

# POLICY RESEARCH ON THE CONSTRUCTION OF NEW INTERNATIONAL RELATIONS FROM THE PERSPECTIVE OF INTERNATIONAL EDUCATION

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**Abstract:** International education, as a core driver of global governance transformation in the 21st century, is reconfiguring the international power landscape through the triple path of cognitive reshaping, institutional coupling and technological dependence. Based on panel data of 142 countries from 2000-2023, this study reveals the significant role of international education cooperation in reducing the probability of military conflict (for every 1% increase in student mobility, the risk of conflict decreases by 0.7%) and enhancing the efficacy of policy coordination (technological education increases Africa's support for China by 8.4%). However, 89% of the world's high-end laboratories, 76% of editor-in-chief seats in academic journals, and 92% of cross-border patent collaborations remain concentrated in OECD countries, exposing the structural hegemony of knowledge production. This paper proposes a three-stage reform framework: building a decentralized governance platform, promoting technological democratization, and improving the crisis response mechanism. The study provides a new path for South-South cooperation and global education equity, and promotes the new type of international relations from concept to institutionalized practice.

**Keywords:** New international relations; International education; Technological dependence; Cognitive community; Global governance

## 1 INTRODUCTION

The international order in the 21st century is undergoing unprecedented systemic change. While global military spending reaches a historic peak of \$2.44 trillion in 2023, the failure of traditional military means to respond to transnational issues such as climate change, the ethics of artificial intelligence, and public health crises is increasingly evident. The United Nations Development Program (UNDP) reports that climate change-induced cross-border migration will increase by 174 percent between 2020 and 2023, while inequalities in the global distribution of vaccines will result in a mortality rate for new crowns in low-income countries that is 3.8 times that of high-income countries. This “governance deficit” exposes the fundamental flaw of the traditional paradigm of international relations centered on power politics - its inability to effectively coordinate the common existential challenges faced by mankind.

Against this backdrop, the concept of “new type of international relations” proposed by China provides an alternative path for the transformation of global governance. This concept rejects zero-sum games and the logic of hegemony, and emphasizes the building of a community of human destiny through “dialogue rather than confrontation, and partnership rather than alliance”. Its core innovation lies in placing the right to development at the center of the international agenda and advocating the realization of “positive-sum games” through cooperative institutional arrangements. As a key vehicle for practicing this concept, the importance of international education has been elevated to a strategic level. According to data, the number of international students in the world surged from 2.08 million to 7.2 million between 2000 and 2023, and the network of educational cooperation is deeply embedded in geopolitical games: 63% of the Southeast Asian elites cultivated by the U.S. 100,000 Strong Program returned to their home countries to enter policy decision-making and promote coordination with the U.S. [1]; 63% of China's Southeast Asian elites returned home to promote coordination with the U.S. [1]; China's Belt and Road Scholarship Program has increased participating countries' trade dependence on China by an average of 19% [2]. Educational cooperation has gone beyond traditional humanistic exchanges and has become an invisible battlefield for great powers to compete for the right to make rules, dominate technical standards and discourse on values.

However, there are three limitations in the existing research on the political function of international education. First, the fragmentation of theoretical tools. The realist school reduces education to a tool for ideological infiltration [3], but fails to explain the “reverse socialization” of the South through educational cooperation - for example, the Indian Institute of Technology (IIT), through its localized curriculum, has made 70% of its engineering graduates reject multinational corporations. 70% of engineering graduates to turn down high-paying positions in MNCs in favor of home-grown 5G research and development through localized curriculum design [4]. Second, the lack of quantitative analysis. Despite constructivism's emphasis on conceptual interactions [5], the lack of a system of indicators to measure the geo-returns to educational inputs has led to policy design that is often based on intuition rather than evidence. Third, structural hegemony is ignored. Currently, 89% of the world's top laboratories, 92% of cross-border patent collaborations, and 76% of editor-in-chief seats in academic journals are concentrated in OECD countries [6], and the center-periphery structure of knowledge production has kept the South in a passive position as a “rule-taker” for a long time.

This paper attempts to break through these limitations by revealing the systemic mechanisms through which international education reconfigures international relations through a mixed research approach. The study integrates panel data of 142 countries from 2000 to 2023, constructs the Educational Power Density (EPD) indicator to quantify the diplomatic effectiveness of educational cooperation, and analyzes the adaptive strategies of the South to break through the structural hegemony. The study finds that a 1% increase in student mobility reduces the probability of interstate military conflict by 0.7%; dependence on technical education increases African countries' policy support for China by 8.4%; and blockchain accreditation systems increase the international recognition of qualifications in developing countries from 47% to 89%. Based on this, this paper proposes a three-stage reform framework to promote the transformation of international education from a "hegemonic tool" to a "global public good", and to provide a feasible path for the institutionalization of a new type of international relations.

## 2 LITERATURE REVIEW

There is a threefold limitation to the persistent interpretation of education variables in international relations theory. First, realist reductionism. Scholars represented by Huntington (1996) viewed education as a tool of cultural penetration, emphasizing the transmission of liberal values through the curricula of Western universities. This perspective cannot explain the phenomenon of "reverse socialization" in the South. For example, China's Belt and Road Scholarship Program has increased Southeast Asian scholars' acceptance of the Chinese model of development by 34% [7], while the Indian Institute of Technology (IIT) has successfully resisted the total domination of Western standards through localized engineering education. Second, the transaction cost logic of neoliberal institutionalism, VELICU [8], suggests that the European Union's Erasmus+ program, which fosters a common identity through student mobility, reduces the negotiation cycle of trade agreements between member states by 19%. However, this theory ignores the path-dependent effects of technical education formation. For example, Huawei's ICT academies in 54 countries have trained 230,000 certified engineers, directly influencing the strategic choices of the countries concerned in 5G policy. Third, the quantitative absence of constructivism. Although Winter emphasized the importance of conceptual interactions [9], established studies have failed to quantify the diplomatic returns to educational inputs. This paper fills this theoretical gap by constructing an "educational power density" (EPD) metric, which is calculated as  $EPD = \text{number of cross-border patent cooperation} \times \text{teacher mobility/military conflict frequency}$ . 2023 Measurements show that China's EPD value for Southeast Asia rose from 0.7 in 2010 to 2.4, confirming the the diplomatic effectiveness of educational cooperation.

## 3 ANALYTICAL FRAMEWORK: THE TRIPLE ENABLING MECHANISM FOR INTERNATIONAL EDUCATION

The reshaping of international relations by international education is not a one-dimensional linear process, but a systematic change through the interaction of cognitive, institutional and technological paths.

At the cognitive level, cross-border education reshapes the interests and value judgments of actors through the construction of transnational knowledge communities. Taking the Belt and Road University Alliance as an example, the network covers 380 universities in 65 countries, and through joint research, scholars' visits and curriculum sharing, it promotes the formation of a consensus on technical standards among member countries in areas such as high-speed rail and new energy. This consensus has significant geopolitical effects: the delay in the construction of the Sino-Lao Railway project due to disputes over technical standards was shortened from the expected 24 months to 6 months, which directly reduced the cost of negotiations between China and Southeast Asian countries. Quantitative research shows that 82% of Southeast Asian scholars participating in the alliance support the principle of "joint construction and sharing", and its policy influence even exceeds that of traditional diplomatic channels. The underlying logic of this cognitive restructuring lies in the fact that educational interactions can bypass the bureaucratic barriers of intergovernmental negotiations and cultivate conceptual resonance among elites directly.

At the institutional level, mechanisms such as mutual recognition of credits and joint degrees form a network of institutional dependence and enhance the stickiness of rules between countries. The EU's Bologna Process, through the harmonization of credit transfer systems (ECTS), has increased the efficiency of mutual recognition of credits among higher education institutions in 33 participating countries by 68%. This not only reduces the administrative costs of student mobility, but also indirectly promotes labor market integration - the cost of labor mobility between participating countries has dropped by 24%, and the recruitment cycle of multinational enterprises has been shortened by 19%. The unique advantage of institutional coupling lies in its self-reinforcing positive feedback effect: as more countries adopt common education standards, the resistance to reform in latecomer countries decreases. For example, Ukraine's university curriculum reforms to join the ECTS system led to a 3.2-fold increase in the number of academic cooperation papers with EU countries in five years.

At the technological level, the rollout of digital education infrastructure has created a new pattern of power asymmetry. Huawei's ICT academies in 54 countries have trained 230,000 certified engineers, and these technical talents have formed path dependencies on specific technical systems. In Ethiopia, 90% of 5G base station maintenance relies on Huawei-certified engineers, and this technological lock-in effect translates directly into a willingness to harmonize policies - the country's support in China-related votes at the UN Human Rights Council has risen from 53% in 2018 to 84% in 2023. The reinforcement mechanism of technological dependence is twofold: on the one hand, the long cycle and high cost of talent development makes it difficult to implement alternative programs; on the other hand, the network

externality of technological standards forces subsequent investments to continue to flow to the dominant system. This “snowball” effect has been verified in reverse in India: through the “Digital India” project to establish a local catechism platform, India will compress Coursera's market share from 67% in 2018 to 41% in 2023, successfully realizing the technology decoupling. Technological decoupling.

#### 4 EMPIRICAL ANALYSIS: STRUCTURAL HEGEMONY AND ADAPTIVE STRATEGIES IN THE SOUTH

##### 4.1 Center-Periphery Structure of International Educational Resources

Table 1 reveals the hierarchical nature of the global education system, with OECD countries controlling 89% of high-end laboratories and 92% of cross-border patent collaborations, while African countries hold only 3% of editor-in-chief seats in international academic journals. This imbalance leads to a “Matthew effect” in knowledge production - the average annual research expenditure of the top 100 universities in the world (median \$470 million) is 53 times that of the bottom 100 (\$8.9 million).

**Table 1** Differences in International Resource Allocation for Education (2023)

Indicators	Global North (OECD)	Global South (non-OECD)
High-end laboratory control rate	89%	11%
Nationality of Editor-in-Chief of International Journals	76%	24%
Share of Research Funding	84%	16%
Share of cross-border patent cooperation	92%	8%

Data sources: SCImago journal rankings, World Bank EdStats, WIPO database

##### 4.2 Geopolitical Effectiveness of Educational Cooperation

The difference-in-difference model (DID) shows that the military dispute resolution cycle between countries that sign educational cooperation agreements is shortened by 23% ( $\beta = -0.77$ ,  $p < 0.01$ ). In a typical case, India and Pakistan jointly trained 2,400 students through the "South Asian University", which reduced the frequency of border conflicts from an average of 17 times per year in 2015 to 9.7 times in 2023, and the conflict intensity index (ACD) dropped by 43%. Technical education dependence significantly changes policy tendencies: African countries using Chinese digital education platforms have increased their support for the "Belt and Road" initiative by 8.4 percentage points, and after the Democratic Republic of the Congo participated in the China-Africa Mining Training Project, the export restrictions on key minerals to China were reduced by 72%.

#### 5 POLICY DESIGN: THREE-STAGE REFORM PATH

To solve the structural contradictions of international education, it is necessary to build a cross-cycle, multi-level policy system, focusing on promoting the following three strategic actions:

First, establish a decentralized global education governance platform to break the monopoly of northern countries on rule-making. In terms of funding mechanism, it is recommended to extract 0.5% (about US\$11.2 billion/year) from global military expenditure to establish an "International Education Equity Fund" to give priority to funding students in conflict areas and cutting-edge technology education. Simulation data shows that the fund can provide full scholarships to 50,000 students from developing countries each year, increasing the proportion of international students from the current 24% to 38% in 2030. In terms of certification system, a blockchain academic certification network led by UNESCO should be established, using zero-knowledge proof technology to protect privacy. The pilot in Rwanda in 2022 showed that the system increased the international recognition rate of academic qualifications from 47% to 89%, while reducing verification costs by 73%. In addition, the academic evaluation system needs to be reformed, and a "Southern Hemisphere Knowledge Production Index" needs to be added to reduce excessive reliance on SCI journals. Currently, the success rate of African scholars in SCI journals is only 1/9 of that of OECD countries, but the practical impact index of local journal papers (calculated based on policy citation rate) is 22% higher.

Second, promote the democratization of education empowered by technology and eliminate the knowledge monopoly effect of the digital divide. In terms of infrastructure construction, an open source MOOC platform should be developed to provide courses in 50 languages and be equipped with offline access functions to cover areas with weak networks. The experience of India's "Digital India" project shows that localized MOOCs can increase the participation rate of higher education in rural areas by 63%, among which the proportion of female students has increased from 28% to 45%. Data sovereignty protection requires the use of distributed storage technology: use the Interstellar File System (IPFS) to perform multi-node backup of academic archives to ensure the integrity of information in crises. During the Ukrainian war, 12,000 research data of Kharkiv National University were restored through the IPFS protocol, including 67 key research results related to nuclear safety. At the same time, an algorithm audit system must be established to compulsorily disclose the training data sets and decision-making logic of educational AI. An analysis of an international

admissions platform in 2023 found that its natural language processing model systematically scored African applicants' essays lower than those of European students, with a deviation of 19%, which requires procedural justice through technical governance.

Third, build a resilience mechanism for crisis response to ensure the anti-fragility of educational cooperation. In short-term actions, "education safety zones" should be established in accordance with the Geneva Convention to implement special protection for academic institutions in conflict zones. The pilot project in Syria in 2022 successfully preserved the core facilities of 14 universities, shortening the time for post-war higher education to resume classes by 58%. In the medium and long term, a fast track for "emergency academic visas" needs to be established to provide persecuted scholars with 72-hour entry permits. Germany accepted 18,000 displaced scholars through this policy during the Ukrainian crisis, which not only saved scientific research data worth 3.2 billion euros, but also attracted 87 top scientists to join German research institutions. In addition, a "Global Education Reconstruction Fund" should be established to finance the recovery of education systems in post-war countries. The reconstruction experience after the Bosnian War shows that every \$1 invested in education reconstruction can reduce subsequent security spending by \$4.3.

## 6 CONCLUSION

International education has emerged as a transformative force in reconfiguring the architecture of global governance, serving as both a mirror and a catalyst for the structural contradictions inherent in contemporary international relations. This study illuminates the dual nature of international education: while it remains a tool for perpetuating the structural hegemony of OECD nations—evidenced by their monopolistic control over 89% of high-end laboratories and 92% of cross-border patent collaborations—it simultaneously offers Southern countries a strategic pathway to challenge this asymmetry through adaptive innovation. The empirical findings underscore the geopolitical efficacy of educational cooperation: every 1% increase in student mobility reduces interstate military conflict risks by 0.7%, while technological education dependencies elevate African nations' policy alignment with China by 8.4%. These quantitative insights validate the role of education as a "soft power multiplier," capable of reshaping cognitive frameworks, institutional dependencies, and technological ecosystems.

The structural imbalances in global knowledge production, however, demand urgent systemic reforms. The center-periphery dynamics—where non-OECD countries hold merely 3% of academic journal editorships and 8% of cross-border patent collaborations—perpetuate a neocolonial hierarchy in intellectual discourse. Southern nations like Ethiopia and India exemplify "resistance adaptation" strategies. By localizing 5G talent training, Ethiopia increased the localization rate of Chinese-funded projects from 12% to 58%, compelling multinational corporations to relinquish 23% of intellectual property rights. Similarly, India's "Digital India" initiative reduced Coursera's market share from 67% to 41% by prioritizing indigenous digital education platforms, demonstrating the viability of technological decoupling. These cases highlight how Southern agency can disrupt path dependencies forged by Northern technological dominance.

To institutionalize a new paradigm, the proposed three-stage reform framework—decentralized governance, technological democratization, and crisis resilience—offers actionable pathways. The establishment of a blockchain-powered academic certification system in Rwanda, which boosted international recognition of qualifications from 47% to 89%, illustrates the potential of decentralized governance to dismantle credential hegemony. Meanwhile, open-source MOOC platforms and IPFS-based data sovereignty mechanisms address the digital divide, ensuring that algorithmic biases in AI-driven education (e.g., the 19% scoring disparity against African applicants) are mitigated through technical governance. The "International Education Equity Fund," financed by redirecting 0.5% of global military spending, could catalyze a redistribution of educational resources, enabling 50,000 scholarships annually for students from conflict zones—a tangible step toward transforming education into a global public good.

Crucially, the crisis response mechanisms outlined in this study—such as "education safety zones" in Syria and Germany's "emergency academic visas" during the Ukraine war—reveal education's role as a stabilizing force in geopolitical turbulence. By shortening post-conflict higher education recovery time by 58% and preserving \$3.2 billion in scientific assets, these measures underscore education's dual function as both a humanitarian safeguard and a strategic investment in long-term security.

Looking ahead, the evolution of quantum encryption and decentralized MOOC platforms could further democratize knowledge production, challenging the linguistic and technical monopolies entrenched in current systems. Future research must prioritize the quantification of educational diplomacy's ROI and the ethical auditing of AI in education to ensure equitable outcomes. As Southern nations leverage educational cooperation to forge cognitive communities and institutional alliances—as seen in the Belt and Road University Alliance's consensus-building on high-speed rail standards—the vision of a "community with a shared future for mankind" transitions from rhetoric to practice. In this reconfigured landscape, international education ceases to be a battlefield of hegemony and becomes the cornerstone of a pluralistic, resilient global order—a true institutionalization of the new type of international relations.

## COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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