

Translating Urban Culture into Educational Practice: Innovation, Tolerance, and Openness

イノベーション・寛容・開放——都市文化の
牽引のもとにおける教育の進路選択と学校運営実践

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Abstract

Guided by Hangzhou's urban culture of "innovation-driven development and tolerance for failure," This study explores the mechanism for translating macro-level culture into micro-level school practices. Integrating the theory of Sociotechnical Imaginaries (SI) with the Action Research paradigm, This study examines how educators, acting as key translators, decode collective visions into institutionalized social orders. Case studies of Hangzhou No. 2 High School and Xianghu Future School reveal that educators have constructed a systematic practice characterized



by the school-based "Seven Actions," including Holistic Sports, Immersive Arts, and Interdisciplinary Sci-Tech Innovation. Reflecting on these practices, the study distills "Three Concepts" (the Big Era View, Big AI View, and Big Curriculum View) as a theoretical framework derived from the practical inquiry. Furthermore, it discusses the "beautiful risk" educators assume when pioneering the uncharted territory of future education. The research concludes that the "Hangzhou Model" offers a localized action model for effectively implementing macro visions.

要約

杭州の「イノベーション駆動と失敗への寛容」という都市文化に着目し、本研究は、マクロレベルの文化がミクロレベルの学校実践へと転換される際の「翻訳メカニズム」を探究することを目的とする。社会技術的想像力 (Sociotechnical Imaginaries: SI) の理論とアクションリサーチ (Action Research) のパラダイムを統合し、教育者が重要な翻訳者として、集合的ビジョンをいかに制度化された社会秩序へと解説・構築していくのかを検証した。杭州第二中学および杭州湘湖未来学校の事例研究を通して、教育者が「全人スポーツ」「没入型芸術」「学際的科学技術イノベーション」などを含む学校独自の「七大大行動 (Seven Actions)」を媒介として、体系的な実践を形成していることを明らかにした。これらの実践に対する省察に基づき、本研究は実践的探究から導出された理論的枠組みとして、「三大観念 (Three Concepts)」(大時代観・大 AI 観・大カリキュラム観) を抽出した。さらに、未来教育という未踏の領域を切り開く上で、教育者が引き受ける「美しいリスク (Beautiful Risk)」の概念についても論じた。

結論として、本研究が提示する「杭州モデル」は、マクロなビジョンを効果的に実践へと転換するための、ローカライズされた行動モデルとして位置づけられる。

Keywords: Education Modernization; High-Quality Development of Basic Education; Innovation-Driven; tolerance-for-failure Incentive; Future Education; Sociotechnical Imaginaries (SI); Action Research

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アクションリサーチ

1. Introduction

1.1 Research Background

Basic education in China is currently undergoing profound and diverse transformations, with great momentum. Regional education across the country exhibits distinct local characteristics. Regional culture serves as the background and fundamental basis for the development of local education. Hangzhou, Zhejiang Province, a city with both a digital economy and historical roots, sees its education development as both following national education reform trends and embodying the distinct characteristics of its urban culture.

In recent years, under the guidance of the urban cultural philosophy of innovation-driven development, tolerance for failure, and prioritizing education, the development of basic education in Hangzhou has demonstrated remarkable vitality and a grand pattern. The emergence of the "Six Little Dragons of Hangzhou" in 2025—referring to six cutting-edge private tech firms: Unitree (游戏科学), DeepSeek (深度求索), Game Science (游戏科学), Manycore (群核科技), BrainCo (强脑科技), and DEEP Robotics (云深处科技)—has once again drawn widespread attention to Hangzhou's education from domestic and even international educational sectors. These enterprises, leading in robotics, AI, and brain-computer interfaces, reflect the synergy between Hangzhou's educational philosophy and its innovation ecosystem.

However, the existence of this gap constitutes a major practical challenge and a theoretical blind spot. Practically, the lack of a clear transmission mechanism hinders policy execution, often leaving grand visions, such as the innovation-driven development mandate, stranded at the macro level. Schools, lacking a rational guide for decoding urban culture, risk engaging in conceptual idling or blindly following trends, which leads to inefficient resource allocation and a failure to cultivate future-ready talent. Theoretically, current organizational theories only offer passive

explanations, focusing on policy or resources. Our study is thus essential because it seeks to provide a meso-level bridge—the Educator Translation mechanism—that not only clarifies how collective visions are institutionalized but also elevates the educator’s role from a passive recipient to an active constructor of the city’s desired future.

1.2 Research Objectives

The author has been deeply involved in school education in Hangzhou for over 20 years, successively serving as the principal of Hangzhou No. 2 High School (hereinafter referred to as Hangzhou No. 2) and Hangzhou Xianghu Future School. Based on the author's long-term practice in Hangzhou, this paper aims to respond to the aforementioned academic gap. The core objective of this study is not simply to describe Hangzhou's educational model, but to:

- **Theorize Urban Culture:** To theorize Hangzhou's urban culture of innovation and tolerance into an analyzable, institutionalized collective vision.
- **Deeply Elucidate the Role of the Educator:** To explain how the educator, as a pragmatic actor, actively translates this macro vision and constructs it into educational practices at the micro level.
- **Distill an Action Model:** Through a systematic presentation of the Action-Reflection process, to distill an Educator Action Model that responds to the vision, and a localized scheme for future education available for reference.

1.3 Research Questions

To achieve the above objectives, this study will focus on the following three research questions:

1. What unique educational collective vision does Hangzhou's urban culture of innovation, tolerance, and prioritizing education present?
2. How does the educator (as an action researcher) translate this urban culture and construct it into concrete, systematic school practices?

3. Within this Action Research cycle of translation and construction, what kind of talent cultivation philosophy and localized Future School model can be distilled through reflection?

2. Literature Review: Innovation, Tolerance for Failure, and Prioritizing Education—The Cultural Choices of an Innovative City

2.1 Innovation: The Driving Force of Urban Development and the First Principle of Educational Reform

Hangzhou places great importance on innovation in its urban development. The city has ranked 14th in the Global Innovation Index's top 100 science and technology clusters for three consecutive years and holds the 4th position nationwide in the evaluation of innovation capabilities of national innovative cities. By September 2025, a total of 137 provincial key laboratories in Zhejiang had been newly recognized, with 94 of them led by units in Hangzhou, accounting for 68.6% of the provincial total. The cumulative number of provincial key laboratories led by Hangzhou-based units has reached 203. Currently, Hangzhou has established the Sci-Tech Innovation Fund, the Innovation Fund, and the M&A Fund, with the total scale of these three major funds expected to reach 300 billion yuan this year. As LIU Fei, Member of the Standing Committee of the Zhejiang Provincial Party Committee and Secretary of the Hangzhou Municipal Party Committee, stated, "Hangzhou strives to be at the forefront of shaping new development advantages through scientific and technological innovation, accelerates the construction of a city with higher levels of innovation vitality, and contributes to high-level scientific and technological self-reliance and self-strengthening."

When the civilization of innovation focuses on education, it forms an endogenous dynamic for the development of urban civilization and culture, thereby awakening the vitality of education. In March 2023, the Department of Education of Zhejiang Province issued the *Detailed Rules for Supporting the Construction of New-Type Universities in Zhejiang Province*. Through methods such as case-by-case

discussion and one policy per school, it supports the construction of new-type universities in terms of funding guarantees, land demand, resource input, and educational and teaching reforms.

Relying on the 1+2+33+7+N framework (1 national laboratory, 2 national major scientific and technological infrastructures, 33 national key laboratories, 7 provincial laboratories, and N other innovation platforms), and anchored by high-level universities such as Zhejiang University and Westlake University, Hangzhou proposes to build an innovation ecosystem and achievement transformation base surrounding universities and major sci-tech innovation platforms. This forms a Hangzhou Model of "Discipline + Platform + Industry," better facilitating synergy among different innovation subjects and gathering strength for urban technological innovation. Under government guidance, Hangzhou No. 2 High School Baima Lake School provides scenarios for Zhejiang Uniview Technologies Co., Ltd. By deeply integrating advanced technology with educational scenarios in areas such as smart playgrounds and student physical and mental guardianship, it has achieved a two-way empowerment of educational reform and corporate innovation.

These attempts and breakthroughs represent a two-way rush between the government and schools based on the vision of future talent cultivation and urban development. They not only imply the city's educational imagination but also align with society's higher demand for innovation. Regarding innovation in school education systems, Hangzhou actively explores the establishment of a diversified evaluation system, breaking the traditional, singular model that relies mainly on examination scores, and focusing more on cultivating students' comprehensive qualities and innovative abilities. In 2022, the Department of Education of Zhejiang Province issued the *Guiding Opinions on the Reform of Comprehensive Evaluation for Primary School Students*, proposing to improve the quality of exam propositions, evaluate the learning process by item, and prohibiting the organization of any form of unified examinations or tests. Specifically, it requires that no written final exams be held for first and second grades, adopting lively and diverse practical evaluations instead.

Prior to this, in 2014, the Provincial Department of Education also issued the *Notice on Improving and Regulating Regional Subject "Unified Testing" in Compulsory Education Schools*, prohibiting local education bureaus and teaching research departments from organizing any form of regional subject "Unified Testing" for grades one to three in primary schools within their jurisdictions. Pioneering explorations emerged in Hangzhou, Ningbo, Jiaxing, and other places, canceling written exams for lower primary grades, implementing non-paper-and-pencil assessments such as module passing and situational garden tours, and promoting an exam-exemption system for excellent students. Today, non-paper-and-pencil assessment has been fully rolled out in lower primary grades across the province.

In terms of curriculum settings, many schools have opened emerging courses such as maker courses, artificial intelligence, and programming, allowing students to directly contact the most cutting-edge scientific and technological knowledge and basic skills. At the same time, the curriculum content focuses on both disciplinary higher-order thinking training and breaking disciplinary barriers to promote interdisciplinary knowledge integration, cultivating students' comprehensive thinking and systematic integration abilities. As early as 1988, Zhejiang Province accepted the task of curriculum reform experiment in the compulsory education stage from the former State Education Commission. It began to conceive and draft plans to replace separate teaching of physics, chemistry, and biology with a comprehensive *Natural Science* curriculum. In the following years, it gradually advanced curriculum reform, and in 1993, the *Natural Science* curriculum was fully piloted in the starting grade of junior high schools across the province. Consequently, in school science courses, Integrating knowledge from physics, chemistry, biology, and other disciplines with practical life problems to guide students in using multidisciplinary knowledge to solve actual problems has become a Standardized teaching method. This reform has not only improved students' scientific literacy but also promoted their ability to comprehensively apply interdisciplinary knowledge, laying a solid foundation for their future learning and lives.

In terms of school administration, Hangzhou encourages and supports schools to attempt diversified school-running models. By promoting innovation in mechanisms and models, this strategy serves as a source of living water for the high-level development of schools. Some primary and secondary schools cooperate with enterprises to establish Industry-University-Research (IUR) bases, providing students with practice opportunities and innovation and entrepreneurship platforms. Some high-tech enterprises open their workshops in schools, carrying out projects such as robot research and development together with students. Students can not only learn advanced technologies in practice but also understand the R&D processes and management models of enterprises, laying a solid foundation for future career development.

2.2 Tolerance for Failure: The Natural Fit between the New Trend of Urban Culture and the Greater Momentum of Educational Development

Innovation is not a linear sprint but a curvilinear process that approaches the goal through trial and error. In recent years, Hangzhou has gradually formed a culture of tolerance for failure oriented towards young people and the future. Only by anchoring innovation to real needs and giving new things enough time and space to grow can technological breakthroughs be truly transformed into productive forces, endowing innovation with sustainable vitality.

At the higher education level, except for a few special enrollment programs, every undergraduate student recruited in broad categories at Zhejiang University has multiple opportunities to apply for a change of major. The rate of major expansion and the success rate of students changing majors rank among the top in similar universities nationwide. For university-wide elective courses, the university also offers a two-week trial period for attending courses. These practices provide space for trial and error, aimed at encouraging students to bravely try different professional directions and find fields they are truly interested in and suitable for. To allow top scientific research talents to concentrate on research, Westlake University

does not use the number of papers, titles, or patents as the main criteria for talent assessment.

In daily teaching, schools support students in gaining experience from failure and generating creativity from projects, encouraging them to learn in large scenarios, with real problems, and across fields. For example, in various science and technology innovation competitions, even if students' works do not achieve ideal results, teachers guide them to analyze the reasons for failure, summarize experiences and lessons, and encourage them to continue trying. This educational atmosphere of "failure is allowed, but giving up is not" provides students with a relaxed learning environment, enabling them to try new things more bravely, awaken innovation factors, temper persistent character, and step out of the vicious cycle of focusing solely on scores, exams, and rankings.

At the same time, schools focus on cultivating students' ability to withstand setbacks. By carrying out mental health education and frustration education, students learn to face setbacks and failures correctly and maintain a positive and optimistic attitude. Some schools persist in carrying out Frustration Education Month activities; some organize regular long-distance off-campus Perseverance Walk activities; others create a Failure Bank, allowing students to experience setbacks, learn methods to cope with them, and transform setbacks into resources for growth through activities such as frustration story sharing sessions, frustration challenges, and negative lists of those who have suffered setbacks.

2.3 Prioritizing Education: Urban Rationality and the Significance of High-Level Educational Development

Hangzhou emphasizes integrating education into the core strategy of urban development, leading educational innovation and development with the grand thinking of urban civilization. For example, Hangzhou High-Tech Zone (Binjiang) has constructed a new pattern for the development of science education in primary and secondary schools according to local conditions by building platforms,

constructing mechanisms, gathering synergy, and focusing on practice. It transforms the resources of high-tech enterprises at the doorstep into incubators for future top-notch sci-tech innovative talents and the cultivation of students' scientific literacy, giving children in Binjiang access to a larger science classroom.

In February 2024, Binjiang District released the *12 Characteristic Actions for Science Education in Primary and Secondary Schools in Hangzhou High-Tech Zone (Binjiang)*. Through 12 characteristic actions across four aspects—Structuring Sci-Edu Integration Space, Creating Sci-Edu Highlight Projects, Promoting Sci-Edu Typical Selection, and Building Sci-Edu Innovation Mechanisms—it aims to form an expert team, lead a team of teachers, build a batch of experimental schools, launch a batch of classic cases, develop a batch of characteristic courses, and provide a service list. This deeply promotes a stronger atmosphere, more solid foundation, more flexible mechanisms, and stronger characteristics for science education in primary and secondary schools throughout the district.

This series of measures not only reflects Hangzhou's high regard for education but also provides solid support for the sustainable development of education. In addition, the government has focused on increasing investment in school infrastructure construction, actively referring to international standards to improve school operating conditions; effectively improving the treatment and status of teachers to attract outstanding talents to dedicate themselves to education; and strengthening the digital intelligence construction of education to promote the iterative and sustainable development of education.

2.4 Core Theory: Sociotechnical Imaginaries (SI)

This paper selects Sociotechnical Imaginaries (SI) as the core analytical theory to frame the macro background and action starting point of this study. Proposed by scholar Jasanoff and others, the theory aims to describe "collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects". This paper views Hangzhou's

urban culture of innovation-driven development and tolerance for failure as a powerful SI—a future vision that is being collectively constructed. These visions are deeply concerned with how technological development (such as the digital economy) and social order (such as talent cultivation) will co-evolve.

The unique value of selecting the SI theory lies in its provision of a meso-level bridge that effectively connects macroscopic urban culture with microscopic school practice, thereby responding to a large extent to the core problem of cultural transmission. Traditional organizational theories (such as institutional isomorphism) tend to explain schools as passively converging with the environment, whereas SI theory emphasizes agency. It elevates Hangzhou's urban culture of innovation, tolerance, and prioritizing education from a vague background board to a clear, explicit, and collectively held future vision (i.e., SI).

In the analysis of this paper, we apply the core of SI theory to the elucidation of the Translation mechanism. We argue that macroscopic urban sociotechnical imaginaries (such as Digital Highland, Innovation-Driven) do not automatically permeate into schools. They must undergo active identification, interpretation, and reconstruction by a key Translator—the Educator—who faces a core question: "To realize the future imagined by this city, what kind of people must we cultivate?"

3. Methodology

3.1 Research Paradigm: Action Research Based on Educator Practice

The philosophical stance of this study is rooted in the Pragmatist research paradigm. Pragmatism (represented by scholars such as C.S. Peirce, who proposed that "truth is utility," and John Dewey, who advocated "learning by doing" and "reflective inquiry") is an action-oriented philosophical view. Its core beliefs provide a solid analytical framework and logical starting point for this study:

First, Pragmatism holds that "reality" and "truth" are not objective existences that

are external, fixed, and waiting to be "discovered" by researchers. Instead, "reality" is continuously co-constructed in our interaction with the world and in the practice of solving concrete problems. This epistemology constitutes the legitimacy basis for the series of school-running practices in this study—these practices are not imitations of an ideal education model but represent the creation of a new reality for future education within the context of Hangzhou, achieved through the interaction between actors and their environment.

At the same time, Pragmatism believes that the value of knowledge lies not in whether it reflects the ultimate truth, but in whether it can effectively guide practice and bring about good results (i.e., truth is utility). We obtain meaningful knowledge through the cycle of Action-Reflection-Action, which echoes Dewey's (1933) classic exposition on Reflective Inquiry. This is the basis for the theoretical distillation of this study—the educational concepts and models generated are considered true knowledge because they have been proven effective in specific school reform practices and are capable of solving real problems.

Furthermore, there is a strong intrinsic correlation between the paradigm of this study (Pragmatism) and the theory (SI). Sociotechnical Imaginaries is itself an action-oriented theory, emphasizing that the future is not destined but imagined and constructed by social members. This perfectly aligns with the Pragmatist paradigm: SI theory provides the "Why" of this study—that is, Hangzhou's collective vision is the starting point for educational reform; while the Pragmatist paradigm provides the "Who" and "How" of this study—that is, the pragmatic educator (the author) is the best agent to translate and realize this collective vision.

Therefore, the analytical framework of this paper is: A pragmatic educator (the first author) actively translates Hangzhou's Sociotechnical Imaginaries (SI) and, through a systematic methodology of Action Research, constructs them into effective practices with promotion value and localized theoretical models.

3.2 Research Design

Based on the aforementioned Pragmatist paradigm and to realize the educational translation of SI, this paper selects Action Research as the core research methodology. This methodology was first proposed by social psychologist Kurt Lewin (1946), aiming to closely combine theoretical inquiry with practical improvement. Subsequently, Kemmis & McTaggart (1988) and others systematically introduced it into the field of education, making it a liberating tool for educators (i.e., "practitioners as researchers") to reflect on their own practice and achieve professional autonomy. This paper strictly follows the spiral cycle of Plan-Act-Observe-Reflect pioneered by Lewin:

- **Plan:** Identify the core problem brought about by SI ("How should we cultivate people?") and design a systematic solution (i.e., the top-level design of the Seven Actions).
- **Act:** Implement the Seven Actions and other schemes in settings such as Xianghu Future School.
- **Observe:** Systematically collect feedback on the effects of the "actions" during the process.
- **Reflect:** Conduct a deep review of the effectiveness and limitations of the "actions" to distill a deeper educational philosophy (i.e., the Three Concepts) and use this to guide the next round of "planning" and "action."

3.3 Research Methods and Rigor

This paper is based on the long-term school-running practice and reflection of the first author (YE Cuiwei) and the theoretical construction and text writing completed jointly by the two authors (YE Cuiwei and JIANG Li). Under the methodological framework of Action Research, this paper adopts specific research methods in the "Observe" stage and employs the triangulation strategy advocated by Denzin (1978) to ensure the rigor of the research—that is, the "observational basis" for the Three Concepts distilled by the authors in the "Reflect" stage is systematically built upon the comprehensive analysis of the following multiple sources of evidence:

- Quantitative Methods: Analyzing big data platforms (such as changes in student physical health data, tracking data of academic performance, etc.).
- Qualitative Methods: Using informal interviews, symposia (such as continuous interaction with teachers, students, and parents), and classroom observations.
- Document Analysis: Analyzing "outputs" during the practice process (such as students' project results from Interdisciplinary Sci-Tech Innovation, and teachers' instructional designs).

Finally, this study must consider the dual identity of "practitioner as researcher" and introduces reflexivity as a core operational point. The study is clearly aware that as the designer and manager of the school, YE Cuiwei's personal educational philosophy (such as "everyone has talent") has profoundly shaped the initial direction of the "Plan" (Seven Actions), which may lead to confirmation bias (i.e., the tendency to seek evidence that supports preconceived ideas). To control this bias, this study introduces third-party education experts as critical friends to regularly independently review the preliminary coding and conclusions of the study, especially conducting focused reviews on data showing "obstructed actions" or "insignificant effects" to ensure the objectivity of the conclusions.

4. Research Findings: Practices and Observations of Action Research

Under the structural support of the urban culture characterized by innovation-driven development, tolerance for failure, and prioritizing education, basic education in Hangzhou has demonstrated significant diversification and high-level development, forming a regional educational ecosystem characterized by "harmony in diversity." This study selects Hangzhou No. 2 High School (a traditional century-old institution and provincial key high school) and Xianghu Future School (a newly established non-profit private school pioneering future education paradigms) as exemplary cases. Their selection is justified as they represent the two most dynamic developmental paths in the region: traditional renewal and innovative genesis. It aims to analyze their talent cultivation pathways and school-running practices to reveal the typical action models of Hangzhou's basic education under the guidance

of urban culture.

4.1 The Two Peaks of a Century-Old School: Traditional Renewal and Era Transformation

Founded in 1899, Hangzhou No. 2 High School is one of the oldest key middle schools in Zhejiang Province and represents the integration of tradition and modernity in basic education. Throughout its development over more than a century, it has formed the phenomenon of Two Peaks where outstanding talents continuously emerge, presenting the characteristics of simultaneous traditional renewal and era transformation (YE Cuiwei, 2018).

(1) The First Peak of Traditional Renewal: Directed by National Mission

Over the past 126 years, outstanding alumni graduating from Hangzhou No. 2 have generally possessed a strong national consciousness, scientific belief, and spirit of dedication. Examples include patriots like YU Dafu and FENG Zhongyun, and over ten academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, such as QIAN Ning, ZHOU Benlian, HE Xingui, and WANG Yide. These alumni constitute the First Peak directed by national mission. Their success reflects not only personal honor but also, to a certain extent, the cultural heritage and educational quality of the school.

The school inspires generations of students to regard academicians as role models through activities such as publicizing the achievements of alumni academicians and establishing academician scholarships. Simultaneously, the school focuses on inheriting the patriotism and scientific spirit of these academicians. Relevant content is integrated into the curriculum setting: the stories of academicians struggling for the national cause of science and technology have become part of the history curriculum, while their scientific methods and innovative spirits serve as spiritual nourishment for students' excellence in learning and high-level development.

(2) The Second Peak of Global leadership: Shining on the World Stage

With the deepening of globalization, a new generation of Hangzhou No. 2 graduates is achieving a series of results in their respective fields on the world stage. Among them are leaders of large high-tech enterprises, winners of top international scientific awards, and leading figures in national key laboratories. For example, HU Hailan, the first female professor in Asia to win a major international brain research award; LIU Chong, named one of the top ten outstanding young scientists by *Science News* in the US; YAO Jizhong, listed in the Forbes Asia 30 Under 30; and ZHANG Weijia, a member of the Royal Astronomical Society. This group of outstanding graduates represents the Second Peak. They exhibit the triple characteristics of progressivism, openness, and long-termism: they dare to explore and are good at integration, finding their own positions in the global knowledge and innovation system. The school fully supports students in entering world-class universities, with about 10% of students being admitted early to the world's top 30 universities annually. Through international exchange activities and the introduction of international curricula, the school provides students with a broad international perspectives and diverse development opportunities.

4.2 The Seven Actions of a Newly Established School: School-Based Translation and Practice Based on Urban Vision

To address the issue of early foundation for innovative talent cultivation and to explore a new paradigm of schooling capable of fully stimulating students' intrinsic motivation, Xianghu Future School was founded in 2021. The school establishes "everyone has talent, everyone can succeed" as its core educational philosophy. It attempts to reconstruct learning scenarios and teacher-student relationships at the primary and secondary school levels to provide institutional protection for student curiosity and deeply excavate personalized potential, emphasizing the diversity of individual values and growth paths.

To translate Hangzhou's urban culture of innovation and tolerance into microscopic

educational practices, Xianghu Future School focuses on the development of students' core competencies and implements the Seven Actions: Holistic Sports, Immersive Arts, Deep Reading, Interdisciplinary Sci-Tech Innovation, Autonomous Student Societies, Nature-Based Learning, and Big Data Driven Management. This study elaborates on each action following the logic of Plan – Act – Observe & Reflect.

(1) Holistic Sports Action: From Physical Exercise to Personality Reshaping

- **Target & Plan:** Addressing the marginalization of physical education, we established physical education as the school's "First Course", aiming to reshape students' physique and personality through high-frequency and high-challenge exercises.
- **Action Implementation:** The school invested one-third of its construction area into sports venues. The curriculum includes nearly 30 courses such as rock climbing, fencing, archery, triathlon, and Lake-Loop Hiking. notably, swimming is a compulsory course, and scenario-based tests, such as "self-rescue after falling into water while wearing heavy clothing," are designed to reinforce survival skills in simulated crises.
- **Observation & Reflection:** Practical observations shows that competitive sports have become a fusion agent for moral and intellectual education. We found that the value of normalized sports competitions far exceeds physical fitness itself; the team awareness, cooperative spirit, and willpower demonstrated by students in the arena prove the unique efficacy of sports in personality shaping.

(2) Immersive Arts Action: From Skill Acquisition to Aesthetic Life

- **Target & Plan:** Based on the concept that "art reveals true human feelings," we are committed to building a ubiquitous aesthetic field, aiming for artistic elements to be integrated into the campus fabric rather than confined to the classroom.

- **Action Implementation:** We created immersive art environments and innovative courses. The school built a professional art space of over 5,000 square meters, including the Diamond Theater, Black Box Theater, Future Art Gallery, and Art Corridor. Beyond conventional courses like music and painting, we promote interdisciplinary Project-Based Learning (PBL) art courses and host the Campus Culture and Art Festival.
- **Observation & Reflection:** Reflection on this process reveals that environmental immersion has transformed art into a lifestyle. When students stroll through the sun-drenched exhibition halls admiring Monet's *Water Lilies*, or dine in the cafeteria accompanied by world-famous melodies, it is internalized into their life experiences, achieving the subtle cultivation of an aesthetic sensibility.

(3) Deep Reading Action: From Knowledge Acquisition to Spiritual Construction

- **Target & Plan:** To build the soul of knowledge and humanities for students, we designed a panoramic reading system aimed at solving the problem of insufficient reading depth in the era of disjointed and superficial information intake through expansive courses.
- **Action Implementation:** We laid out a dual structure of physical space and activity mechanisms. The school established three types of libraries: the Enlightenment Library for lower grades, the Multilingual Electronic Reading Room, and the Classic Library. We implemented the Four 100s Plan (reading 100 famous books, watching 100 famous films, appreciating 100 famous paintings, and listening to 100 famous songs). Reading is woven into the flow of life through morning broadcasts, celebrity lecture halls, and family co-reading sessions.
- **Observation & Reflection:** Observations show that reading has been successfully engraved into the students' developmental trajectory. Through accumulated edification and continuous dialogue with classics, students have not only enriched their artistic knowledge but also enhanced their deep cultural literacy.

(4) Interdisciplinary Sci-Tech Innovation Action: From Tech Consumption to Real Creation

- **Target & Plan:** Responding to the call for innovation-driven development in Hangzhou, we built a progressive platform from "playing" to "creating." The core goal is to transform students from passive consumers of technology into active creators solving problems.
- **Action Implementation:** Implementation focuses on the combination of cutting-edge hardware and real-task driving. The school introduced facilities such as the C919 flight simulator, drone laboratory, and the Youth Academy of Engineering. The curriculum integrates science, information technology, and creativity, guiding students to engage in real projects. For example, students used 3D modeling to "resurrect" the canoe from the Kuahuqiao site and set up IoT sensors to analyze weather data for decision-making regarding the school sports meeting.
- **Observation & Reflection:** Project results confirmed the huge potential of "learning by doing." However, in the review, we found that although these actions relied on specific hardware facilities, their core effectiveness stemmed more from the reconstruction of curriculum design rather than mere equipment investment. Without matching PBL curriculum and instructional design, physical upgrades cannot translate into the expansion of thinking space; high-end equipment would eventually become mere formalistic landscapes, losing their substantive value in empowering growth.

(5) Autonomous Student Societies Action: From Passive Management to Autonomous Trial and Error

- **Target & Plan:** To encourage students to move from "natural persons" to "social persons," we constructed an ecosystem of autonomously managed clubs. This action aims to utilize the tolerance for failure mechanism to let students learn responsibility and accountability through socialized learning.
- **Action Implementation:** We granted students full autonomy in institutional design. The school established 14 three-star student clubs, adhering to

the principles of "autonomous creation, operation, development, and achievement."

- **Observation & Reflection:** Typical cases reveal the hidden value of club activities in character education. In a fierce flag football match, facing a strong team, our children, though defeated, shared their medals with the coach and injured teammates. Parents remarked that this was not just about the cruelty and fun of competition, but a proof that the children possess love and gratitude—this is exactly the educational echo we anticipate.

(6) Nature-Based Learning Action: From Classroom Limitations to the Great Beauty of Heaven and Earth

- **Target & Plan:** Advocating "Nature as Classroom, World as Textbook," we are committed to rebuilding the connection between humans and ecology, breaking down walls to solve the "nature deficit disorder" of urban children.
- **Action Implementation:** the approach involves moving the classroom into nature and the community. The curriculum follows the solar terms, encouraging students to observe nature and understand philosophy through real interactions. Study tours are incorporated into the formal curriculum system.
- **Observation & Reflection:** Teachers' field reflections confirm the unique significance of the "Earth Classroom." As one teacher realized, "Labor practice contains the deep affection for the land at the fingertips and the fresh teamwork of youth, filled with the simplest happiness in the world." This indicates that the action of returning to nature effectively nourishes the students' bodies and minds.

(7) Big Data Driven Management Action: From Experience-Driven to Precision Navigation

- **Target & Plan:** Relying on digital technology, we attempt to build a new paradigm for intelligent educational management. The goal is to use AI and big data to break through the limitations of traditional empiricism and achieve

precision in education.

- **Action Implementation:** We established a comprehensive intelligent data collection and analysis system. Using smart wearable devices, we collect sports data (e.g., jumping, strength, endurance) from freshmen; using campus IoT and interactive paper-pen platforms, we collect environmental data and academic performance respectively.
- **Observation & Reflection:** Data analysis makes differentiated instruction scientifically visible. Teachers can now provide targeted physical training plans based on data curves. AI-generated profiles for students, teachers, and subject teams provide a scientific basis for personalized educational decisions, while effectively protecting privacy and promoting home-school collaboration.

5. Discussion and Conclusion

5.1 Discussion 1: Educator Translation—Revealing the Transmission Mechanism of SI

The core finding of this study is the systematic and implementable school practice embodied in the Seven Actions. The core theoretical contribution, utilizing the perspective of Action Research within Pragmatism, attempts to open the black box by revealing the key mechanism through which macro-level Sociotechnical Imaginaries (SI) are transmitted to micro-level school practice: Educator Translation.

In previous academic discussions on the relationship between cities and education, two passive perspectives often prevailed: policy determinism, which views schools merely as the execution terminals of upper-level policies; and resource dependency theory, which considers educational innovation as merely a byproduct of urban economic development. This study, through solid action evidence, confirms that the transmission of macro-SI is by no means an automatic permeation or simple resource spillover. It urgently requires a pragmatic agent—the Educator as Translator—who can both "look up at the stars" (understand urban SI) and "keep

their feet on the ground" (cultivate educational practice).

This translation process is not a simple copy-paste operation but a creative, dynamic process of dual construction involving:

- First, top-down decoding and reconstruction. This requires educators to be not only receivers but also curriculum designers. Educators must decode highly condensed macro-SI such as innovation-driven development and digital highland into operable pedagogical language and reconstruct them into specific curriculum systems and teaching scenarios like Interdisciplinary Sci-Tech Innovation and Big Data Driven Management. Simultaneously, they must translate the abstract social atmosphere of tolerance for failure into the "autonomous trial-and-error space" provided by Autonomous Student Societies, protected by boundaries.
- Second, bottom-up verification and empowerment. The significance of the successful practice of the Seven Actions lies not only in educating students but also in validating the vision. It acts as an educational proving ground, conversely verifying and reinforcing the legitimacy and feasibility of the Hangzhou Model. In other words, schools (especially new ventures like Xianghu Future School) do not merely passively adapt to the future; they actively create, define, and demonstrate the city's future. They provide the most vivid success stories and talent reserves for the city's SI, thereby empowering the continuous evolution of the macro-SI from the bottom up.

Previous studies often viewed the influence of urban culture on schools as a unidirectional permeation. However, this study finds that when macro-SI (such as Hangzhou's innovation drive) enters the micro-school field, it does not drive straight in but generates intense tension with existing "exam-oriented education habitus". In this process, the educator acts not only as a translator of vision but also as a negotiator of contradictions. For example, when promoting Interdisciplinary Sci-Tech Innovation, parents' anxiety about enrollment rates (existing imaginary) directly conflicted with the city's thirst for innovative talents (emerging imaginary).

The translation strategy of this study was not a simple "either-or" choice but the construction of a buffer zone through the Seven Actions—creating a secondary evaluation pathway through Autonomous Student Societies and Interdisciplinary Sci-Tech Innovation while ensuring core academic performance (aligned with the national compulsory curriculum).

This finding corrects the simplification tendency in the application of SI theory in education: the landing of urban vision by educators is essentially a game process of finding a balance between the "ideal future" and "realistic assessment." Therefore, the true significance of the Seven Actions lies not only in the "technique" (Shu) of curriculum innovation but also in demonstrating the "way" (Dao) of the educator's key agency as an Urban SI Translator and Future Constructor. This study provides a mechanism-based answer to the "last mile" problem bridging policy and practice regarding how macro visions land on the micro level.

5.2 Discussion 2: Three Concepts—Sublimation of Action Research and Theoretical Contribution

According to the Action Research methodology adopted in this paper, after undergoing the systematic practice of "Plan" and "Act" and collecting multiple sources of evidence (via triangulation) in the "Observe" stage, the study needs to enter the critical Reflect stage.

This distillation (reflection) is necessary because the ultimate goal of Action Research and the Pragmatism paradigm is not only effective action but also the sublimation of "theory that can guide future practice" from effective action. If the study stopped at describing the Seven Actions, it would remain at the technical level. Therefore, the research must systematically reflect on the deep logic behind the actions to complete the sublimation from "practical wisdom" to "theoretical models".

The Three Concepts are the crystallization of this reflection stage, representing the

core reflective results and theoretical discussions of this study:

1. **The Big Era View:** We must be guided by the underlying logic of the era's development, always putting people first—seeing the person as well as the score, integrating person and score, and realizing that the person is unique.
2. **The Big AI View:** Within the broad AI scenario, education must focus on building knowledge bases, constructing large models, and forming ecological flows, ultimately enabling humans to excel beyond and guide AI, thereby ensuring that humanity retains its essential qualities.
3. **The Big Curriculum View:** The curriculum must be self-consistent with each student's Zone of Proximal Development (ZPD), forming an organic whole comprising "Learn in the Future" (national compulsory curriculum), "Play in the Future" (student self-study curriculum), and "Joy in the Future" (student specialty curriculum), using a broad curriculum to cultivate a fully realized "person".

These Three Concepts jointly constitute an Educator Action Model responding to Sociotechnical Imaginaries, systematically answering three core questions of the Action Research reflection stage:

- The Big Era View reflects on the "Action Starting Point," answering "Why must we change?" It elevates educational reform from "passive response" to "active identification," recognizing that education must resonate with the "Big Era" (SI). This provides the legitimacy source for the educator's practice of translating SI.
- The Big AI View reflects on the "Core Challenge," answering "What is the relationship between humans and technology?" In the practice of Interdisciplinary Sci-Tech Innovation and Big Data Driven Management, the core reflection is that technology is a tool, but "the person is unique." The proposal of the Big AI View represents a humanistic calibration contributed by this study amidst the prevalence of "technocentrism."
- The Big Curriculum View reflects on the "Practice Pathway," answering "How

does future education land?" It is a philosophical purification of the Seven Actions, transcending "discipline-based" approaches to integrate various curricula into an organic whole for "educating people," providing a pragmatic methodology for "letting every life shine".

5.3 Discussion 3: Stripping Resource Dependence—The Mechanism Core of the Hangzhou Model

The practices in this study (Two Peaks and Seven Actions) jointly present a construction pathway for Future Schools that can be termed the Hangzhou Model. In dialogue with the global wave of future schools, this model contributes a unique "Chinese Experience." The Two Peaks of Hangzhou No. 2 High School not only demonstrates the interplay of tradition and modernity but also reveals the unique role of school education in inheritance and globalization leaps.

Current global explorations of Future Schools often fall into two biases: "technological worship," overly relying on Big Data and AI; or "conceptual idling," overly emphasizing literacy and personalization without systematic implementation tools. The Hangzhou Model (represented by the Seven Actions) provides a paradigm of "integrating Chinese and Western elements, combining substance and function." It utilizes cutting-edge technology (e.g., Sci-Tech Innovation, Big Data) to respond to the innovation demands of SI, but its "substance" (core) remains profound humanism and cultural inheritance (as seen in Arts, Reading, Sports). It is a systemic solution for future education rooted in local soil, constructed through pragmatic action research under the guidance of SI.

Admittedly, some elements in this case study (e.g., the flight simulator or the 5,000-square-meter art space) are resource dependent and are difficult to replicate directly in ordinary schools. However, stripping away these material shells, the core of the Hangzhou Model distilled in this study lies in its low-cost, transferable mechanisms:

1. Reconstruction of Boundaries: The core of this action lies in breaking the solidified spatial-temporal and disciplinary boundaries of traditional education. Regardless of resource abundance, any school can break disciplinary barriers (e.g., Big Curriculum View) and utilize surrounding community resources (e.g., community study tours in Nature-Based Learning) to replace expensive on-campus laboratories.
2. Translation of Evaluation: "Tolerance for failure" does not require funding; it requires the transfer of evaluation power. Establishing mechanisms like "exam exemption systems" or "multidimensional evaluation" represents "micro-innovations" that all educators can attempt within the allowable scope of the system.

5.4 Discussion 4: Beautiful Risk—The Educator's Responsibility in Innovative Translation

The Action Research paradigm of this study concerns not only "reflection" (Three Concepts) but also the responsibility inherent in the action itself. Educator Translation (Section 5.1) is by no means a theoretical exercise conducted in a sterile laboratory but a practical process fraught with Beautiful Risk.

First, innovation and risk are two sides of the same coin. The Seven Actions presented in this paper—especially the embrace of frontier technology in Interdisciplinary Sci-Tech Innovation, the delegation of autonomy in Autonomous Student Societies, and the reconstruction of traditional class hours in Holistic Sports—all represent a "deviation" from and "transcendence" of established educational paradigms and evaluation systems. This deviation itself constitutes a risk, potentially facing short-term pressure regarding academic scores, challenges in resource investment, or skepticism about concepts being "too advanced".

Second, this risk is "beautiful" because of its value orientation. It is not a speculative or reckless adventure but a systematic, constructive "educational exploration" based on the judgment of the Big Era View and the ultimate goal of "cultivating a fully

realized person." The educator's responsibility is embodied here: daring to assume this risk rooted in humanism to explore the path for future education.

Finally, the connotation of the tolerance for failure culture is deepened. The city's macro-level tolerance incentive (SI) must be internalized into the educator's courage to "dare to try and err." Educators must not only provide space for students' trial and error (as in student societies) but also become role models who bravely bear risks, forging ahead into the "no-man's land" of future education. This responsibility is an indispensable agentic element connecting Urban SI and School Innovation, alongside translation ability.

The process of Action Research is not a smooth path. This study must point out that Educator Translation is accompanied by real ethical risks. For example, in the early stages of Holistic Sports, increased intensity triggered concerns from some parents regarding safety. This forces us to reflect: Who bears the cost of innovation? The so-called Beautiful Risk does not mean ignoring safety but implies that educators must proactively assume a balance between "absolute safety" and "appropriate challenge" through comprehensive safety plans and deep home-school communication. This responsibility, rather than mere hardware investment, is the spiritual core of the Hangzhou Model that is hardest to replicate yet most worthy of advocacy.

5.5 Conclusion and Limitations

Through the Action Research paradigm, this study deeply elucidates how Hangzhou's urban culture of innovation and tolerance (SI) is concretely "constructed" into school practices represented by the Seven Actions through Educator Translation, and how the Three Concepts model is distilled through reflection. The value of this study lies in revealing the transmission mechanism of "SI-Educator-Practice" and providing a systemic Hangzhou Model for the localized construction of Future Schools.

Although Hangzhou No. 2 High School and Xianghu Future School belong to

different stages of basic education, they jointly interpret the characteristics of Hangzhou education: "coexistence of tradition and innovation, equal emphasis on individuality and universality." Both schools focus on the growth of the "person," sketching the appearance of Hangzhou education where "each has its own beauty, and beauties are shared." They uphold the mission of cultural inheritance while standing at the forefront of era transformation; they cultivate top-notch innovative talents leading the future while illuminating the life of every child, ultimately realizing the educational ideal of "letting every life shine".

Hangzhou's educational experience tells us that China's basic education is completing a structural transformation from teaching-centered to learning-centered. Factors such as policy emphasis on literacy, institutional promotion of diverse curricula, pedagogical focus on inquiry-based learning, and the cultural creation of an atmosphere respecting individuality and advocating freedom work together to build a new foundation for the high-quality development of basic education in the new era.

Finally, it should be noted that this study is based on the Action Research paradigm. Its ultimate goal is not to "discover a universal truth" but to "improve current practice." The Hangzhou Model (e.g., the Seven Actions) distilled in this paper is highly rooted in Hangzhou's specific urban culture (SI) and educational resources, limiting its transferability. This paper aims to provide "referential inspiration" for educational colleagues facing similar situations, rather than a "standard answer" universally applicable everywhere.

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