, authorship, and participation are constructed in classrooms. Within language education, particularly in contexts such as German studies in Brazilian universities, this implies cultivating critical AI literacy: the ability to interpret, question, and ethically use digital tools as part of language and cultural learning. Activities such as analyzing misinformation, negotiating meaning in AI-mediated dialogues, and co-designing arguments for debates exemplify how Freirean principles of dialogue and reflection can be rearticulated in technologically mediated environments.

Rather than presenting empirical teaching cases, the article has offered a conceptual and pedagogical framework that illustrates how AI can be integrated into language education in ways that foreground agency, criticality, and ethical reflection. This framework aligns with the methodological

orientation outlined in the introduction, emphasizing conceptual analysis and theoretically informed pedagogical design.

Such integration demands a shift in focus, from learning about technology to learning with and against it. In Freirean terms, this involves transforming AI into an interlocutor that provokes critical thinking rather than replaces it. When students use AI to simplify complex texts, generate arguments, or critique bias, they are not only improving linguistic competence; they are engaging in acts of critical literacy, reading the word and the world simultaneously. Through these encounters, learners reflect on how digital systems construct linguistic norms, whose knowledge they privilege, and how they might be reimagined to represent plural voices and perspectives.

Looking toward the next decades, the pedagogical horizon will be shaped by increasing automation, hybrid learning, and data-driven assessment. The task for critical educators will be to ensure that these trends do not erode the dialogic and humanistic essence of education. Challenges remain significant: unequal access to technology, the risk of overreliance on automated feedback, and the reproduction of linguistic or cultural biases in AI systems. Yet these challenges are also opportunities to reassert education as a space of agency, to democratize participation in digital discourse, and to cultivate ethical awareness of how knowledge is produced and circulated in globalized contexts.

Ultimately, this article has argued that the future of critical pedagogy in language education lies in its capacity to integrate conceptual rigor with pedagogical imagination. By situating AI within the broader historical trajectory of critical pedagogy and by proposing concrete avenues for critical engagement in the language classroom, the study reaffirms that teaching is not about adapting to technological change but about shaping it through reflection, dialogue, and collective action. As classrooms become increasingly digital, the Freirean project endures: to foster learners who can speak, read, and write not only in another language, but in another world, one that is more just, dialogic, and profoundly human.

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