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Exploring Pathways for Cultivating Innovation and Entrepreneurship Capabilities of Finance and Economics Undergraduates through Discipline Competitions

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Abstract: *As a critical practical platform in higher education, discipline competitions have become a key driver for enhancing the innovation and entrepreneurial capabilities of finance and economics undergraduates. This paper, driven by discipline competitions, explores the importance of innovation and entrepreneurship education and examines the current status and challenges in cultivating these capabilities among finance and economics students. Through theoretical research and empirical analysis, the paper proposes specific pathways for constructing an innovation and entrepreneurship education system centered on discipline competitions. These pathways include optimizing the curriculum system, improving competition guidance models, building practical platforms, and refining diversified evaluation mechanisms. The study demonstrates that the effective integration of discipline competitions can significantly enhance students' practical skills, teamwork, and innovative thinking, providing actionable insights for advancing innovation and entrepreneurship education in finance and economics universities in the new era.*

Keywords: *Discipline Competitions; Finance and Economics Undergraduates; Innovation and Entrepreneurship Capabilities; Educational Pathways; Practical Platforms*

1. Introduction

In recent years, pilot universities have actively explored innovation and entrepreneurship talent cultivation models driven by discipline competitions, achieving initial success.[1] Under the guidance of national policies, higher education institutions have continuously reformed their talent development approaches, placing greater emphasis on organizing and participating in discipline competitions. These competitions have not only promoted educational innovation but also injected new vitality into higher education practices, particularly in finance and economics.As a teaching model that integrates theory and practice, discipline competitions have proven highly effective in cultivating innovation and entrepreneurship skills. First, they address the limitations of traditional classroom teaching. Unlike passive lecture-based learning, discipline competitions adopt a "learning through competition" approach, allowing students to apply theoretical knowledge to real-world scenarios. By analyzing and solving practical problems—such as financial risk assessment, market forecasting, or business strategy formulation—students enhance their problem-solving abilities, logical reasoning, and knowledge integration skills. This experiential learning method not only boosts engagement but also achieves a deeper connection between academic concepts and practical applications. Second, discipline competitions play a crucial role in fostering innovation. Many competition projects are designed around complex, open-ended challenges that require creative and feasible solutions. For example, business case analysis contests, financial modeling competitions, and fin-tech innovation challenges encourage students to think critically, conduct data-driven decision-making, and develop strategic insights.[2] Beyond technical skills, these competitions cultivate soft skills such as teamwork, leadership, and communication, as students often work in groups to refine and present their solutions.

Moreover, discipline competitions serve as a platform for autonomous learning and interdisciplinary growth. Unlike structured classroom environments, competitions demand self-directed learning, where students must proactively acquire new knowledge, experiment with different methodologies, and adapt

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to evolving challenges. This process strengthens their independent learning capabilities and resilience.[3] Additionally, many competitions incorporate interdisciplinary elements—such as combining finance with AI, big data, or sustainability—broadening students' perspectives and equipping them with versatile problem-solving skills needed in today's dynamic job market.Finally, discipline competitions facilitate university-industry collaboration and resource integration. Many contests are co-sponsored or judged by enterprises, providing students with exposure to real business challenges, industry trends, and professional networks. Companies often use competitions as talent pipelines, offering internships, job opportunities, or funding for promising projects. This synergy between academia and industry not only enhances students' employability but also bridges the gap between education and market demands, creating a sustainable ecosystem for innovation and entrepreneurship.

2. Current Status and Challenges in Cultivating Finance and Economics Students' Innovation and Entrepreneurship Capabilities through Discipline Competitions

2.1 Current Status Analysis

In the cultivation of finance and economics students' innovation and entrepreneurship capabilities through discipline competitions, several key issues hinder effectiveness. Firstly, there is insufficient emphasis on competition-oriented innovation and entrepreneurship education. Many institutions treat such competitions as peripheral activities rather than integral components of the curriculum. The educational model remains rigid, lacking flexibility and adaptability to students' diverse needs. Additionally, the absence of a resource-sharing mechanism prevents efficient utilization of tools, platforms, and expertise, limiting students' access to necessary support.

Secondly, student participation rates are notably low, reflecting a weak institutional culture around innovation and entrepreneurship. This stems from inadequate promotion and organization of competitions, leaving many students unaware of opportunities or their potential benefits. Without clear incentives or recognition, motivation to participate remains poor. Furthermore, the lack of mentorship and preparatory training exacerbates the problem, as students may feel ill-equipped to compete.

Thirdly, the integration of practical projects and discipline competitions is weak. Projects are often reserved for senior-year students, excluding underclassmen who could benefit from early exposure. Competition topics frequently fail to align with real-world social and economic needs, reducing their practical relevance. Moreover, insufficient funding and guidance resources further limit the quality and impact of these initiatives. Addressing these gaps requires curriculum reforms, better resource allocation, and stronger industry collaboration to ensure competitions are accessible, relevant, and impactful.

2.1.1 Insufficient Emphasis on Innovation and Entrepreneurship Education Guided by Discipline Competitions

Currently, finance and economics disciplines still need to place greater emphasis on innovation and entrepreneurship education, especially within education models driven by discipline competitions. These models lack the flexibility and specificity required for integration with practical applications, resulting in limited student engagement and self-directed learning[4]. Some universities treat discipline competitions as activities for a small group of students, failing to establish mechanisms for sharing educational resources across the institution, which hinders the comprehensive development of students' innovation and entrepreneurship capabilities.

2.1.2 Low Participation and Weak Institutional Atmosphere

A vibrant campus atmosphere for innovation and entrepreneurship is critical to motivating students to participate in discipline competitions and improve their innovation capabilities. However, many finance and economics programs lack sufficient promotion and organization of discipline competitions, with limited scale and insufficient systematic guidance and resources. Students often have a superficial understanding of discipline competitions, perceiving little relevance to personal growth or career development, which diminishes their willingness to participate. This low participation and coverage restrict student growth and constrain the overall improvement of innovation and entrepreneurship education in universities.

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2.1.3 Weak Integration of Practical Projects and Discipline Competitions

Although some universities have gradually implemented innovation and entrepreneurship practice projects centered on discipline competitions, their scope and effectiveness remain limited. Many projects focus on senior students, neglecting the development of younger students' abilities. Additionally, competition topics are often disconnected from societal needs, making it difficult for students to translate competition results into practical entrepreneurial capabilities. The lack of funding and guidance resources further restricts the sustainability and scalability of these projects.(see Fig. 1)

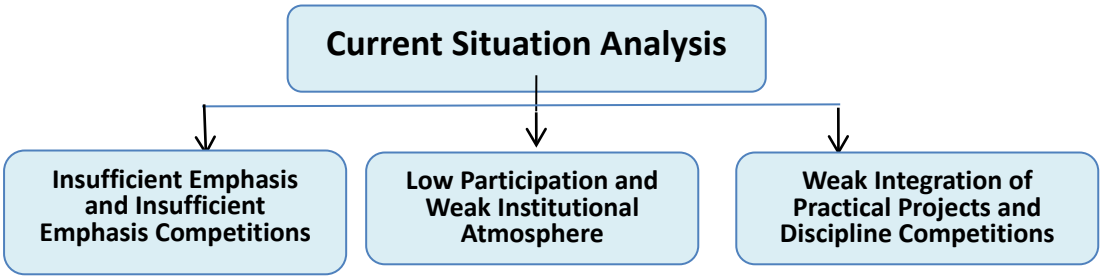

Fig. 1 Construction of Current Status Analysis

2.2 Major Challenges

The major challenges include the lag in integrating competitions into the educational system, with insufficient incorporation of competition content in curriculum design. Resource support and university - industry collaboration are inadequate, facing shortages in funds and qualified instructors, and shallow cooperation with enterprises. Moreover, students encounter difficulties in participation and skills development, showing low interest and participation, along with a lack of systematic competition guidance and skills training.(see Fig. 2)

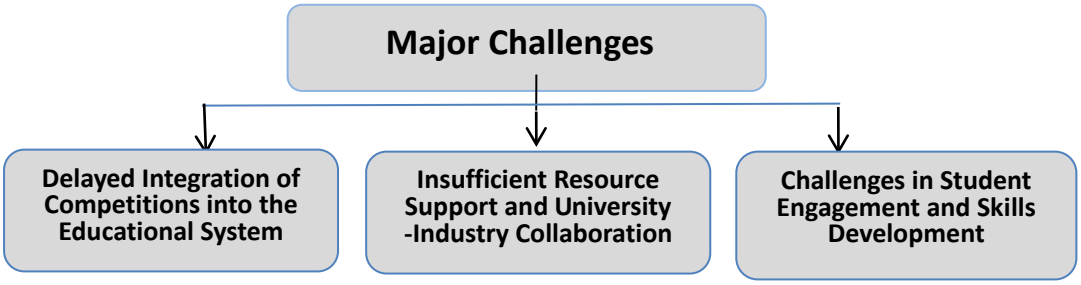

Fig. 2 Construction of Major Challenges

2.2.1 Delayed Integration of Competitions into Educational Systems

Currently, finance and economics programs in many universities have yet to fully incorporate discipline competitions into their curriculum design. Traditional teaching models remain predominantly lecture-based, focusing on theoretical knowledge transmission while neglecting the cultivation of interdisciplinary and practical skills. Although some institutions offer innovation and entrepreneurship courses, these are often taught in isolation without deep integration with discipline competitions. This disconnect results in fragmented learning experiences, where students struggle to systematically develop the comprehensive abilities required for real-world challenges.

Moreover, the assessment methods for these courses rarely incorporate competition performance as an evaluation metric, reducing incentives for student participation. Without structured guidance on how to apply classroom knowledge to competition scenarios, students miss valuable opportunities to enhance their problem-solving and critical thinking skills. To address this, universities need to redesign curricula to embed competition-oriented learning modules, establish credit recognition systems for competition achievements, and create interdisciplinary teaching teams to better support students' holistic development.

2.2.2 Insufficient Resource Support and University-Industry Collaboration

The successful implementation of discipline competitions relies heavily on adequate funding, expert

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mentorship, and practice platforms. However, many universities face resource constraints, including limited financial support for competition-related activities and a shortage of qualified instructors with practical industry experience. While some institutions organize competitions, they often lack sustained investment, resulting in superficial events rather than high-quality, impactful learning experiences. Another critical issue is the weak university-industry collaboration in competition design and execution. Many enterprises remain passive participants, providing minimal real-world case studies, technical support, or funding. Without industry involvement, competition topics may lack relevance to current market needs, diminishing their educational value. To improve this, universities should establish long-term partnerships with corporations, financial institutions, and startups to co-develop competition themes, provide mentorship, and offer internship opportunities for outstanding participants. Additionally, creating dedicated innovation funds and practice bases can enhance resource availability and ensure sustainable competition development.

2.2.3 Challenges in Student Engagement and Skills Development

Despite the benefits of discipline competitions, many finance and economics students show low participation rates due to misconceptions about their relevance. Some view competitions as overly demanding or disconnected from their career goals, while others lack confidence in their ability to compete effectively. This reluctance is compounded by insufficient promotion and awareness campaigns, leaving many students uninformed about competition opportunities and their potential benefits. Furthermore, even when students participate, they often struggle to convert theoretical knowledge into practical innovation outcomes. This is largely due to the absence of systematic pre-competition training, such as workshops on business modeling, financial analysis, and presentation skills. Without proper guidance, participants may focus narrowly on academic performance rather than developing the creativity, teamwork, and adaptability needed for real-world applications.To boost engagement, universities should implement targeted outreach programs, highlighting success stories and career advantages gained through competitions. Additionally, integrating competition preparation into regular coursework—such as through case study simulations and skill-building seminars—can better equip students to excel. By fostering a culture that values hands-on learning, institutions can enhance student motivation and ensure that discipline competitions fulfill their role in cultivating well-rounded, innovative professionals.

3. Exploring Innovation and Entrepreneurship Education Pathways Driven by Discipline Competitions

Discipline competitions, as a critical carrier of innovation and entrepreneurship education, effectively stimulate finance and economics students' learning interest and practical enthusiasm through the concepts of "learning through competition" and "teaching through competition." Within the "innovation and entrepreneurship" talent cultivation model, universities emphasize the deep integration of theoretical teaching and information technology, expanding classroom teaching content and guiding students from passive to active learning.Through discipline competitions, students continuously enhance their innovative thinking, problem-solving abilities, and practical capabilities in knowledge application and teamwork.[6] By constructing a "dual innovation" talent cultivation model centered on discipline competitions, universities can effectively advance the comprehensive development of finance and economics students' innovation and entrepreneurship capabilities, nurturing high-quality, application-oriented talents who meet the demands of the new era.

3.1 Constructing an Innovation and Entrepreneurship Education Curriculum System

3.1.1 Deep Integration of discipline Competitions and Curriculum Design

As an essential form of practical teaching, discipline competitions serve as a powerful bridge between theoretical knowledge and real-world application. To maximize their educational value, universities should systematically integrate competition elements into the curriculum design for finance and economics programs. [5]This integration can be achieved through multiple approaches:

First, competition-oriented specialized courses should be developed and incorporated into the core curriculum. For example, courses like “Business Simulation Practice” could utilize case studies from actual competitions, allowing students to analyze market trends, formulate financial strategies, and make investment decisions in simulated environments. Similarly, “Data Analysis Tools” could teach Python, SQL, and financial modeling through competition datasets, ensuring students gain hands-on

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experience with industry-relevant tools.

Second, a modular teaching approach can be adopted to structure learning progression. Basic modules would focus on foundational theories in finance, economics, and management, while advanced modules would incorporate competition projects that require interdisciplinary knowledge application. For instance, a corporate finance course could include a competition module where students develop fundraising strategies for startups, combining financial analysis with business planning skills.

Third, assessment methods should be reformed to recognize competition performance. Universities could establish credit equivalency systems where high competition achievements count toward course credits or graduation requirements. This not only incentivizes participation but also validates competitions as legitimate academic endeavors.

Moreover, interdisciplinary collaboration should be encouraged. Joint courses with computer science, statistics, or engineering departments could prepare students for competitions in fintech, algorithmic trading, or sustainable finance, broadening their skill sets and fostering innovative thinking.

By deeply embedding competitions into curricula, universities transform passive learning into active problem-solving. Students benefit from early exposure to practical challenges, continuous skill development, and meaningful connections between classroom knowledge and real-world scenarios. This approach not only enhances employability but also cultivates the entrepreneurial mindset needed in today's rapidly evolving financial landscape.

3.1.2 Diversified Innovation and Entrepreneurship Course Offerings

Based on the requirements of discipline competitions, finance and economics universities should establish a phased and diversified curriculum system. This system should include courses such as Innovation Thinking Introduction, Entrepreneurship Fundamentals, Competition-Specific Training, and Comprehensive Entrepreneurship Practice. For example, in the context of competitions like "Challenge Cup" or "Internet+" competitions, courses can be designed to align with the competition themes, blending theoretical instruction with practical competition preparation. This structured curriculum meets the needs of students across different discipline levels and encourages active participation in competitions, thereby enhancing their practical skills and innovative capabilities.

3.2 Optimizing Discipline Competition Guidance Models

3.2.1 Building Interdisciplinary Mentor Teams

To effectively support students in multidisciplinary competitions, universities should establish a structured interdisciplinary mentorship system. This system should integrate faculty resources across departments while also incorporating industry experts to provide comprehensive guidance. Specifically, the mentorship team could include:

Core Academic Mentors: Professors specializing in finance, economics, law, and management who can provide theoretical foundations and methodological guidance. For finance competitions, these mentors would teach valuation techniques, risk assessment models, and investment analysis frameworks.

Industry Practice Mentors: Professionals from banks, securities firms, law firms, and consulting companies who can share real-world case studies and practical insights. They can help students understand current industry standards and emerging trends.

Technical Support Mentors: Experts in data analysis, programming, and digital tools who can assist with quantitative modeling, algorithm development, and fintech applications.

Presentation Coaches: Communication specialists who can train students in business presentation skills, including visual design, public speaking, and executive summary writing.

The mentorship team should adopt a collaborative working model featuring:

Regular interdisciplinary workshops

Case-based learning sessions

Mock competition simulations

Post-competition reflection meetings

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This comprehensive guidance system not only improves competition outcomes but also helps students develop T-shaped competencies-deep discipline knowledge combined with broad interdisciplinary application skills. For example, in an "Innovative Financial Product Design Competition," students would simultaneously learn financial engineering principles, regulatory compliance requirements, market demand analysis, and product prototyping techniques through this integrated mentorship approach.

3.2.2 Personalized Guidance and Team Collaboration Development

To effectively unlock students' potential, universities should develop personalized competition guidance systems that align with individual competencies and competition requirements. This begins with comprehensive competency assessments to identify students' strengths in areas such as technical skills, analytical thinking, or leadership. Based on these assessments, interdisciplinary teams can be strategically formed with clearly defined roles - for instance, in "Internet+" competitions, teams might include technical developers responsible for product prototyping, market analysts conducting feasibility studies, and operational managers overseeing project timelines. Throughout the competition cycle, mentors should provide phased guidance, offering foundational training during preparation, role-specific coaching during execution, and presentation refinement before final submissions. This structured yet flexible approach not only optimizes team performance but also ensures each student develops both specialized expertise and collaborative skills. Regular feedback sessions and role rotation opportunities further enhance the learning experience, fostering well-rounded innovation capabilities.

3.3 Building Innovation and Entrepreneurship Practice Platforms

3.3.1 Establishing On-Campus Practice Bases and Off-Campus Corporate Collaboration Mechanisms

To maximize the educational impact of discipline competitions, universities should establish dedicated innovation labs and competition studios equipped with cutting-edge technologies and professional resources. These facilities could provide specialized support such as financial modeling software, business simulation platforms, and data analysis tools. Simultaneously, institutions should deepen cooperation with industry partners to co-develop practical competition projects like "Venture Capital Simulation Competitions" or "Fin-tech Innovation Challenges" that mirror real business environments. For instance, banks could provide authentic datasets for financial analysis contests, while tech companies might offer AI platforms for digital finance projects. This university-enterprise collaborative approach not only bridges the gap between academic theory and industry practice but also allows students to develop solutions for genuine business challenges. Through such initiatives, students gain valuable insights into industry standards and expectations while cultivating professional competencies that enhance their employability and entrepreneurial potential.

3.3.2 Developing Online and Offline Resource-Sharing Platforms

The development of information technology has revolutionized resource sharing for discipline competitions, enabling universities to create integrated online-offline learning ecosystems. By establishing comprehensive digital platforms, institutions can provide centralized access to valuable competition resources including historical case databases, virtual simulation systems, expert lecture archives, and AI-powered analytical tools. These platforms allow students to independently access preparatory materials, submit practice projects, and receive remote mentoring from faculty and industry experts through cloud-based communication systems. Complementing these digital resources, universities should organize physical capacity-building activities such as intensive boot camps, hands-on workshops with financial modeling software, and interdisciplinary brainstorming sessions. For example, a blended "FinTech Innovation Platform" could combine online algorithmic trading simulations with offline hackathons judged by banking professionals. This dual-channel approach not only optimizes learning flexibility and preparation efficiency but also creates a continuous improvement cycle where online theoretical learning informs offline practical application, significantly enhancing students' competition readiness and innovation capabilities.

3.4 Improving Diversified Evaluation Mechanisms

3.4.1 Innovation and Entrepreneurship Capability Indicators Based on Discipline Competitions

To establish a robust competition evaluation system, universities should develop a multidimensional

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assessment framework that tracks both process and outcomes. This system should incorporate quantitative and qualitative metrics across four key dimensions: (1) innovation potential, measured through idea originality and solution creativity; (2) analytical capability, assessed via problem-solving methodologies and decision-making processes; (3) collaborative performance, evaluated through team role fulfillment and communication effectiveness; and (4) practical impact, judged by solution feasibility and commercialization potential. The evaluation should employ phased dynamic assessments - preliminary rounds focusing on knowledge application, mid-term evaluations examining skill development, and finals assessing comprehensive output quality. For instance, in financial case competitions, early stages might evaluate data processing techniques, while final presentations assess integrated reporting and stakeholder value creation. Such a system not only provides diagnostic feedback for student development but also generates actionable data for curriculum optimization, creating a closed-loop improvement mechanism for innovation education.

3.4.2 Combining Process and Outcome Evaluation

A comprehensive competition evaluation system should integrate both process and outcome assessments to fully capture students' developmental progress. Process evaluation monitors real-time performance through key indicators including research depth (e.g., number of prototype iterations), collaboration effectiveness (peer-reviewed teamwork scores), and milestone achievement rates (completed tasks versus project timeline). Outcome evaluation employs rigorous criteria such as solution innovation index (judges' ratings on originality), implementation feasibility (industry expert assessments), and potential impact (market value projections). For example, in fintech competitions, process metrics might track algorithmic model refinement processes, while outcome metrics evaluate the model's predictive accuracy and commercial applicability. This dual approach enables mentors to: 1)identify skill gaps during development phases, 2) provide timely interventions, and 3) adjust training focus based on quantitative performance data. The integrated assessment not only validates final achievements but also documents competency growth patterns, allowing for personalized development plans that bridge theoretical knowledge and practical innovation capabilities

4. Conclusion

Discipline competitions serve as a critical tool for cultivating the innovation and entrepreneurship capabilities of finance and economics students, effectively integrating theory with practice through the "learning through competition" approach. This paper explores pathways for innovation and entrepreneurship education driven by discipline competitions, focusing on curriculum construction, guidance model optimization, practice platform development, and evaluation mechanism improvement. In curriculum construction, phased course designs such as "Innovation Introduction," "Competition Guidance," and "Comprehensive Practice" enable students to transition effectively between theoretical learning and practical application. Embedding competition content into the curriculum stimulates learning enthusiasm and enhances knowledge application skills. In guidance models, interdisciplinary mentor teams and personalized guidance strategies help students realize their potential and improve teamwork. In practice platforms, the integration of on-campus bases with off-campus corporate collaborations offers students real-world experience, reinforcing professional skills. Furthermore, the development of online and offline resource-sharing platforms optimizes competition preparation and participation efficiency. Finally, diversified evaluation mechanisms based on discipline competitions not only focus on outcomes but also emphasize the cultivation of process-oriented capabilities, providing scientific support for student growth and instructional improvement. Moving forward, universities should deepen the educational value of discipline competitions to nurture finance and economics talents with innovation and practical abilities, meeting the demands of a rapidly changing society.

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