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Perspective

More Than a Trophy: How the CICSIC Reshaped a Medical Student's Mindset from Lab to Market

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Abstract

This reviews the author's entire process of participating in the China International College Student Innovation Competition (CICSIC). The initial motivation for participating stemmed from a concern about the pain points of an aging society, aiming to combine a medical background with artificial intelligence technology to explore a rapid screening solution for anti-aging drugs. The participation brought not only awards but also a significant leap in comprehensive abilities such as business thinking, stress resistance, public speaking, and project management, as well as a profound understanding of "from lab to market." Furthermore, the network gained through teamwork and the sense of responsibility to respond to social needs with professional competence will serve as lasting motivation for future career development.

Keywords: CICSIC; medical student; innovation and entrepreneurship; teamwork; cognitive upgrade

1. Introduction

The China International College Student Innovation Competition (CICSIC), formerly known as the "Internet+" College Student Innovation and Entrepreneurship Competition, is one of the most extensive and influential innovation and entrepreneurship competitions for college students in China.

The competition aims to stimulate college students' innovative spirit, entrepreneurial awareness, and innovation-entrepreneurship capabilities, promoting the integration of university scientific and technological achievements with social needs. Participating projects cover various fields such as information technology, biomedicine, new materials, and rural revitalization, attracting millions of college students annually. Empirical research on the practice of Chinese college student discipline competitions shows that college students exhibit a high level of interest in innovation and entrepreneurship competitions, and their initiative in participating significantly influences their entrepreneurial awareness and practices [1]. For universities, the CICSIC is not only a touchstone for assessing the quality of talent cultivation but also an important platform for promoting industry-university-research integration and teaching and learning through competition. For individual students, the participation process itself is an intensive comprehensive ability training—covering everything from topic selection, research, and technical breakthroughs to business plan writing and roadshow defense, encompassing almost all real-world scenarios that classroom education often fails to provide.

The key reason I chose to participate in the CICSIC is that it falls under the category of innovation and entrepreneurship competitions. I believe that in today's rapidly changing international landscape, innovation ability is crucial, and entrepreneurship is a natural extension of innovation implementation. On this basis, I began to think: As a medical student, what kind of innovation can I create? And what contributions can I bring to the country and society through innovation? Considering the current declining birth rate, I realized that aging will inevitably become a major challenge for China's future, with a growing demand for health, longevity, and anti-aging. According to relevant research, the population aged 60 and above in China accounted for 18% of the total population in 2020, and those aged 80 and above accounted for 2.5%; these proportions are expected to rise to 39% and 10% respectively by 2050 [2]. Therefore, I decided to focus on the pain point of aging. Learning about the extensive application of artificial intelligence in the medical field, I attempted to combine AI technology to find a solution [3-6]. Of course, it is undeniable that practical factors such as graduate school admission bonus points and the university's increasing emphasis on innovation and entrepreneurship competitions also motivated me—participating in the CICSIC helps me advance my academic studies. However, the core driving force that kept me going through the entire process was always the desire to respond to real social problems through innovation.

Looking back on the whole journey, my greatest gain is not the award itself, but the cognitive upgrade. During the preparation for the competition, I increasingly felt the real part of social pain points, and my thinking became more dynamic and grounded. I have truly begun to look forward to using my professional knowledge to make a tangible contribution to society in the future.

2. Preliminary Preparation: From Inspiration to Project Prototype

2.1 Topic Selection and Project Establishment

The project's topic consistently focused on social pain points. I firmly believe that innovation is not just for entrepreneurship but for solving problems; conversely, for an entrepreneurial project to stand invincible, it must keep pace with the times and respond to the real needs of the people. The lab I work in primarily studies small molecule compounds, which gave me an inspiration: could we build a rapid screening system for small molecule compounds to assist in finding anti-aging drugs, thereby contributing to alleviating the labor shortage in an aging society?

However, as college students new to innovation and entrepreneurship, we must remain clear-headed in topic selection: the direction cannot be too broad. For example, our goal is anti-aging, but we absolutely cannot "promote childbirth" or completely reverse the aging trend at the societal level.

2.2 Team Building and Role Allocation

Talent is the prerequisite for the stable advancement of a project. By "talent," I do not only refer to technical talent, but also roles in marketing, finance, and roadshow presentation. The technical team is responsible for producing core results and optimizing models; the marketing team needs to constantly monitor the trends of other anti-aging companies and products to ensure our project is both up-to-date and competitive; finance is equally crucial—for any entrepreneurial project to develop stably, flawless financial management is essential. Moreover, for a college student competition, how to accurately and compellingly showcase the project's advantages relies on roadshow presenters who convey full enthusiasm, strong confidence, and a commanding presence.

The most difficult aspect of teamwork is handling conflicts of opinion. Here, the advisor plays an indispensable role—possessing richer experience and broader vision, the advisor can provide directional guidance when students cannot make up their minds. However, it must be emphasized: innovation should primarily be the result of brainstorming among students. If we rely entirely on the advisor to do the work, it defeats the purpose of the "College Student Innovation Competition." The focus of the competition is never winning awards, but honing oneself and broadening horizons during the preparation process.

Additionally, often character matters more than ability. A person's sense of responsibility and willingness to communicate often contribute more to team collaboration advantages than any single skill—this was the deepest interpersonal insight I gained throughout the competition.

2.3 Material Preparation

The core materials needed for the CICSIC mainly include: business plan, slides, presentation video, and if the innovation outcome is a physical product, bringing a physical model is even better. Among these, the slides deserves special attention for refinement. A slides should not be as flashy as possible; instead, it needs a clear logical chain, progressing step by step: Where is the pain point? What is our solution? What achievements have we made so far? What are the advantages over existing solutions? What is the team composition? What is the future development plan?—A good slides allows judges to fully understand the project's value proposition within a few minutes.

3. During the Competition: Mindset and Actions Under High Pressure

3.1 Improvisation under Emergency

The ability to cope with pressure and regulate emotions in innovation competitions is an important factor affecting team performance. In a multi-modal study of teams in an academic programming competition (hackathon), researchers identified four major types of challenges teams faced: cognitive, motivational, emotional, and behavioral, and found that teams that applied more socially shared emotion regulation strategies during challenging moments exhibited higher levels of mutual trust and shared mental models [7]. This finding reveals the crucial link between emotion regulation strategies and team coordination, and confirms the importance of maintaining a calm mindset under competition pressure. Additionally, psychological research also indicates that adolescents and adults tend to show a trend of enhanced innovation ability under moderate competitive pressure, suggesting that pressure is not entirely negative; the key lies in how to transform it into positive motivation.

3.2 Defense and Presentation

In preparing for the defense, we carefully studied the competition's judging criteria during the preparation period, breaking down each scoring indicator into specific questions and preparing answers in advance. For example, for the "innovativeness" indicator, we prepared a three-tiered answer: technical innovation (algorithm innovation), application innovation (new application in anti-aging), and model innovation (collaboration with medical institutions and pharmaceutical companies). The process of rehearsal in advance was very important—some award-winning students shared their experience, mentioning that they "specifically simulated various questioning scenarios and rehearsed repeatedly," which made the official defense much smoother. This practice is consistent with the findings of empirical research on how entrepreneurship competitions enhance students'

comprehensive abilities—the competition not only tests professional skills but also the soft skills required for cross-cultural collaboration, and students need to complete the entire process from problem definition to solution design to project presentation in a short time [8].

4. Conclusion: Long-term Impact of Participation on the Future

First, there is a comprehensive improvement in ability. Empirical research has shown that innovation and entrepreneurship competitions play a unique and effective role in stimulating college students' innovation awareness, cultivating entrepreneurial ability, and promoting the integration of theory and practice [9,10]. In terms of personal experience, business thinking taught me to reverse-engineer technical paths from market demand; stress resistance made me no longer flustered in unexpected situations; public speaking taught me to move audiences with stories; project management taught me resource coordination and priority management. These abilities are something no classroom can directly provide.

Second, there is a profound cognitive transformation. I truly understood the gap and the leap "from lab to market"—the value of a technology ultimately depends on how many people it can help and how big a problem it solves. I am more convinced that medical students' innovation should not stop at paper publication, but should move toward real social scenarios, responding to people's health needs with professional competence.

Third, there is the valuable gain of networking. I met a group of like-minded partners—from different majors, yet sharing the common belief of changing the world through innovation. We also established connections with several industry experts, relationships that will become important resources for future career development.

Finally, there is the quiet rooting of a sense of mission. As a medical student, I always remember the original motivation for participating—the urgent need for anti-aging in the context of an aging society. The CICSIC showed me that medical students' innovation can go beyond publishing an SCI paper; it can tangibly improve the quality of life for countless elderly people. This sense of responsibility will become the driving force for my continuous advancement on the medical path in the future.

5. References

[1]Wu L, Jiang S, Wang X, Yu L, Wang Y, Pan H. Entrepreneurship Education and Entrepreneurial Intentions of College Students: The Mediating Role of Entrepreneurial Self-Efficacy

and the Moderating Role of Entrepreneurial Competition Experience. Front Psychol. 2022 Jan 6;12:727826. doi: 10.3389/fpsyg.2021.727826. PMID: 35069312; PMCID: PMC8770817.

[2] Fang EF, Fang Y, Chen G, Wang HL, Zhang J, Wu C, Liao J, Xie C, Liu X, Wang K, Liu Y, Yang G, Wang Q, He LT, Li J, Chen HZ, Kang L, Jiang Y, Su H, Jiang H, He N, Tao J, Leng SX, Siow RC, Liu C, Khan HTA, Liu Y, Kato H, Sasaki T, Kim JI, Maier AB, Zhang L, Rasmussen LJ, Woo J, Wu J, Zou H. Adapting health, economic and social policies to address population aging in China. Nat Aging. 2025 Nov;5(11):2176-2187. doi: 10.1038/s43587-025-00999-8. Epub 2025 Oct 31. PMID: 41174222.

[3] Zhou G, Rusnac DV, Park H, Canzani D, Nguyen HM, Stewart L, Bush MF, Nguyen PT, Wulff H, Yarov-Yarovoy V, Zheng N, DiMaio F. An artificial intelligence accelerated virtual screening platform for drug discovery. Nat Commun. 2024 Sep 5;15(1):7761. doi: 10.1038/s41467-024-52061-7. PMID: 39237523; PMCID: PMC11377542.

[4] Yusri K, Kumar S, Fong S, Gruber J, Sorrentino V. Towards Healthy Longevity: Comprehensive Insights from Molecular Targets and Biomarkers to Biological Clocks. Int J Mol Sci. 2024 Jun 20;25(12):6793. doi: 10.3390/ijms25126793. PMID: 38928497; PMCID: PMC11203944.

[5] Mishin A, Gusach A, Luginina A, Marin E, Borshchevskiy V, Cherezov V. An outlook on using serial femtosecond crystallography in drug discovery. Expert Opin Drug Discov. 2019 Sep;14(9):933-945. doi: 10.1080/17460441.2019.1626822. Epub 2019 Jun 11. PMID: 31184514; PMCID: PMC6687307.

[6] Lee CH, Lee SH. Natural products, artificial intelligence, and the future of anti-aging pharmacology: A human-centered call to action. Pharmacol Res. 2025 Nov;221:107952. doi: 10.1016/j.phrs.2025.107952. Epub 2025 Sep 16. PMID: 40967494.

[7] Kazemitabar, M., Lajoie, S. P., & Doleck, T. (2024). Examining the relationship between socially-shared emotion regulation and building team coordination mechanisms during a hackathon. Education and Information Technologies, *29*(5), 6241–6272.

[8] Wang J, Guo Y, Zhang M, Li N, Li K, Li P, Huang L, Huang Y. The Impact of Entrepreneurship Competitions on Entrepreneurial Competence of Chinese College Students. Front Psychol. 2022 Feb 28;13:784225. doi: 10.3389/fpsyg.2022.784225. PMID: 35295399; PMCID: PMC8918648.

[9] Patel J, Eranki S, Tan I, Huang I, Sindhu T, Lam D, Mukherjee R, Chakraborty A, Weber P. Inspiring Student Entrepreneurship and Innovation. Cureus. 2024 Oct 10;16(10):e71195. doi: 10.7759/cureus.71195. PMID: 39525220; PMCID: PMC11550102.

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8. Conflict of Interest Statement

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