

# Coupling and Linkage of Four-in-One Classrooms: Generative Logic and Institutional Construction of Practical Education Community in Universities in the New Era

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## Abstract

Centered on the fundamental task of fostering virtue through education, targeting prominent practical dilemmas including separated fields, fragmented resources and disconnected stakeholders among in-classroom theoretical teaching, on-campus extracurricular practice, off-campus social immersion and global international education (collectively named the Four-in-One Classrooms). Adopting a combined methodology of conceptual synthesis and literature research, this paper first defines the connotation, boundary and functional coupling relationship of the Four-in-One Classrooms. From theoretical, practical and value dimensions, it elaborates the inherent generative logic of the practical education community, and sorts out four major realistic constraints restricting the linkage of the Four-in-One Classrooms, namely institutional, content-based, resource-based and evaluation-related obstacles. This study concludes that reconstructing collaborative organizational structures, facilitating mutual recognition of curriculum credits, integrating an all-domain education resource platform, and remedying the deficiencies of embedded international education constitute the core paths for constructing an integrated practical education community. This research clarifies the progressive coupling relationship among the Four Classrooms and establishes a practical institutional framework for multi-classroom linkage, providing solid theoretical references and feasible practical solutions for the reform of all-scenario practical education in contemporary universities.

## Keywords

Four-in-One Classrooms, Practical Education Community, Collaborative Education, All-Domain Talent Cultivation, Internationalized Education

## 1. Introduction

Transitioning from pure knowledge transmission to holistic competency cultivation, higher education in the new era regards practical education as a pivotal medium linking theoretical instruction with social application and domestic cultivation with international empowerment, which has become a core initiative for Chinese universities to implement the fundamental task of fostering virtue through education and improve talent training quality. Alongside the continuous expansion of educational scenarios, the traditional single-classroom education model has evolved into a multi-scenario cultivation framework anchored in the Four-in-One Classrooms: theoretical classroom lays disciplinary foundations via classroom lectures, intramural practical classroom expands capabilities through on-campus practical activities, social field classroom polishes students' competencies amid real-world social contexts, and international classroom broadens students' global horizons and core competitiveness [1]. As each component of the Four-in-One Classrooms bears differentiated educational functions, coordinated construction of an interconnected educational ecosystem becomes an inherent requirement.

Despite sustained progress in practical education reform across Chinese universities, fragmented governance remains a conspicuous bottleneck. Administered by disparate functional departments, the Four-in-One Classrooms lack unified goal planning, coherent curriculum design and coordinated resource allocation, resulting in isolated internal and external as well as domestic and international educational resources that fail to generate regular collaborative educational synergy [2]. Existing academic research predominantly focuses on the integration of theoretical and intramural practical courses, or separately explores school-enterprise practical cooperation and international education. Few studies incorporate social field learning and overseas international education into a unified analytical framework, neglecting the inherent progressive coupling of the Four-in-One Classrooms and lacking systematic theoretical construction and feasible path design for the practical education community under their coordinated linkage.

This paper adopts a research method that integrates conceptual synthesis and systematic literature research. Firstly, it applies the conceptual synthesis method to clarify the core connotations, structural boundaries, and internal logical relationships of the Four-in-One Classrooms and the practical education community, thereby establishing a solid theoretical foundation for this research. Secondly, based on systematic literature review and typical case analysis, this paper deductively refines the three-level generative logic of the practical education community and summarizes four core practical barriers that restrict the collaborative development of multi-scenario education.

Against such backdrop, this paper takes functional coupling of the Four-in-One Classrooms as the entry point, unpacks three-tier generative logic of the practical education community, diagnoses practical barriers restraining cross-module collaboration, and systematically designs a multi-stakeholder, cross-scenario and internationalized institutional system for the practical education community. It not

only enriches theoretical research on collaborative higher education, but also delivers operable references for universities to eliminate classroom boundaries and deepen practical education reform.

## 2. Definition of Core Concepts

The Four-in-One Classrooms constitute a progressive multi-field practical education system with dual-layer logical implications. On one hand, each subdivision boasts clarified functional boundaries: the theoretical classroom relies on formal disciplinary curricula and in-class teaching to deliver systematic theoretical knowledge; the intramural practical classroom adopts on-campus innovation competitions, student associations and intramural training to facilitate preliminary knowledge transformation from theories to hands-on practice; the social field classroom is anchored in enterprise internship bases, urban communities and research venues to realize the socialized application of professional expertise; the international classroom draws on overseas joint schooling programs, global study tours and Sino-foreign collaborative projects to cultivate students' international core competitiveness. On the other hand, the four subdivisions follow progressive developmental logic consistent with talent growth laws: theoretical learning → intramural drilling → social verification → global refinement, forming an interconnected and complementary full-chain talent cultivation system under the unified framework of Four-in-One Classrooms.

This paper further clarifies three core conceptual connotations and cross-scenario activity classification criteria. First, “linkage” refers to the organic connection and interactive cooperation among the four classrooms in terms of teaching objectives, curriculum content, resource allocation and achievement recognition, which breaks the isolated operation of single scenarios and realizes the organic docking of different educational links. Second, “coupling” emphasizes the functional interdependence and synergistic matching of the four classrooms, that is, each classroom has unique educational functions, and the superposition and interaction of multiple functions produce a comprehensive educational effect that is far greater than the sum of individual scenarios, realizing complementary advantages and progressive empowerment. Third, the Practical Education Community is a standardized, institutionalized and sustainable multi-stakeholder educational governance ecosystem, which takes high-quality innovative talent cultivation as the core goal, integrates universities, governments, enterprises, overseas universities and other subjects, and realizes resource sharing, curriculum docking and mutual recognition of results across all four classroom scenarios [3].

It is worth noting that the progressive logic of “theoretical learning → intramural drilling → social verification → global refinement” is not an absolute rigid linear model, but a mainstream basic cultivation path suitable for most disciplines. In practical talent training, the model has obvious iterative characteristics and discipline-specific heterogeneity. For applied disciplines such as engineering and management, social verification and on-campus drilling can be iterated many times,

and students can return to campus to supplement theoretical learning after social practice; for interdisciplinary and international-oriented majors, global refinement can be advanced in advance, forming a development path of “theoretical learning + global frontier perception → intramural in-depth drilling → social high-standard verification”. This flexible iterative path conforms to the diversified growth laws of talents in different disciplines and enhances the practical adaptability of the Four-in-One Classrooms model.

### **3. Generative Logic of Practical Education Community under Four-in-One Classrooms Linkage**

#### **3.1. Theoretical Logic: Inherent Functional Coupling of the Four-in-One Classrooms**

Talent development features gradual integration of theory and practice as well as domestic learning and global exposure, which endows the categorized yet progressive Four-in-One Classrooms with natural academic foundations for collaborative operation. The theoretical classroom establishes students’ systematic disciplinary knowledge framework as the theoretical prerequisite for subsequent practical learning; the intramural practical classroom enables initial theoretical-to-practical transformation within confined on-campus scenarios; the social field classroom aligns learning with authentic social demands to promote industrial and social implementation of expertise; the international classroom benchmarks global industrial standards and cutting-edge academic achievements to polish students’ comprehensive capabilities for global competition. Instead of isolated individual modules, the Four-in-One Classrooms extend progressively from classroom to campus, from campus to society and from domestic to global contexts with mutually supplementary and reinforcing relations. Accordingly, a community-based governance mechanism is indispensable to streamline the full educational process and realize step-by-step cultivation of students’ knowledge, practical abilities and comprehensive literacy.

#### **3.2. Practical Logic: Compelling Demands to Address Fragmented Education Governance**

Three typical fragmentation plights prevail in current university practical education targeting the implementation of Four-in-One Classrooms. First of all, field segmentation stemming from separated administrative governance leads to disjointed teaching arrangements: theoretical courses lack extended practical arrangements while off-campus social practices deviate from formal disciplinary training objectives. Secondly, educational resources exist in isolated silos, as intramural research facilities, off-campus enterprise internship bases and overseas cooperative resources are controlled by independent entities without school-wide coordinated allocation for the Four-in-One Classrooms. Thirdly, uni-dimensional evaluation dominated by theoretical classroom written exam scores fails to form standardized credit conversion rules for competition awards, social practice cre-

dentials and overseas study experiences, discouraging students' active participation in diversified practical activities across the Four-in-One Classrooms. The practical imperative to resolve above deficiencies drives the establishment of a practical education community to consolidate diverse stakeholders and integrate scattered educational resources of the Four-in-One Classrooms.

### **3.3. Value Logic: Alignment with National High-Quality Talent Development Strategies**

High-quality advancement of Chinese higher education requires cultivating outstanding talents with profound patriotism and global competence, a strategic goal precisely matched by the community-based Four-in-One Classrooms integrated education model. The social field classroom cultivates students' sense of social responsibility and patriotism via grassroots internships and field investigations linking individual development with national social progress; the international classroom enhances cross-cultural communication proficiency and global vision through transnational competitions and overseas collaborative projects; meanwhile, the theoretical and intramural practical classrooms consolidate disciplinary foundations to underpin students' subsequent social practices and global competitions. Therefore, the linkage-based community built upon Four-in-One Classrooms balances domestic literacy cultivation and international competency empowerment, fully conforming to the value orientation of national contemporary talent development strategies.

## **4. Realistic Barriers Restricting Community Construction via Four-in-One Classrooms Collaboration**

### **4.1. Institutional Barrier: Absence of Top-Level Coordination Caused by Administrative Segmentation**

The subdivisions of Four-in-One Classrooms fall under disparate university functional administrations: the Academic Affairs Office administers the theoretical classroom, the Communist Youth League Committee governs the intramural practical classroom, individual academic departments manage scattered projects of the social field classroom, and the International Affairs Office is responsible for the international classroom. Each department operates under isolated administrative regulations without overarching collaborative design for the Four-in-One Classrooms. Most universities have not set up cross-departmental specialized agencies for practical education, resulting in overlapping jurisdiction, ambiguous power allocation and insufficient institutional guarantee for curriculum connectivity, resource sharing and achievement accreditation across all modules of Four-in-One Classrooms.

### **4.2. Content Barrier: Disjointed Teaching Curricula across Four-in-One Classrooms**

Overall curriculum planning deficiency results in obvious disconnection through-

out the educational chain of Four-in-One Classrooms. Core courses in the theoretical classroom overemphasize theoretical indoctrination with insufficient incorporation of industrial case studies and global frontier updates; innovation contests and club activities of the intramural practical classroom are designed separately without referencing formal disciplinary curriculum standards; short-term sporadic off-campus internships and surveys within the social field classroom barely connect with students' regular learning schedules; independently developed overseas courses and study programs of the international classroom cannot be coherently docked with domestic practical training, breaking the closed-loop talent cultivation system of Four-in-One Classrooms.

#### **4.3. Resource Barrier: Dual-Side Isolation of Domestic and International Educational Resources for Four-in-One Classrooms**

Practical education resources supporting Four-in-One Classrooms suffer from dual siloed constraints. Internally, university laboratories prioritize teaching tasks of theoretical and intramural practical classrooms with restricted opening for social field classroom fieldwork and international classroom overseas training programs. Externally, most university-industry and university-community cooperation relies on short-term informal contracts lacking stable long-term co-construction mechanisms; furthermore, high-quality overseas curriculum and internship resources for the international classroom are only accessible to a small number of exchange students rather than the entire student cohort, failing to satisfy the all-domain resource demand of the practical education community for full implementation of Four-in-One Classrooms.

#### **4.4. Evaluation Barrier: Deficient Accreditation Mechanism for Diversified Practical Achievements of Four-in-One Classrooms**

Existing academic assessment system centers predominantly on written examination results of the theoretical classroom, lacking unified appraisal criteria covering all subdivisions of Four-in-One Classrooms. No standardized rules are available to convert awards from disciplinary competitions, off-campus internship certifications and overseas research outcomes into official academic credits. Practical performance assessment generally depends on written reports and simple administrative verification without quantified indicators for practical process and competency improvement, whose rigid single-dimensional evaluation seriously dampens students' enthusiasm for multi-scenario practical engagement across Four-in-One Classrooms.

### **5. Institutional Construction Paths of Practical Education Community Based on Four-in-One Classrooms Coupling**

Based on the four core practical barriers restricting the collaborative operation of the Four-in-One Classrooms summarized in the previous section, this section

proposes targeted, barrier-matched optimization paths for community construction. Specifically, the top-level collaborative governance framework addresses the institutional barriers caused by administrative segmentation; the integrated credit-recognition curriculum system resolves content disconnection barriers across multi-scenario teaching; the embedded internationalization reform breaks the dual domestic and international resource isolation barriers; and the multi-dimensional full-process guarantee mechanism remedies the single and incomplete evaluation system barriers. The one-to-one correspondence between diagnostic problems and optimization strategies effectively constructs a logical closed loop from obstacle identification to path improvement.

### **5.1. Restructuring Collaborative Governance Framework to Consolidate Top-Level Resource Coordination for Four-in-One Classrooms**

Universities shall establish a university-level specialized management body for practical education community construction to coordinate cross-departmental routine work of Four-in-One Classrooms via regular joint meetings, eliminating internal administrative fragmentation and external stakeholder communication obstacles [4]. A university-wide integrated resource sharing platform is built to break cross-field resource barriers for Four-in-One Classrooms: on-campus laboratories and competition bases are fully open for social field classroom fieldwork and international classroom overseas training; standardized long-term off-campus practice bases are constructed through formalized cooperation with leading industrial enterprises and local communities; all overseas partner university curricula, internship opportunities and international contest resources for the international classroom are cataloged on the platform and open to all enrolled students to lower access thresholds for global educational resources of Four-in-One Classrooms.

### **5.2. Realizing Interconnected Curriculum System and Mutual Credit Recognition across Four-in-One Classrooms**

Centered on professional talent cultivation objectives, universities shall formulate integrated curriculum layout enabling content coherence and credit mutual recognition across the Four-in-One Classrooms. First, revise core and elective courses of the theoretical classroom by increasing practical class hours embedded with industrial real cases and international cutting-edge disciplinary developments to strengthen theory-practice and domestic-global content linkage within Four-in-One Classrooms. Second, adopt modular curriculum design following the progressive path: theoretical lectures in the theoretical classroom, targeted intramural training in the intramural practical classroom, on-site occupational practice and social research in the social field classroom, and overseas academic exchange plus Sino-foreign joint research in the international classroom, forming a seamless full-cycle cultivation chain of Four-in-One Classrooms. Third, formulate unified quantified accreditation policies specifying detailed credit conversion standards

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for competition honors, internship credentials and overseas research achievements to realize cross-module outcome mutual recognition among Four-in-One Classrooms.

### **5.3. Deepen Embedded Internationalization to Fill Global Education Shortfalls of Four-in-One Classrooms**

Incorporate overseas partner universities and multinational corporations as formal council members of the Practical Education Community to advance in-depth integration between the international classroom and the other three subdivisions of Four-in-One Classrooms. In terms of project design, adopt the hybrid training mode of domestic preliminary training + overseas advanced study tour: students complete theoretical learning and intramural practice via theoretical and intramural practical classrooms before participating in short-term overseas internships and joint research sponsored by community projects to translate domestic training outcomes into global practical experience for the international classroom. For bilateral academic exchange, launch reciprocal practical programs: domestic students go global via the international classroom to participate in transnational industrial projects, while inbound international exchange students access China's social field classroom for domestic field research and corporate internships, realizing bidirectional complementation and sharing of Sino-foreign practical educational resources for the whole Four-in-One Classrooms system.

### **5.4. Optimize Multi-Dimensional Safeguard Mechanisms for Sustainable Operation of Four-in-One Classrooms**

Community Three supporting institutional arrangements are formulated to guarantee long-term stable community functioning for Four-in-One Classrooms implementation. First, establish a pooled teaching faculty bank consisting of on-campus academic instructors, enterprise industrial mentors and overseas foreign teachers, who jointly deliver interdisciplinary courses and supervise practical projects across Four-in-One Classrooms with regular cross-border faculty training to improve cross-scenario teaching competency. Second, implement co-sponsored annual practical education projects jointly funded by universities, cooperative enterprises and overseas partners; all projects span the full spectrum of Four-in-One Classrooms and encourage interdisciplinary and cross-grade student team participation. Third, launch dynamic quantified performance appraisal covering indicators including cross-module linkage efficiency of Four-in-One Classrooms, resource utilization rate, students' practical output and international competition awards; appraisal results are incorporated into institutional teaching evaluation and annual faculty/department assessment to impose binding institutional constraints for sustainable community advancement.

## **6. Conclusion and Prospect**

Coupling and coordinated development of the Four-in-One Classrooms serves as

a core driver for constructing the practical education community in contemporary Chinese higher education. Its inherent construction necessity originates from the natural functional coupling among four educational subdivisions as well as its inherent value consistency with national high-end talent cultivation strategies. Constrained by administrative segmentation, disjointed curriculum design, isolated resource allocation and unitary evaluation mechanism, fragmented practical education of Four-in-One Classrooms cannot be resolved by individual universities or single participating stakeholders alone. Through community-based integrated governance covering internal-external and domestic-overseas multi-stakeholders, universities can restructure top-down collaborative administrative systems, build interconnected credit-transfer curriculum frameworks, integrate full-spectrum practical resources, promote deep fusion between internationalized education and domestic practical training within Four-in-One Classrooms, and complete supporting mechanisms concerning faculty management, project operation and quantitative assessment. Such systematic reforms thoroughly break artificial classroom boundaries and materialize the closed-loop cultivation path of in-class theoretical grounding → on-campus skill training → off-campus social refinement → global competency expansion for Four-in-One Classrooms, providing targeted empirical references for high-quality sustainable development of university practical education.

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

### References

- [1] Wang, H. and Wang, S.L. (2025) Analysis on the Construction of Practical Education System in Colleges and Universities from the Perspective of Education Power. *Guidelines of Ideological and Theoretical Education*, No. 12, 138-145. (In Chinese)
- [2] Yang, X.H. (2018) “Three-Wide Education” in Higher Education: Theoretical Implications, Realistic Problems and Practical Paths. *China Higher Education*, No. 18, 4-8. (In Chinese)
- [3] He, Y. and Li, C.M. (2025) Analysis of the Construction of Practical Education Community in Colleges and Universities from the Perspective of System Theory. *Heilongjiang Higher Education Research*, **43**, 112-117. (In Chinese)
- [4] Tang, C.S. (2019) Research on the Innovation of Practical Education Mechanism in Colleges and Universities. *School Party Building and Ideological Education*, No. 24, 61-63. (In Chinese)