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Artificial intelligence as a site of global educational governance: the case of UNESCO

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ABSTRACT

This article critically examines UNESCO's engagement in the global governance of artificial intelligence in education (AIED). Through a structured website mapping and a qualitative document analysis of key documents published between 2019 and 2025, the paper shows how UNESCO constructs AI as an object of educational policy, articulates normative frameworks, and positions itself as the leading actor in shaping the governance of AI in educational systems. Drawing from interdisciplinary debates on legitimacy, norm diffusion, AI ethics and global governance, this paper analyses the ways in which UNESCO negotiates internal and external dilemmas and challenges. The analysis shows that while UNESCO's discourse champions human rights, ethics, and inclusion, it also reveals underlying tensions, discrepancies as well as oscillating discourses of slow 'ethics' vs rapid 'transformation'. We argue that the ambivalences and tensions that emerge are not only by-products of 'bureaucratic pathologies' but also strategies that UNESCO adopts in order to reassert its legitimacy in the global governance of education and respond to contradictory demands among normative commitments, the national priorities of Member States, and agendas of Big Tech.

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Introduction

The integration of artificial intelligence into education (AIED) marks not only a major technological transformation in teaching and learning, but also raises profound ethical and policy challenges for global governance. International organisations, particularly UNESCO, have rapidly taken up the task of setting ethical, pedagogical, and governance frameworks for AIED, positing themselves as leaders and pioneers along the way. Such technological and institutional developments create the need for new questions and analyses. What does it mean to govern AI in education? How do international organisations engage in the process of norm entrepreneurship in AI governance? How are

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priorities and claims to authority constructed in this emerging policy domain, and what do these constructions reveal?

This paper responds to these questions by conducting a critical examination of UNESCO's engagement in the global governance of AIED. Through a structured website mapping and a document analysis of key related outputs published between 2019 and 2025, the paper shows how UNESCO constructs AI as an object of educational policy, articulates normative frameworks, and positions itself as the leading actor in shaping the governance of AI in educational systems. In so doing, the paper contributes to emerging scholarship on the political legitimacy of global governance in AIED (Erman and Furendal 2024; Roberts et al. 2024; Elfert and Ydesen 2024); to long-standing debates about norm diffusion and the role of epistemic authority in shaping global education policy (Rizvi and Lingard 2010; Steiner-Khamsi 2012; Steiner-Khamsi, Martens, and Ydesen 2024); as well as to recent educational policy debates about UNESCO's role in the global landscape of AIED (Mochizuki and Vickers 2024; Mochizuki, Bruillard, and Bryan 2025).

Within UNESCO, the ambivalence between calls to embrace the fast-paced developments and transformative potential of AI, and the more critical, slow-paced aspirations, highlights the challenges the organisation faces in aligning ethical commitments with actual governance and technological practices on the ground. Drawing from interdisciplinary debates around legitimacy, norm diffusion and global governance, this paper reveals tensions between commitments such as upholding human rights versus not falling behind technological 'progress', ethical aspirations versus institutional politics and normative standards versus actual practices on the ground. Different imperatives, which often pull in opposite directions, are presented in a simplistic manner that ignores their irreconcilability and focuses on normative calls that obscure underlying tensions and political stakes.

UNESCO, which often calls itself 'a laboratory of ideas' was created after the end of the Second World War with the understanding that it would not focus on hard power such as military power, coercion, and sanctions, but it would promote peace and security through soft power i.e. the promotion of education, cultural diplomacy, intercultural dialogue, scientific cooperation, and the dissemination of normative frameworks. Since 2015, following the Incheon Declaration and the adoption of the Education 2030 Framework, UNESCO has served as the lead UN agency responsible for coordinating SDG 4 on quality education. While this role grants it a prominent normative position within global education governance, its influence remains constrained by competing institutional actors, state sovereignty overriding transnational cooperation, its lack of enforcement power and broader geopolitical dynamics (see Mochizuki and Vickers 2024; Mundy 1999). UNESCO was selected for analysis over other regional international organisations, such as the Council of Europe or the OECD, due to its unique global mandate, its universal membership, its strong claims to normative authority in setting international standards in education and finally the fact that it has, so far, produced a significantly larger and more diverse corpus of documents than other organisations addressing AIED.

Our purpose here is to focus specifically on the Education sector of UNESCO – the largest and most prominent sector within UNESCO, both in terms of its budget

allocation, staffing, and institutional visibility. Three guiding, interrelated questions form the backbone of our research study:

(a) How does UNESCO conceptualise the global governance of AIED from 2019 to 2025?
(b) How does UNESCO frame its *own* role in the global governance of AIED over the same period?
(c) To what extent do UNESCO's published activities and policy outputs align with its stated rhetoric and normative commitments?

The first research question examines how UNESCO constructs AIED: how it defines problems and proposes solutions within the global governance of AIED. This is significant because international organisations do not simply react to technological change; they actively construct what AI 'is', what it 'should do', and what it is 'for' in education. Such constructions shape policy priorities, imagined futures, and which challenges are elevated or sidelined, especially in lower-income countries where UNESCO's guidance carries considerable normative weight. The second question examines UNESCO's self-framing in the wider AI governance ecosystem; this is significant because it reveals how it claims legitimacy, epistemic authority, and relevance, and how it positions itself in relation to more powerful stakeholders such as Big Tech. The third question turns to the concrete activities, partnerships, and practices through which UNESCO engages in AIED governance; this is important because it assesses UNESCO's alignment between rhetoric and practice. Together, these questions provide a framework for analysing UNESCO's positioning, influence, and constraints in the contested politics of global governance of AIED.

Our study addresses an underexplored area of research. Although a small but growing body of work examines the regional and global governance of AI more broadly (Christodoulou and Iordanou 2021; Erman and Furendal 2024; Roberts et al. 2024; Tallberg et al. 2023), scholarship that focuses specifically on AIED and the role of UNESCO remains rather limited. Mochizuki, Bruillard, and Bryan (2025) provide an important critique of techno-solutionism through discourse and social-network analysis of two UNESCO headquarters publications (focusing on policy guidance). Our study extends this emerging line of inquiry by offering a comprehensive analysis of UNESCO's framing of AIED from 2019 to 2025 across fifteen documents produced by different organisational units (headquarters, IITE, IESALC), complemented by website mapping of its activities. By drawing on an interdisciplinary framework that connects global governance theory, education policy studies, and AI ethics critique, we examine not only what UNESCO claims about the global governance of AIED but also how these claims are operationalised, thereby revealing tensions and inconsistencies that narrower analyses cannot capture.

The remainder of this paper is structured as follows. First, it sets out the aforementioned conceptual framework. The next section outlines the qualitative methodology used. The paper then turns to the empirical analysis, organised around the three interrelated questions of our study. The paper concludes with a discussion of the theoretical and policy implications of this analysis.

Conceptual framework

The rapid integration of AIED has created new spaces of contestation within global governance. While AI itself is a technological phenomenon, the ways in which it is framed, governed, and deployed are deeply political. This paper examines UNESCO's engagement with AIED through the combined lenses of global governance theory in International Relations, emerging scholarship on AI governance, and critical perspectives on global education policy. Together, these bodies of literature offer complementary insights into how international organisations (IOs) like UNESCO operate in complex governance environments where authority is diffuse, legitimacy is contested, and influence depends on normative framing and soft power.

From a global governance perspective, IOs such as UNESCO are conceptualised as actors that exert influence not through coercive authority but via norm production, soft law, and discursive legitimation (Weiss 2013). In an interconnected and interdependent world, IOs are seen as significant actors in a complex regime of governance which Member States join and agree to cooperate in order to address transnational challenges. However, the ability of IOs to endure and function over time—i.e. their sustained effectiveness – depends on being seen as legitimate by governments, citizens, civil society as well as other IOs (Buchanan and Keohane 2006; Tallberg and Zürn 2019). Legitimacy, in this sense, is not a static attribute but a relational product that is constantly negotiated and potentially fragile.

Education governance presents particular challenges for IOs, because education remains constitutionally under the authority of national and sub-national governments. This means that IOs influence is primarily indirect, mediated through its capacity to establish legitimacy normative authority, technical expertise, and agenda-setting power (Robertson 2022). Within fragmented and multi-actor global governance regimes, IOs compete for authority, credibility, and relevance and as a result they resort to ambiguous or even contradicting strategies to maximise their influence (Mahon 2016; Tikly 2017). For instance, the IMF used performance criteria that appeared clear but still allowed staff to grant waivers and apply them flexibly, thereby institutionalising ambiguity (Best 2012). In the field of AI governance, where UNESCO lacks binding enforcement tools and relies heavily on soft power, its legitimacy is especially contingent on normative leadership and symbolic capital (See Auld and Elfert 2024; Walter 2024).

Barnett and Finnemore's (1999) influential theory of IOs as bureaucratic actors with rational – legal authority emphasizes both the potential and the vulnerabilities of such organisations. They highlight that IOs are not neutral instruments but social actors shaped by their own institutional logics, which can produce 'pathologies' i.e. systemic dysfunctions such as over-routinisation, organisational insulation, or cultural contestation. These dynamics can lead to mission drift, inefficiency, or insensitivity to local contexts. In education governance, such pathologies may manifest in the entrenchment of epistemic hierarchies, whereby Western-centric frameworks are promoted as universal, thereby reinforcing global inequalities under the guise of neutrality or globality. Applying this lens to UNESCO's engagement with AIED makes it possible to interrogate how bureaucratic culture influences both the form and the content of its interventions, shaping whose knowledge counts and whose perspectives are marginalised.

Complementing this institutional focus, the Foucauldian concept of 'governmentality' shifts analytical attention from the formal structure of IOs to the practices, techniques, and rationalities through which they govern (Sending and Neumann 2006). From this perspective, UNESCO's power lies less in enforcing rules than in defining what constitutes a global educational problem (e.g. shortages of qualified teachers, overworked teaching staff, inefficient and inequitable administrative systems) and framing AI as 'progress' or a 'solution' to these challenges, determining which solutions are legitimate, and producing the expert knowledge – through policy reports, guidelines, and recommendations – that shapes how actors understand and act on these issues. In the case of AIED, this might involve framing AI as an inevitable marker of progress, positioning ethical principles as central to its governance, and encouraging states, educators, and technology companies to align with these visions. Crucially, this approach foregrounds the ways in which such framings are not neutral but embedded in broader power relations that privilege certain values, epistemologies, and actors.

A further body of literature from AI ethics has provided crucial critiques of the global discourse on ethical AI. Scholars have argued that the 'ethics of AI ethics' often functions more as legitimising rhetoric than actionable frameworks (Hagendorff 2020). As Hagendorff (2020) argues, the current landscape of AI ethics is marked by a proliferation of voluntary guidelines that lack enforceability and are often co-opted by corporate actors to avoid binding regulation – in other words, what we see is ethics being used as a substitute for governance. Authors Name Removed also highlight concerns about 'ethics-washing', noting that major tech corporations often adopt superficial ethical frameworks or advisory boards to enhance marketability and public image, despite lacking genuine ethical commitment or accountability mechanisms (p. 10). Moreover, comparative analyses have shown that the majority of global AI ethics guidelines originate in the Global North and reflect Euro-American liberal values (Roche et al. 2023). These guidelines emphasise abstract principles such as transparency, fairness, and accountability, yet remain disconnected from enforcement mechanisms or local contexts. The dominance of Global North actors in AI policy-making not only reflects geopolitical inequalities but also reproduces epistemic exclusion of Global South perspectives and value systems. UNESCO's AI ethics frameworks, as shown later in our analysis, operate within these broader dynamics. While UNESCO presents its guidance as globally inclusive, critiques have shown that its guidance draws heavily on procedural, principle-based ethics rooted in Anglo-American scholarship and Global North epistemic assumptions, making it susceptible to the same limitations identified in the wider ethics landscape (Mochizuki, Bruillard, and Bryan 2025).

Finally, this study draws on critical education policy scholarship that conceptualises IOs as 'norm entrepreneurs' (Finnemore and Sikkink 1998), central to the global production and circulation of policy norms. Examining the discourses and practices of IOs, including critically reflecting on the normative values, ideological assumptions, and pedagogical strategies that they promote is essential to understanding how global norms are produced, institutionalised, and ultimately shape national policies and everyday practices (Rizvi and Lingard 2010; VanderDussen Toukan 2018; Author Name Removed). This is particularly important in emerging and rapidly evolving fields such as those of AIED. Recent scholarship has also

focused on how IOs increasingly rely on promissory visions i.e. projections of desirable futures as a means of asserting relevance and sustaining legitimacy in a fragmented global governance landscape (Auld and Elfert 2024; Elfert and Ydesen 2024). These visions are often framed in technocratic and ethical terms, allowing IOs like UNESCO to maintain epistemic authority despite weak enforcement capacities and declining material power, authority and legitimacy (see Christodoulou 2024; Elfert and Ydesen 2023; Mundy 1999).[1] In the field of AI governance, UNESCO's invocation of inclusive, human-centred futures exemplifies this strategy, enabling it to occupy a normative space through future-oriented framings which obscure geopolitical and economic asymmetries that shape AI development and use.

The convergence of these perspectives – global governance theory, Foucauldian governmentality, AI ethics critiques, and critical education policy – provides us a robust conceptual framework for analysing UNESCO's engagement with AIED. By integrating these perspectives, the present study moves beyond a descriptive account of UNESCO's initiatives to a critical interrogation of how it constructs and legitimizes its role in AIED governance. It enables us to ask not only what UNESCO is doing but also how it defines the problems it seeks to address, whose voices are amplified or silenced in that process, and how its normative commitments are enacted or compromised in practice (see also Tallberg et al. 2023). In doing so, the framework also provides the conceptual tools to identify potential contradictions between UNESCO's ethical rhetoric and the realities of global AI politics.

Methodology

This study employs a qualitative methodology to explore how UNESCO conceptualizes and operationalizes its role in the global governance of AIED from 2019 and 2025. The choice of this temporal frame was deliberate: 2019 marks the year when UNESCO published the first dedicated document on AIED (see Table 1). Corroborating this significance, archival retrievals via the Wayback Machine – a digital library of internet archives – demonstrate that 2019 was the first year in which a dedicated tab called 'Artificial Intelligence' appeared on UNESCO's education website, previously located under the broader ICT section until approximately March 2023.[2]

To address our three guiding research questions, we integrated complementary qualitative methods that operate across different levels of analysis, from micro-level discourse to macro-level policy architecture. Specifically, these comprised of qualitative document analysis and a structured website mapping. For qualitative document analysis, we drew on discourse-analytical techniques within the methodological framework articulated by Bowen (2009), which is particularly suited to examining heterogeneous and institutionally embedded textual artefacts. This approach allows for an interpretive engagement with meaning-making, institutional context, and discursive positioning, moving beyond surface content to interrogate the ideological assumptions and normative values that underpin AIED policy narratives. In addition, we drew on the discursive framing approach developed by Rizvi and Lingard (2010), which emphasises how policy actors construct problems, legitimise solutions, and mobilise particular narratives; this approach is particularly relevant for analysing UNESCO's claims to epistemic authority

Table 1. UNESCO AI-related outputs (2019–2025).

Year	Title	Main Author(s)	Specific UNESCO Institution	Type of Document	No. of pages
2019a	Beijing Consensus on Artificial Intelligence and Education	UNESCO (participants of the 2019 International Conference on Artificial Intelligence and Education)	UNESCO EDUCATION	International Declaration	11
2019b	Artificial Intelligence in Education: Compendium of Promising Initiatives	Borhene Chakroun, Fengchun Miao, Valtencir Mendes	UNESCO EDUCATION	Resource Document	62
2020a	AI in Education: Change at the Speed of Learning	Steven Duggan, (Terawe Corporation)	UNESCO IITE (Russia)	Policy Brief	37
2020b	Artificial Intelligence and Inclusion: Compendium of Promising Initiatives	Borhene Chakroun, Fengchun Miao, Valtencir Mendes	UNESCO EDUCATION	Resource Document	48
2021	AI and Education: Guidance for Policy-Makers	Fengchun Miao, Wayne Holmes, Ronghuai Huang, Hui Zhang	UNESCO EDUCATION	Guidance Report	50
2022a	Recommendation on the Ethics of Artificial Intelligence	UNESCO General Conference	UNESCO	Recommendation	44
2022b	K-12 AI Curricula: A Mapping of Government-Endorsed AI Curricula	Fengchun Miao & Kelly Shiohira	UNESCO EDUCATION	Global Mapping Report	63
2023a	Generative AI and the Future of Education	Stefania Giannini	UNESCO EDUCATION	Opinion piece/ Commentary by Assistant DG of UNESCO	8
2023b	Guidance for Generative AI in Education and Research	Fengchun Miao et al.	UNESCO EDUCATION	Guidance Report	48
2023c	ChatGPT and Artificial Intelligence in Higher Education: Quick Start Guide	Emma Sabzalieva, Arianna Valentini	UNESCO IESALC (Venezuela)	Guidance Report	15
2023d	Readiness assessment methodology: a tool of the Recommendation on the Ethics of Artificial Intelligence	Not mentioned	UNESCO	Policy Implementation Tool	30
2023e	Harnessing the Era of Artificial Intelligence in Higher Education: A Primer for Higher Education Stakeholders	Bosen Lily Liu, Diana Morales, Jaime Félix Roser Chinchilla, Emma Sabzalieva, Arianna Valentini, Daniele Vieira do Nascimento, Clarisa Yerovi	UNESCO IESALC (Venezuela)	Primer	93
2024a	AI Competency Framework for Students	Fengchun Miao, Kelly Shiohira and Natalie Lao et al.	UNESCO EDUCATION	Competency Framework	80
2024b	AI Competency Framework for Teachers	Fengchun Miao, Mutlu Cukurova et al.	UNESCO EDUCATION	Competency Framework	52
2025	The Challenges of AI in Higher Education and Institutional Responses: Is There Room for Competency Frameworks?	Arianna Valentini and Alep Blancas	UNESCO IESALC (Venezuela)	Working Paper (roadmap for competency frameworks)	36

and norm entrepreneurship. Our analysis operated at two distinct but interrelated levels: first, how AIED is discursively constructed, including the moral, political, and epistemic assumptions embedded in these constructions; and, second, how UNESCO positions and legitimises itself within the broader global governance landscape for AIED.

Fifteen key documents, ranging from normative frameworks, policy guidance, declarations (e.g. the 2019 Beijing Consensus), to competency frameworks, were purposively selected to represent a variety of document types and institutional origins. These texts were identified through a systematic search of the UNESCO digital repository, restricting inclusion to publicly available documents whose titles explicitly referenced AIED between January 2019 and July 2025.[3] The majority were published by UNESCO headquarters in Paris with the remaining being published in cooperation with UNESCO IITE (Institute for Information Technologies in Education) based in Moscow and IESALC (International Institute for Higher Education in Latin America and the Caribbean, based in Caracas.

For the structured website mapping, mapping of UNESCO's practices was conducted to identify the range of concrete activities, mechanisms, and partnerships through which UNESCO operationalises its policy frameworks, including capacity-building initiatives, global conferences, regional consultations, and the development of pedagogical resources. This methodology, while offering valuable insights, has certain limitations. First, reliance on publicly available documents and archived web content inevitably constrains the analysis to officially sanctioned narratives, potentially omitting contested debates or alternative perspectives circulating within UNESCO. While our document and website mapping strategies capture discursive trends and institutional self-presentation, they cannot fully account for the informal practices, behind-the-scenes negotiations, and political compromises that shape policy outcomes. Second, the absence of interview or ethnographic data limits our capacity to examine the gap between rhetoric and practice from actors' perspectives, and understand the funding mechanisms, authorship processes and institutional interests shaping policy development. These limitations emphasize the value of future research to build on and extend the present analysis. Nevertheless, the policy analysis remains valuable in revealing how UNESCO frames problems, constructs normative agendas, and positions itself within global AI governance.

Findings

This section is organised into three sub-sections. The first examines how UNESCO conceptualises the global governance of AIED, analysing the discursive framings, normative values, and ideological assumptions embedded in its key publications and communications between 2019 and 2025. The second analyses how UNESCO positions itself within this governance landscape, focusing on the narratives, identity claims, and alignments through which it defines its role. The third maps the organisation's concrete activities, partnerships, and implementation mechanisms on AIED, exploring the alignment between its rhetoric and actions, and assessing the extent to which its practices reflect its stated normative commitments and mandate.

UNESCO's conceptualisation of the global governance of AIED from 2019 to 2025

Technocratic-humanitarian framing: the discourse of 'harnessing' AI

UNESCO's framing of what needs to be done in relation to AIED centres on a normative discourse that positions AI as both a transformative opportunity/solution and a governance challenge requiring ethical and inclusive responses. Across key documents since 2019, UNESCO constructs AI not merely as a technical innovation, but as a force that must be carefully directed to align with human rights, justice, and the Sustainable Development Goals, particularly SDG4. The problem is primarily represented in terms of a skills and capacity gap, where educators, students, and systems are perceived to lack the competencies necessary to harness AI responsibly. The main problem to be addressed is, thus, the education systems' *unpreparedness* for AI integration as the systems are lagging behind the pace of AI technological innovation. UNESCO suggests that there is need for:

> appropriate policy responses aimed at the systematic integration of AI and education to innovate education, teaching and learning, and at leveraging AI to accelerate the delivery of open and flexible education systems that enable equitable, relevant and quality lifelong learning opportunities for all that will contribute to achieving the SDGs and the shared future for mankind. (2019a, 3)[4]

UNESCO's framing prioritises solutions grounded in capacity-building, ethical awareness, and standardisation, with UNESCO calling for the integration of AI literacy into national curricula, professional development for teachers, and multi-stakeholder governance mechanisms. UNESCO emphasises the need to 'create multistakeholder partnerships and mobilize resources to reduce the AI divide and *increase investment* in the application of AI in education' (2019a, 3, emphasis added). While the discourse emphasises the importance of fairness, transparency, and human oversight, there is limited engagement across its publications with more contentious structural issues, such as the political economy of data or the commercial interests of technology providers. The emphasis on universal principles and technical competencies reflects an attempt to mediate between diverse Member State priorities, but it also risks marginalising deeper critiques related to power, surveillance, and digital neocolonialism (Author's Name Removed). Thus, UNESCO's vision of what 'needs to be done' in relation to AIED is shaped by a technocratic-humanitarian logic, combining ethical aspirations with managerial solutions, while leaving certain political tensions underarticulated.The core commitment of UNESCO is to ensure that the potential of AI is *harnessed* for education – a word found in all the documents analysed that were published from the UNESCO Education Sector. The recurring use of the word 'harness' (in its various grammatical forms) to describe the relationship between AI and education reflects a technocratic and instrumental framing, one that positions AI as a neutral force to be optimised for human benefit. The repeated use of the word suggests mastery and utility, inviting readers to accept AI as a benign force that merely needs direction rather than contestation i.e. questioning who controls it, how and why. This language subtly naturalises AI's integration into education by focusing on utility and control, while diverting attention from structural critiques related to power, inequality, or the political economy of AI. This 'harnessing' arguably becomes even more problematic when we are referring to GenAI, as it seems UNESCO is promoting the idea that its use by students is desirable and inevitable as long as it is regulated:

> In order to address the controversies around generative AI and to harness the potential benefits of GenAI in education, it first needs to be regulated . . . Regulating GenAI to harness the potential benefits for education and research requires the development of appropriate policies. (2023b, 18, 24)

Techno- optimism and marginal treatment of risks

Furthermore, our analysis of the documents during this time period indicates a heavily optimistic and promotional tone, with only minimal attention given to the potential risks or critical dimensions of AI in education. For example, out of the 12 paragraphs of the executive summary of a document titled *AI in Education: Change at the Speed of Learning* (UNESCO IITE 2020a), only two of these discuss challenges related to AI. Similarly, out of 28 pages of the optimistic promises of AI, only 2.5 pages are devoted to 'challenges' of AI and even so the language and tone is soft and uncritical. For instance, on a section on 'technology dependence' the first out of the two paragraphs is entirely positive on AI, focusing on the time that educators will save and the 'enormous benefit' to all the stakeholders as if to lessen the impact of the next paragraph which actually does admit the danger of dependence and erosion of cognitive skills in a single sentence. This second paragraph is phrased in either soft terms or in terms of questions about other technologies, leaving it rather open to the reader and trying to convince them that nothing really dangerous will happen by invoking past technological developments:

> The role of the educator therefore is likely to be enhanced rather than displaced by technology. An increased reliance upon AI will not be entirely to our benefit. We can expect to see an increased number of jobs replaced by automation . . . . There is also a danger that our ability to delegate tasks and cognitive functions to machines can increase our dependence upon technology whilst eroding our own ability to perform these, in what might be termed a 'use it or lose it' scenario. Do students who rely on a computer keyboard lose the ability to write legibly? Do those who perform calculations using a spreadsheet or calculator become less skilled at mental arithmetic? (UNESCO IITE 2020a, 28)

Another example of the techno-solutionist logic can be found in a document that is 'urgently' calling for AI competency frameworks in higher education institutions 'to guide AI integration into teaching and learning' (2025, 4, 22). There is a strong normative position that AI can be harnessed to 'address global challenges', and that students should be guided to create 'projects or policies that leverage AI for social good, tackling complex issues like global inequality or climate action with AI solutions' (12, 21).

Variability and limitations of critical engagement

Importantly, there is variability among UNESCO documents and their critical view of AI. Some documents discuss issues such as algorithmic bias, surveillance, digital access, and inclusivity, while acknowledging the need for regulation, transparency, and ethical oversight to protect human rights. In some cases, these documents are explicit about the significant uncertainties surrounding AI, recognising that much remains unknown and that it is unclear whether AI can ultimately meet the expectations placed upon it (see for instance 2021, 26). These remain brief, afterthought-like sections, serving as disclaimers that actions must align with a human rights framework. Interestingly, the more recent documents and ones that focus on GenAI seem to show a progressively more critical stance – probably in response to public and academic critique particularly after the onset

of GenAI – with one publication (2024a) having a sub-section entitled 'Fostering a Critical Approach to AI' (14) addressing though only its pedagogical use.[5] Below we give examples of some of the more critical arguments we could find:

> There is also the additional concern that AI data and expertise are being accumulated by a small number of international technology and military superpowers. (2021, 20)

> AI and other tools that are run by companies dependent on making profit, may not be open source (and therefore more equitable and available), and … may be extracting data for commercial purposes. (UNESCO IESALC 2023c, 11)

> The rapid pervasion of GenAI in technologically advanced countries and regions has … intensified the concentration of AI wealth in the Global North. As an immediate consequence, the data-poor regions have been further excluded and put at long-term risk of being colonized by the standards embedded in the GPT models. (2023b, 14)

> [T]here is limited democratic control of the companies that are promoting GenAI. This raises the question of regulations, in particular in respect of access to, and use of, domestic data …. Appropriate legislation is needed … (14)

Even when these challenges are discussed though, across various UNESCO documents, three important observations emerge. First, these challenges are often framed in rather vague and reactive terms, with no or very limited critical engagement with the dangers of private industry having such unelected power over billions of citizens globally. Risks are treated as issues to be *managed* and *regulated* once AI is adopted, rather than questioning the structural conditions or power relations that shape AI's development and deployment and whether AI is desirable given all the ethical, societal and pedagogical harms and risks that it entails. For example, in the above excerpts that offer more critical views of AIED, the emphasis remains on technical fixes and post-hoc regulatory responses, rather than on fundamentally reimagining governance structures or resisting the monopolistic control of AI by powerful corporate and geopolitical actors.

Second, whenever there is a critical framing, it is done in such a way that the dangers, risks and challenges are presented as some form of *AI collateral damage* i.e. something unavoidable that comes with the overwhelmingly positive package and that we as a society will need to learn to deal with. This reinforces the highly problematic assumption that AI integration is *inevitable* and universally *desirable*, deflecting attention from deeper critiques of who benefits, who governs, and who is left behind. Consider, for example, the following excerpt, which frames the issue in terms of users or stakeholders being 'mindful' or 'aware' of the limitations – as if to suggest that use should proceed without interruption, provided such concerns remain merely in the background:

> Be cognizant of the dilemmas of balancing between open access to data and data privacy protection. Be mindful of the legal issues and ethical risks related to data ownership, data privacy and data availability for public good. (2019a, 8)

The more critical perspectives are acknowledged but placed in a secondary, informative role – mentioned directly yet given limited emphasis – serving to lend the documents a more nuanced and balanced, albeit at times inconsistent, appearance. This finding is consistent with a recent study (Mochizuki, Bruillard, and Bryan 2025) which has analysed two UNESCO publications on AI and argues that this critique as 'background information' is there to make UNESCO seem 'more justice-oriented, in accordance with

UNESCO's self-identity as a custodian of AI ethics and a global coordinator of SDG 4' (10). This approach raises concerns about whether UNESCO is engaging in a tokenistic strategy to reconcile two different logics of framing AI: the optimistic framing of AI as a transformative solution to education's challenges and the more critical framing that underscores its numerous dangers and risks.

Thirdly, across the documents there is a strong emphasis on equipping students and teachers with AI literacy – developing the skills needed to 'harness' AI's potential while mitigating its risks and challenges. The issue here is not the emphasis on skills per se, but the underlying neoliberal assumption (see Davies and Bansel 2007; De Lissovoy 2017) that learners can both identify these dangers while still in the process of learning and, crucially, that recognition alone is sufficient to address them. This is especially problematic given that, behind AI's 'black boxes', even those at the forefront of developing these systems – leading AI researchers and tech executives such as Geoffrey Hinton and Sam Altman – have repeatedly admitted they do not fully understand its inner workings (See (Pelley 2024; Curry 2024):

> Guide students to develop embodied comprehension of ethical principles; and offer opportunities to reflect on personal attitudes that can help address ethical challenges (e.g. advocating for inclusive interfaces for AI tools, promoting inclusion in AI and reporting discriminatory biases found in AI tools). (2024a, 32)

> The pre-condition for responsible use consists in students' abilities to detect the trustworthiness and proportionality of AI tools. (14)

This 'responsibilisation' of individual educators and learners (see Halse, Hartung, and Wright 2018; Wright 2011), is problematic not only because it shifts the burden onto them, but also because it effectively absolves Big Tech of its responsibility to ensure transparency, accountability, and the prevention of misuse from the outset. Admittedly, UNESCO's non-legally binding mandate limits its capacity to compel Big Tech to change. Yet, given its presumed role as a global norm-setter, placing the primary burden on individuals rather than on powerful corporate actors is a misplaced strategy.

UNESCO's framing of its own role in the global governance of AIED

Officially, UNESCO states that 'in order to support Member States' efforts to harness technological innovation for education' it adopts a strategy with three key 'functions' as it refers to them (note how UNESCO does *not* have a single, stand-alone 'Strategy on AI' yet but AI is explicitly addressed within this broader one) (UNESCO 2021, 1). These are listed as: '(i) observatory of technological transformations in education; (ii) technical assistance and capacity development and (iii) development and implementation of standard-setting instruments' (1).

In terms of the first function, the rationale here is that UNESCO will take the role of observing the technological developments and their consequences for education. It is explicitly mentioned that this includes 'the enhancement of global south-south and south-north cooperation' (UNESCO 2021, 2) which shows that there is awareness about the critiques of the domination of the Global North though this does not mean that this rhetoric is translated in practice. In terms of practical ways of achieving this function, 'collaborative research, systematic reviews of evidence, consultations with

expert networks, global and regional knowledge-sharing' (2) are mentioned. The justification for UNESCO having this function is being linked back to its self-description as 'a laboratory of ideas' and its role as 'informing global, regional, and national education and development policy'. No further rationale is given as to why UNESCO is in a position of this authority or expertise to be able to do so.

In terms of its second function, entitled 'technical assistance and capacity development', UNESCO adopts a distinctly technocratic focus to 'ensure technology is harnessed to strengthen education and advance sustainable development' (UNESCO 2021, 2). This framing promotes AI as a wholly positive and almost inevitable driver of progress, without specifying how these benefits will materialize and omitting any discussion of its environmental, pedagogical, or ethical risks. Absent is recognition of environmental degradation linked to digital infrastructure (e.g. energy use, carbon emissions, rare earth mineral extraction) or educational risks such as algorithmic bias, privacy violations, overreliance, and academic fraud (See Baker and Hawn 2022; Christodoulou and Zembylas 2025; Crawford 2021; Williamson, Macgilchrist, and Potter 2023; Yu et al. 2024; Zhai, Wibowo and Li 2024). By ignoring these tensions, UNESCO advances a narrative aligned with dominant global governance logics, reinforcing a technological utopianism that depoliticizes reform and deflects attention from deeper structural contradictions. For this function, UNESCO is self-positioned as a benevolent, authoritative actor – a facilitator and technical enabler that is 'leveraging its convening power and global mandate' (UNESCO 2021, 2). This phrasing reflects a technocratic discourse of expertise, wherein authority is derived from the claim to possess legitimate knowledge and global reach.

The third and final function listed in UNESCO's formal strategy is 'Development and implementation of normative tools'. The purpose of this task is to create (AI) guidelines and frameworks to 'ensure that technological innovation is designed to strengthen education as a common good and for the benefit of learners and teachers' (UNESCO 2021, 2). Although the word 'ethics' appears only in the title of UNESCO's framework 'Recommendation on the Ethics of AI', the approach reflects a strong ethico-technical orientation, combining human-rights principles with multi-stakeholder cooperation. However, as scholars note (Gleckman 2018), multistakeholderism can privilege corporate interests, lack transparent governance, and legitimize Big Tech's influence in norm-setting spaces. Technology is framed not only as a tool to 'advance' education but as an inevitable force to be 'accelerated' (UNESCO 2021, 2).

This modernist, pro-innovation stance reflects what Morozov (2013) calls *technological solutionism*, where structural inequities and epistemic injustices are subordinated to faith in design, regulation, and ethics. While there is implicit recognition of potential harms, references remain abstract and lack detail on enforcement mechanisms. Conceptually, this function positions UNESCO as a moral and technical authority in global education governance, presenting its role as guardian of the 'common good' and champion of human rights. Yet both notions are contested; framing them as universal norms risks depoliticizing their application in AIED, turning them into managerial tools rather than sites of political struggle.

After examining UNESCO's broader engagement with AI, an important observation can be made about the Strategy analysed above vis-à-vis its practices and other documents. The three core functions – observatory, capacity development, and normative

frameworks – appear insufficiently differentiated. In particular, there is notable conceptual overlap between the first and third categories, and other important areas of UNESCO's work such as teacher and learner guidance, policy guidance, public advocacy, and stakeholder engagement – are either absent or subsumed in ways that obscures the significance that UNESCO attributes to them in practice. This lack of coherence becomes especially apparent when compared to other UNESCO domains. For instance, in its work on (Detail Removed), UNESCO distinguishes clearly between advocacy, guidance, and capacity-building as distinct but interconnected operational levels (Author Removed). Moreover, while the strategy outlines what needs to be developed, it gives limited attention to the concrete ways of implementation and remains largely silent on how UNESCO plans to address the persistent challenge of weak enforcement mechanisms.[6]

This lack of clarity may be partly attributed to the absence of a dedicated AI strategy. However, three additional explanations could be proposed. First, the ambiguity may reflect the emerging and unsettled nature of AI governance, where institutional roles and norms are still in flux and in experimentation mode. Second, it may reflect UNESCO's institutional preference for cautious language, particularly in new or politically sensitive domains, where ambiguity is often used to mitigate controversy or alienating Member States and avoid premature commitments. Third, the fragmentation may be a result of organizational decentralization: various institutes and regional offices (e.g. IITE, IESALC) operate with some degree of autonomy, producing outputs that may not always align neatly with headquarters-defined categories.

Activities undertaken by UNESCO to promote AIED

In practice, UNESCO seems to be undertaking a variety of activities related to AIED, with an emphasis on both policy development and knowledge dissemination. These include the production of policy guidance, teacher support tools and mapping exercises focused on the incorporation of AI into national curricula. In parallel, UNESCO identifies and promotes what it defines as innovative or promising practices in AI and education, often through curated collections of initiatives.

These activities are complemented by international conferences and forums, which aim to function as spaces for knowledge exchange, policy diffusion, and consensus-building around AI's role in education systems. UNESCO positions itself as a platform for dialogue, hosting expert groups, regional consultations, and partnerships with both public and private actors. For example, in 2019, UNESCO launched the 'International Forum on AI and Education' as a global platform to facilitate dialogue on the integration of artificial intelligence in education. The Forum brings together government officials, AI specialists, researchers, and private and civil society actors to explore the implications of AI for education systems. While presented as a mechanism to support ethical, inclusive, and human-centred approaches, aligned with UNESCO's broader normative agenda, the Forum also reflects UNESCO's efforts to position itself as a convening authority in the emerging field of AI governance. Also, the Digital Learning Week, launched in 2023 (previously called Digital Mobile Week) is the organization's flagship event on the use of digital technologies in education, with a dedicated focus on AI.

Collectively, these activities reflect a clear effort to influence how AI is framed and operationalized across global education landscapes. However, the influence of these

activities relies on soft power, as UNESCO lacks enforcement mechanisms, and it must navigate competing pressures from sovereign Member States and powerful corporate stakeholders. Thus, any influence takes place through discursive authority, technical guidance, and convening power, rather than through direct regulation.

Another central aspect of UNESCO's work in AIED is the production and dissemination of frameworks and guidelines that aim to influence national policies and pedagogical strategies. A comprehensive list of these publications form 2019–2025, categorised into document type and length has been constructed and presented in Table 1 above. As the table illustrates, the generation of guidance and advocacy play a much more significant role in its AI practice than the Strategy (2022–2025) presents. UNESCO produces policy guidance and pedagogical frameworks to help education systems integrate AI. It also conducts so- called mapping exercises such as surveys of national AI curricula and case studies.

Its most significant, and perhaps well-known initiative is the *Recommendation on the Ethics of Artificial Intelligence* (UNESCO 2022a), the first global normative instrument on AI ethics adopted by all its Member States. This serves as a reference framework for national policies and is accompanied by tools such as the *Readiness Assessment Methodology* (UNESCO 2023d). However, this tool is not specific to education, was not an output that originated only from the UNESCO Education sector and the content remains at a very general and abstract level. There is only 1.5 pages devoted to education from the 30-page document and the questions are rather general, not really in line with any critical outlook on the use of AI in education e.g. 'Does your country have any laws or policies to integrate AI or other digital tools into the education system? If not, is such a law or policy in the process of being adopted?' (UNESCO 2023d, 18)

Another type of activity within the capacity development realm is training. This, however, raises questions about epistemic expertise – specifically, what knowledge and perspectives are being conveyed – something that remains unclear from the publicly available information. A notable example is the IIEP-UNESCO Office for Latin America and the Caribbean, which organised an online seminar entitled *The Digital Transformation of Education Policy*, an event featured into the main UNESCO website as bringing together more than 800 participants. This event will be described in more detail as it serves as another illustrative example of how UNESCO is not always aligned with its normative mandate. UNESCO frequently promotes AI as a tool for advancing equity, inclusion and democratization in education. Yet this normative discourse is undermined by institutional practices that contradict these aims as the following example shows.

According to the news report of the event posted on the website, 'The event addressed the impact of digital technologies and AI on education from a perspective of equity, innovation, and sustainability'.[7] The sub-titled caption of the event noted, Participants also . . . 'learned about an upcoming IIEP course, currently open for registration'. Upon further research, it emerged that the price of this short online course was USD 1000. The irony of introducing a high-cost training programme during a meeting focused on AI's potential to promote educational equity is difficult to ignore. Such a model effectively excludes professionals from under-resourced education systems, precisely those whom UNESCO claims to support through its global digital inclusion agenda. This contradiction – what Krasner (1999) has described as a form of 'organised hypocrisy' (Krasner

1999) – highlights the ongoing tension between the organisation's rhetorical commitments and the financial logics that shape aspects of its programming.

These discrepancies can be attributed to a range of factors, including UNESCO's decentralized organisational structure, which often results in varied priorities and messaging across different departments; internal tensions among units and epistemic communities with competing mandates or ideological leanings (see Mochizuki and Vickers 2024; Mundy 1999; Vickers 2024); and the possibility that UNESCO's stance on AI is gradually shifting as it becomes more sensitive to the ethical, social, and environmental risks linked to digital technologies. In other words, UNESCO's approach appears to be evolving in a contested and uneven fashion, reflecting both the dynamic nature of global governance in emerging technological domains and the inherent contradictions of coordinating a diverse, multistakeholder institution. This evolution may also indicate that, despite its normative aspirations and public self-presentation as a global leader in AIED, UNESCO may lack the consolidated expertise, resources, or strategic coherence required to act as the decisive forerunner it claims to be. Instead, its position in this fast-moving field appears shaped as much by external pressures, shifting alliances, and reactive adjustments as by a clear and proactive vision.

Discussion and implications

Our analysis reveals a structural decoupling between UNESCO's rhetorical commitments and its policy implementation in the governance of AIED. While the organization consistently presents itself as a champion of human rights, inclusion, and ethical innovation, its actions often reflect pragmatic accommodations to competing pressures – arising from geopolitical tensions between Member States, such as divergent Chinese and U.S. approaches to AI governance, and from the strategic influence of Big Tech (Mochizuki and Vickers 2024; Mochizuki, Bruillard, and Bryan 2025). Drawing on Beckert's (2020) notion of 'promissory legitimacy,' Elfert and Ydesen (2024) show how IOs sustain authority not through outcomes but through articulating compelling futures. Yet, when these futures are framed by technological determinism and institutional self-referentiality, they risk becoming ethically hollow and geopolitically instrumentalized. As Mochizuki and Vickers (2024) demonstrate, UNESCO increasingly serves as a stage for Chinese-American competition over AI norms, undermining its portrayal as a neutral steward of educational futures. The epistemic framing and digital aesthetics of its AI agenda seem to reinforce rather than challenge the dominant logics of techno-capitalism and neoliberal governance.

This dual positioning manifests in what we term an *oscillation strategy*: on the one hand, framing AI as a transformative tool that must be 'harnessed' for educational progress; on the other, ensuring that it is seen – especially after the widespread adoption of GenAI in 2023—as sufficiently alert to the risks and challenges AI poses. This balancing act is not merely rhetorical; it functions as a survival strategy for an international organisation navigating the incompatible demands of powerful constituencies. Such an approach is not uncommon among IOs facing diverse and often contradictory expectations from states, corporate actors, and civil society. From a global governance perspective, this oscillation allows UNESCO to maintain a semblance of consensus while avoiding decisive commitments that might alienate key stakeholders.

However, our analysis also suggests that UNESCO's ethical discourse in this space is not purely normative, rooted in universal principles, but also performative, aimed at reconciling internal contradictions and preserving organisational legitimacy. This is especially evident in its efforts to maintain cohesion among ideologically diverse Member States while engaging private-sector actors that operate according to profit-driven logics often at odds with public interest principles. As scholars have noted, allowing private businesses such as Big Tech to shape the governance of AI entails significant risks: their market imperatives can override ethical commitments, diminish transparency, and weaken public accountability (Name Removed; Walter 2024). Without strong democratic oversight, corporate-led governance can produce self-serving standards, inconsistent practices, and the potential misuse of AI technologies – particularly as influential figures such as Zuckerberg, Musk, and Altman remain unelected yet wield disproportionate global influence.

An even more problematic finding of our analysis is the responsibilisation of students and teachers within UNESCO's AIED discourse. Across documents, there is a recurrent assumption that AI – especially GenAI – is inevitable, desirable, and ultimately successful, if governed by appropriate regulations and policies. This framing positions learners and educators as responsible for 'harnessing' AI's potential while managing its risks, despite the fact that even AI's leading creators acknowledge they do not fully understand the inner workings of these technologies. Moreover, this narrative disregards those students who resist AI adoption, either refusing to use it altogether or abandoning it after recognising its detrimental effects on their cognitive skills and capacities (Pérez Soler 2025). This omission is troubling not only because it contradicts UNESCO's stated commitment to inclusivity, but also because it normalises a one-size-fits-all technological future in education, where refusal or disengagement is rendered invisible. As [Names Removed] have argued, such erasures undermine the possibility of truly democratic and pluralistic educational futures.

It is undeniable that UNESCO has taken significant steps to shape the global governance of AIED, producing ethical, pedagogical, and policy frameworks. Yet, its engagement is marked by both ambitious optimism and ambiguity. On paper, UNESCO positions itself as a leading norm-setter and ethical authority in this evolving domain; in practice, however, there is a disjunction between rhetorical commitments and institutional action. Strategic documents and public statements overwhelmingly frame AI in education as a transformative solution to systemic challenges, emphasising innovation and acceleration. Risks, contradictions, and geopolitical entanglements are relegated to normative caveats, abstract principles, or omitted altogether. This contrasts sharply with critical AIED scholarship, where some call for pausing the hasty adoption of AI applications. As Williamson, Molnar, and Boninger (2024, 4) caution, once AI becomes 'inextricably enmeshed' in education, 'the only way to disentangle from it would be to completely dismantle those systems'.

These omissions are not simply oversights; they reflect deeper tensions within UNESCO's governance model – tensions rooted in its reliance on soft power, anticipatory discourse, and symbolic legitimacy rather than binding regulation, critical deliberation, or enforceable commitments. From the perspective of our

conceptual framework, this pattern aligns with the pathologies of international organisations identified by Barnett and Finnemore (1999): tendencies toward depoliticisation, technocratic narrowing of complex issues, and the prioritisation of organisational self-preservation over transformative action. We therefore argue that the ambiguities, tensions, and contradictions in UNESCO's AIED engagement are not merely unintended consequences of bureaucratic dysfunction but also intentional strategies. Faced with the need to maintain legitimacy in the global governance of education, UNESCO adopts positions that accommodate contradictory demands: balancing normative commitments with respect for state sovereignty and the economic imperatives of technological development. This is particularly visible in its careful avoidance of antagonising either powerful Member States or influential corporate actors.

While this 'people-pleasing' approach may protect UNESCO's membership base and funding streams, it comes at a cost. The avoidance of controversy often results in self-censorship, depoliticisation, and ambiguity. By refraining from directly addressing the structural inequalities and power asymmetries that underpin global AI development, UNESCO risks offering only technocratic and superficial solutions. These limitations, in turn, contribute to the organisation's declining legitimacy as a global leader capable of steering education through technological transformations. This framing of UNESCO as a neutral convener or facilitator reinforces a myth of impartiality in global governance. It masks the power asymmetries, epistemic hierarchies, and institutional self-interests that shape its engagement with AIED. At the same time, its reliance on promissory futures – projecting technologically advanced and ethically sound educational landscapes – reproduces a modernist narrative of technological progress. This narrative is rarely interrogated in its documents, which means it remains detached from the socio-political realities and structural contradictions of contemporary AI development.

The implications of these findings are clear. For UNESCO to play a genuinely transformative role in AIED governance, it must move beyond rhetorical commitments to human rights and ethical AI toward more politically engaged, contextually grounded, and enforceable approaches. This would require embracing plural epistemologies, amplifying marginalised voices, and openly addressing the structural political economy of AI. Without such shifts, its governance model will continue to operate in a mode of symbolic performance, where legitimacy is maintained through the projection of ethical authority rather than through substantive transformation of the conditions under which AI is developed and deployed in education.

In sum, our analysis suggests that UNESCO's current trajectory in AIED governance exemplifies the broader challenges of global governance in emerging technological domains: balancing competing demands, maintaining legitimacy, and navigating rapid innovation – often at the expense of critical engagement with the deep-seated inequalities and power relations shaping the field. Unless it confronts these tensions head-on, UNESCO risks becoming less a shaper of global norms and more a mediator of competing narratives, perpetuating a governance model that is ultimately reactive, depoliticised, and limited in its capacity to deliver on its most ambitious commitments.

Conclusion

This study has illuminated not just UNESCO's formal activities, but also the political, ethical, and institutional tensions inherent in its efforts to lead on AI governance. Understanding these tensions is essential for assessing the legitimacy, coherence, and limits of UNESCO's engagement, especially as it attempts to reconcile its human rights-based mandate with the pressures of technological acceleration, state interests, and corporate power. These findings also raise broader concerns about UNESCO's institutional capacity and epistemic authority in leading the governance of such a complex and contested domain.

In particular, UNESCO's approach towards AIED reflects a technocratic mode, one that is overly reliant on a narrow epistemic base, lacks meaningful participation from the Global South, and is susceptible to corporate influence. We do not dismiss the relevance of UNESCO's work; indeed, its convening power and global mandate make it a uniquely placed actor in this space. However, unless it takes seriously the challenges of implementation, enforcement, and plural epistemologies, its legitimacy risks further erosion, not because of what it sets out to do, but because of how selectively it does so. What emerges is an organisation that claims to be a 'laboratory of ideas' but simultaneously wants and pretends to be able to change the education landscape with very weak mechanisms and resources.

Ultimately, this paper argues that UNESCO's engagement with AIED must be understood not simply as a technical intervention, but as a deeply political, ethical and therefore contested project of global governance. Its discursive strategies, institutional contradictions, and strategic ambivalences are not incidental – they are structural features of an international organization navigating the competing demands of Member States, private sector actors, and its own normative history and mandate. At the same time, UNESCO operates within a crowded and increasingly fragmented global and regional AI governance landscape in which actors such as the OECD, the Council of Europe, and the EU articulate competing standards and priorities. A comparative examination of these actors was beyond the scope of the present study, but future research could meaningfully explore how UNESCO's self-conceptualised leadership role is negotiated, challenged, or reinforced in relation to these institutions. In addition, future research could examine intra-organisational dynamics within UNESCO, particularly the relationship between headquarters and its specialised institutes, to better understand how institutional processes shape the organisation's positions on AI in education.

UNESCO occupies a structurally constrained position in global AI governance: lacking legislative capacity and operating with limited financial resources, its authority rests primarily on the knowledge it produces and the norms it promotes, while simultaneously navigating the tensions between technological optimism, the interests of its funders and the precise values it seeks to uphold. As our findings demonstrate, UNESCO functions not only as an actor seeking leadership in AI governance but also as an *arena* in which competing interest groups interact, contest, and seek leverage. Whether UNESCO will continue to function merely as a symbolic norm entrepreneur or evolve into a more reflexive and accountable actor – or indeed achieve the leadership status it seeks – remain open questions. What is clear, however, is that its current positioning, rooted in promissory legitimacy and techno-ethical optimism, risks depoliticizing AI governance at precisely the moment when deeper ethical, social, and geopolitical scrutiny is most urgently needed.

Notes

1. UNESCO has faced severe financial constraints since 2011 following the withdrawal of United States membership dues, forcing the organization to accept voluntary project-bound contributions that jeopardize its autonomy and push it into cooperation with the private sector, while its traditional coordinating role in global education governance has been increasingly usurped by emerging actors including the OECD, World Bank, and multistakeholder entities such as the Global Partnership for Education, G7, and G20 (Elfert and Ydesen 2023, 32–33). It has also been argued that in certain education initiatives, UNESCO promotes policies inconsistent with its humanistic principles, lacks critical self-reflection, and relies on self-referential legitimization strategies that ultimately undermine trust and acceptance of its normative power among experts and stakeholders (Christodoulou 2024).
2. While there is no specific timestamp showing the exact creation date of this tab, its existence can be traced back to the global education discourse initiated by the 2019 Beijing Consensus on Artificial Intelligence and Education and this also can be triangulated using data from the wayback machine. See here: https://web.archive.org/web/20191209230536/https://en.unesco.org/themes/ict-education/action/ai-in-education.
3. Conference reports and speeches were not part of the selected corpus included in Table 1 unless the report was part of a formal declaration agreed at the end of the conference e.g. the Beijing Consensus. Also excluded was a short 2025 think piece written by an external consultant. The search instruction 'artificial intelligence and education in English, between 2019 and 2025)' was used in UNESCO's Digital Library. However, this did not bring up some key publications which were featured on UNESCO's website under the section 'Publications', so these were searched for manually through the digital library. The 'Recommendation' and its associated implementation tool (2022a and 2023d) were the only outputs that included but were not specific to education.
4. All bolded text in quotations throughout this paper are the authors' emphasis.
5. Although this shift is not strictly linear over time, there are examples, such as a concept note for a 2025 event, that adopt a markedly more critical stance towards AI compared to similar documents produced earlier.
6. Although the strategy includes a section on implementation (parag. 13–16) and monitoring and evaluation, it focuses primarily on administrative arrangements and resource mobilization. There is no reference to strategies to incentivize follow-through or evaluate national uptake of normative frameworks.
7. See here: https://www.iiep.unesco.org/en/articles/artificial-intelligence-and-its-role-education-policies.

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