

GOVERNING TRANSNATIONAL QUALITY AND RESEARCH PARTNERSHIPS IN TRANSDISCIPLINARY PROGRAMMES: CHINA-ITALY INSIGHTS

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Abstract

The expansion of transnational education and research collaborations increases organizational complexity in universities, particularly in transdisciplinary programmes, where epistemic traditions, assessment norms, and cultures diverge. Coordinating such programmes across countries, such as China and Italy, amplifies misalignment risks in academic standards and research outputs, which are valued differently across disciplines and national evaluation systems. This paper presents a case study of a China-Italy undergraduate programme in Engineering-Industrial Design, drawing on the authors' empirical involvement, documentary evidence, partnership mappings, and triangulated thematic analysis, it examines curriculum and assessment alignment as well as research strategies within the context of disciplinary and national differences. The results show that compliance-based quality assurance and opportunity-led partnerships are necessary yet insufficient. Quality assurance often decouples from core academic practices like curriculum design, assessment, pedagogy, and faculty development. Research internationalisation risks leading to fragmented collaborations and misaligned publications without coordinated support. The undergraduate programme thus needs two integrated governance functions: Academic Quality & Transnational Alignment for curricular coherence, standards equivalence, assessment mediation, and site/partner coordination; Research Development & Strategic Partnerships for network building, partnership integration, and bridging research trajectories credible in both Chinese and Italian systems. This differentiation avoids overload while coordination fosters a unified academic identity. The study offers an empirical characterisation of alignment challenges in China-Italy transdisciplinary engineering-design programmes and a practical governance framework to enhance institutional capacity for collaboration and coordination.

Keywords: *Transnational higher education, academic quality, strategic partnerships, transdisciplinarity, China-Italy.*

1. Introduction

Transnational higher education (TNHE) is integral to modern universities, yet its demands are often underestimated. Cross-jurisdictional programmes require equivalent academic standards and learning experiences via coordinated curriculum, assessment, and staff roles. These challenges intensify in transdisciplinary engineering-design programmes amid divergent epistemic traditions, pedagogies, and research evaluation systems (Allinson & Mahon, 2022).

TNHE literature finds compliance-based quality assurance necessary but insufficient. Quality demands ongoing engagement and adaptation, especially where cultural and temporal factors shape standards enactment (Bordogna, 2019). China-international cooperation studies stress institution-level controls attuned to cultural and organisational dynamics (Zhu & Wang, 2022).

This paper analyses governance for quality and research partnerships in a China-Italy Engineering-Industrial Design undergraduate programme. We frame challenges as institutional capacity needs: beyond formalities, coherence requires boundary-spanning that links quality assurance to core academic practices producing equivalence and aligning partnerships and research outputs across disciplinary/national logics (Zheng et al., 2017; Bordogna, 2019).

Research questions are: **What coordination challenges emerge in curriculum/assessment alignment and research partnerships within a China-Italy transdisciplinary programme? What governance capacities mitigate these and bolster integrity across sites, disciplines, and evaluation systems?**

The practice-informed case draws on programme documents, curriculum artifacts, faculty/student feedback, and output traces. Contributions include an empirical profile of transnational transdisciplinary challenges and a framework differentiating and coordinating two functions - Academic Quality & Transnational Alignment; Research Development & Strategic Partnerships - to build capacity amid rising complexity.

2. Theoretical background

China's transnational higher education has evolved from rapid expansion to focus on quality, institutional integration, and national priorities (Shu, 2025). Shaped by Australian and UK partnerships in a regulatory framework (Yang, 2008), quality assurance now requires negotiating a “new shared space” that adapts global standards to local cultural, institutional, and regulatory contexts (Lu, 2019; Zhu & Wang, 2022). Governance is shifting toward adaptive models that integrate transnational actors in financial, organizational, and strategic decisions (Si & Rayner, 2025). In China-Italy TNHE, especially in transdisciplinary programmes, three factors are key.

First, managing tensions between international standards and local contexts. Analytical frameworks address structural complexity, but cultural differences, academic traditions, and time practices affect standards implementation (Bordogna, 2019). Micro-level interactions among staff and partners shape standards enactment (Zhu & Wang, 2022), demanding proactive handling of power asymmetries and trust-building beyond formal rules (Zheng & Ouyang, 2023).

Second, university and interdisciplinary collaboration address wicked problems through knowledge co-creation (Loorbach & Wittmayer, 2023). It bridges pedagogical, cultural, and disciplinary gaps, shares resources, and co-develops teaching and research for sustained quality (Ha, 2018). In interdisciplinary courses, it overcomes hierarchies and silos (Allinson & Mahon, 2022) and enhances students' higher-order and metacognitive skills (Atkinson-Toal, 2024).

Third, engaging local industries and socio-economic contexts. This links international pedagogy to local conditions (Zhu & Wang, 2022), supports project-based learning for professional skills, fills resource gaps, and keeps curricula aligned with industry needs (Eriksson et al., 2025).

3. Methods

This study adopts an embedded, practice-informed case study design focused on a China-Italy transnational undergraduate programme in Engineering-Industrial Design Engineering within the XJTU-POLIMI Joint School (approved by the Chinese Ministry of Education in 2022 and launched in September 2022 with two undergraduate programmes: Architecture and Engineering-Industrial Design). The case study approach examines how academic quality and research partnership development are governed in a transnational, transdisciplinary setting, with attention to the operational work through which alignment is produced and maintained. The evidence base combines programme documents, governance records, staff and student feedback, and outcome traces (Table 1).

Table 1. Evidence base: data sources, artefacts, provenance, and analytical focus for the XJTU-POLIMI Joint School case study (2022-2026).

Data source	Period	Data type / artefacts	Data origin	What it informs
Teaching Plan package	2024 - present	TP drafts + tracked changes; Excel tables (curriculum mapping/notes); diagrams (programme structure); programme-level descriptions; Course syllabi.	TP: Head; Working Group Courses Syllabi	Alignment Governance/ coordination
Programme governance & coordination records	2022 - present	Academic Committee minutes; working-group coordination minutes; partnership agreements; internal communications; Excel files (original TP versions / mapping notes); meeting calendar/frequency records.	Head; Academic Committee / WG secretariats; Faculty	Governance/ coordination Communication
Faculty feedback + Administrative Staff synthesis	A.Y. 2022/23 - Jan 2026	~23-25 course-level reports (free-text; lightly structured template) covering teaching, networking, research; debrief notes/emails (where available); Administrative Office synthesis report (all reports up to Jan 2026)	Faculty; Administrative Staff	Alignment Communication Partnerships/ Research
Student feedback	2024/25-present (evaluations)	POLIMI-style course evaluation reports (structured questionnaires) + summaries;	Students; evaluations focus group with POLIMI coordinator;	Alignment Communication Outcomes

	Apr 2026 (<i>focus group</i>)	focus group with ~15 final-year students + facilitator notes (and transcript, if available)	Administrative Office	
Thesis topic list (for proposed co-supervision)	Feb 2026	~20 thesis topics (titles/keywords) initially shortlisted for POLIMI co-supervision; internal tracking sheet (Excel); supervisor mapping (if recorded)	Faculty thesis coordinator; supervisors	Outcomes Partnerships/ Research
Internship host list + post-graduation destinations	Cohort 2022 final year (2025/26)	complete list of internship companies (whole cohort); destination tracking (employment vs MSc; major; institution/location) (mix of confirmed and intended choices)	Administrative Office records; students (destination data)	Outcomes Partnerships/ Research

All materials were organised chronologically and by source type. Analysis proceeded in two steps. First, a process-oriented document analysis was used to reconstruct key episodes of coordination and alignment work, drawing primarily on Teaching Plan iterations, governance minutes, working-group records, and agreements. Second, qualitative materials (faculty reports, student evaluation summaries, and focus group notes) were analysed thematically to identify recurrent “breakdowns and repairs” related to (a) curriculum and assessment alignment, (b) cross-site communication and coordination, and (c) research/industry integration and partnership development. Outcome traces (thesis topics, internship hosts, and post-graduation destinations) were used as indicators to triangulate patterns emerging from documentary and qualitative evidence.

Findings and recommendations were derived through triangulation across: (1) formal governance and coordination records; (2) curriculum artefacts documenting intended design and revision trajectories; (3) staff and student experience data capturing enacted practices and perceived issues; and (4) outcome indicators reflecting programme outputs and graduate pathways. This multi-source strategy was used to strengthen credibility by checking whether issues observed in one evidence stream (e.g., alignment problems reported by faculty) were also visible in other streams (e.g., Teaching Plan revisions, working-group minutes, student feedback, or output patterns).

4. Results

The analysis identifies three recurrent challenge clusters in governing a China-Italy transnational undergraduate programme in Engineering-Industrial Design. Across the evidence base (Table 1), issues emerge not as isolated incidents but as recurring misalignments that require continuous coordination between POLIMI and XJTU, and across the wider Italy-China institutional interface. A common thread is that formal quality assurance processes alone do not guarantee equivalence in practice: alignment is produced (or fails) through day-to-day decisions about learning outcomes, course sequencing, workload expectations, and the routines through which teaching, assessment and collaboration are enacted. The following findings therefore focus on (1) curriculum and assessment alignment across sites, (2) the weak coupling between teaching delivery and research/industry connections, and (3) communication and coordination breakdowns that shape both alignment and partnership development.

4.1. Finding 1 - Curriculum and assessment alignment across sites

A recurrent challenge is curriculum coherence and standards alignment across POLIMI and XJTU, resulting from incomplete sharing and joint coordination of syllabi, learning outcomes, and sequencing. Misalignments exceed content overlap, disrupting pedagogical logic, generating redundancy, and impeding progression from fundamentals to advanced projects. Assessments that adhere to Chinese regulations are necessary for the adaptation of grading principles for POLIMI faculty. Despite course-by-course mapping to the Italian programme and an extra year in the Chinese curriculum, operational sequencing and delivery issues persist, undermining perceived coherence and workload balance. Some evidence signals:

Syllabus non-disclosure and course overlap: An undeclared XJTU Year 2 Semester 1 elective became compulsory, overlapping substantially with POLIMI’s mandatory Year 2 Semester 2 User Experience course, duplicating learning outcomes and eroding annual distinctiveness.

Sequencing and workload pressures: Two late Basics of Product Design courses yield minimal progression. Semesters surpass 500 contact hours; calendar misalignments exacerbate tensions amid constrained visiting faculty availability. Students report unclear support channels and inconsistent teaching assistants.

Equivalence demands a shared curriculum map with syllabus transparency, joint sequencing to safeguard progression, and workload/calendar mechanisms that anticipate peaks, define support roles, and establish escalation protocols.

4.2. Finding 2 - Weak coupling between teaching delivery and research/industry connections

A second recurrent challenge is the weak integration between teaching delivery and stable research/industry partnerships. The programme creates many external contacts, but these remain personal and episodic rather than developing into lasting collaborations. This issue is evident in design fields, where the host lacks a design department, cross-departmental links are unexplored, and collaboration relies on ad hoc efforts rather than shared research pathways. Some evidence is:

Ad hoc networking without institutional follow-up: Faculty feedback records cases where one staff member introduced visiting lecturers, meetings occurred mainly in Chinese, and no structured continuation followed. This limits knowledge transfer and sustained collaborations.

Outcomes show breadth of exposure but limited institutionalisation: Internship lists show diverse company placements, mainly in engineering/technology. Of approximately 20 thesis topics shortlisted for POLIMI co-supervision, only two proceeded, depending on individual availability rather than embedded structures.

To strengthen this link, institutional mechanisms are needed: shared research mappings across departments, assigned partnership leads, bilingual meeting support, and simple templates to turn contacts into joint work.

4.3. Finding 3 - Communication and coordination breakdowns

A third recurrent challenge is communication and coordination breakdowns affecting daily delivery and strategic alignment. The core issue is a practical communication gap: visiting faculty struggle with spoken Chinese interactions limiting meetings, troubleshooting, and informal coordination. Unclear support roles and weak escalation pathways confuse faculty and students on key contacts, while inconsistent tutor/TA guidance creates conflicting channels that favour convenience over course coherence. Some evidence signals:

Language-mediated loss of meaning: Faculty report difficulties sustaining Chinese conversations, restricting real-time participation and causing meaning loss in coordination.

Unclear support channels and inconsistent guidance: Operational issues lack ownership; students prefer Chinese-speaking TAs for instructions, despite conflicts with instructors.

Programme coherence requires an explicit communication architecture: defined contacts for operations, escalation protocols, bilingual facilitation for key meetings, and routines aligning TA guidance with instructors.

5. Discussion

Across the three findings, a pattern emerges: programme challenges arise not from absent formal mechanisms, but from gaps between formal arrangements and operational demands in transnational, transdisciplinary contexts. First, QA compliance does not ensure academic equivalence. Assessments follow Chinese rules, and curricula map systematically to the Italian programme, yet equivalence demands coherent enactment through shared syllabi, non-redundant sequencing, manageable workloads, and reliable delivery. Undisclosed components, redundant projects/labs, and calendar/workload constraints erode comparability across sites. Second, partnerships do not drive research development. Frequent industry contacts remain person-dependent and uninstitutionalised. Without assigned ownership, bilingual follow-up, and simple agreements on objectives, timelines, and resources, they yield few sustained collaborations or co-supervisions. These reframings highlight the paper's contribution: in transnational, transdisciplinary provision, the key challenge is governance capacity to link QA/partnerships to core academic processes, turning activity into sustainable development. We propose a pragmatic governance framework with two coordinated functions, implemented via delegated responsibilities or groups.

Function A - Academic Quality & Transnational Alignment. This function sustains practical equivalence via curriculum coherence; standards/assessment calibration; faculty support for cross-site delivery; and mediation for syllabus transparency, sequencing, workloads and calendars. Includes operational communication architecture. It links to programme coordination and curriculum groups for joint decisions.

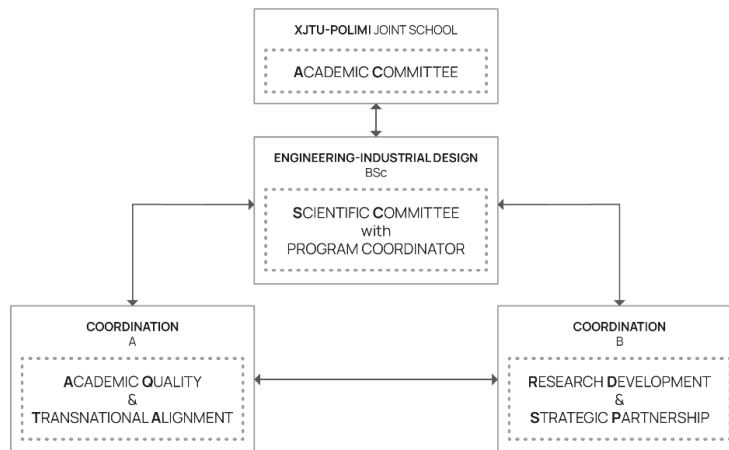
Function B - Research Development & Strategic Partnerships. This function converts contacts into sustainable research via partnership portfolios; partner prioritisation; network building; cross-context publication support; and research-industry interfaces. Use research mappings, bilingual facilitation, and lightweight templates.

6. Conclusions

Figure 1 presents a proposed governance architecture of the Engineering-Industrial Design BSc within the XJTU-POLIMI Joint School. The Joint School Academic Committee provides overarching oversight across programmes, while the programme-level Scientific Committee (including the Programme

Coordinator) steers Engineering-Industrial Design. Two differentiated coordination functions operate under this structure—Coordination A (Academic Quality & Transnational Alignment) and Coordination B (Research Development & Strategic Partnership)—linked by a bidirectional interface to ensure iterative alignment between educational quality decisions and partnership/research development. The framework also implies two feedback logics: assessment and delivery constraints should inform curriculum choices, and partnership activity should translate into cumulative research outputs rather than episodic contacts.

Figure 1. Two coordinated governance functions for institutional capacity.



Using an institutional capacity lens, the paper shows that key challenges in the China-Italy programme are driven less by the absence of formal rules than by recurring misalignments between formal arrangements and the operational work required for coherent delivery (e.g., syllabus transparency, sequencing, workload/calendar feasibility, and coordination). It also shows that broad external exposure (internships and contacts) does not automatically generate research development or durable partnerships without clear ownership, bilingual follow-up capacity, and lightweight operational agreements. The proposed dual-function governance framework supports a shift from compliance and activity toward equivalence in practice and cumulative institutional development in transnational, transdisciplinary programmes.

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