Chapter 1 / Capítulo 1

Emerging pedagogies: AI, territory, and situated knowledges (English Version)
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Algorithmic literacy and epistemic inequality: the risk of a new cognitive colonization with AI

Alfabetización algorítmica y desigualdad epistémica: el riesgo de una nueva colonización cognitiva con IA

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ABSTRACT

This article argues that generative AI is reorganizing how knowledge is produced, distributed, and validated, intensifying historical asymmetries through data extraction and predictive architectures. It distinguishes algorithmic literacy from conventional digital skills: rather than operating tools, algorithmic literacy entails understanding and disputing the epistemic, political, and normative frameworks embedded in algorithms that filter reality in advance. Drawing on critical epistemology and the notion of epistemic injustice, the paper shows how algorithmic systems can universalize a single representational grammar, invisibilize non-dominant knowledges, and consolidate a new cognitive coloniality under the veneer of mathematical neutrality. It analyzes AI as a device of governmentality that pre-positions subjects via anticipation and modulation, producing exclusion not by censorship but by omission. Against this backdrop, the article proposes algorithmic literacy as a praxis of cognitive sovereignty: an educational project that equips learners to read, question, and transform algorithmic criteria of classification, prediction, and legitimacy. Rather than technophilia or technophobia, it calls for situated, critical, and collective capacities to interrupt automated futures—especially in Latin America—so that societies design, govern, and pluralize their own horizons of knowledge.

Keywords: Algorithmic Literacy; Epistemic Inequality; Cognitive Coloniality; Governmentality; Critical Pedagogy

RESUMEN

Este artículo sostiene que la IA generativa reconfigura la producción, circulación y validación del conocimiento, profundizando asimetrías históricas mediante extracción de datos y arquitecturas predictivas. Distingue la alfabetización algorítmica de las competencias digitales instrumentales: más que "usar" herramientas, implica comprender y disputar los marcos epistémicos, políticos y normativos que organizan los algoritmos y prefiltran la realidad. Desde una epistemología crítica y la noción de injusticia epistémica, se muestra cómo los sistemas algorítmicos universalizan gramáticas de representación, invisibilizan saberes no hegemónicos y consolidan una nueva colonialidad cognitiva bajo la apariencia de neutralidad matemática. Se analiza la IA como dispositivo de gubernamentalidad que pre-posiciona sujetos por anticipación y modulación, produciendo exclusión por omisión más que por censura. Frente a ello, se propone la alfabetización algorítmica como praxis de soberanía cognitiva: un proyecto educativo situado, crítico y colectivo para leer, interrogar y transformar criterios de clasificación, predicción y legitimidad. Especialmente en América Latina, se enfatiza interrumpir futuros automatizados y diseñar infraestructuras y lenguajes propios para pluralizar los horizontes del conocimiento.

Palabras clave: Alfabetización Algorítmica; Desigualdad Epistémica; Colonialidad Cognitiva; Gubernamentalidad; Pedagogía Crítica

INTRODUCTION

Artificial intelligence is rapidly reshaping how knowledge is produced, distributed, and validated on a global scale (Clemente Alcocer et al., 2024; Flores Jaramillo & Núñez Olivera, 2024; Mogollón-Beltrán, 2025), reopening questions about power and hegemony in the contemporary digital ecosystem. Thus, far from being a neutral technology, artificial intelligence (AI) operates as a cognitive infrastructure that deepens historical asymmetries by extracting and hierarchizing knowledge.

This phenomenon has been described as a form of data colonialism, in which value is no longer extracted from territories or bodies, but from the massive capture and modeling of people's everyday information. The result is the possibility of a new form of cognitive colonization, capable of imposing cultural, linguistic, and epistemological frameworks from technology centers concentrated in the global north, thereby displacing or subordinating other rationalities.

Faced with this scenario, a critical question arises: can algorithmic literacy (Buitrago et al., 2024) act as a tool of resistance against the epistemic inequality that artificial intelligence tends to intensify (González Torres et al., 2024), preventing societies from becoming mere consumers of automated truths? Thus, this proposal assumes that the dispute is not only about access to technology, but also about the ability to actively intervene in the criteria that determine what recognition is considered legitimate, accurate, or relevant.

The expansion of generative algorithmic models (Perezchica-Vega et al., 2024) has taken educational systems by surprise (Díaz-Romero et al., 2025; Martínez-Álvarez & Martínez-López, 2024) that lack the necessary skills to train individuals capable of interpreting, questioning, and disputing these infrastructures of power. Without such critical literacy, citizens are exposed to automated decisions that operate in an opaque manner on what they see, learn, think, and eventually believe.

The urgency of this debate is not only pedagogical, but also ethical and geopolitical, since the biases present in artificial intelligence systems reveal that these are not technical errors, but expressions of structural inequalities transferred to the algorithmic level. At the same time, the extreme concentration of investment, infrastructure, and technological sovereignty in a minority of countries anticipates a cognitive gap of unprecedented magnitude, relegating vast sectors of the world to a peripheral role in knowledge production.

In view of this, this study argues that algorithmic literacy (Gatti, 2024) cannot be limited to instrumental training but must be configured as an exercise of cognitive sovereignty that promotes the ability to understand, question, and transform algorithms from situated perspectives.

The thesis asserts that artificial intelligence can contribute to the democratization of knowledge only if it is accompanied by critically designed algorithmic literacy processes that challenge the concentration of power today. Otherwise, its expansion would lead to the consolidation of new forms of epistemic dependence under the guise of modernization, jeopardizing not the future of technology but the very scope of societies' intellectual autonomy.

DEVELOPMENT

1. From traditional literacy to digital literacy

It is no coincidence that each historical transformation undergone by the concept of literacy has coincided with a new way of organizing power over subjectivity. That said, literacy was never simply about teaching writing and reading, but about providing tools to strengthen skills related to the way of thinking, feeling, and perceiving time. Thus, modern literacy seeks not only to teach people to read texts, but also to obey the order of the text, its linearity, its sequential logic, and the discipline of reading rhythm that guaranteed predictable, recordable, and governable subjects. Reading was not only about accessing information, but also about remaining legible to institutions.

With digitization (Romero-García et al., 2020), literacy transcended the limitation of deciphering signs to inhabiting interfaces, with text ceasing to be a static object and becoming an interactive flow. However, the decisive change was not technical but epistemic, as digital technology introduced the idea that knowledge had to be continuously updated, accelerated, and interrupted, displacing deep reading with constant browsing. Digital literacy not only expanded capabilities but also reconfigured the relationship between attention, truth, and authority, unanchoring interpretation from prolonged temporality and replacing it with the logic of the instant.

However, what is truly decisive occurs with the advent of the algorithmic regime, in which literacy ceases to be centered on reading the world and becomes oriented toward understanding how the world is read to us, since the subject is no longer the one who seeks information; rather, it is information that finds the subject first, anticipating their desires and modulating their perceptions even before they formulate any questions.

Algorithmic literacy does not emerge as a natural extension of digital literacy, but as a radical break, since it is not a matter of learning to interpret content, but of learning to resist the prediction of our behavior. In other words, it is not a matter of reading texts, but of understanding the forces that read us.

This shift reveals that literacy has always been a technology of power over time, first disciplining rhythm, then accelerating and fragmenting, and now governing by anticipation. Therefore, the fundamental contemporary challenge is not to teach how to use technologies, but to train individuals capable of interrupting the logic that has already decided for them what to see, think, and believe.

Literacy ceases to be access and becomes defense, so this shift cannot and should not be addressed from traditional pedagogical categories (Moreno Durán & Peña Rodríguez, 2011), but rather through a profound critique of the way in which artificial intelligence reconfigures the very experience of the knowable (Barahona-Martínez et al., 2024; Gallent-Torres et al., 2024).

1.1. What is algorithmic literacy? Difference from digital skills

Algorithmic literacy cannot be reduced to an instrumental extension of digital literacy, because it is not oriented towards the use of tools, but rather towards understanding the epistemological and decision-making framework that organizes algorithms. In contrast, traditional digital skills (Cañete Estigarribia, 2025) focus on operating technologies, particularly in information search, platform interaction, and content reproduction (Flores & Chiappe, 2025).

Algorithmic literacy consequently aims to understand how these technologies generate

reality by modulating available information, using discursive relevance in accordance with the value criteria that govern the contemporary public sphere. That said, and put in strict terms, algorithmic literacy becomes a critical ability to evaluate and interpret by confronting the computational processes involved in constructing the world, which requires awareness of how algorithms classify, predict, and prioritize, and how they affect what is considered plausible, visible, and legitimate.

Therefore, an epistemic rather than a technical ability, it involves recognizing that algorithms not only process data, but also produce order, establish hierarchies, define thresholds of recognition, and exclude anything that cannot be translated into their logic of calculation. It is precisely here that it differs from digital skills, since the latter, even in their most advanced formulations, continue to assume that the subject accesses information from a position of agency.

Algorithmic literacy, on the other hand, starts from the opposite assumption, in which information reaches the subject already preconfigured by automated architectures that have first filtered out what is possible. It is there, where understanding that condition is the starting point, that it is not enough to know how to use the technology, because it is essential to know how to read the invisible decisions that precede it. Therefore, algorithmic literacy does not ask "how to use artificial intelligence," but rather questions "how artificial intelligence is already using the world and what position the subject takes in relation to it."

1.2. Critical epistemology and knowledge justice

Understanding the scope of algorithmic literacy requires placing it within the horizon of a critical epistemology that asks not only who has access to knowledge, but who can be recognized as a legitimate subject of knowledge, where the notion of epistemic injustice is fundamental at this point, as it allows us to highlight how certain voices are systematically discredited or misinterpreted in the processes of knowledge production and circulation.

This occurs when certain groups are given less credibility due to structural prejudices and, on the other hand, when these groups lack the conceptual resources to interpret their own experiences, which generates a deficit of intelligibility or hermeneutic injustice.

In the era of artificial intelligence, both dimensions are intensified, as algorithmic systems trained on partial data reproduce unequal credibility. In contrast, experiences that cannot be translated into the language of data are rendered invisible by the models' very design.

Added to this is an additional form of exclusion that is usually less mentioned, contributory injustice, in which knowledge-bearing communities do produce knowledge, but their contributions are ignored or absorbed without recognition in the dominant circuits. Thus, if artificial intelligence extracts data from culture without allowing it to intervene in the interpretation or destination of that data, it produces a contribution without agency, a presence without authority, resulting in cognitive extraction disguised as technical progress.

From this diagnosis arises the demand for cognitive justice, which must be understood not as simple access to technology, but as the recognition of the diversity of ways of producing knowledge. This perspective maintains that no system of representation has a monopoly on rationality and affirms that popular, indigenous, community, scientific, and spiritual knowledge can coexist in an actual ecology of knowledge, where dialogue is neither hierarchical nor subordinate, but reciprocal.

Based on the above, artificial intelligence becomes problematic when it universalizes a single form of representation centered on abstract-vectorial statistics and, as a consequence, imposes an epistemic monoculture that decides which experiences deserve to be recorded and which are discarded as irrelevant.

Thus, the colonial line, which for centuries separated what was considered valid knowledge from what was classified as folklore or superstition, can be reactivated today in algorithmic form if models are trained exclusively with data from hegemonic matrices (Müller de Ceballos, 1994). In fact, the risk of a new epistemicide arises when AI captures local knowledge only to standardize it, thus disconnecting it from its context and reinserting it into a global system without restoring its sovereignty.

Critical pedagogy complements this framework by insisting that cognitive emancipation does not come from consuming information, but from understanding and disputing the conditions under which that information is produced. For this reason, literacy should not train docile tool operators, but rather subjects capable of questioning the logic that structures the digital experience.

In support of this argument, reading an algorithm critically does not consist in mastering its use, but in distinguishing the invisible decisions it has already made for us. An example of this would be knowing what data it has selected, what errors it considers tolerable, and to which bodies and voices it assigns value or risk. This requires learning that is not banking-based, but rather problematizing, valuing learning to ask what the system omits, to make visible the assumptions that operate within it, to detect which epistemologies remain outside its horizon of recognition.

From this convergence emerges a compelling thesis, consistent with the idea that algorithmic literacy can only be meaningful if it enables collective capacity to dispute the very criteria of design, representation, and decision-making, not as an advanced digital skill, but as a practice of cognitive sovereignty.

Along these lines, it is emphasized that the question is not only about how artificial intelligence works. However, also to whom does its epistemic architecture respond? Only when these types of questions are generated and enter the center of literacy can we affirm that we are dealing with a genuinely critical practice and not a terminological update (Lucero Baldevenites et al., 2024) of the old servile education adapted to the new cognitive regime. This point marks the threshold at which algorithmic literacy becomes an instrument of epistemic democratization or is absorbed as a device for passive adaptation to the automated order.

2. Artificial Intelligence as a device of governmentality and prediction

Artificial intelligence does not function merely as a technical tool, but as a form of behavioral governance, thus serving as the invisible infrastructure that anticipates, guides, and conditions decisions even before the subject perceives that they have been made. In this sense, AI operates as a device of governmentality, since it does not react to human actions, but rather models possible scenarios, calculates risks, assigns probabilities, and produces reality in advance.

In this context, its rationality is not merely descriptive, but pre-active, governing the future by adjusting in advance what is considered probable under algorithmic logic. It is from this point of departure that the fundamental shift from retrospective control to predictive governance takes place, where the decisive factor is no longer responding to what happens, but preventing

what should not happen.

Such power is materialized in algorithmic architectures that organize information flows, such as search platforms, social networks, and scoring models, which not only display content but also shape the very horizon of what is thinkable and desirable.

Therefore, what the user sees is not a reflection of the world, but a statistical curation designed to maximize permanence, dependence, and profitability. Artificial intelligence does not expect the subject to explore, so it pre-filters the world for them, producing a personalized reality whose structure responds to historical patterns rather than conscious will. Algorithmic governmentality no longer manages populations, but also manages futures, classifying bodies, discourses, and trajectories according to their usefulness or risk.

Under the scenario described above, a new cognitive asymmetry emerges: whoever controls the model dominates the very possibility of perception and decision (Chao-Rebolledo & Rivera-Navarro, 2024). It is no longer a question of censoring the forbidden, but of preventing the emergence of the unthinkable. Algorithmic power is all the more effective when there is less resistance, and it encounters less resistance the more it naturalizes its operations.

Artificial intelligence not only automates tasks but also mechanizes expectations. It does not predict behaviors; it induces them. Therefore, in this predictive regime, the subject is not simply governed, but pre-positioned. Explicit rules no longer govern society; invisible probabilities do. From this perspective, thinking of algorithmic literacy as critical consciousness takes on a highly strategic meaning, since if the algorithm acts before thought, literacy is no longer about teaching how to respond, but about teaching how to interrupt, how to recover the ability to disobey prediction. Only from this threshold is it possible to speak of true cognitive sovereignty.

2.1. Algorithmic biases and cognitive exclusion

So-called algorithmic biases should not be understood as contingent errors or as flaws that can be corrected through technical adjustments, but rather as structural effects of a process of selective translation of the world. Every artificial intelligence system operates on a prior reduction of reality, processing only what has been previously selected, classified, and deemed relevant.

In this context, anything that does not fit within this framework, anything that cannot be quantified, labeled, or predicted, is expelled from the realm of the computable. Therefore, such exclusion is ontological in nature, since it deprives of cognitive existence anything that does not fit into the forms of legibility imposed by the algorithmic regime.

In this sense, talking about bias is materially insufficient, given that the problem is not only that certain groups are mistreated within the system, but that they are not even recognized as part of the world that is knowable to the system. It is not just a matter of discrimination, but of epistemic invisibility.

If algorithms assign risk, reliability, relevance, or desirability according to statistical patterns learned from historical data, what they are doing, strictly speaking, is institutionalizing the past as the horizon of the possible, perpetuating inherited inequalities under the guise of mathematical neutrality.

This cognitive exclusion does not operate by confrontation, but by omission; it does not

censor what is said, but what is unthought; it does not block rights, but futures. That said, artificial intelligence decides what deserves to be shown, recommended, or enabled before the person is even aware of having made a choice. It does not repress the voice; it makes it improbable, and therefore, it is the one that lacks importance, hence its dangerousness, since it is a power that functions through the absence of conflict, because its violence is exercised before the threshold of consciousness. Justice without resistance is perfect injustice (Bracho Fuenmayor, 2021).

Under this logic, algorithmic neutrality is ontologically impossible because every model of artificial intelligence explicitly or implicitly encodes a worldview, and it is precisely this default filter that privileges the majority, the homogeneous, the Western, not because of conspiracy but because statistics reward the dominant and discard the non-hegemonic.

From this arises the idea that cognitive exclusion is much more than a gap in access to information, resulting in inequality in capacity itself (Bracho Fuenmayor, 2023), of existing within the infrastructures that define what is real, what is human, what is possible, resulting in a form of preventive silencing of that which does not even reach the threshold to be considered input; and it is precisely there that algorithmic literacy becomes a form of resistance, derived from the fact that it does not seek to teach adaptation to the system, but rather to dispute the right to be eligible, to interrupt the predictive economy that decides who counts before anyone has spoken.

2.2. Big Tech as a new epistemic empire

Large technology corporations do not simply operate as providers of digital services, but as infrastructures of reality that monopolize the production, circulation, and validation of knowledge on a planetary scale. Technological organizations that have developed these models not only manage data but also decide what information exists, what becomes visible, what remains peripheral, and what is automatically defined as irrelevant, dangerous, or non-existent.

Their power is no longer economic or communicational in the traditional sense, but epistemic and normative, as a result of their setting the criteria for what counts as truth, as science, as a legitimate voice, through algorithms protected by industrial opacity. This means we are therefore facing an unprecedented form of automated cognitive colonialism, according to Bracho-Fuenmayor et al. (2025), in which control is exercised not over physical territories but over the very architecture of the intelligibility of the world.

Big Tech companies are thus consolidating a new power regime that does not compete with states (Bracho Fuenmayor, 2024), but rather reabsorbs them into a political economy of knowledge, where sovereignty is no longer defined by control over material resources, but by the power to determine what is real, who counts, and what futures are legitimate.

Its sophistication lies in the fact that it does not need to explicitly impose a truth, since it is sufficient for it to determine what should not appear, modulating the horizon of the thinkable through algorithms. In this way, Big Tech monopolizes not only information, but also the regime of intelligibility on which education depends, as do science, journalism, and even democracy itself.

Thus, from this perspective, the process of critical algorithmic literacy cannot necessarily be limited to a mere understanding of the technical functioning of the systems (Delgado et al., 2024), but must consequently sharpen the ability to denaturalize the very architecture of power

that sustains them, given that its strategic task lies in adapting to the best algorithm, rather than interrupting the normalization of the world under a single, statistically administered epistemology.

Table 1.1. Power structure of the new algorithmic epistemic empire

Dimension	How classical colonialism operated	How Big Tech operates	Direct epistemic consequence
Controlled territory	Geographical spaces, physical borders	Digital and cognitive infrastructures (search, clouds, models)	Control of access to reality itself
Extracted resource	Gold, labor, bodies	Data, attention, cognitive patterns	Irreversible appropriation, without recognition
Hegemonic language	Spanish, imperial English	Standard English + technical-algorithmic language	Invisibilization of untranslatable knowledge
Legitimation mechanism	Church, State, colonial science	"Mathematical neutrality" + intellectual property	Oppression without conflict: legitimized as progress
Subordinate subject	Visible violence, explicit law	Invisible prediction, anticipation of desire	Obedience without coercion (automated)
Subordinate subject	Colonized people	User turned into data	Dispossession of cognitive and narrative agency
Political outcome	Economic dependence	Total epistemic dependence	Impossibility of imagining outside the model

2.3. Coloniality of knowledge reactivated by artificial intelligence

Artificial intelligence does not inaugurate a new logic of domination, but rather reactivates and refines a pre-existing architecture, such as the coloniality of knowledge, anchored in modernity as a civilizing project since the 16th century. The world order was not sustained solely by the extraction of material resources, but also by the imposition of a hegemonic epistemology responsible for defining what constitutes legitimate knowledge, which forms of rationality deserve to exist, and which should be subordinated or rendered invisible.

It is necessary to note that AI does not interrupt this trajectory; instead, it automates it, scaling it up and naturalizing it under the guise of mathematical objectivity. However, in light of this, it is necessary to point out that classical colonialism unfolded through the capture of bodies, wealth, and territories, which is opposed to the proposal presented by artificial intelligence, insofar as it operates on the capture of data, sensitive worlds, and languages whose form of power consists of translating the real into a computable grammar, which in the long run allows the world to be translated into a computable grammar, rewriting everything in terms of predictive value.

That which cannot be formalized as data ceases to exist, not only informatively, but politically. This is not collateral damage, but rather an ontopolitics of simplification that decides which modes of existence manage to persist in the field of the legible. In this operation, artificial intelligence does not act as a mere technical tool, but as the infrastructure of Eurocentrism, where its function is not only to analyze the world, but to select it, translate it, universalize it, and return it as statistically normalized truth.

Thus, coloniality no longer requires the explicit gesture of the civilizing mission; it is enough to train a model, epistemic extractivism that automates itself and becomes silent, inscribed in systems that decide which worlds continue and which will be re-signified as anomaly, noise, or

irrelevance.

The danger, therefore, lies not only in the exclusion of the other but in their replacement by a statistical simulation produced from outside their ontological framework. Artificial intelligence not only dominates, but it also redefines the very contours of reality. Hence, critical algorithmic literacy cannot be conceived as mere advanced digital competence, but as a form of civilizational defense, the radical affirmation of the right of peoples to continue existing on their own terms, before the predictive economy decides for them which ways of life deserve a future.

2.4. Homogenization of thought and loss of epistemic plurality

Artificial intelligence not only standardizes content, but also ways of thinking, because instead of allowing multiple ways of inhabiting knowledge, it optimizes reality toward a statistically majority pattern. This means that, even when presented as personalized or adaptive, it actually narrows the epistemic horizon, leading subjects to converge on narratives, languages, and modes of judgment that are functional to the dominant cultural model. The risk is not only losing peripheral information but also losing the civilizational capacity to think beyond the frameworks of artificial intelligence deemed probable or efficient.

Table 1.2. Comparison of truth regimes: epistemic ecology vs. extractive algorithmic architecture

Dimension	Truly pluralistic regime (historical epistemic ecology)	Algorithmic regime of truth (predictive cognitive capitalism)	Epistemic-political effect
Cognitive principle	Truth emerges from human interaction: confrontation of perspectives, historical dispute, possibility of fertile error. Truth is a process, not a product.	The truth is calculated in advance using statistical correlations. It is not debated, it is predicted. What is not probable is not true.	Replacing deliberation with prediction. Truth is no longer constructed: it is imposed by calculation.
Model of the world	Multiplicity of coexisting rationalities (conflicting, unstable, historically situated). Truth is always "in dispute."	A single totalizing model that claims to represent everything using a uniform grammar (datafication). Anything that diverges is seen as "noise."	Reducing the horizon of reality to what can be processed and monetized by AI.
Criterion of legitimacy	Authority based on argumentation, intersubjective recognition, the possibility of counter-speech.	Authority based on efficiency, performance, scalability, and economic utility. What is true is what "works."	Critical judgment is replaced by the logic of optimization. Epistemology becomes managerial.
Relationship with dissent	Dissent is constitutive: the existence of conflict is a sign of democratic and intellectual vitality.	Dissent is eliminated before it exists: the algorithm pre-filters the improbable, the slow, the problematic, the unprofitable.	Conflict is no longer resolved, it is structurally avoided. Politics dies.
Economy of knowledge	Slow, uneven circulation, but with the possibility of critical reappropriation. Knowledge can be a counter-hegemonic weapon.	Massive extraction of attention and data. Every human interaction generates value for cognitive corporations. Thought is exploited without being aware of it.	AI turns human experience into economic raw material. Extractive colonialism without territory.
Form of subjectivity	Interpretive, reflective subject, with the right to be wrong and to think outside the norm. Interiority has value.	Subject-profile calculated to be predictable: their desire is anticipated, their behavior modulated. They do not think: they react.	From subject to statistical object. Interiority is canceled as a legitimate source of truth.

Cognitive time	Long time, open to slowness, silence, the unproductive. Memory and archives are resistance.	Ultra-accelerated, impulsive, dopaminergic time. Every second must generate engagement, data, economic signals.	Time to think against the flow disappears. There is only time left to be governed.
Mode of exclusion	Obvious and therefore debatable exclusion: visible, resistible, politicizable marginalization.	Invisible exclusion: what cannot be translated into data simply does not exist for the system. It is not excluded, it is erased.	Perfect epistemicide: civilizations expelled from the map of the thinkable without being able to reclaim it.

The most serious aspect of this homogenization is not that it limits access to specific ideas, but that it numbs the very possibility of imagining alternative epistemologies. There would no longer be a so-called cultural battle, because artificial intelligence resolves the dispute before it even reaches the stage.

It eliminates the conditions for divergent thinking to emerge, not simply for it to prevail. Algorithmic power does not impose an explicit doctrine; it reduces the world's mental ecology to what can be processed, monetized, or predicted, undermining the very idea of epistemic diversity as a vital resource for humanity. In this scenario, the question is not only how to resist, but how to ensure that worlds continue to exist that the algorithm cannot convert into probability.

2.5. What does it mean to resist? Critical literacy vs. servile literacy.

The notion of algorithmic literacy has been quickly incorporated into educational discourse, but under a structural ambiguity that can operate as a vector of emancipation or as a mechanism of functional alignment with the digital order. Thus, in its hegemonic form, algorithmic literacy does not form critical subjects but rather relatively efficient users. Consequently, it does not seek to challenge the algorithmic architecture, but rather to adapt to it, internalizing its opacity, authority, and presumed neutrality as inevitable. Under this logic, literacy does not dismantle the power of artificial intelligence, but rather legitimizes it.

Critical literacy, in contrast, does not start from the imperative of learning to use systems, but rather from questioning the conditions of power that make them possible. Bracho Fuenmayor (2022) argues that its starting point is political rather than technical: the algorithm is not a neutral tool but a normative infrastructure that defines what is visible, predictable, and governable, always considering the ethical, following Martínez-Pinto et al. (2024).

Therefore, according to Bracho Fuenmayor (2022) and Del Solar-Duarte & Bracho-Fuenmayor (2024), critical literacy involves restoring the ability to question the machine, to read its ontological assumptions, and to intervene in its claim of inevitability. It does not ask how to optimize artificial intelligence to strengthen efficiency, but rather what forms of experience and decision-making are excluded when judgment is delegated to systems that do not allow for contradiction.

As is evident, the difference between the two approaches is fundamentally ontological: the servile literacy of the population aligns with the horizon of artificial intelligence projects as the only possible option, while critical literacy, on the other hand, preserves the collective faculty of imagining what the model cannot anticipate or capture.

The former consolidates cognitive dependence; the latter proposes epistemic sovereignty.

Therefore, the relevant question is not whether it is necessary to educate in artificial intelligence, but which educational model will guarantee that individuals retain the ability to decide which forms of knowledge deserve to exist and under what horizon of legitimacy. Only through this clarity can we speak of resistance, since resistance does not consist of a single act of rejecting technology, but of preventing artificial intelligence from becoming the exclusive framework for defining the real, the thinkable, and the possible.

2.6. Resisting the automation of thought: algorithmic literacy as a praxis of epistemic sovereignty

Thinking about education in the age of artificial intelligence (Cándano Pérez et al., 2025) requires understanding that the center of the dispute does not revolve around technology, but rather the right to imagine what technology cannot yet anticipate. Because recovering the pedagogy of questioning does not imply rescuing a didactic method, but rather affirming a political principle, denying that others have already defined the world before we can interpret it.

In the algorithmic regime, this means that education cannot be reduced to teaching how to use artificial intelligence, but rather to developing the ability to question it, to read its architecture as an expression of power, to ask not only what it responds to, but also what it excludes in order to respond. Thus, in a Freirean classroom today (Aparici et al., 2021), the use of large language models (LLMs) would not be prohibited; rather, it would be the object of hermeneutic criticism, with the question being how to use them. However, instead, what world does it presuppose? This is because Freire's proposal (Andrelo, 2023) was not based on curiosity, but on cognitive insubordination.

From this perspective, algorithmic literacy cannot be standardized or neutral, as it must be situated in a conscious relationship with the historical, linguistic, and geopolitical conditions from which knowledge is produced. In Latin America, algorithmic literacy is not about teaching how to operate tools, but explaining why our data trains foreign models, why our languages are not part of the dominant corpora, and why this constitutes a contemporary form of epistemic coloniality.

The risk for the region is not only to fall behind, but to be functionalized as the cognitive periphery of digital capitalism, consequently exporting invisibly monetized data, bodies, and languages, and then importing artificial intelligence encapsulated as truth. This represents a shift from extracting minerals or imposing explicit ideology to obtaining patterns of life and returning predictive normativity. Thus, power does not evangelize, but instead optimizes; domination no longer needs civilizing discourse, it suffices to become the default.

If this process is not interrupted, the gap will no longer be between those who have access and those who do not. However, between those who design the future and those who are designed by it, Latin America risks becoming a training ground rather than a subject of deliberation. Only then can education recover its fundamental task, which is not to train digital consumers, but to train subjects capable of interrupting a future that is already intended to be decided before it can be thought of.

CONCLUSION

Artificial intelligence is not just a technical innovation; it is a dispute over the power to define what is genuine, legitimate, and accurate. The decisive question is not whether artificial intelligence will be beneficial or dangerous, but who will set the criteria that will organize the

cognitive horizon of the next era. This will determine whether it remains subject to extractive logic and narrow epistemic centers, allowing for the consolidation of an unprecedented cognitive colonization, in which it will no longer be necessary to impose domination, since it is enough to program the invisibility of what exceeds statistics. Then the danger is not being replaced by machines, but unwittingly renouncing the right to imagine what calculation cannot measure.

In this context, algorithmic literacy cannot be reduced to functional adaptation, since it is a formative insurrection. It is not a matter of improving instrumental skills, but of preserving the ability to interrupt automated destinies, keeping open the possibility of unexpected thought, and challenging the architecture that decides what knowledge deserves to exist. Only in this way will education regain its historical power, not as a means of transmission, but as a defense of the right to question, and in turn as a guarantee that the future will not be closed before it is thought out.

For Latin America, the task is immense and unavoidable. It is not enough to consume AI; we must invest in its design, challenge its languages, build appropriate infrastructures, and produce governance frameworks from the South and for the South. Integrating artificial intelligence into the curriculum is insufficient if it is not embedded in the political project of decolonizing knowledge, grounded in the development of cognitive justice, epistemic plurality, and cultural autonomy.

The ability to respond collectively to this challenge will determine not only the fate of a technology but also the very validity of intellectual freedom in the 21st century, as well as the possibility of deciding what we understand by intelligence, what we affirm as human, and what worlds we consider worthy of defending.

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