

THE REGULATION OF ARTIFICIAL INTELLIGENCE IN EDUCATION: PROTECTION OF RIGHTS OR CONSTRAINT ON PEDAGOGICAL FREEDOM?

A REGULAMENTAÇÃO DA INTELIGÊNCIA ARTIFICIAL NA EDUCAÇÃO:
PROTEÇÃO DE DIREITOS OU RESTRIÇÃO À LIBERDADE PEDAGÓGICA?

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ABSTRACT

This article critically analyzes the regulation of artificial intelligence in education, considering the tension between rights protection and the containment of pedagogical freedom. The study adopted a qualitative, exploratory, and critical-interpretive approach, based on a selective literature review and documentary analysis of national and international frameworks, including the Brazilian Federal Constitution, the National Education Guidelines and Framework Law, the General Data Protection Law, the National Digital Education Policy, Bill No. 2338/2023, UNESCO, OECD and NIST documents, and the European AI Act. The theoretical framework drew on authors associated with regulation, power, bureaucracy, risk society, digital platforms, and intellectual freedom, including Deleuze, Weber, Merton, Lipsky, Beck, Jasanoff, Sunstein, Lessig, Zuboff, Selwyn, Williamson, Morozov, Mill, Arendt, Popper, Humboldt, Oakeshott, Polanyi, and Biesta. The findings indicate that AI regulation, although necessary to address concrete risks, may produce indirect effects of surveillance, bureaucratization, legal fear, market concentration, and limitation of teacher and student autonomy. The article concludes that educational AI should be regulated proportionally, distinguishing low-risk pedagogical uses from high-impact decision-making applications. Rights protection must not become a form of preventive tutelage over learning, nor should it restrict the freedom to teach, learn, research, and create with the support of artificial intelligence.

Keywords: Artificial Intelligence; Education; Regulation; Pedagogical Freedom; Compliance; Algorithmic Governance; Generative AI.

RESUMO

Este artigo analisa criticamente a regulação da inteligência artificial na educação, considerando a tensão entre a proteção de direitos e a

contenção da liberdade pedagógica. O estudo adotou uma abordagem qualitativa, exploratória e crítico-interpretativa, baseada em uma revisão bibliográfica seletiva e análise documental de marcos nacionais e internacionais, incluindo a Constituição Federal do Brasil, a Lei Geral de Educação (LGE), a Lei Geral de Proteção de Dados (LGPD), a Política Nacional de Educação Digital, o Projeto de Lei nº 2338/2023, documentos da UNESCO, OCDE e NIST, e a Lei Europeia de Inteligência Artificial. O referencial teórico baseou-se em autores associados a temas como regulação, poder, burocracia, sociedade de risco, plataformas digitais e liberdade intelectual, incluindo Deleuze, Weber, Merton, Lipsky, Beck, Jasanoff, Sunstein, Lessig, Zuboff, Selwyn, Williamson, Morozov, Mill, Arendt, Popper, Humboldt, Oakeshott, Polanyi e Biesta. Os resultados indicam que a regulamentação da IA, embora necessária para lidar com riscos concretos, pode produzir efeitos indiretos de vigilância, burocratização, receio jurídico, concentração de mercado e limitação da autonomia de professores e alunos. O artigo conclui que a IA educacional deve ser regulamentada proporcionalmente, distinguindo usos pedagógicos de baixo risco de aplicações de tomada de decisão de alto impacto. A proteção dos direitos não deve se tornar uma forma de tutela preventiva sobre a aprendizagem, nem deve restringir a liberdade de ensinar, aprender, pesquisar e criar com o apoio da inteligência artificial.

Palavras-chave: Inteligência Artificial; Educação; Regulamentação; Liberdade Pedagógica; Conformidade; Governança Algorítmica; IA Generativa.

I. INTRODUCTION

The expansion of artificial intelligence in teaching and learning spaces inaugurates a decisive dispute over the boundaries between

the protection of rights, pedagogical freedom, and institutional control. Although regulation is presented as a necessary mechanism to prevent abuse, discrimination, and data violations, its advancement may also produce restrictive effects on the freedom to learn, teach, research, and disseminate thought, a principle guaranteed by the Federal Constitution and by the Law of Guidelines and Bases of National Education (BRASIL, 1988; BRASIL, 1996).

In this context, AI ceases to be merely a technological tool and begins to occupy the center of a tension between educational innovation and normative tutelage. The growing presence of generative AI systems, adaptive platforms, recommendation mechanisms, automated assessment, and learning support tools has been transforming the ways in which students access, elaborate, articulate, and re-elaborate knowledge.

This process expands opportunities for adaptation, pedagogical exploration, and intellectual independence, but it also raises concerns related to authorship, data protection, algorithmic asymmetries, and institutional accountability. The problem emerges when such risks begin to justify an excessively preventive form of regulation, capable of transforming pedagogical innovation into a continuous field of regulatory suspicion (SELWYN, 2019; WILLIAMSON, 2017).

In this scenario, the contemporary regulation of artificial intelligence in education should not be understood only as a mechanism for guaranteeing rights, but also as an institutional device capable of reorganizing conduct, limiting pedagogical experimentation, and

transferring educational authority to regimes of legal, technical, and bureaucratic compliance.

This perspective makes it possible to observe that regulation does not operate solely through direct prohibition, but also through the production of acceptable conduct, the definition of risks, and the normalization of educational practices mediated by technology (Foucault, 2008; Lessig, 2006). The critique developed here does not reject the need for rules to prevent abuses, academic fraud, automated discrimination, or the misuse of personal data. On the contrary, it recognizes that AI systems applied to education require parameters of transparency, safety, human supervision, and student protection.

However, such requirements cannot be converted into instruments of pedagogical censorship, nor can they authorize the State, regulatory bodies, or private platforms to determine in advance what teachers may teach, what students may investigate, and which forms of learning with AI will be considered legitimate (Brazil, 1988, 2018).

The European AI Act represents a paradigmatic example of this new risk-based regulatory rationality. Although its declared objective is to promote safe, transparent, and human-centered AI, its classification of educational uses as sensitive or high-risk reveals a tendency to subject education to a high degree of normative surveillance (European Union, 2024).

The central issue, therefore, is not whether AI should or should not be regulated, but rather understanding which forms of regulation protect rights without compromising pedagogical freedom.

Legitimate regulation must prevent abusive, opaque, or discriminatory uses, especially when high-impact automated decisions concerning students are involved.

However, when regulation begins to preventively restrict teaching and learning experimentation, it ceases to protect education and starts to administer it through normative apprehension, bureaucracy, and institutional containment (Merton, 1968; Weber, 1999). This concern becomes even more relevant in developing countries, where educational innovation depends on local solutions, teacher creativity, applied research, and the critical appropriation of emerging technologies.

Excessively complex regulations tend to favor large companies, consolidated platforms, and institutions with greater legal and technical capacity, while making it more difficult for schools, teachers, researchers, and smaller educational startups to operate. Thus, regulatory protection may paradoxically produce market concentration and reduce technological diversity (Morozov, 2013; Zuboff, 2021).

Given this context, the present article aims to critically analyze the regulation of artificial intelligence in education, investigating the extent to which the language of protection, ethics, and risk management may produce restrictive effects on pedagogical autonomy. The hypothesis defended is that regulation, when structured in a broad, preventive, and bureaucratic manner, may displace teacher and student autonomy into compliance regimes, limiting the autonomy to teach, study, investigate, and produce knowledge with the support of AI.

II. METHODOLOGY

This study adopted a qualitative, exploratory, and critical-interpretive procedure aimed at analyzing the regulation of artificial intelligence in education and its possible effects on pedagogical freedom. The choice of this methodological design was justified by the theoretical and normative nature of the problem, which required understanding not only the formal content of the norms, but also the institutional, political, and educational meanings produced by them (Gil, 2008; Lakatos & Marconi, 2017).

The research was developed through a targeted bibliographic survey and documentary analysis, articulating classical and contemporary authors with national and international normative documents. This strategy made it possible to construct a consistent theoretical framework capable of supporting the central critique of the article without relying on opinion-based claims or isolated interpretations (Severino, 2016).

The validation of the bibliographic framework was carried out based on three main criteria: theoretical relevance, academic recognition, and adherence to the research problem. Consolidated works in the fields of regulation, power, bureaucracy, risk society, educational technology, digital governance, freedom of thought, intellectual autonomy, and pedagogical freedom were prioritized, ensuring coherence between the authors mobilized and the critical axis of the study.

In the first axis, authors who discuss regulation as a mechanism for organizing conduct, social normalization, and institutional governance were analyzed. In this group, Foucault, Deleuze, Rose,

and Lessig stood out, whose contributions made it possible to understand that regulation does not operate only through direct prohibition, but also through the production of acceptable behaviors, architectures of control, and regimes of visibility (Deleuze, 1992; Foucault, 2008; Lessig, 2006).

In the second axis, authors dedicated to bureaucracy, institutional rationalization, and the paralyzing effects of normative compliance were used. Weber, Merton, and Lipsky were mobilized to examine how excessively broad rules may shift educational action toward defensive routines, reducing the margin of decision-making of teachers, managers, and institutions in the face of normative and administrative apprehension (Lipsky, 2010; Merton, 1968; Weber, 1999).

In the third axis, contributions on risk, precaution, and the co-production between technology and social order were incorporated. Beck, Jasanoff, and Sunstein were used to interpret how educational AI has come to be framed as an object of risk, requiring mechanisms of anticipation, control, and accountability that may go beyond legitimate protection and reach the preventive containment of innovation (Beck, 2011; Jasanoff, 2004; Sunstein, 2005).

In the fourth axis, critical approaches to educational technology, digital platforms, surveillance capitalism, and economic centralization were analyzed. Selwyn, Williamson, Zuboff, and Morozov made it possible to examine how regulation, when excessively complex, may favor large platforms and institutions with greater compliance capacity, restricting local, open, and pedagogically autonomous experiences (Morozov, 2013; Selwyn, 2019; Williamson, 2017; Zuboff, 2021).

In the fifth axis, authors focused on freedom of thought, intellectual autonomy, academic freedom, and critical formation not subordinated to bureaucratic tutelage were mobilized. Mill, Arendt, Popper, Humboldt, Oakeshott, Polanyi, and Biesta were used to support the argument that education cannot be reduced to the execution of technical or legal protocols, since it involves judgment, inquiry, creation, the confrontation of ideas, and the public exercise of thought (Arendt, 2016; Biesta, 2010; Humboldt, 2004; Mill, 2011; Oakeshott, 1989; Polanyi, 2009; Popper, 1974).

The documentary analysis covered regulatory frameworks and institutional guidelines related to artificial intelligence, education, data protection, and fundamental rights. Among the documents examined were the Federal Constitution, the Law of Guidelines and Bases of National Education, the General Data Protection Law, the National Digital Education Policy, Bill No. 2,338/2023, guidelines from the Ministry of Education, documents from UNESCO, the OECD, NIST, and the European AI Act (Brazil, 1988, 1996, 2018; European Union, 2024).

The AI Act was used as a contextual and comparative reference, and not as the central focus of the study. Its analysis was mobilized when its logic of risk-based regulation, fundamental rights, transparency, human supervision, and compliance appeared reflected in other normative proposals or educational guidelines. In this way, the article avoided becoming a specific legal analysis of the European regulation.

To organize the interpretation of the bibliographic and documentary data, an analytical matrix composed of thematic categories was developed. The preliminary categories were: protection of rights,

pedagogical freedom, risk governance, compliance, excessive formalization, teacher autonomy, institutional control, digital platforms, economic centralization, and educational innovation.

Each author was linked to one or more categories, according to their specific theoretical contribution. This matrix made it possible to verify whether the framework used effectively supported the argument of the article, avoiding ornamental citations, unnecessary repetitions, or the displaced use of concepts. Thus, the bibliographic review functioned as a basis for validating the critique proposed.

The analysis was conducted through triangulation among theory, regulation, and the educational problem. First, the categories present in the regulatory documents were identified; then, these categories were confronted with the selected authors; finally, it was assessed whether regulatory language contributes to protecting rights or whether it also produces effects that limit pedagogical freedom.

As a criterion of methodological rigor, primary sources, classical works, and widely circulated academic publications in areas related to the topic were prioritized. The references were verified in terms of authorship, relevance, timeliness when necessary, scientific recognition, and direct relationship with the problem investigated, reducing the risks of conceptual fragility or superficial use of the theoretical framework.

Thus, the methodology adopted sought to ensure that the critique of AI regulation in education was constructed on the basis of normative evidence, theoretical consistency, and argumentative coherence. The objective was not to reject regulation itself, but to

examine its institutional effects when it goes beyond the protection of rights and begins to restrict the autonomy to teach, study, investigate, and produce knowledge with artificial intelligence.

III. BETWEEN PROTECTION AND CONTROL: FINDINGS ON AI REGULATION IN EDUCATION

The regulation of artificial intelligence in education is not limited to the definition of formal rules to authorize or restrict the use of technologies. Its scope is deeper, as it establishes standards of conduct, criteria of acceptability, and institutional forms of control over pedagogical practices mediated by digital systems. In this sense, regulation does not merely govern tools, but also guides teaching, student, and administrative behaviors (Foucault, 2008).

Foucault's contribution is central to understanding this phenomenon, as the author demonstrates that modern power operates less through direct prohibition and more through the conduct of conduct. Applied to the educational field, this perspective makes it possible to observe that AI regulation may define in advance which uses will be considered safe, ethical, legitimate, or suspicious, displacing part of pedagogical freedom to normative structures external to the classroom (Foucault, 2008).

This logic reveals that educational AI regulation does not operate only after concrete harm has occurred. On the contrary, it tends to anticipate risks, classify practices, and induce preventive behaviors. Thus, teachers and institutions may cease to experiment with innovative tools not because they are formally prohibited, but because they begin to act under permanent normative surveillance.

Deleuze expands this critique by indicating that contemporary societies have ceased to operate exclusively through closed disciplinary institutions and have begun to function through continuous mechanisms of control. In the educational context, digital platforms, AI systems, performance indicators, and compliance protocols may produce permanent forms of monitoring learning, authorship, and student conduct (Deleuze, 1992).

This transition from discipline to control is relevant to the educational debate, since AI not only supports teaching and learning processes, but may also record, classify, predict, and modulate behaviors. When associated with excessively preventive regulations, technology ceases to be merely a pedagogical instrument and becomes part of an architecture of institutional surveillance.

Lessig contributes to deepening this analysis by demonstrating that regulation is not carried out only through laws, but also through codes, technical architectures, platforms, and digital environments. Thus, educational AI may be regulated simultaneously by legal norms, institutional policies, terms of use, algorithmic filters, and technical configurations that are invisible to the ordinary user (Lessig, 2006).

This point is decisive because pedagogical freedom may be limited even without explicit censorship. A system may restrict content, block questions, record interactions, filter responses, or condition forms of use through technical design. In these cases, regulation shifts from the law to the architecture of the platform, making control less visible and more difficult to contest.

Rose also contributes to this reading by addressing the government of conduct as a process distributed among institutions, technical knowledge, and forms of subjectivation. In education, this means that teachers and students may be induced to act according to standards defined by experts, regulators, platforms, and automated systems, even when such standards have not been democratically debated within the school environment (Rose, 1999).

The critical finding of this subsection is that AI regulation in education must be analyzed as an institutional device for organizing learning. It may protect against real abuses, but it may also convert the pedagogical experience into an administered practice, reducing autonomy to teach, study, investigate, and produce knowledge with the support of artificial intelligence.

Thus, the central issue is not only whether AI will be permitted or prohibited in education. The deeper problem consists of identifying who comes to define the legitimate limits of the pedagogical use of technology: the teacher, the educational institution, the student, the state regulator, the private platform, or an asymmetrical combination among these actors.

Education as a Space of Risk and Regulatory Surveillance

The second finding of the research refers to the conversion of education into a space of regulatory risk. The presence of AI in learning processes, assessment, content recommendation, and educational management has come to be associated with threats related to privacy, discrimination, surveillance, authorship, and academic integrity. This interpretation is close to Beck's notion of the risk society (Beck, 2011).

In the risk society, institutions begin to organize their decisions based on the anticipation of possible harms. Although this posture is necessary in certain situations, it may also produce a culture of excessive prevention. In education, this movement tends to transform pedagogical experimentation with AI into a practice that is suspicious in advance.

This framing shifts the educational debate toward a defensive logic. Before assessing whether AI expands learning, improves research, strengthens authorship, or stimulates creativity, the institution begins to ask what legal, reputational, or administrative risks may arise. Thus, innovation ceases to be a pedagogical possibility and begins to be treated as a potential regulatory problem.

Jasanoff contributes to this analysis by demonstrating that science, technology, and social order are co-produced. This means that regulation concerning AI is not merely technical, as it expresses a particular vision of society, subjectivity, risk, and authority. In the educational field, regulating AI also means regulating models of learning, assessment, and intellectual emancipation (Jasanoff, 2004).

This perspective shows that risk classification is never neutral. By defining certain practices as dangerous or sensitive, the regulator also delimits which forms of experimentation will be accepted, tolerated, or discouraged. In this way, the language of protection may function as a mechanism for the institutional selection of what will be considered pedagogically legitimate.

Sunstein helps identify the risk of an expanded application of the precautionary principle. When the prevention of hypothetical harms becomes the dominant criterion of public policy, innovation may be

blocked before producing concrete evidence of value. In education, this effect is serious, since learning depends on trial, error, creation, confrontation of ideas, and the critical appropriation of new tools (Sunstein, 2005).

The European AI Act appears in this article as a contextual example of this risk-based rationality. The regulation classifies certain educational uses of AI as high-risk, especially when related to access, admission, learning assessment, or the monitoring of students during examinations (European Union, 2024). This classification appears in Annex III of the European regulation.

The critique developed here does not consist of denying the existence of educational risks. The central point is to problematize their normative generalization, since regulation built upon overly broad categories may transform the school into an environment of preventive surveillance. In this scenario, teachers and students begin to act under a permanent expectation of control.

When education is treated primarily as an environment of vulnerability, rather than as a space of intellectual freedom, regulation tends to produce institutional fear. The consequence is not merely administrative, but pedagogical: the willingness to experiment, research, create, and test formative uses of AI is reduced in the name of a regulatory security that is often abstract.

Thus, the second finding indicates that risk governance may be converted into regulatory surveillance. The protection of rights remains necessary, especially in high-impact decision-making uses, but it cannot justify transforming learning into a territory of

permanent suspicion. Free education requires responsibility, but also real room for inquiry and innovation.

Bureaucracy, Compliance, and Legal Fear in Educational Institutions

The third finding of the research indicated that AI regulation may expand the excessive formalization of educational practices. Weber demonstrated that modern rationalization organizes institutions through rules, procedures, documents, and technical hierarchies. This model increases predictability and control, but it may also reduce creativity, autonomy, and contextual judgment (Weber, 1999).

When applied to educational artificial intelligence, this rationality tends to transform the pedagogical use of technology into an administrative process. The teacher, instead of deciding based on experience, the pedagogical project, and the needs of the class, begins to act according to compliance protocols, legal opinions, and institutional authorizations.

Merton deepens this critique by discussing the dysfunctions of bureaucracy. In certain structures, means begin to replace ends, causing the rule to cease serving its original purpose and become an objective in itself. In education, this risk appears when normative protection begins to weigh more heavily than learning (Merton, 1968).

This inversion is decisive for understanding the indirect effects of regulation. Norms created to protect students may generate institutional environments in which documentary compliance overlaps with experimentation, authorship, creativity, and pedagogical innovation. Thus, the school begins to demonstrate compliance, but loses formative vitality.

Lipsky contributes to this analysis by showing that public policies are concretized by agents who operate at the front line. In the case of AI, teachers, coordinators, school managers, and institutional technicians interpret norms under pressure, resource scarcity, and fear of accountability. This environment favors conservative decisions and preventive blockages (Lipsky, 2010).

In this context, compliance ceases to be merely a tool of institutional organization and begins to function as a filter for authorizing innovation. Instead of asking whether AI improves learning, expands research, or strengthens intellectual autonomy, the institution begins to ask whether its use may generate legal, administrative, or reputational problems.

Normative apprehension, in this case, operates as an indirect form of interdiction. The use of AI may not be formally prohibited, but the set of requirements, uncertainties, and perceived risks leads teachers and managers to avoid innovative experiences. This dynamic produces pedagogical self-censorship and institutional withdrawal.

The consequence is the replacement of pedagogical courage by bureaucratic caution. The teacher ceases to act as a creative intellectual mediator and begins to behave as an operator of authorized procedures. The classroom, in turn, loses its margin for experimentation and comes closer to a structure administered by external norms.

This finding reinforces the central thesis of the article. AI regulation in education may not produce explicit prohibition, but it may create institutional conditions that inhibit its adoption. Containment occurs

through legal uncertainty, documentary excess, fear of punishment, and dependence on technical sectors external to pedagogical practice.

Thus, the problem does not lie in the existence of minimum controls, but in the disproportionate expansion of the compliance logic. Education requires responsibility, but it also requires freedom to test, make mistakes, correct, create, and learn. When regulation eliminates this margin, it ceases to protect the school and begins to govern it through fear.

Platformization, Economic Centralization, and Technological Dependence

The fourth finding of the research revealed that complex regulations tend to benefit actors with greater technical, legal, and financial capacity. Large platforms, consolidated companies, and structured educational networks are able to adapt more easily to compliance, auditing, information security, and documentation requirements. Smaller schools, independent teachers, and local startups face higher barriers.

Zuboff contributes to this critique by demonstrating that the contemporary digital economy operates through the extraction, analysis, and monetization of behavioral data. In education, this model may transform learning activities into permanent data flows, in which students are observed, classified, and directed by platforms that concentrate infrastructure, information, and decision-making power (Zuboff, 2021).

This scenario becomes even more sensitive when regulation requires high standards of security, traceability, and documentation.

Although such requirements may be legitimate in high-impact uses, they also increase the cost of entry into the educational market. As a result, smaller providers and open solutions may be displaced by platforms already prepared to operate under complex regimes of compliance.

Selwyn and Williamson make it possible to understand that educational technology is not neutral. Digital platforms reorganize curricula, assessments, teaching practices, school management, and forms of measuring learning. Thus, when regulation requires secure, auditable systems compatible with complex technical standards, the tendency to adopt corporate solutions that are “compliance-ready” increases (Selwyn, 2019; Williamson, 2017).

This process may generate technological dependence that is difficult to reverse. The educational institution begins to delegate part of its pedagogical infrastructure to companies that control digital environments, databases, algorithmic models, and the operating criteria of the tools. As a result, pedagogical freedom becomes conditioned not only by state regulation, but also by the private architecture of platforms.

Morozov adds a critical dimension by warning against technological solutionism, that is, the belief that complex social problems can be solved through technical systems. In the case of educational AI, the risk is twofold: believing that AI will solve all educational deficits and, at the same time, imagining that technical regulation will eliminate all AI-related risks (Morozov, 2013).

This double illusion favors centralized solutions. First, the promise of educational efficiency is transferred to technology. Then, the

promise of neutralizing its risks is transferred to regulation. In both cases, teachers, students, and school communities may be placed in a secondary position in relation to platforms, experts, regulators, and compliance structures.

The critical finding of this subsection is that heavy regulation may produce an institutional paradox. In the name of guaranteeing rights and protecting students, it may increase the dependence of educational institutions on large private platforms, reducing the diversity of local, public, open, or community-based solutions.

Thus, the critique of AI regulation in education must also consider its economic effects. Regulatory bureaucracy does not affect all actors equally. The higher the cost of compliance, the greater the tendency toward economic centralization and the smaller the space for decentralized pedagogical experimentation.

Therefore, regulatory protection may become an indirect mechanism of technological concentration. The result is not necessarily a freer, safer, or more plural education, but an educational system more dependent on providers capable of converting legal compliance into competitive advantage.

Pedagogical Freedom, Teacher Autonomy, and the Right to Learn with AI

The fifth finding of the research focused on pedagogical freedom as a material limit to educational regulation. The Federal Constitution establishes, among the principles of education, the freedom to learn, teach, research, and disseminate thought, art, and knowledge. The Law of Guidelines and Bases of National Education reaffirms this

foundation as a structuring principle of Brazilian education (Brazil, 1988, 1996).

This foundation prevents AI from being treated merely as an object of technical or administrative control. By reaching tools for research, writing, creation, programming, tutoring, and access to knowledge, regulation affects concrete means of intellectual formation. For this reason, its limits must be assessed in light of academic freedom, teacher autonomy, and the student's right to investigate critically.

Mill contributes to this discussion by arguing that freedom of thought and expression constitutes an indispensable condition for the advancement of knowledge. In educational environments, norms that restrict instruments of inquiry in advance may impoverish formation, reduce the confrontation of ideas, and weaken students' critical autonomy (Mill, 2011).

This perspective is decisive for the debate on AI, since learning is not strengthened through the preventive interdiction of thought. It requires guidance, comparison, doubt, argumentation, and critique. When students are distanced from emerging intellectual tools, schools run the risk of preserving a formative model disconnected from the cognitive transformations of their time.

Arendt contributes by understanding education as a responsibility toward the common world. The school should not be converted into a space for the technical administration of conduct, since its function involves presenting the world to new subjects while preserving the possibility of judgment, freedom, and renewal (Arendt, 2016).

From this perspective, AI should be understood as part of the world that students will need to interpret, question, and transform. Preventing its pedagogical use, or subjecting it to disproportionate controls, means restricting guided contact with one of the main technological mediations of contemporary society.

Popper reinforces this reading by arguing that open societies depend on criticism, contestation, and the free circulation of ideas. When applied to educational AI, this conception indicates that normative protection cannot be converted into the closure of the investigative field, under the risk of bringing education closer to models of intellectual tutelage (Popper, 1974).

Humboldt offers another relevant foundation by associating formation, academic freedom, and the autonomous development of the individual. In this tradition, education is not limited to the transmission of previously authorized content, but involves the formation of subjects capable of investigating, judging, and producing knowledge (Humboldt, 2004).

Oakeshott contributes by understanding education as entry into a broad intellectual conversation, formed by different traditions, languages, and ways of understanding the world. Regulation that narrows the pedagogical use of AI may impoverish this conversation, limiting new forms of research, comparison, synthesis, and argumentative creation (Oakeshott, 1989).

Polanyi is also relevant by demonstrating that knowledge is not reduced to explicit rules, formal procedures, or fully codifiable models. There are tacit dimensions in learning, interpretation, and judgment that cannot be replaced by regulatory protocols. For this

reason, teaching practice requires situated freedom, not mere technical obedience (Polanyi, 2009).

Biesta complements this critique by questioning educational models excessively oriented toward measurement, performance, and control. For the author, education involves subjectification, responsibility, and formation, dimensions that cannot be fully captured by technical indicators or compliance regimes (Biesta, 2010).

The central finding of this subsection is that AI must be recognized as a legitimate instrument for cognitive expansion, creation, research, and intellectual expression. Regulation is necessary when it addresses concrete harms, abusive automated decisions, data violations, or discrimination, but it loses legitimacy when it blocks pedagogical freedom in the name of abstract protection.

Thus, acceptable educational regulation must preserve responsibility without interdicting creation. The freedom to teach, learn, research, and produce knowledge with the support of AI cannot be treated as an exception tolerated by the regulator, but as a contemporary expression of the very constitutional principles of education.

The Global and National Regulatory Advance: Normative Expansion and the Densification of Control

The research showed that the regulation of artificial intelligence has been expanding rapidly at both international and national levels. This movement is not limited to the creation of isolated norms, but constitutes a cumulative process of regulatory densification, in which guidelines, legal frameworks, governance frameworks, and institutional orientations begin to compose an increasingly dense

and more intrusive normative environment regarding the use of AI (OECD, 2019; UNESCO, 2021).

At the international level, this advance became more visible with the consolidation of instruments aimed at algorithmic governance. Among the main milestones are the OECD Principles on AI, the UNESCO Recommendation on the Ethics of Artificial Intelligence, the NIST AI Risk Management Framework, UNESCO's guidance on generative AI in education, and, more recently, the European AI Act (European Union, 2024; NIST, 2023; OECD, 2019; UNESCO, 2021, 2023).

Although these instruments are presented as mechanisms for protection, trust, and responsible use, their progressive juxtaposition produces an effect of normative saturation. As requirements for transparency, risk mitigation, human supervision, documentation, auditing, and accountability accumulate, the displacement of innovation toward regimes of technical and legal compliance expands.

In the Brazilian case, this movement has assumed its own contours, although convergent with the international trend. The General Data Protection Law established a decisive framework for data processing, followed by the National Digital Education Policy, Bill No. 2,338/2023, and, more recently, Ministry of Education guidelines on AI in basic education. As shown in Figure 1, these milestones, when analyzed together with international references, reveal the formation of a progressively denser regulatory environment with increasing incidence over the use of artificial intelligence in educational contexts (Brazil, 2018).

Figure 1 – Regulatory Advancement of AI: International and Brazilian Context



Source: Author, 2026.

This normative sequence reveals that AI has been progressively incorporated into the Brazilian regulatory agenda not only as a technological innovation, but also as an object of governance, monitoring, and containment. Although there is still no definitive and consolidated data legal framework for AI in the country, the set of norms, proposals, and guidelines already indicates the formation of an expanding regulatory environment.

The critical point does not lie in the mere existence of norms, but in the direction assumed by this process. Instead of prioritizing proportional regulation centered on concretely harmful uses, there is a diffusion of a preventive rationality, in which potential risk tends to justify, in advance, new layers of institutional control. In education, this movement acquires particular gravity, as it affects formative, investigative, and creative practices.

In this scenario, the AI Act functions as a relevant contextual reference, although it does not constitute the central focus of this article. Its importance lies in the fact that it condenses a regulatory grammar that has begun to influence debates and formulations in different countries: risk, fundamental rights, compliance, human oversight, transparency, and accountability. When this language is incorporated without critical mediation, education tends to be treated as a space of intensified regulatory surveillance.

The result of this normative advance is not necessarily a formal prohibition of educational AI, but its indirect containment. The accumulation of regulatory frameworks, technical guidelines, and institutional requirements produces an environment in which teachers, schools, and researchers begin to act under increasing normative uncertainty, legal apprehension, and dependence on external validation structures.

Thus, the finding of this subsection is that the global and Brazilian regulatory advance should not be read only as an expansion of guarantees, but also as a process of institutional thickening of control. Instead of merely disciplining abusive uses, this movement may progressively narrow the legitimate space of pedagogical

freedom, especially when the principle of protection becomes a basis for the multiplication of mechanisms of tutelage.

The bibliographic and documentary analysis indicated that the regulation of artificial intelligence in education has an ambivalent nature. On the one hand, it responds to legitimate concerns related to data protection, discrimination, transparency, authorship, and accountability. On the other hand, it may produce restrictive effects on pedagogical autonomy, especially when formulated in a broad, preventive, and bureaucratic manner.

The first finding demonstrated that regulation functions as a device for organizing conduct. Norms do not merely authorize or prohibit, but also define acceptable practices, expected behaviors, and legitimate forms of technology use. Thus, regulation may reorganize the pedagogical experience even before any concrete harm is identified (Foucault, 2008; Lessig, 2006).

The second finding evidenced the conversion of education into a space of risk and regulatory surveillance. AI has come to be associated with threats related to privacy, authorship, discrimination, automated assessment, and monitoring. Although these risks exist, their generalization may transform the school into an environment of permanent suspicion (Beck, 2011; Jasanoff, 2004; Sunstein, 2005).

The third finding indicated that compliance may generate normative apprehension and institutional withdrawal. Teachers, managers, and institutions tend to avoid innovative experiences when regulation becomes excessively complex, uncertain, or punitive. In this context, documentary compliance may replace

pedagogical courage and reduce the margin for experimentation (Lipsky, 2010; Merton, 1968; Weber, 1999).







The fourth finding revealed that complex regulations may favor large platforms and concentrate the market. The higher the cost of compliance, the greater the advantage of companies with the legal, technical, and financial structure to meet normative requirements. As a consequence, local, open, and community-based solutions may lose space to corporate platforms already adapted to the regulatory regime (Selwyn, 2019; Williamson, 2017; Zuboff, 2021).

The fifth finding focused on pedagogical freedom as a material limit to regulation. The Federal Constitution and the LDB guarantee the freedom to learn, teach, research, and disseminate thought, art, and knowledge. Therefore, any norm concerning AI in education must preserve the right of teachers and students to use technology as an instrument of inquiry, creation, and intellectual expression (Brazil, 1988, 1996).

The sixth finding demonstrated that the global and Brazilian regulatory advance has been forming an increasingly dense normative environment. The multiplication of guidelines, frameworks, laws, and regulatory projects expands AI governance, but may also intensify requirements for control, auditing, supervision, and accountability. In education, this normative densification may produce indirect containment of pedagogical innovation, as systematized in Chart 1.

Chart 1 – Analytical Synthesis of the Research Findings

CHART 1 – ANALYTICAL SYNTHESIS OF THE RESEARCH FINDINGS

Analyzed Axis	Critical Finding	Implication for Education
 Regulation and Conduct	The norm organizes behaviors, defines risks, and establishes acceptable uses of AI.	Pedagogical freedom may be displaced to legal, technical, and administrative structures.
 Risk and Surveillance	Education comes to be treated as a sensitive and vulnerable environment regarding the use of AI.	Teacher and student experimentation may be replaced by preventive caution.
 Bureaucracy and Compliance	Broad normative requirements may generate normative apprehension and institutional withdrawal.	Teachers and managers tend to avoid innovative uses to reduce administrative risks.
 Platformization	Complex regulations favor large providers capable of meeting compliance requirements.	Schools may become dependent on private platforms and reduce their technological autonomy.
 Pedagogical Freedom	Teaching, learning, researching, and creating are constitutionally protected principles.	Regulation cannot preemptively block the use of AI as an intellectual tool.
 Normative Advancement	The global and Brazilian expansion of norms creates a denser regulatory environment.	The protection of rights may be converted into indirect containment of educational innovation.

Source: Author, 2026.

Source: Author, 2026.

The synthesis of the findings confirms the central hypothesis of the article. The regulation of artificial intelligence in education, when guided by broad risk categories and excessive compliance requirements, may displace teacher and student autonomy into legal, technical, and bureaucratic regimes. As a result, the protection of rights may be converted into the indirect containment of autonomy to teach, study, investigate, and produce knowledge with AI.

The problem, therefore, does not lie in the existence of rules, but in their scope, proportionality, and purpose. Education requires protection against real abuses, opaque automated decisions, data

violations, and discrimination. However, it also requires intellectual freedom, methodological plurality, teacher autonomy, and openness to responsible technological experimentation.

Thus, the results indicate that legitimate regulation of AI in education must distinguish lower-risk formative applications from decision-making uses with high educational impact. The use of AI for research, writing, programming, tutoring, creation, and learning support should be presumed permitted. Uses linked to selection, punishment, surveillance, ranking, or definitive automated assessment, however, should be subject to stricter control.

This distinction is essential to prevent regulation from transforming protection into tutelage. A balanced educational norm must protect students without infantilizing them, guide teachers without replacing them, and hold institutions accountable without interdicting their capacity to innovate. The purpose of regulation cannot be the preventive control of learning, but the preservation of the conditions for free, critical, and technologically situated education.

IV. CONCLUSION

This article critically analyzed the regulation of artificial intelligence in education, based on the conflict between the protection of rights and the restriction of pedagogical autonomy. The research demonstrated that regulation should not be understood only as a legal instrument of security, transparency, and accountability, but also as an institutional device capable of reorganizing conduct, inducing behaviors, and limiting educational practices mediated by technology.

The findings showed that educational AI has come to be framed by a normative rationality centered on risk, surveillance, and compliance. Although there are real risks associated with privacy, algorithmic discrimination, automated assessment, and the misuse of data, the generalization of these risks may transform the school into a space of permanent suspicion, reducing the margin for teacher and student experimentation.

In this context, the protection of rights, when formulated in an excessively broad and preventive manner, may be converted into an indirect mechanism of pedagogical control. The problem does not lie in the existence of rules, but in the possibility that such rules begin to define in advance which forms of learning, research, creation, and intellectual expression with AI will be considered acceptable, legitimate, or tolerable.

The analysis also indicated that regulatory bureaucratization tends to produce normative apprehension in educational institutions. Teachers, managers, and researchers may avoid the use of AI tools not because of pedagogical disagreement, but because of fear of accountability, administrative sanctions, or normative insecurity. Thus, innovation ceases to be guided by the educational project and begins to be filtered by compliance regimes.

Another relevant point concerns economic centralization. Complex regulations tend to favor large platforms and providers with the technical, legal, and financial capacity to meet regulatory requirements. Thus, a norm created to protect students may paradoxically increase the dependence of educational institutions on private companies, reducing technological autonomy and the diversity of local solutions.

The international and Brazilian regulatory advance revealed an expanding normative environment, marked by guidelines, frameworks, laws, bills, and institutional orientations. This process strengthens AI governance, but it also expands layers of control, auditing, documentation, and supervision. In education, such densification must be analyzed with particular caution, as it directly affects the freedom to learn, teach, research, and disseminate thought.

The European AI Act, used in this article as a contextual reference, illustrates this risk-based regulatory rationality. Its relevance lies less in the specific legal analysis of the norm and more in its ability to express a global grammar of control, centered on transparency, human oversight, fundamental rights, compliance, and accountability. When transposed into education without critical mediation, this grammar may transform pedagogical practice into an object of intensified normative surveillance.

Pedagogical freedom, in this sense, must be recognized as a material limit to regulation. The Federal Constitution and the Law of Guidelines and Bases of National Education guarantee the freedom to learn, teach, research, and disseminate thought, art, and knowledge, which prevents AI from being treated merely as a technical or administrative object (Brazil, 1988, 1996). Regulating AI in education also means regulating the concrete conditions of inquiry, authorship, and intellectual formation.

AI must be understood as a legitimate instrument of cognitive expansion, creation, research, programming, writing, tutoring, and learning support. Its presence in schools and universities should not be reduced to the idea of threat, fraud, or risk. On the contrary, it

needs to be incorporated in a critical, guided, and responsible manner, allowing students and teachers to understand, test, compare, and question its limits.

Legitimate educational regulation must distinguish low-risk pedagogical uses from decision-making uses with high educational impact. The use of AI as support for learning, research, writing, creation, and knowledge organization should be presumed permitted. Applications aimed at selection, punishment, surveillance, ranking, definitive automated assessment, or decisions without human review, however, must be subject to rigorous controls.

This distinction is essential to prevent protection from becoming tutelage. A balanced norm must protect students without infantilizing them, guide teachers without replacing them, and hold institutions accountable without interdicting their capacity to innovate. The purpose of regulation cannot be the domestication of learning, but the preservation of the conditions for free, critical, and technologically situated education.

The hypothesis of the article was confirmed. The regulation of AI in education, when structured by broad risk categories and excessive compliance requirements, may displace teacher and student autonomy into legal, technical, and bureaucratic regimes. As a result, the protection of rights may be converted into the indirect containment of autonomy to teach, study, investigate, and produce knowledge with artificial intelligence.

Thus, this article seeks to contribute to a proportional, responsible regulatory proposal oriented toward educational innovation. AI

regulation must prevent concrete abuses, correct asymmetries, protect personal data, and ensure transparency in high-impact uses. However, it cannot curtail pedagogical freedom, nor transform teachers, students, and educational institutions into passive operators of technocratic governance.

It is concluded, therefore, that artificial intelligence in education requires responsibility, but it also requires freedom. A school that only restricts, blocks, or bureaucratizes the use of AI risks preparing students for a world that no longer exists. The contemporary regulatory challenge is not to prevent AI in education, but to prevent regulation, in the name of protection, from becoming an instrument for containing intellectual autonomy and pedagogical innovation.

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