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Logical Reconstruction and Practical Landscape of Interdisciplinary Talent Cultivation in "Sports + Finance" Driven by Digital Intelligence Technology

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Abstract

Currently, driven by the dual national strategies of "Sports Power" and "Financial Power," the capitalization of the sports industry and the cross-border layout of the financial industry have become new engines for high-quality economic development. However, facing the urgent demand from the industry for "Sports + Finance" composite talents who possess both sports industry operational thinking and the ability to apply modern financial tools, the existing higher education system is still deeply constrained by traditional single-discipline logic. Deep structural contradictions exist, such as rigid disciplinary barriers, fragmented curriculum systems, a lack of practical fields, and lagging evaluation mechanisms. The new round of technological revolution, especially the explosive growth of digital intelligence technologies such as artificial intelligence, big data, knowledge graphs, and digital twins, provides a new technological landscape and logical starting point for breaking this talent cultivation dilemma. Based on the Outcome-Based Education (OBE) concept, this paper abandons the traditional quantitative empirical paradigm and uses systems theory and educational ecology perspectives to deeply analyze the internal mechanism of "Sports + Finance" interdisciplinary talent cultivation. The paper demonstrates the empowering role of digital intelligence technology in restructuring teaching spatiotemporal fields, optimizing heterogeneous knowledge supply, and innovating whole-process evaluation mechanisms. It proposes innovative paths such as constructing a fusion curriculum system based on knowledge graphs, building an immersive practical platform based on digital twins, and establishing a full-cycle evaluation mechanism based on data profiling. The aim is to reshape the practical landscape of "Sports + Finance" talent cultivation and provide prospective theoretical references and action guides for educational and teaching reforms in application-oriented universities under the background of "New Finance and Economics."

Keywords

Digital Intelligence Technology; Sports Finance; Interdisciplinary Talent Cultivation; OBE Concept; Logical Reconstruction; New Finance and Economics.

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1. Introduction

1.1. Research Background: Industrial Transformation and Talent Gap Under Dual Strategies

The Report to the 20th National Congress of the Communist Party of China, standing at the strategic height of national rejuvenation, clearly proposed the magnificent goals of accelerating the construction of a "Sports Power" and a "Financial Power." These two seemingly parallel national strategies have generated deep intersection and resonance within the context of high-quality development.

(1) Financial Transformation of the Sports Industry

The sports industry is undergoing a critical transformation from extensive scale expansion to intensive quality improvement. One of its core characteristics is the securitization of assets and the financialization of operations. The modern sports industry is no longer just a collection of athletic performances but a vast capital operation system. From the equity reform of professional sports clubs to the Public-Private Partnership (PPP) financing model for large sports venues, and from the Asset-Backed Securitization (ABS) of athletes' compensation contracts to the pledge loans of sports intangible assets (such as broadcasting rights and portrait rights), financial capital is penetrating the capillaries of the sports industry with unprecedented depth. This penetration is not limited to simple capital injection but involves business model reconstruction, risk management optimization, and value chain extension [1].

(2) Sports-Oriented Layout of Financial Capital

On the other hand, driven by the policy guidance of "moving from virtual to real" and the endogenous drive to find high-quality assets, the financial industry urgently needs to expand into new business growth poles. The sports industry, with its green, healthy, and sunrise attributes as a trillion-level industry, has become an important field for financial capital allocation. From the establishment of sports industry investment funds to mergers and reorganizations of sports-listed companies, and to the innovative design of sports insurance products, the integration of finance and sports has moved from a "physical reaction" to a "chemical reaction."

(3) Structural Shortage on the Talent Supply Side

However, this deep coupling at the industrial level has encountered severe bottlenecks on the talent supply side. Traditional sports professional education focuses on sports skill instruction, event organization management, and physical training, leaving students generally lacking understanding and application abilities regarding complex financial tools such as capital operations, hedging, and asset valuation. Conversely, traditional finance professional education emphasizes training in mathematical models, financial analysis, and investment strategies but often neglects cognition of the special laws of sports competitions, professional sports business logic, and the characteristics of sports intangible assets. This structural misalignment, where "those who understand sports do not understand finance, and those who understand finance do not understand sports," has led to an extreme scarcity of composite talents in the market capable of competent roles in high-end positions such as sports investment and financing, sports insurance actuarial science, and sports asset management. This has become a key shortcoming restricting the modernization process of China's sports industry.

1.2. Problem Examination: Involution and Failure of Traditional Interdisciplinary Cultivation Models

Facing this huge talent gap, although some universities have attempted to explore interdisciplinary talent cultivation by offering minor majors, dual-degree programs, or general

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education courses, practical operations often fall into the trap of "additive" reform, failing to touch the deep texture of talent cultivation.

(1) Disciplinary Barriers Remain Rigid, and Collaborative Education Mechanisms are Formalistic

Under the current administrative teaching management system, schools of physical education and schools of finance often act independently, possessing independent teaching plans, faculty teams, budget funds, and performance assessment systems. The flow of curriculum resources is blocked by departmental interests, and collaborative education across colleges often remains at the document level, lacking substantive resource sharing and personnel exchange. Students shuttling between different colleges face two completely different teaching discourse systems and evaluation standards, making it difficult to form an organic integration of knowledge. For example, teaching in sports colleges emphasizes "movement standardization" and "on-site organization," while teaching in finance colleges emphasizes "logical deduction" and "data models," creating a natural gap in teaching paradigms.

(2) Knowledge Systems Feature a "Platter" Characteristic, Lacking Deep Logical Interplay

Current interdisciplinary courses are mostly a simple "Sports Course + Finance Course" arrangement, lacking deep excavation of the intersection between the two. What students receive is often a mechanical piling up of sports and finance courses, lacking deep logical interplay and knowledge integration. For instance, when explaining "sports sponsorship," sports teachers focus on brand exposure and event image, while finance teachers focus on financial returns and return on investment (ROI). There is a lack of a bridge between the two, making it difficult for students to form comprehensive solutions through knowledge transfer when facing complex real-world sports finance problems. This "physical platter" style of curriculum setting fails to cultivate the "chemical reaction" ability to solve complex problems.

"Hollowing Out" of Practical Teaching, with Serious Disconnection Between Theory and Practice

(3) "Sports + Finance" is an interdisciplinary subject with extremely strong practicality, involving highly complex realistic scenarios such as event IP valuation, derivative design, and club mergers and acquisitions. However, constrained by traditional teaching conditions, it is difficult for students to access real industry data and decision-making processes. Most teaching still lingers on textbook theories and outdated case studies, lacking high-fidelity, dynamic practical environments. Students cannot experience real trading pressure and market fluctuations during their time at school, leading to a long adaptation period after graduation before they can be competent in their jobs. Teaching lacking real data support makes "connecting theory with practice" an empty phrase.

1.3. Research Significance: Paradigm Shift in the Digital Intelligence Era and the Mission of "New Finance and Economics"

Digital intelligence technologies represented by Artificial Intelligence (AI), Big Data, Cloud Computing, Blockchain, and the Metaverse have not only reshaped human production and lifestyle but also brought a profound paradigm revolution to higher education. Digital intelligence technology possesses core capabilities such as linking, computing, simulating, and predicting, which precisely address the pain points of interdisciplinary talent cultivation.

Against the background of "New Finance and Economics" reform, finance and economics education is shifting from traditionally explaining the world to transforming the world, emphasizing interdisciplinary intersection, technological empowerment, and integration of industry and education. This paper aims to explore how to break through the physical boundaries and disciplinary barriers of traditional education driven by digital intelligence technology, reconstruct the underlying logic of "Sports + Finance" interdisciplinary talent

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cultivation, and depict a practical landscape that is implementable and scalable. This is not only a positive response to the "Sports Power" and "Financial Power" strategies but also a vigorous exploration for application-oriented universities to deepen educational and teaching reforms and improve the quality of talent cultivation, possessing significant theoretical value and practical significance.

2. Theoretical Perspective and Logical Reconstruction

In the era of digital intelligence, talent cultivation is no longer a simple transfer of knowledge but involves a comprehensive reconstruction of epistemology, methodology, and axiology. We need to step out of the traditional disciplinary perspective and re-examine the generation mechanism of "Sports + Finance" composite talents from a grander logical level.

2.1. Epistemological Reconstruction: From "Static Knowledge Hoarding" to "Dynamic Competency Generation"

Traditional epistemology is based on the assumption that "knowledge is objective truth," believing that the task of education is to instill as much established disciplinary knowledge as possible into students, which refers to the "banking concept of education" criticized by Brazilian educator Paulo Freire. In this model, students are viewed as containers for knowledge, and teachers are the depositors.

(1) Decentralization and Networking of Knowledge

In the digital intelligence environment, authoritative knowledge is no longer monopolized by textbooks and teachers but is distributed across the Internet, industry databases, and vast networks built by algorithmic models. The acquisition of knowledge has become accessible; the key lies in screening and integration. Students no longer need to memorize static formulas or rules but must master the abilities to retrieve, screen, integrate, and apply information, i.e., "digital literacy" [2]. They need to learn to discover patterns in massive data and construct logic in fragmented information.

(2) Scenarization and Contextualization of Competencies

The core competency of "Sports + Finance" does not exist in abstract books but is generated in the process of solving specific problems. Knowledge can only be transformed into competency when applied in specific contexts. For example, how to design an insurance compensation scheme for a sports league suspended due to a public health emergency? This problem has no standard answer and requires students to mobilize multi-disciplinary knowledge from sports science (event risk cognition), finance (actuarial models), and law (contract terms) to generate solutions in dynamically changing scenarios. Therefore, the logical starting point of talent cultivation should shift from "what was taught" to "what students can do," moving from knowledge-based to competency-based.

(3) Generativity and Fluidity of Knowledge

In the digital intelligence era, knowledge is no longer a fixed stock but a fluid increment. Business models (such as NFT, DAO) and technical tools (such as smart contracts) in the sports finance field iterate extremely fast. Traditional textbook-style teaching cannot keep up with this speed. Epistemological reconstruction requires shifting our teaching focus from "established conclusions" to "inquiry processes," cultivating students' ability to generate new knowledge using digital intelligence tools when facing unknown problems.

2.2. Methodological Reconstruction: From "Linear Assembly Line" to "Digital Intelligence Personalized Customization"

Education in the industrial age followed the logic of standardized mass industrial production: unified textbooks, unified progress, and unified assessment, aiming to mass-produce

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standardized graduates. This model might ensure basic quality in single-discipline talent cultivation, but it appears powerless when facing interdisciplinary talent cultivation with significant differentiation.

(1) Adaptive Learning

Utilizing AI algorithms to analyze students' knowledge blind spots and learning styles, pushing personalized learning resources and paths. For example, for students with a good sports foundation but weak mathematics, the system can intelligently recommend basic modules of financial mathematics and reduce the difficulty of understanding through visualization tools, helping them cross the mathematics threshold; for students with a strong finance background who do not understand sports rules, it reinforces case studies of event operations and rule analysis to enhance their perceptual understanding [3]. This mode of teaching students in accordance with their aptitude greatly improves learning efficiency.

(2) Non-linear Growth Path

Learning is no longer a step-by-step linear process but presents the "Rhizomatic" non-linear characteristics described by Deleuze. Students can jump and link freely within the knowledge network according to interests and project needs, constructing their own unique cognitive structures. They can learn advanced finance cases first and trace back to basic theories when encountering knowledge blind spots; or start from sports phenomena and gradually penetrate the capital logic behind them. This non-linear learning method conforms more to the cognitive laws of interdisciplinary exploration.

(3) Algorithm-Assisted Teaching Decisions

Teachers' teaching decisions no longer rely solely on experience but are driven by data. Through real-time analysis of student learning behavior data, teachers can accurately identify difficulties and pain points in teaching and dynamically adjust teaching strategies. For example, if data shows that most students stay too long on the knowledge point of "option pricing" and have a high error rate, teachers can intervene in time to carry out targeted tutoring or adjust teaching progress.

2.3. Axiological Reconstruction: From "Supply-Side Dominance" to "Demand-Side Definition"

Traditional higher education often falls into the dilemma of "working behind closed doors," formulating training programs based on the school's existing faculty reserves and teaching conditions, i.e., "teaching what we have." This supply-side dominant logic leads to a structural misalignment between talent cultivation and social needs, which is the main reason for the coexistence of difficulty in employment for college graduates and difficulty in recruitment for enterprises.

(1) Backward Design

The OBE concept emphasizes "Student-Centered, Outcome-Based, and Continuous Improvement." The logical starting point is the core competency requirements of "Sports + Finance" industry positions. Digital intelligence technology can crawl massive data from recruitment websites and analyze industry research reports, using Natural Language Processing (NLP) technology to automatically generate talent capability profiles, thereby accurately defining graduation requirements [4]. For example, big data analysis may find that enterprises generally require candidates to possess "data analysis ability" and "cross-cultural communication ability," so these two abilities should become the core indicators of curriculum system design.

(2) Value Co-creation and Ecological Synergy

Training programs are no longer formulated unilaterally by universities but involve the joint participation of enterprises, industry associations, alumni, and other subjects. Digital

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intelligence platforms can serve as a link connecting all parties, realizing collaborative co-creation of educational value and breaking down the walls between schools and society. Enterprises can provide real-time feedback on changes in talent demand, and universities can dynamically adjust training programs based on feedback, forming a benign interactive ecology.

(3) Value Orientation of Whole-Person Development

While emphasizing professional skills, education in the digital intelligence era pays more attention to the whole-person development of students. Through interdisciplinary learning, students' critical thinking, innovative spirit, social responsibility, and ethical awareness are cultivated. Especially in the financial field, professional ethics and risk awareness are crucial. Digital intelligence technology can guide students to make correct value judgments in complex situations by simulating ethical dilemmas.

3. Core Mechanisms: Disciplinary Coupling and Factor Synergy Empowered by Digital Intelligence

"Sports" and "Finance" are two disciplines with strong heterogeneity. To achieve deep integration of the two, we cannot rely solely on simple physical superposition but must establish a deep coupling mechanism. Digital intelligence technology plays the key roles of "adhesive" and "catalyst" in this process.

3.1. Knowledge Graph Driven Disciplinary Intersection and Fusion Mechanism

The difficulty of disciplinary intersection lies in the heterogeneity of knowledge. Sports science knowledge is mostly descriptive and empirical (such as tactical analysis, training methods, event organization processes), while finance knowledge is mostly logical and mathematical (such as pricing models, risk measurement, financial analysis). Bridging these two discourse systems is the primary challenge of interdisciplinary teaching.

(1) Digital Construction of Knowledge Ontology

Using knowledge graph technology to perform ontology modeling on core concepts of sports science and finance, extracting Entities, Attributes, and Relations. For example, connecting the entity "Football Club" with the entity "Balance Sheet" through the relation "Financial Status"; connecting the event "Athlete Injury" with "Insurance Claims" through the "Risk Trigger" relation. In this way, originally isolated knowledge points are woven into a closely connected knowledge network.

(2) Semantic Association and Reasoning of Cross-Domain Knowledge

Establishing cross-disciplinary knowledge linkage paths. Through algorithmic mining, logical associations hidden behind knowledge points of different disciplines are discovered. For example, big data analysis reveals a specific cointegration relationship between team winning rate fluctuations (sports indicator) and club stock price fluctuations (financial indicator). Once this association is solidified by the knowledge graph, it becomes core content for interdisciplinary teaching, helping students establish a mapping mindset of "Sports Phenomenon - Financial Logic." Students no longer view sports matches in isolation but can see the capital flow behind the score.

(3) Dynamically Updating Knowledge Network

This graph is not static but updates in real-time with the input of industry data. When a new type of "Fan Token" appears in the market, the system automatically crawls relevant information and mounts it to the intersection node of "Sports Intangible Assets" and "Digital Currency," ensuring the timeliness of teaching content [5]. This dynamic update mechanism ensures that teaching content is always synchronized with industrial development.

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3.2. Virtual-Real Symbiosis Situational Teaching Mechanism

Situated Cognition theory posits that knowledge is situated, and learning is social participation in specific contexts. For high-risk, high-cost practical activities like "Sports + Finance," the trial-and-error cost in the real world is too high, making the virtual simulation environment provided by digital intelligence technology the best alternative.

(1) Fully Simulated Financial Trading Floor

Using Virtual Reality (VR) and Augmented Reality (AR) technologies to build a high-fidelity sports finance trading floor. Students can immersively play roles such as market makers, brokers, or club managers to conduct real-time trading operations. The system backend accesses real historical data from financial markets (such as the K-line chart of a sports concept stock), allowing students to test strategies in historical reenactments and experience the psychological impact of market fluctuations. This immersive experience allows students to deeply understand the cruelty and charm of financial markets.

(2) Digital Twin Event Operations Center

Constructing a digital twin of large-scale sports events. In the virtual environment, students can adjust parameters such as ticket pricing strategies, sponsor equity packages, and insurance coverage. The system instantly calculates the impact of these decisions on total event revenue, brand value, and operational risk based on complex network models. For example, what chain reaction will raising ticket prices have on attendance and merchandise sales? This "What You See Is What You Get" feedback mechanism greatly shortens the cognitive distance from theory to practice and cultivates students' systems thinking [6].

(3) Human-Machine Collaborative Role-Playing and Game Theory

Introducing AI Agents (NPCs) to play negotiation opponents, regulators, or media reporters. Students need to engage in game-theoretic negotiations with these high-IQ AIs (such as player transfer contract negotiations) to exercise their on-the-spot adaptability and communication skills. AI is not only an opponent but also a mentor, pointing out logical loopholes in student decisions through review analysis. This human-machine interaction provides students with high-frequency, high-quality practical drill opportunities.

3.3. Data-Driven Full-Cycle Evaluation Feedback Mechanism

Evaluation is the baton of teaching. Traditional evaluation is often summative and one-sided, while digital intelligence technology makes "full-sample, whole-process, multi-dimensional" evaluation possible, truly implementing "continuous improvement" in the OBE concept.

(1) Accompanied Data Collection and Process Perception

Using IoT devices (such as smart bracelets monitoring tension levels), eye trackers (monitoring focus of attention), and platform logs (recording click streams, decision duration, interaction frequency) to collect students' learning behavior data around the clock and insensibly. These data are no longer cold numbers but mappings of students' thinking processes. For example, analyzing heart rate changes when facing a crisis can evaluate psychological quality; analyzing operation paths on the virtual platform can infer decision logic.

(2) Multi-Dimensional Capability Profiling and Comprehensive Evaluation

Abandoning single score evaluation and establishing radar chart profiles containing multiple dimensions such as cognitive ability, skill level, emotional attitude, and collaborative spirit.

Cognitive Dimension: Assessed through objective tests and knowledge graph mastery.

Skill Dimension: Assessed through operation accuracy and yield rates in virtual simulation experiments.

Emotional Attitude: Assessed through questionnaires and behavioral data (e.g., learning duration, interaction frequency).

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Collaborative Spirit: Assessed through contribution in group projects (Git submission records, document editing records) and peer review data.

For example, analyzing speech frequency and semantic networks in group discussions to evaluate "team leadership"; analyzing operational response when facing sudden crises to evaluate "stress resistance" [7].

(3) Predictive Intervention and Teaching Loop

Training machine learning models based on historical data to predict students' academic risks. Once the system detects that a student has understanding obstacles in the "derivative pricing" module, it will automatically alert and push tutoring resources. At the same time, aggregated evaluation data is fed back to teachers and management as a basis for revising training programs and adjusting teaching progress, forming a closed loop for teaching quality improvement. This truly realizes "continuous improvement" in the OBE concept.

4. Practical Landscape: Implementation Paths for "Sports + Finance" Interdisciplinary Talent Cultivation

Based on the above theoretical logic and core mechanisms, we need to build concrete implementation paths at the practical operation level, forming a comprehensive reform plan from curriculum systems, teaching models, and faculty teams to platform construction, aiming to form a replicable paradigm in the "New Finance and Economics" reform.

4.1. Curriculum System Reconstruction: A Fusion Architecture of "Modularity + Project-Based"

Breaking the traditional three-stage structure of "Public Courses - Basic Courses - Professional Courses," constructing a matrix curriculum system based on capability modules. This system should reflect the characteristics of "Broad Foundation, Deep Integration, and Emphasis on Frontiers."

(1) Cornerstone Layer: Dual-Core Literacy and Digital Intelligence Base

Offering general courses such as Foundations of Data Science and Python Financial Data Analysis to consolidate students' digital intelligence technology base, equipping them with basic data thinking and programming skills; simultaneously offering Introduction to Sports Industry and Principles of Finance as introductory guides for the dual disciplines, focusing on opening up the translation channel of basic concepts and eliminating blind spots in disciplinary cognition. The goal of this level is for students to master two languages: the language of sports and the language of finance.

(2) Core Layer: Deep Integration and Scenario Application

This level should not be a platter but new fusion courses formed by reorganizing knowledge points.

1) Sports Asset Valuation and Management: Combining intangible asset valuation theory with sports IP characteristics, teaching how to scientifically value player worth, event copyrights, and club equity, introducing AI valuation models as teaching tools. The course sets practical operation links, requiring students to write valuation reports for specific clubs.

2) Sports Event Investment and Financing: Integrating Project Finance (BOT/PPP) models with event operation processes, exploring fund-raising and return mechanisms for large venue construction and event hosting, and analyzing the application of tools like REITs in the sports venue field.

3) Sports Insurance and Risk Management: Combining actuarial science and sports medicine, studying the design and pricing of special insurance products like professional athlete disability

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insurance and event cancellation insurance, using big data to analyze historical injury data to optimize actuarial models.

(3) Expansion Layer: Frontier Intersection and Innovative Practice

Keeping up with industry hotspots, offering micro-courses such as Sports FinTech, Blockchain and Sports Digital Assets, and Esports Industry Economics and Finance to maintain the openness and forward-looking nature of the curriculum system, encouraging students to explore new sports finance business formats in the Web 3.0 era. These courses can adopt flexible forms such as lectures and seminars, inviting industry experts to teach.

4.2. Teaching Model Innovation: Deep Combination of PBL and Immersive Experience

Completely changing the "cramming" teaching method, fully promoting a student-centered active learning model, and returning the dominance of the classroom to students.

(1) Project-Based Learning (PBL) and Doing Real Questions

Introducing real corporate topics as teaching projects. For example, "A football club plans to IPO on the Hong Kong Stock Exchange, please design a listing financing plan for it." Students form interdisciplinary teams (mixed sports background + finance background students), collaborate on the digital intelligence platform, and complete tasks such as industry analysis, financial forecasting, valuation modeling, and prospectus writing. This model forces students to break disciplinary boundaries and achieve internalization and integration of knowledge in the process of solving problems [8].

(2) Immersive Situational Teaching and War Gaming

Using virtual simulation laboratories for high-intensity scenario simulations. Setting specific situations (such as event suspension caused by public health emergencies, serious injury to core players), requiring student teams to use financial derivatives (such as weather options, catastrophe bonds) for hedging operations. The system automatically generates profit and loss statements based on decision results. This stress-test style teaching can greatly improve students' psychological quality and practical combat ability.

(3) AI Teaching Assistant Support and Human-Machine Co-education

Deploying 7x24 hour online AI teaching assistants. They can answer basic conceptual questions, correct objective assignment questions, and even assist students in brainstorming through conversational generation (AIGC), such as "Please list three profit models of Premier League clubs and analyze their pros and cons." The introduction of AI teaching assistants releases teachers' energy, allowing them to focus on guiding higher-order thinking and emotional interaction.

4.3. Resource Platform Construction: School-Enterprise Jointly Built "Digital Intelligence Brain"

(1) "Sports + Finance" Multi-Source Heterogeneous Big Data Database

Integrating financial terminal data from Wind, Bloomberg, etc., with sports competition data from Opta, InStat, etc., while accessing government public data and desensitized internal data from cooperative enterprises, building a domestic leading sports finance thematic database. This serves not only teaching but also provides a data "goldmine" for faculty and student research, supporting empirical research and quantitative analysis.

(2) Virtual Simulation Experimental Teaching Center

Constructing a national or provincial-level experimental teaching demonstration center integrating "Teaching, Practical Training, Scientific Research, and Competition." The center features functional areas such as "Sports Roadshow Hall," "Algorithmic Trading Laboratory," and "Sports Big Data Visual Analysis Room," with hardware and software facilities

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benchmarking industry top standards, providing students with a practical training environment seamlessly docked with the industry.

(3) Cloud Collaborative Teaching and Research Office and Virtual Teaching Community

Using cloud platforms to break physical walls, establishing virtual teaching and research offices composed of on-campus mentors, enterprise mentors, and overseas famous teachers. The three parties regularly conduct collective lesson preparation, case studies, and teaching demonstrations via the cloud, realizing cross-temporal sharing of high-quality teaching resources and solving the problem of insufficient faculty strength [9].

4.4. Faculty Team Construction: Cross-Border Fusion "Dual-Teacher Dual-Ability" Team

(1) Internal Potential Tapping and Cross-Training Mechanism

Encouraging sports teachers to obtain CFA (Chartered Financial Analyst) or FRM (Financial Risk Manager) certificates or visit for further studies to bridge the finance gap; encouraging finance teachers to take temporary posts in sports enterprises to understand industry frontiers. The school should establish corresponding incentive mechanisms to provide policy support for interdisciplinary studies, such as reimbursing exam fees and calculating workload for further studies.

(2) External Wisdom Introduction and Dual-Mentor System

Hiring industry elites such as sports investment institution partners and sports insurance product directors as adjunct professors or industry mentors. In PBL projects, implementing a "Campus Academic Mentor + Off-Campus Industry Mentor" dual-mentor guidance model ensures that theory and practice are not disconnected, enabling students to master academic norms while gaining insight into industry unspoken rules.

(3) Human-Machine Collaborative New Faculty Structure

Teachers must learn to "work with" AI. Teachers are liberated from tedious knowledge instruction and homework correction to focus on teaching design, emotional interaction, and higher-order thinking guidance, while handing over work like knowledge retrieval and data analysis to AI, forming a "Human + AI" new faculty structure to improve teaching efficiency and quality.

5. Practical Challenges and Governance Dimensions

Although digital intelligence technology depicts a beautiful blueprint for "Sports + Finance" interdisciplinary talent cultivation, many practical challenges remain in the implementation process, requiring responses from the governance level to ensure the smooth progress of reform.

5.1. Risk Governance of Data Ethics and Algorithmic Bias

With the digitization of the entire teaching process, student privacy protection becomes a red-line issue. How to ensure that collected behavioral data is used only for teaching improvement rather than commercial purposes? How to prevent algorithmic bias (e.g., AI developing stereotypes about a certain class of students based on historical data) from leading to educational inequity?

(1) Data Privacy Protection Mechanism

Establish strict data governance standards, follow the "minimum sufficient" principle for data collection, and implement data desensitization processing and graded authorization management. Clarify data ownership, granting students the right to know and choose. Strictly prohibit selling student data to third-party institutions.

(2) Algorithmic Audit and Ethical Supervision

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Introduce an "algorithmic audit" mechanism to regularly detect the fairness and transparency of teaching algorithms, ensuring "technology for good." Establish a supervision committee composed of technical experts, educational experts, and ethics experts to review algorithmic recommendation logic and prevent unequal distribution of educational resources caused by algorithmic bias.

5.2. The Gap and Enhancement of Faculty and Student Information Literacy

Digital intelligence reform places extremely high demands on the information literacy of faculty and students. Some older teachers may fear new technologies, and some students may indulge in virtual environments while neglecting real interpersonal communication, or overly rely on AI-generated answers and lose independent thinking ability.

(1) Whole-Staff Digital Literacy Enhancement Project

Conduct layered and classified technical training for teachers and include their digital intelligence teaching ability in professional title assessment. Training content includes not only the use of tools but also the concept of digital intelligence instructional design.

Basic Level: Master the operation of common teaching platforms and tools.

Advanced Level: Able to use data analysis to improve teaching.

Expert Level: Able to develop digital intelligence curriculum resources and lead teaching reforms.

(2) Student Information Ethics and Critical Thinking Education

Strengthen information ethics education and critical thinking training, guiding students to correctly treat AI as a tool rather than an "external brain" to depend on. Special modules should be set in courses to discuss the limitations and ethical risks of artificial intelligence and cultivate students' humanistic sentiments [10].

5.3. Inertia Resistance and Breakthrough of Institutional Mechanisms

The biggest resistance to interdisciplinary cultivation often comes from the administrative system. Existing college settings, funding allocations, and workload calculations are mostly based on single disciplines. Cross-college course selection, credit recognition, and resource sharing face the obstruction of "departmental walls."

(1) Establishing Special Zones for Interdisciplinary Talent Cultivation

Establish a school-level "Sports Finance Modern Industry College" or "Interdisciplinary Talent Cultivation Special Zone," granting it relatively independent personnel rights, financial rights, and teaching management rights. The special zone implements flexible mechanisms of "mutual employment of personnel, resource sharing, and mutual recognition of credits."

(2) Reforming Evaluation and Incentive Mechanisms

Establish a recognition mechanism for interdisciplinary achievements, giving inclination in performance assessment to cross-college collaborative teaching reform projects and textbook compilation. Break the barriers of solidified interests and form an institutional environment that encourages collaboration. For example, for student achievements guided by dual mentors, workload and performance are shared by both parties.

6. Conclusion and Outlook

Against the grand background of "New Finance and Economics" and "New Liberal Arts" construction, "Sports + Finance" interdisciplinary talent cultivation is not only a pragmatic move to cope with industrial changes but also an inevitable choice for the logical evolution of higher education itself. Digital intelligence technology, with its powerful connection, computing, and simulation capabilities, provides a way to break the deadlock for this complex systematic project.

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Through logical reconstruction, we have established a new educational view based on competency, characterized by personalization, and oriented by demand; through mechanism innovation, we have constructed a power system of "Trinity" involving knowledge graphs, situational teaching, and data evaluation; through path implementation, we have depicted a practical landscape of all-around integration of curriculum, teaching, faculty, and platforms. This transformation concerns not only the integration of two disciplines but also the fundamental transformation of the educational paradigm.

Looking forward, with the further maturity of technologies such as Generative Artificial Intelligence (AIGC), future "Sports + Finance" education will become more intelligent and ecological. We expect to see a borderless learning community where the boundaries between sports and finance dissolve, and students freely explore and boldly innovate under the empowerment of digital intelligence technology. Universities should maintain strategic determination, continuously deepen the integration of the OBE concept and digital intelligence technology, and not only cultivate practitioners adapted to the current market but also cultivate leaders capable of defining future sports finance business formats, contributing educational strength to the construction of a Sports Power and a Financial Power.

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