

# A Star-Shaped Governance Model for a New Collaborative Order

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## ABSTRACT

International cooperation in education is increasingly shaped by geopolitical instability, digital transformation, and the proliferation of multilevel educational ecosystems. Traditional hierarchical governance arrangements struggle to ensure credible commitments, equitable participation, and adaptive coordination across global and local contexts. This paper proposes a polycentric star-shaped governance model as a first conceptual and exploratory framework for rethinking international educational cooperation. Grounded in Barro and Gordon's theory of policy credibility, Ostrom's principles of collective action, multilevel governance, and global public goods theory, the model distinguishes between institutional cooperation at the centre and collaborative dynamics across territorial nodes. Through analytical formalization and applied governance scenarios, the paper clarifies operational implications while explicitly addressing power asymmetries and governance tensions. The model is positioned as a conceptual architecture designed to strengthen credibility, reciprocity, and adaptive coordination in the governance of education as a global common good.

**Keywords:** New Order, Education, policy, star model, collaboration

## INTRODUCTION

### The Governance Challenge of International Educational Cooperation

International cooperation in education operates within an increasingly complex global environment. Geopolitical fragmentation, technological acceleration, digital infrastructures, and the diversification of educational actors challenge the capacity of traditional multilateral frameworks to ensure coherence and long-term alignment. Education today transcends national borders: knowledge flows globally, digital learning environments are transnational, and global challenges—climate change, migration, artificial intelligence—require coordinated educational responses. In such a context, cooperation must move beyond symbolic commitments toward credible and adaptive governance architectures. This paper proposes a polycentric star-shaped governance model to conceptualize how institutional coherence and territorial innovation can be integrated within a multilevel framework. The model is introduced as a first conceptual and exploratory proposal, intended to stimulate theoretical refinement and future empirical research rather than to prescribe an immediate institutional blueprint.

### Theoretical Foundations

The starting point of this model lies in the policy credibility problem identified by Barro and Gordon (1983). Their theory of time inconsistency demonstrates that public commitments lose effectiveness when political actors cannot credibly bind themselves to long-term objectives. Rational actors anticipate deviation, resulting in weakened trust and suboptimal cooperation.

Although originally formulated within monetary policy, this credibility problem applies directly to international educational governance. States frequently endorse global commitments—such as SDG4—yet domestic political cycles, resource constraints, and shifting priorities may produce divergence between declared objectives and implementation. This generates a structural credibility gap. The star-shaped model emerges as an institutional response to this dilemma: how can international cooperation be structured to stabilize commitments across time and across levels of governance. Ostrom's theory of collective action complements this perspective by emphasizing reciprocity, mutual monitoring, and nested institutional arrangements. In decentralized systems, cooperation becomes sustainable when actors observe each other's contributions and share accountability mechanisms. Education increasingly resembles a global common, requiring coordination among diverse and autonomous actors. Polycentric governance offers a structure in which multiple centres of decision-making

coexist within a coherent institutional framework.

### Education as a Global Public Good

Global public goods theory (Kaul et al., 1999) further strengthens the normative foundation of the model. Education generates transnational spillovers—knowledge diffusion, human capital mobility, technological innovation—that exceed national boundaries. However, global public goods are vulnerable to underinvestment, fragmentation, and free riding. Thus, the credibility problem (Barro–Gordon) and the collective action problem (Ostrom) converge within global education governance. Without credible commitments and reciprocal accountability, international cooperation remains fragile.

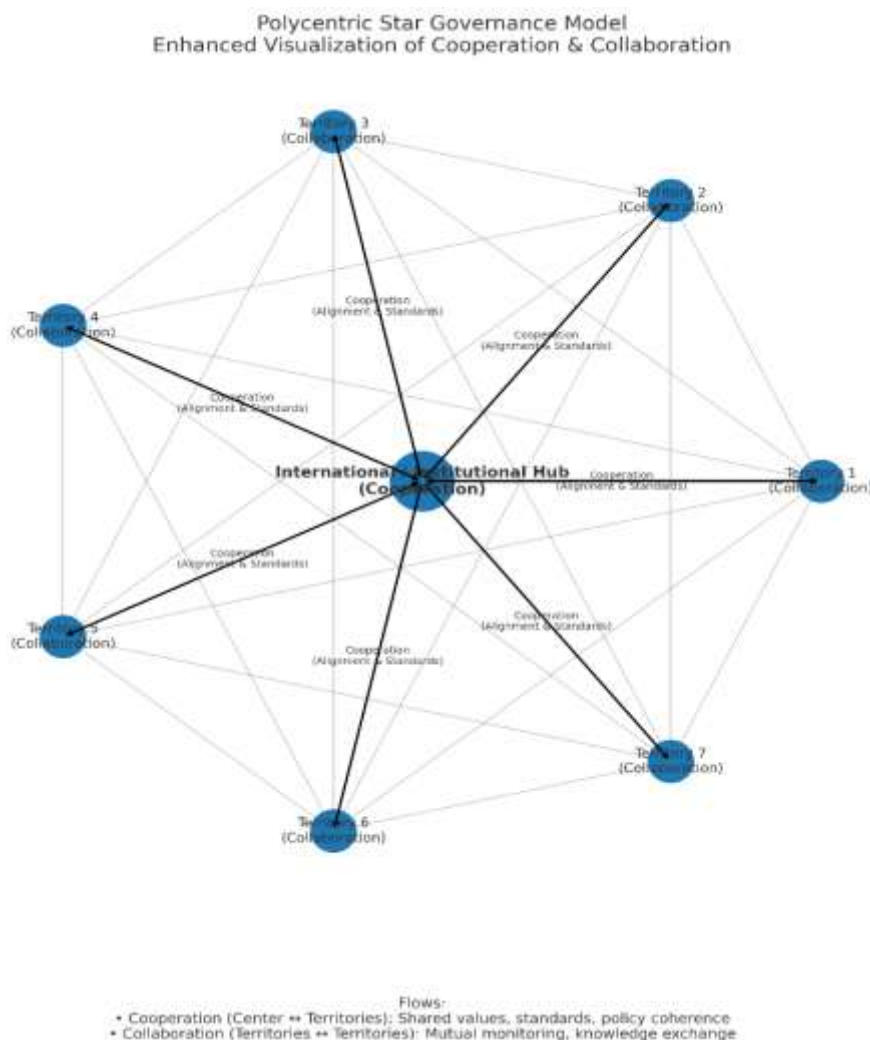
### A Star-Shaped Model: New Hypothesis for International Educational Cooperation

Building on these theoretical insights, the star-shaped governance model is proposed as an architecture capable of reconciling coherence and autonomy, international frameworks and territorial innovation, global commitments and local actions.

The star consists of:

- A central normative hub, representing international cooperation: shared commitments, values, global frameworks (UNESCO recommendations, SDG4 targets, guidelines on AI, global citizenship), and long-term policy coherence.
- Multiple peripheral nodes, representing territorial educational ecosystems: schools, local governments, civic organizations, research clusters, cultural institutions, NGOs, and hybrid public-private initiatives.

Territorial nodes are not passive implementers; they are active generative units capable of producing innovations, practices, and locally grounded models. The centre is not a command point but a coordination and coherence hub.



The distinction between cooperation and collaboration becomes fully meaningful within the geometry of the star.

- Cooperation is located at the centre: it refers to shared commitments, stable rules, credible long-term agreements, policy coherence, and common values. Cooperation in this sense is institutional, normative, and strategic.
- Collaboration is located at the nodes: it represents the operational relationships among educational actors, the co-design of practices, exchange of knowledge, peer-learning, joint experimentation, and day-to-day relational work. Collaboration is relational, situated, and generative.

The star demonstrates that collaboration without cooperation leads to fragmentation, while cooperation without collaboration produces rigidity and lack of innovation. The future of international educational governance depends on holding both in dynamic tension.

The model enables three key dynamics:

- **Bidirectional flow**  
 Territory → centre: local ecosystems contribute innovations and contextual knowledge.  
 Centre → Territory: international frameworks provide coherence, standards, and long-term commitments.
- **Reciprocal accountability**  
 Nodes monitor each other’s progress (Ostrom’s reciprocity), while the centre ensures consistency across the star.
- **Reduced risk of defection**  
 Through shared commitments (Barro–Gordon) and mutual monitoring (Ostrom), the model mitigates the prisoner’s dilemma: collaboration becomes the rational strategy.

**Table 1. Analytical Structure of the Star-Shaped Governance Architecture**

Dimension	Central Hub	Territorial Nodes	Governance Function
Normative Framework	Global standards, ethical commitments	Contextual adaptation	Alignment without uniformity
Decision-Making	Strategic coordination	Participatory processes	Polycentric governance
Knowledge	Standard-setting	Co-creation	Bidirectional learning
Accountability	Shared indicators	Mutual monitoring	Reciprocal trust
Adaptability	Policy refinement	Experimental implementation	Adaptive governance

The **normative framework** dimension highlights the role of the central hub in articulating global standards and ethical commitments. These may include international agreements, SDG benchmarks, or regulatory principles for digital education. Territorial nodes, however, are not passive recipients of norms; they adapt these frameworks to contextual realities. The governance function here is “alignment without uniformity”: coherence is maintained while allowing contextual differentiation.

The **decision-making** dimension distinguishes strategic coordination at the centre from participatory processes at the territorial level. The institutional hub provides long-term direction and coordination mechanisms, while nodes engage stakeholders in localized decision-making. Together, these processes embody polycentric governance, where authority is distributed but structurally connected.

The **knowledge** dimension underscores a critical asymmetry that the model seeks to rebalance. Traditionally, knowledge production flows from centre to periphery. In the star-shaped architecture, however, nodes act as co-creators of knowledge. The central hub sets benchmarks and synthesizes global data, while territorial ecosystems

generate situated practices and innovations. The governance function is bidirectional learning, ensuring that innovation informs policy refinement.

The **accountability** dimension operationalizes the credibility logic derived from Barro–Gordon. Shared indicators and monitoring frameworks established at the centre are complemented by mutual monitoring and peer evaluation among nodes. Accountability thus becomes reciprocal rather than hierarchical, reinforcing trust and long-term commitment stability.

Finally, the **adaptability** dimension reflects the model’s capacity to respond to systemic transformation. Policy refinement at the institutional level is informed by experimental implementation at the territorial level. Adaptive governance emerges from iterative feedback loops rather than rigid compliance structures.

Through this formalization, the star-shaped model is clarified as a relational governance architecture in which each dimension is dynamically co-constructed between centre and nodes.

### **Operational Governance Scenarios (Hypothesis)**

To further clarify its applicability, the model can be illustrated through three governance scenarios that demonstrate how the analytical dimensions operate in practice.

### **SDG4 Implementation in a Polycentric Framework**

Within SDG4 governance, the central institutional hub represents global benchmarks, reporting mechanisms, and shared indicators for educational quality, equity, and inclusion. These frameworks address the credibility problem by stabilizing long-term commitments across political cycles. However, implementation occurs within territorial ecosystems. Municipalities, school networks, and regional authorities translate global benchmarks into locally meaningful strategies. For example, inclusion policies may be adapted to specific socio-economic or cultural contexts. Bidirectional flows are crucial: local innovations—such as new models of community engagement or inclusive pedagogies—feed back into global reporting and policy refinement. This feedback loop mitigates the time inconsistency problem by linking commitment with ongoing evaluation. The result is not uniform compliance, but credible alignment sustained through reciprocal learning.

### **AI Governance in Education**

The governance of artificial intelligence in education presents a particularly relevant test case. At the central level, international organizations and multilateral institutions articulate ethical guidelines, data protection principles, and standards for responsible AI use. These frameworks provide normative coherence and address cross-border risks.

At the territorial level, schools, universities, and educational networks experiment with AI-supported pedagogies, adaptive learning systems, and digital assessment tools. Collaboration among nodes enables peer learning and shared evaluation of technological risks and benefits.

The credibility dimension becomes critical: if ethical commitments remain abstract and disconnected from implementation realities, trust erodes. The star-shaped model addresses this by institutionalizing horizontal knowledge exchange and upward feedback, allowing practical experimentation to inform normative refinement. Thus, AI governance becomes both coordinated and adaptive, avoiding both technological fragmentation and centralized rigidity.

### **Regional Educational Ecosystem Networks**

In regional contexts, the star-shaped architecture can structure cooperation among universities, municipalities, vocational institutions, and civil society actors. The institutional hub provides strategic vision and shared policy orientation, while territorial actors co-design programs responding to local socio-economic needs.

Here, collaboration among nodes plays a decisive role. Lateral partnerships generate shared infrastructures, joint training initiatives, and distributed innovation hubs. The centre coordinates and synthesizes outcomes without centralizing operational authority.

This scenario illustrates how the model prevents fragmentation while preserving distributed leadership. Power asymmetries may still exist, but structured coordination and shared standards reduce the risk of domination by a single actor.

Across these scenarios, the star-shaped model demonstrates how credibility (long-term commitments), reciprocity (mutual monitoring), and coordination (multilevel alignment) interact to stabilize international educational cooperation.

The analytical table provides structural clarity, while the governance scenarios illustrate dynamic application. Together, they transform the model from a purely conceptual metaphor into an operationally intelligible governance architecture capable of addressing both commitment instability and power asymmetry within complex educational ecosystems.

## **Foundational Pillars Of The New Collaborative Order**

For the star-shaped model to serve as a sustainable architecture, it must rest on a set of pillars that ground its normative and operational coherence.

### **Pillar 1: Credibility and Policy Coherence**

Credibility and policy coherence are foundational conditions for sustainable international cooperation in education. Drawing on the logic of policy consistency, cooperation becomes effective only when long-term commitments are aligned with actual policy implementation across levels of governance. Monitoring systems, transparent reporting mechanisms, shared indicators, and alignment with global frameworks (such as SDG4) strengthen trust among actors and reduce the credibility gap between declared objectives and real practices. In a polycentric system, coherence does not imply uniformity, but structured alignment that allows diverse educational ecosystems to operate within a shared normative horizon.

### **Pillar 2: Reciprocity and Mutual Monitoring**

Inspired by Ostrom's theory of collective action, reciprocity and mutual monitoring enable stable cooperation among diverse actors. In international education governance, transparency, peer-learning mechanisms, and shared evaluation frameworks allow institutions and territorial ecosystems to observe, compare, and learn from each other's practices. This reduces the risk of unilateral defection and fosters a culture of responsibility and trust. Mutual monitoring should be conceived not as control, but as a collaborative process that supports collective improvement and distributed accountability.

### **Pillar 3: Collaborative Multilevel Governance**

Contemporary educational systems operate across interconnected levels—global, national, regional, and local. Collaborative multilevel governance ensures that these levels are not hierarchical silos but interdependent components of a coordinated ecosystem. The star-shaped model provides a conceptual structure in which institutional frameworks offer direction and coherence, while territorial actors contribute contextual knowledge and innovation. This pillar emphasizes subsidiarity, coordination, and shared responsibility, aligning governance practices with the complexity of global educational challenges.

### **Pillar 4: Distributed Leadership and Knowledge Co-Creation**

In a polycentric governance model, leadership is distributed rather than centralized. Territorial educational ecosystems—schools, universities, local authorities, and civil society organizations—are recognized as active producers of knowledge, not merely policy implementers. Co-creation processes, participatory design, and collaborative research strengthen innovation capacity and contextual relevance. This approach promotes epistemic equity, recognizing the value of diverse local experiences in shaping global educational agendas.

### **Pillar 5: Shared Standards and Infrastructures**

Shared standards and infrastructures provide the operational backbone of international cooperation. Harmonized indicators, interoperable data systems, open knowledge platforms, and common evaluation tools enable

comparability, transparency, and evidence-informed decision-making. These infrastructures support alignment without imposing rigid uniformity, allowing local adaptation while maintaining global coherence. In the context of digital transformation and AI in education, shared infrastructures also ensure ethical governance and equitable access to knowledge resources.

### **Pillar 6: Ethical and Global Commitments**

Ethical and global commitments define the normative foundation of the star-shaped model. Principles such as equity, inclusion, human rights, sustainability, and responsible digital transformation establish a shared ethical horizon for international cooperation. Framing education as a global common good reinforces the responsibility of institutions and territories to act beyond national interests and contribute to collective well-being. This pillar aligns closely with UNESCO's humanistic vision of education and global citizenship.

### **Pillar 7: Adaptive Governance**

Given the rapid pace of technological, social, and geopolitical change, governance structures must be flexible and responsive. Adaptive governance emphasizes learning-oriented policies, iterative evaluation, and the capacity to adjust strategies over time. The polycentric logic of the star model supports adaptability by enabling continuous feedback loops between institutional hubs and territorial nodes. This flexibility enhances resilience, allowing educational systems to respond effectively to emerging global challenges while preserving long-term strategic coherence.

### **Power Asymmetries, Credibility, And Governance Tensions**

While the star-shaped model seeks to stabilize international cooperation through polycentric coordination, it must explicitly confront the political economy of power asymmetries that shape global educational governance. The credibility problem identified by Barro and Gordon is not only temporal but also political: actors anticipate deviation when power is unevenly distributed and when commitment mechanisms lack symmetrical enforcement.

At the central level, international institutions often occupy a structurally privileged position. They define standards, monitoring criteria, and normative benchmarks. This agenda-setting power may generate risks of centre dominance, where institutional coherence becomes *de facto* normative imposition. If territorial actors perceive that commitments are imposed rather than co-constructed, the credibility of the governance architecture weakens. In such contexts, deviation is not merely strategic but structurally induced by asymmetrical participation.

Power asymmetries also emerge horizontally among territorial nodes. Resource-rich ecosystems—whether geographically advantaged, technologically advanced, or institutionally consolidated—may disproportionately influence knowledge production and policy diffusion. This generates epistemic inequalities within the polycentric system, potentially distorting collaborative reciprocity.

From a credibility perspective, asymmetry directly affects cooperative stability. If weaker nodes anticipate that stronger actors can deviate without consequence, mutual trust deteriorates. Thus, the time inconsistency problem becomes intertwined with power distribution: credibility cannot be sustained without inclusive governance design.

To mitigate these risks, the star-shaped architecture requires:

- Transparent decision-making processes
- Participatory norm-setting mechanisms
- Distributed monitoring systems
- Negotiated rather than imposed standards

Furthermore, adaptive mediation structures are essential to manage conflict and divergence among nodes. In polycentric systems, conflict is not an anomaly but an inherent feature of decentralized governance. The



objective is not to eliminate tension but to institutionalize processes capable of transforming divergence into negotiated alignment.

Finally, excessive coordination demands may generate bureaucratic overload, particularly for weaker actors. Accountability must remain proportionate and context-sensitive to avoid reinforcing structural inequalities.

By explicitly integrating power asymmetries into the credibility framework, the model acknowledges that sustainable international cooperation depends not only on shared commitments but on equitable participation in their formulation and enforcement.

## CONCLUSION

The model remains conceptual and requires empirical validation. Future research should test its applicability across geopolitical contexts and governance environments, examining its capacity to stabilize commitments and manage asymmetries

The polycentric star-shaped governance model can be understood as an institutional response to the credibility dilemma underlying many failures of international cooperation. By embedding long-term commitments within a polycentric and multilevel structure, the model seeks to reconcile global coherence with territorial innovation. Rather than a definitive solution, it offers a conceptual architecture intended to guide scholarly inquiry and policy experimentation in the governance of education as a global public good

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