

Algorithmic dogmatism and the crisis of educational reflexivity: A secular pedagogy for generative AI

Dogmatismo algoritmico e crisi della riflessività educativa: una pedagogia laica per l'IA generativa

Bruno José Betti Galasso^a

^a *Universidade Federal de São Paulo*, bruno.galasso@unifesp.br

Abstract

This conceptual essay engages with the Manifesto for a Secularly Inspired Pedagogy by examining the educational implications of generative artificial intelligence as a contemporary form of theological-political authority. The argument articulates the construct of algorithmic dogmatism, defined as the conjunction of propositional opacity, scale-mediated authority, commercial enclosure and epistemic naturalisation that reproduces the structural logic of pre-modern dogma in the medium of mathematical inference. The essay proposes the Triangle of Secular Reflexivity, that articulates epistemic autonomy, algorithmic transparency and democratic deliberation. The framework is operationalised through the construct of zones of algorithmic friction, presented in three families: reconstructive, contrastive and propositional. The essay discusses implications for teacher education, institutional governance and curricular design, addresses three anticipated objections, and outlines an agenda for future empirical research, thereby contributing, from a Global South epistemic perspective, to the renewal of the secular pedagogical project under the conditions of the algorithmic age.

Keywords: secular pedagogy; algorithmic dogmatism; educational reflexivity; generative artificial intelligence; democratic deliberation.

Sintesi

Questo saggio concettuale dialoga con il Manifesto per una pedagogia di ispirazione laica esaminando le implicazioni educative dell'intelligenza artificiale generativa come forma contemporanea di autorità teologico-politica. L'argomentazione articola il costrutto di dogmatismo algoritmico, definito come la congiunzione di opacità proposizionale, autorità mediata dalla scala, enclosure commerciale e naturalizzazione epistemica che riproduce la logica strutturale del dogma pre-moderno nel medium dell'inferenza matematica. Il saggio propone il Triangolo della Riflessività Laica, che articola autonomia epistemica, trasparenza algoritmica e deliberazione democratica. Il quadro è operazionalizzato attraverso il costrutto di zone di attrito algoritmico, illustrate nelle tre famiglie ricostruttiva, contrastiva e propositiva. Il saggio discute le implicazioni per la formazione docente, la governance istituzionale e la progettazione curricolare, risponde a tre obiezioni anticipate e delinea un'agenda di ricerca empirica futura, contribuendo, da una prospettiva epistemica del Sud globale, al rinnovamento del progetto pedagogico laico nelle condizioni dell'età algoritmica.

Parole chiave: pedagogia laica; dogmatismo algoritmico; riflessività educativa; intelligenza artificiale generativa; deliberazione democratica.

1. Introduction: When the algorithm becomes oracle

The Manifesto for a Secularly Inspired Pedagogy (Movimento della pedagogia laica, 2026) opens with a striking diagnosis: the secular vocation of education, historically forged against the conflation of state authority and religious revelation, must today confront a different but cognate adversary, namely the rise of “ideologies and political theologies that tend to constrain the ethical and intellectual autonomy of individuals and civil society”. The Manifesto names this adversary in classical terms: dogmatism, integralism, identitarian closure, normalising frameworks. What it does not yet name, and what this essay aims to articulate, is the contemporary materialisation of that adversary in a technological form that did not exist when the secular pedagogical tradition first crystallised in post-war Italian thought: the generative artificial intelligence system, conceived not merely as a productivity tool but as an infrastructure of epistemic mediation that increasingly pre-structures what counts as knowable, sayable, and learnable in formal and non-formal educational contexts.

The release of ChatGPT in late 2022 and the subsequent proliferation of large language models, multimodal generators and adaptive personalisation engines have transformed the pedagogical landscape in a span of less than four years (Macgilchrist et al., 2025; Selwyn, 2024; Williamson, 2024). What is at stake is no longer the relatively modest question of how technology can support teaching, but the more radical question of who, or what, holds the cognitive authority to define the contours of legitimate educational discourse. When a learner asks a generative model to summarise a body of research, draft an argument or evaluate a claim, the system returns an output whose statistical provenance is opaque, whose training corpus is undisclosed, and whose alignment rules are governed by private actors operating outside the deliberative reach of the educational community. The pedagogical relation, once predicated on the asymmetry between teacher and learner mediated by a shared tradition of inquiry, becomes triangulated by a third agent whose voice is everywhere and whose accountability is nowhere.

This essay names the resulting condition algorithmic dogmatism. The term is not metaphorical. Drawing on Burrell’s (2016) seminal taxonomy of opacity in machine learning, on Crawford’s (2021) anatomy of artificial intelligence as a planetary infrastructure of extraction, and on the postdigital critique articulated by Williamson, Macgilchrist, and Potter (2023), I argue that the convergence of three properties (technical inscrutability, scale-mediated authority and commercial enclosure) constitutes a functional analogue of pre-modern dogma. As in any dogma, the proposition is to be received rather than scrutinised; as in any dogma, the source of the proposition is shielded from public deliberation; as in any dogma, dissent is technically possible but practically discouraged by the asymmetry between the individual user and the infrastructure of authority. The difference is that algorithmic dogma travels under the alibi of mathematical neutrality, which makes it more difficult to recognise and, once recognised, more difficult to refuse.

1.1. The theoretical gap

The literature converges from two largely disconnected directions. On one side, the secular pedagogical tradition, represented in this issue by Capperucci, Pintus, Riva, Tomarchio and the broader Manifesto della pedagogia laica (Movimento della pedagogia laica, 2026), has elaborated a sophisticated normative apparatus around reflexivity, self-determination and

democratic deliberation, but has so far engaged sparingly with the specific challenge posed by generative artificial intelligence. The Manifesto's preamble alludes to "ideologies and political theologies" without articulating the algorithmic operation as one such theology. On the other side, a vibrant international literature on critical educational technology (Eynon et al., 2025; Macgilchrist, 2025; Selwyn, 2024) has produced a powerful diagnostic of the harms produced by datafied schooling, but has largely worked within an Anglo-Saxon political vocabulary that does not always travel into the continental European tradition of *pedagogia laica*. The two literatures share substantive concerns, yet they rarely meet on the page.

This essay sits in the gap between these two corpora. Its central thesis is that the secular pedagogical tradition holds, in its classical commitments to antidogmatism and to the public exercise of reason, the conceptual resources required to name and resist algorithmic dogmatism, while the contemporary critical literature on educational artificial intelligence supplies the empirical and analytical apparatus required to translate those commitments into actionable pedagogical practice. The argument is therefore not that secular pedagogy needs to be supplanted by a new digital pedagogy, nor that critical edtech scholarship needs to import a foreign Italian tradition. The argument is that the two are already speaking, in different idioms, about the same phenomenon, and that a deliberate translation is overdue.

1.2. Research questions and contribution

Three research questions organise the essay. First, in what specific operational respects does the contemporary regime of generative artificial intelligence in education constitute a form of dogmatism that the secular pedagogical tradition is structurally equipped to identify and resist? Second, how should the three foundational concepts of the Manifesto, namely reflexivity, self-determination and educational democracy, be reconfigured to address the distinctive epistemic, political and infrastructural features of algorithmic mediation? Third, what concrete pedagogical orientation, expressible as a framework usable by teachers, school leaders and policy actors, can translate the secular commitment into curricular, didactic and evaluative practice in the age of generative artificial intelligence?

The contribution of the essay is threefold. Conceptually, it proposes the construct of algorithmic dogmatism as a bridge between the secular pedagogical tradition and the international critical edtech literature. Theoretically, it articulates a framework, the Triangle of Secular Reflexivity, that links *autonomia epistemica* (epistemic autonomy), *trasparenza algoritmica* (algorithmic transparency) and *deliberazione democratica* (democratic deliberation) into a single normative-practical figure. Operationally, it develops the notion of zones of algorithmic friction, understood as designed pedagogical situations in which the learner is required to interrogate, contest or recompose the inferences produced by a generative system, thereby reactivating the antidogmatic vocation of formal education.

1.3. Position of the author and structure of the essay

The author writes from the Brazilian academic context, an educational ecosystem situated at the periphery of the global infrastructures of artificial intelligence development yet absorbed by their effects through pedagogical adoption and policy translation (Galasso, 2026b). The essay deliberately mobilises a Southern epistemic vantage that the secular pedagogical tradition, in its predominantly European articulation, has not yet systematically incorporated, and that the international critical literature, in its

predominantly Anglo-Saxon articulation, has signalled but not consistently centred. The promise of a secular pedagogy is the openness of reason to the plurality of contexts in which it is exercised, and a critique of algorithmic dogmatism written from the South is one operationalisation of that openness. Methodologically, the essay is a conceptual contribution proceeding by hermeneutic reconstruction, structured comparison and framework construction (Section 3). Section 2 develops the theoretical foundation. Section 4 presents the analytical results: the construct of algorithmic dogmatism, the Triangle of Secular Reflexivity (Figure 1) and the operational notion of zones of algorithmic friction. Section 4 also discusses implications for teacher education, curricular design and educational governance, addressing anticipated objections. Section 5 concludes with limitations, an agenda for future research and a final reflection on what it means, in 2026, to inherit and renew the secular pedagogical project.

2. Theoretical foundation: Secular pedagogy and the algorithmic condition

2.1. The grammar of secular pedagogy

The Italian tradition of *pedagogia laica* is not reducible to the negation of religious instruction. It is a positive grammar of educational reason that the *Manifesto for a Secularly Inspired Pedagogy* (Movimento della pedagogia laica, 2026) consolidates after a conversation extending from post-war Italian schooling through the activist pedagogy of the 1970s and the contemporary inflection of phenomenological and clinical-pedagogical research. Three commitments define this grammar.

The first commitment is antidogmatism understood as a disposition of inquiry. Educational reason, on this view, treats truth as an indefinite process composed of provisional achievements destined to be discussed, contested and surpassed. The *Manifesto* frames secularity as the principle of freedom of thought, that is, freedom from constraints and impositions and freedom to engage in critical inquiry within the domains of research and public debate (Movimento della pedagogia laica, 2026). The pedagogical implication is precise: any educational arrangement that arrests the questioning of its own premises is, by that fact, anti-secular.

The second commitment is reflexivity, articulated with particular depth in the phenomenological-empirical strand developed by Mortari and her collaborators (Mortari et al., 2023; 2024). Reflexivity is the disciplined exercise through which the educational subject attends to the conditions, assumptions and effects of their own thinking. It is not introspection but an epistemic practice that returns the act of knowing to the conditions of its own production, refusing the closure of the cognitive act on its own apparent self-evidence.

The third commitment is democratic deliberation. The *Manifesto*'s invocation of dialogue among universities, schools, educational agencies, services and civil society (Movimento della pedagogia laica, 2026) translates the conviction that educational truth cannot be settled by any single authority, public or private. Federighi's (2025) analysis of "learning warfare" makes explicit that the democratic vocation of education is contested by digital infrastructures whose pedagogical effects are produced without the deliberative consent of educators and learners. Biesta (2022) sharpens the same point: world-centred education refuses both the closure of curriculum on a presupposed canon and the closure of the learner on a presupposed identity.

2.2. The contemporary critical literature on educational artificial intelligence

The international critical literature has produced, over the past five years, a sophisticated diagnostic apparatus organised around three contributions.

The first concerns opacity. Burrell (2016) distinguished three forms: intentional corporate or state secrecy, technical illiteracy, and an opacity that arises intrinsically from large-scale machine learning. Bender et al. (2021), in their warning about stochastic parrots, established that large language models do not understand the texts they generate but produce statistically plausible recombinations drawn from training corpora whose composition is rarely disclosed. The educational use of these systems thus imports a form of textual authority whose epistemic warrant cannot be reconstructed by the user.

The second concerns infrastructure. Crawford (2021) demonstrated that artificial intelligence is a planetary infrastructure of extraction, encompassing minerals, labour, classifications, state power and affect. Couldry and Mejias (2019) and Mejias and Couldry (2024) articulated the concept of data colonialism. In educational terms, the deployment of generative artificial intelligence in schools is not the deployment of a neutral tool but the insertion of the educational encounter into a global political economy whose orientation is not deliberately decided by educators.

The third concerns datafication. Williamson, Macgilchrist, and Potter (2023) and Williamson (2024) have shown how educational artificial intelligence reinscribes pedagogical practice into machine-readable formats, producing what Eynon et al. (2025) and Macgilchrist (2025) call the algorithmic restructuring of educational time, attention and judgement. Selwyn (2024) identifies four specific limits: the narrow ways in which educational processes can be statistically modelled, the perpetuation of social harms for minoritised students, the losses incurred by reorganising education to be machine readable, and the ecological and environmental costs of data-intensive systems. The 2025 generation of contributions extends the diagnostic to the specific effects of generative tools (Macgilchrist et al., 2025; 2025; Rapanta et al., 2025; Selwyn et al., 2025).

2.3. Bridges and missing links

The two literatures share more than they acknowledge: both refuse the closure of educational experience on a non-deliberated authority, both recognise that education is constitutively political, and both understand reflexivity as a practice. Yet three operative bridges have not been built. The secular tradition speaks of dogma and ideology in classical terms while the critical edtech literature speaks of opacity, datafication and algorithmic governance in postdigital terms; the absence of an explicit translation has prevented the secular tradition from naming the algorithmic condition with the precision it deserves. The secular tradition has elaborated a normative architecture for reflexivity in face-to-face settings without specifying what reflexivity demands when the learner is in conversation with a generative system whose outputs cannot, in principle, be fully reconstructed (Holmes et al., 2022). The international literature has centred high-income contexts; the critical voice from the global South, including Latin American educational research on inclusive technology (Galasso, 2026d), supplies an underrepresented analytical lens. From the South, algorithmic dogmatism appears as a vector of asymmetric epistemic dependency, in which the curricular reasoning of the periphery is mediated by inferential machines trained on corpora that systematically underrepresent its languages, traditions and educational concerns.

2.4. Toward a synthesis: The algorithmic condition as theological-political challenge

The synthesis proposed here is structural. Generative artificial intelligence in education exhibits four properties that, when taken together, reproduce the logical form of a theological-political authority of the kind the secular tradition has historically resisted: it produces propositions whose justification cannot be publicly reconstructed (opacity); it operates at a scale that grants it presumptive authority across innumerable encounters (scale-mediated authority); it is governed by private actors outside the deliberative reach of the educational community (commercial enclosure); and it presents its outputs in a register of computational neutrality that suspends rather than invites critical scrutiny (epistemic naturalisation).

These four properties are the operational signature of what this essay calls algorithmic dogmatism. The qualifier is not rhetorical: it designates the structural homology between the pre-modern dogmatic regime and the contemporary algorithmic regime, with the crucial difference that the latter does not invoke transcendence but mathematics. The secular tradition is challenged to develop a renewed grammar capable of recognising the new dogmatism in its specifically computational guise. The three concepts named in the call (*riflessività, autodeterminazione, democrazia*) form the three sides of a single triangle: reflexivity without self-determination collapses into hermeneutic exercise without practical consequence; self-determination without democracy collapses into individualism without collective horizon; democracy without reflexivity collapses into procedure without epistemic vitality. Section 4 reconstructs them as a triangulated structure for pedagogical practice. Before that reconstruction, the next section specifies the methodological procedure of the analysis.

3. Methodology: Conceptual analysis and framework construction

3.1. Nature and procedure of the contribution

This essay is a conceptual contribution. It does not present empirical findings derived from observation, interview or measurement, and it does not require ethical approval. It is an exercise in conceptual work, that is, the disciplined production of distinctions, clarifications and frameworks intended to render a complex phenomenon analytically tractable. Conceptual work is not a substitute for empirical investigation; it is a precondition for it. The relation between secular pedagogical commitments and the contemporary regime of generative artificial intelligence in education is a domain in need of conceptual scaffolding.

The analysis proceeds in four sequential moves. The first move is hermeneutic reconstruction. The essay reconstructs the relevant fragments of two theoretical corpora: the Italian tradition of pedagogia laica, with particular attention to the Manifesto for a Secularly Inspired Pedagogy (Movimento della pedagogia laica, 2026), the phenomenological-empirical strand of Mortari and collaborators (Mortari et al., 2023; 2024) and the adult-education tradition of Federighi (2023; 2025); and the international critical literature on educational artificial intelligence published between 2021 and 2026 (Bender et al., 2021; Burrell, 2016; Crawford, 2021; Eynon et al., 2025; Macgilchrist, 2025; Rapanta et al., 2025; Selwyn, 2024; Williamson, 2024; Williamson et al., 2023). The second move is structural comparison: the essay identifies, across the two corpora, points of resonance, points of friction and gaps, producing the synthetic claim that the two corpora describe a single phenomenon in different idioms. The third move is framework

construction. Drawing on the synthetic claim, the essay develops the Triangle of Secular Reflexivity, articulating three normative-practical axes (epistemic autonomy, algorithmic transparency, democratic deliberation) according to three criteria: internal coherence (axes mutually irreducible yet jointly sufficient), normative continuity (extending rather than displacing the secular tradition) and operational tractability (yielding distinguishable pedagogical practices). The fourth move is operational specification: the construct of zones of algorithmic friction is developed as the concrete pedagogical operationalisation of the framework, with implications for teacher education, curricular design and educational governance.

3.2. Sources, selection criteria and reflexive disclosure

The hermeneutic reconstruction relied on three categories of sources. The first includes the foundational theoretical texts of the Italian secular pedagogical tradition, accessed through the Manifesto della pedagogia laica and through monographs and articles by authors associated with the Movimento della pedagogia laica and with the editorial network of *Form@re*. The second includes the international critical literature on educational artificial intelligence, accessed through systematic reading of articles published between 2021 and 2026 in five reference journals: *Learning, Media and Technology*; *International Journal of Artificial Intelligence in Education*; *Postdigital Science and Education*; *British Journal of Sociology of Education*; and *Educational Philosophy and Theory*. The third includes selected institutional documents, namely the Unesco Recommendation on the Ethics of Artificial Intelligence (Unesco, 2022), the Unesco Guidance for Generative AI in Education and Research (Miao & Holmes, 2023) and the European Union Artificial Intelligence Act (EU, 2024), included for their normative weight in current educational policy debates.

The selection of references followed two non-negotiable criteria. First, all cited works are real and verifiable through digital object identifiers, ISBNs or stable institutional URLs. Second, the temporal scope privileges contributions published between 2022 and 2026, with seminal earlier works (Bender et al., 2021; Burrell, 2016; Couldry & Mejias, 2019; Crawford, 2021) retained because they constitute the analytical genealogy on which the recent literature builds.

In conformity with the commitment to reflexivity that the essay defends, the author discloses three features of his own position. The author is a pedagogical researcher based in Brazil working on the intersection of educational technology, accessibility and disability inclusion (Galasso, 2026a), with prior contributions to systematic and scoping review methodology in educational technology research that have shaped the analytical disposition of the present essay even though it is not itself a review. The author writes from outside the Italian secular pedagogical tradition, which he approaches with the calculated risk that constitutes any cross-traditional dialogue. This positioning is offered not as a disclaimer but as part of the argument: a secular pedagogy whose conceptual apparatus cannot be inhabited from outside the tradition that produced it is, by that very fact, less than secular.

3.3. Limits and auditability

The conceptual nature of the essay implies three limitations. The framework proposed in Section 4 is not empirically validated; validation would require subsequent classroom-based, comparative and longitudinal research. The diagnostic of algorithmic dogmatism is structural rather than ethnographic; specific generative systems, institutional adoptions and

national regulatory frameworks will inflect that diagnostic variably. The translation between the secular pedagogical tradition and the international critical literature is one possible translation; the intention is to open a conversation, not to close it.

To support intellectual auditability, the bibliographic apparatus is organised so that every claim can be traced to either a peer-reviewed publication accessible through a digital object identifier or to an institutional document accessible through a stable URL. No reference is fabricated. Where direct quotation is used, the original wording is preserved and unambiguously cited according to the seventh edition of the American Psychological Association style. The conformity of the manuscript to these protocols was verified through final cross-checking before submission.

4. Results and discussion: The Triangle of Secular Reflexivity

4.1. Algorithmic dogmatism: Anatomy of a contemporary heteronomy

The first analytical result of the essay is the operational definition of algorithmic dogmatism. The construct is not a metaphor borrowed from the religious lexicon. It is a structural designation built on four observable properties of contemporary generative artificial intelligence in education. Property one is propositional opacity: the system produces statements whose epistemic warrant cannot be reconstructed by the user (Bender et al., 2021; Burrell, 2016). Property two is scale-mediated authority: the system presents its outputs across millions of pedagogical encounters, generating an asymmetry of voice that confers presumptive credibility (Crawford, 2021; Williamson, 2024). Property three is commercial enclosure: the rules that govern the system, its training corpus and its alignment criteria are decided by private actors operating outside the deliberative reach of the educational community (Couldry & Mejias, 2019; Mejias & Couldry, 2024). Property four is epistemic naturalisation: the outputs are presented in a register of computational neutrality that suspends rather than invites critical scrutiny (Macgilchrist, 2025; Selwyn, 2024).

The conjunction of these four properties reproduces, in computational form, the structural logic of pre-modern dogma. Where classical dogma invoked transcendence, algorithmic dogma invokes mathematics. The pedagogical effect is congruent: in both cases the proposition is to be received rather than scrutinised, and the source of the proposition is shielded from public deliberation. Naming this convergence is the first step of a renewed secular pedagogical project.

4.2. The Triangle of Secular Reflexivity

The second analytical result is the framework introduced in Figure 1, the Triangle of Secular Reflexivity. The framework articulates three normative-practical axes that together constitute the contemporary form of the secular pedagogical commitment.

The first axis is epistemic autonomy. It names the disposition and the capacity of the educational subject to interrogate the warrant of any proposition encountered, including propositions produced by generative artificial intelligence systems. Epistemic autonomy is the contemporary translation of the antidogmatic commitment of the secular tradition (Movimento della pedagogia laica, 2026), inflected to address algorithmic mediation. It is the pedagogical refusal to outsource the act of judgement to a system whose justificatory

chain is, by design, incomplete (Galasso, 2026c).

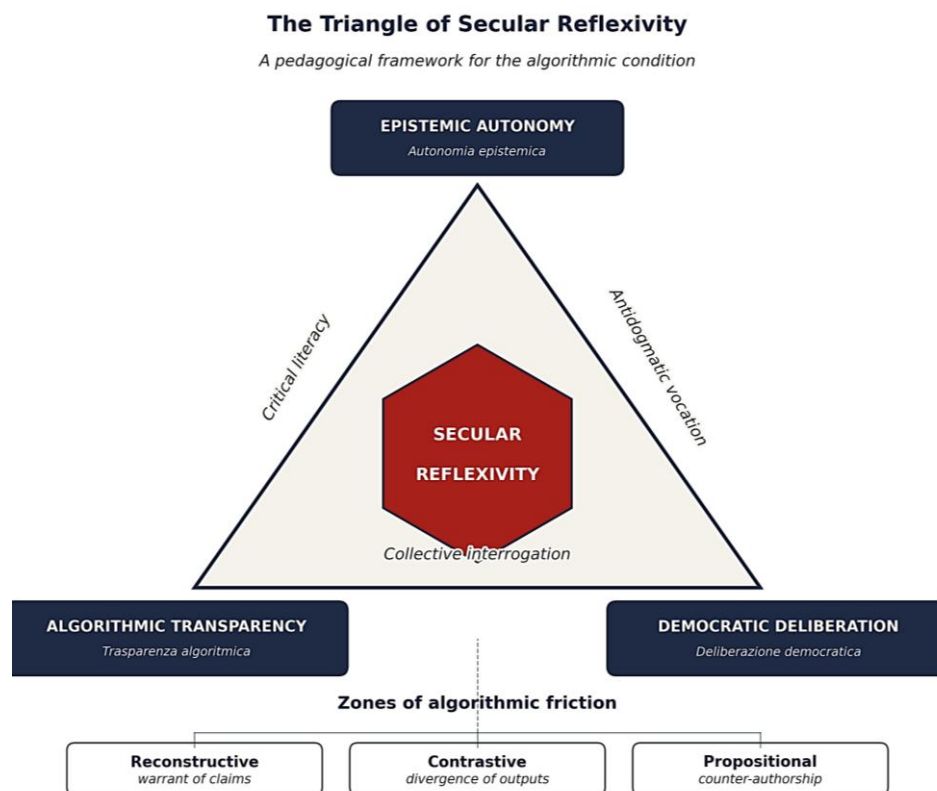


Figure 1. The Triangle of Secular Reflexivity.

The second axis is algorithmic transparency. It names both the technical condition of partial inspectability of the system and the pedagogical practice of teaching learners to recognise, name and contest the limits of that inspectability. Following Burrell (2016), transparency is not a binary property but a graduated achievement that requires articulated literacy on three levels: the level of corporate practice (what is undisclosed by design), the level of technical literacy (what is undisclosed by competence asymmetry) and the level of intrinsic complexity (what is, even in principle, recalcitrant to interpretation). The pedagogical task is not to render the system fully transparent, an aspiration that the literature suggests is technically impossible (Bender et al., 2021); it is to render the opacity itself an object of pedagogical attention.

The third axis is democratic deliberation. It names the collective dimension that prevents the framework from collapsing into individual cognitivism. Reflexivity exercised in isolation is inadequate to the scale of the algorithmic infrastructure; democratic deliberation is the social form through which classes, schools, professional communities and civil society contest, regulate and reorient the use of generative systems in educational settings (Federighi, 2025; Holmes et al., 2022; Macgilchrist et al., 2025).

The three axes are not independent. They form a triangle in the strict sense that each is constitutively dependent on the other two. Epistemic autonomy without algorithmic transparency yields a learner who refuses the system without understanding its operation. Algorithmic transparency without epistemic autonomy yields a learner who understands the system but lacks the disposition to question it. Democratic deliberation without the

other two yields a procedural shell. Reflexivity, in the algorithmic condition, is precisely the disciplined practice of holding the three axes together.

The figure visualises the framework as an equilateral triangle whose vertices are labelled with the three axes (epistemic autonomy, algorithmic transparency, democratic deliberation) and whose centre is occupied by a single integrating notion (secular reflexivity). The edges of the triangle are themselves labelled, indicating the operative relationship between each pair of axes: critical literacy connects epistemic autonomy and algorithmic transparency; collective interrogation connects algorithmic transparency and democratic deliberation; antidogmatic vocation connects democratic deliberation and epistemic autonomy.

4.3. Zones of algorithmic friction: From framework to practice

The third analytical result is operational. The framework is translated into pedagogical practice through the construct of zones of algorithmic friction. A zone of algorithmic friction is a deliberately designed pedagogical situation in which the learner is required to interrogate, contest or recompose the inferences produced by a generative system. The construct is intentionally borrowed from the engineering metaphor of friction as productive resistance: a zone of friction is a place where the smooth operation of the inferential machine is interrupted in order to reactivate the cognitive activity of the learner.

Three families of zones of friction are proposed.

The first family is reconstructive zones. The learner receives an output produced by a generative system and is required to reconstruct, with documentary evidence and explicit reasoning, the warrant of the claims it contains. The pedagogical value of the exercise is not in the validation of the output but in the disciplined attention to its incompleteness (Burrell, 2016; Selwyn et al., 2025).

The second family is contrastive zones. The learner generates outputs from multiple distinct prompts or systems, compares them and articulates the conditions of their divergence. Contrastive zones are particularly productive because they exhibit, empirically and immediately, the sensitivity of generative outputs to formulation, training and alignment, dissolving the illusion of a single neutral answer (Macgilchrist et al., 2025; Rapanta et al., 2025).

The third family is propositional zones. The learner uses the generative system as a starting point and then deliberately departs from it, producing a counter-proposition that incorporates, contests or surpasses the original output. Propositional zones reactivate the generative role of the learner, restoring authorship as a pedagogical category and resisting the fluency-induced acceptance characteristic of large language models (Bender et al., 2021).

The three families are not exhaustive and are not mutually exclusive. They are illustrative ways of operationalising the framework in classroom practice across educational levels, from secondary education to doctoral training. They presuppose teacher expertise and institutional support, and their effective deployment is therefore inseparable from the second and third moves discussed in the following subsections.

4.4. Implications for teacher education and institutional governance

The framework has direct implications for teacher education. Teachers cannot orchestrate

zones of algorithmic friction unless they have themselves traversed them. Initial and continuous teacher education must integrate three interdependent components: a technical layer that introduces the operational logic of generative systems; a critical layer that situates these systems within the political economy of artificial intelligence (Crawford, 2021; Williamson et al., 2023); and a pedagogical-philosophical layer articulating these elements within the broader tradition of secular reason and reflexive practice (Mortari et al., 2024; Rapanta et al., 2025). The absence of any one layer produces an unbalanced professional disposition that reverts, under pressure, to either uncritical adoption or undifferentiated rejection.

The framework also has implications for institutional governance. The European Union Artificial Intelligence Act (EU, 2024) classifies several educational applications as high-risk, including admissions, evaluation of learning outcomes, student placement and proctoring. The framework proposed here suggests that the institutional response should not be reduced to procedural compliance: the deeper response is institutional reflexivity, that is, the establishment of deliberative spaces in which faculty, students, administrators and external stakeholders interrogate the educational legitimacy of specific deployments. The Manifesto's call for dialogue among universities, schools, agencies and civil society (Movimento della pedagogia laica, 2026) is the political form of this institutional reflexivity.

4.5. Discussion: Anticipated objections and replies

Three objections deserve explicit reply. The first holds that the framework is unduly negative, treating generative artificial intelligence as a threat rather than a resource. The reply is that the framework is not negative but disciplined: it does not prescribe rejection but interrogation. A generative system that survives the disciplined interrogation of a zone of friction can legitimately participate in the educational process. The framework distinguishes between use and unreflective use, not between use and non-use.

The second objection holds that the framework imposes a Eurocentric concept (*laicità*) on a global educational debate. Empirically, the secular pedagogical tradition has analogues across multiple educational cultures, including the Latin American tradition of *pedagogia crítica*, with which it shares the antidogmatic commitment even when the genealogies differ. Conceptually, a tradition that takes its situatedness seriously is strengthened, not weakened, by translation. The author writes from Brazil precisely to perform such a translation.

The third objection holds that the framework is unrealistic given accelerated curricula and asymmetric resources. The reply is that the framework is offered as a regulative ideal rather than a uniform implementation protocol. Regulative ideals orient gradations of practice, signalling the direction in which marginal educational decisions should move. In this sense the framework is precisely calibrated to the asymmetric conditions in which most educational practice takes place.

5. Conclusions

This essay has argued that the Manifesto for a Secularly Inspired Pedagogy, in its commitment to reflexivity, self-determination and democratic deliberation, holds the conceptual resources required to name and resist the form of educational heteronomy that generative artificial intelligence introduces into contemporary educational settings. I have

called that heteronomy algorithmic dogmatism, designating by this term the conjunction of propositional opacity, scale-mediated authority, commercial enclosure and epistemic naturalisation that, in functional terms, reproduces the structural logic of pre-modern dogma in the medium of mathematical inference. The secular pedagogical tradition, I have argued, is not displaced by this development; it is challenged to articulate a renewed grammar that recognises the new dogmatism in its specifically computational guise.

The renewal proposed here takes the form of the Triangle of Secular Reflexivity, a framework that articulates epistemic autonomy, algorithmic transparency and democratic deliberation as three irreducible yet jointly sufficient axes of contemporary secular pedagogy. The framework is operationalised through the construct of zones of algorithmic friction, understood as deliberately designed pedagogical situations in which the learner is required to interrogate, contest or recompose the inferences produced by a generative system. Three families of zones (reconstructive, contrastive and propositional) have been illustrated; the elaboration of additional families is one of several lines of further work that the framework invites.

Three limitations should be acknowledged. First, the essay is conceptual; the framework is therefore offered as a regulative scaffolding awaiting empirical validation in classroom-based, comparative and longitudinal research. Second, the diagnostic of algorithmic dogmatism is structural rather than ethnographic; specific generative systems and specific institutional adoptions will inflect that diagnostic variably. Third, the translation between the secular pedagogical tradition and the international critical literature on artificial intelligence is one possible translation, not the only one; alternative articulations are conceivable and welcome.

Three lines of future research follow naturally. The first is the empirical investigation of zones of algorithmic friction in classroom settings, including the development of validated instruments to measure the displacement of student reasoning when such zones are systematically introduced. The second is the curricular embedding of the framework in teacher education, with attention to institutional conditions that enable or impede its uptake. The third is the comparative analysis of how distinct national educational systems, including those of the global South, translate the framework into context-specific pedagogical strategies, with particular attention to how the diagnostic of asymmetric epistemic dependency demands additional refinements when posed from the periphery rather than the centre of the global infrastructure of artificial intelligence.

The Manifesto for a Secularly Inspired Pedagogy invites educational research to safeguard the freedom of thought against any imposition that conceals itself in a register of inevitability. In the first decades of the twenty-first century, the most pervasive register of inevitability has migrated from the metaphysical to the computational. The pedagogical task is therefore not to reject the algorithmic infrastructure but to refuse its presumptive authority, to insist on the public reconstruction of its inferences and to keep open the deliberative spaces in which educational communities decide what role, if any, those inferences should play. The secular vocation of education is, in the end, the disciplined practice of holding such spaces open. To inherit the Manifesto is to inherit that practice, and to renew it under the specific conditions of the algorithmic age.

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