

Research on the Optimization Path of College Students' Innovation and Entrepreneurship Education under the Background of New Quality Productivity

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Abstract: Against the backdrop of a new round of technological revolution and accelerated industrial transformation, new quality productivity has gradually become the core driving force for promoting high-quality economic and social development. This form of productivity is characterized by digitization, intelligence, and greenization, which puts higher demands on the knowledge structure, abilities, and innovative consciousness of talents. As an important battlefield for talent cultivation, universities must actively adapt to the development needs of new quality productivity in their innovation and entrepreneurship education. At present, there are still obvious shortcomings in the innovation and entrepreneurship education for college students in terms of updating concepts, curriculum systems, practical mechanisms, and faculty construction, which make it difficult to effectively support the demand for composite and innovative talents in new quality productivity. This article focuses on the new requirements of new quality productivity for higher education, systematically analyzes the current practical difficulties faced by innovation and entrepreneurship education for college students, and proposes optimization paths from four dimensions: educational philosophy, curriculum system, collaborative mechanism, and evaluation orientation. The aim is to provide theoretical reference and practical guidance for improving the quality of innovation and entrepreneurship education in universities.

Keywords: New Quality Productivity; Higher Education Institutions; Innovation and Entrepreneurship Education; Improvement Path

1. The Intrinsic Relationship Between New

Quality Productivity and Innovation and Entrepreneurship Education for College Students

New quality productivity is an advanced form of productivity driven by technological innovation, which essentially aims to achieve a leap in total factor productivity through technological integration, factor recombination, and model innovation^[1]. In this context, the traditional development path relying on resource investment and scale expansion is gradually being replaced by knowledge intensive and technology driven development models. As an important component of the national innovation system, universities undertake the core task of cultivating talents with innovative, practical, and cross-border integration abilities. Innovation and entrepreneurship education for college students is not only an important way to enhance their comprehensive quality, but also a key link in meeting the development needs of new quality productivity. New quality productivity emphasizes original technological breakthroughs and systematic solution capabilities, which require universities to strengthen students' critical thinking, problem-solving skills, and interdisciplinary collaboration awareness in the educational process. At the same time, the development of new quality productivity has given rise to a large number of emerging business formats and occupational forms, such as artificial intelligence applications, green energy development, digital content creation, etc. These fields have raised higher standards for the compound knowledge background and rapid learning ability of talents. Therefore, innovation and entrepreneurship education must go beyond the traditional single dimension of "entrepreneurship competition" or "project incubation", and shift towards building a systematic education system that covers all students, runs through the entire training process, and integrates multidisciplinary resources^[2].

2.The Main Challenges of Innovation and Entrepreneurship Education for College Students Under the Background of New Quality Productivity

2.1 Educational Philosophy Laging Behind the Demand for Productivity Transformation

At present, some universities still have a superficial understanding of innovation and entrepreneurship education, which encourages students to start businesses or participate in competitions, and fails to fully recognize its fundamental role in shaping students' comprehensive literacy and adapting to future social changes. This conceptual limitation leads to overly utilitarian setting of educational goals, neglecting the systematic cultivation of students' innovative thinking, risk awareness, and systemic cognitive abilities^[3]. New quality productivity emphasizes the acceleration of technological iteration speed and the blurring of industrial boundaries, requiring talents to possess the ability of continuous learning and cross-border integration. However, existing educational concepts have not yet incorporated such abilities into core training objectives. Some teachers still consider innovation and entrepreneurship as additional content beyond professional education, lacking awareness of integrating them organically into the professional curriculum system. In addition, the strategic positioning of innovation and entrepreneurship education by school management is not clear enough, often categorizing it as student work or employment guidance, rather than an important lever for talent cultivation model reform. This conceptual lag has led to a clear disconnect between educational content and the quality structure required for new productivity, making it difficult to effectively respond to the new requirements of technological changes on talent capabilities.

2.2 The Curriculum System Lacking Systematicity and Cutting-Edge Features

The existing innovation and entrepreneurship courses generally have problems such as loose structure, outdated content, and disconnection from professional education. Most innovation and entrepreneurship courses in universities exist in the form of general elective courses, lacking unified curriculum standards and

advanced design, making it difficult to form a knowledge system that progresses gradually from shallow to deep^[4]. The course content mainly focuses on traditional entrepreneurial skills such as business plan writing and market analysis, with less involvement in new quality productivity related issues such as artificial intelligence ethics, data governance, and green technology applications. At the same time, the curriculum development mechanism is rigid and fails to timely absorb cutting-edge technological achievements and the latest developments in the industry, resulting in teaching content lagging behind actual development. Insufficient integration of interdisciplinary courses, lack of business thinking training for science and engineering students, and lack of technical understanding ability for humanities students, making it difficult to meet the demand for composite talents in new quality productivity. The implementation method of the course is also relatively single, overly relying on theoretical lectures and lacking situational teaching design based on real problems, which weakens the cultivation of students' ability to solve complex real-world problems.

2.3 Insufficient Integration of Practical Platform Resources

The innovation and entrepreneurship practice of college students highly relies on effective collaboration of internal and external resources, but currently, the construction of practice platforms in most universities is still in a dispersed state. The facilities such as campus laboratories, engineering centers, and maker spaces have not been open and shared, resulting in low efficiency and a lack of effective coordination mechanisms with innovation and entrepreneurship projects. Although external enterprises, research institutes, industrial parks and other resources have intentions to cooperate, the depth of cooperation is limited, mostly staying at the level of visits or short-term internships, which makes it difficult to support students in carrying out innovative practices with technological content^[5]. Although some universities have established entrepreneurship parks or incubators, their operational mechanisms are heavily administrative and their service functions are single, making it difficult to provide specialized support such as technology transformation, intellectual property protection, and financing docking. In addition,

the selection of practical project topics often deviates from the real needs of the industry, and student teams lack in-depth research and judgment on technical feasibility and market prospects, resulting in poor project sustainability. The fragmented state of resource integration makes it difficult for students to hone the technical application and business implementation skills required to cope with the challenges of new quality productivity in real scenarios.

2.4 Structural Shortcomings in the Professional Competence of the Teaching Staff

Innovation and entrepreneurship education requires teachers to have high comprehensive qualities, including solid professional knowledge, as well as certain industry experience and innovative practical experience. However, the current teachers engaged in innovation and entrepreneurship education in universities are mostly counselors, ideological and political course teachers, or management cadres, and generally lack systematic innovation and entrepreneurship training and industry practical experience. Although professional course teachers have disciplinary advantages, their enthusiasm for participating in innovation and entrepreneurship teaching is not high due to the evaluation system's emphasis on scientific research papers and longitudinal topics, and they lack the ability to translate professional content into innovative project guidance. The teacher training mechanism is not sound, and existing training mainly focuses on teaching methods, neglecting systematic explanations of new quality productivity related technology trends, business models, and policy environments, making it difficult to enhance teachers' cutting-edge vision and practical guidance abilities. The shortcomings of the teaching staff directly affect the quality of teaching and the level of student projects, making it difficult for innovation and entrepreneurship education to truly meet the deep-seated requirements of new quality productivity for talent ability structure.

3. Optimization Path of Innovation and Entrepreneurship Education for College Students Under the Background of New Quality Productivity

3.1 Refactoring the Ability Oriented

Educational Philosophy

Universities should regard innovation and entrepreneurship education as a fundamental process of cultivating students' basic competencies, rather than just serving as an additional activity for students with entrepreneurial intentions. The educational objectives should focus on the systematic cultivation of problem-solving ability, technical understanding ability, systematic thinking ability, and value judgment ability, so that students have the basic qualities of identifying opportunities, integrating resources, and promoting change in highly uncertain environments. Schools should clarify the fundamental position of innovation and entrepreneurship education in the top-level design of talent cultivation, incorporate it into professional certification standards and curriculum quality evaluation systems, and ensure that it runs through the entire teaching process of various majors^[6]. All colleges and departments should, according to the discipline attribute and development logic, formulate differentiated but intrinsically linked ability training objectives, and avoid the use of unified templates that lead to the disconnection between educational content and professional characteristics. The role of teachers also needs to be adjusted accordingly, shifting from traditional knowledge transmitters to guides in the learning process and collaborators in innovative activities. Critical thinking training, cross disciplinary problem analysis, and project-based learning methods should be organically integrated into professional courses. Through systematic restructuring at the conceptual level, innovation and entrepreneurship education can truly become the core link in supporting the talent capability structure required for new quality productivity, achieving effective alignment between educational goals and social needs.

3.2 Building Curriculum System Integrating Cutting-Edge Issues

The optimization of the curriculum system requires breaking the disconnect between general education and professional education, theoretical teaching and practical training, and establishing a modular and advanced logical curriculum structure. The basic module should cover general knowledge content such as innovation methodology, technical ethical

norms, and intellectual property systems, laying a basic cognitive framework for students; Advanced modules should be combined with different disciplinary directions, and specialized courses such as intelligent system design principles, sustainable technology application logic, and digital product development processes should be set up to strengthen the cultivation of innovative abilities in professional backgrounds; Advanced modules should focus on complex problems in real industry contexts and adopt a project-based teaching model to guide students to complete the complete innovation chain from problem identification, solution design to prototype verification. The course content must establish a dynamic update mechanism to timely absorb the technological evolution trends, policy and regulatory changes, and emerging business model elements involved in the development of new quality productivity, ensuring the adaptability of the teaching content to the times. At the same time, cross college joint curriculum development should be encouraged to promote the cross integration of engineering technology, business management, and humanities and social sciences knowledge, expand students' multidimensional cognitive perspectives, and enhance their ability to make comprehensive judgments and collaborative innovations in complex systems^[7].

3.3 Building Practical Support System for Collaborative Linkage

The construction of a practical support system requires the coordination of various resources both inside and outside the school, forming an open, shared, and functionally complementary platform network. Schools should break down organizational barriers between laboratories, research centers, and innovation and entrepreneurship bases, establish interdisciplinary innovation workshops, and provide students with physical space and equipment support for technology integration, system testing, and prototype iteration. Off campus should deepen strategic cooperation with high-tech enterprises and new research and development institutions, jointly build joint laboratories or collaborative innovation centers, so that students can be exposed to cutting-edge technology application scenarios and understand the actual needs of the industry. The project initiation process of practical projects should introduce a mechanism for industry mentors to

participate in the evaluation, and conduct pre evaluation of the selected topics from the dimensions of technical feasibility, social value, and implementation path, in order to improve project quality and practical significance. At the same time, it is necessary to improve the project incubation service system, integrate specialized support functions such as legal consultation, financial planning, and market analysis, and assist student teams in solving key obstacles faced in the process from creative conception to achievement implementation. By building a multi-level and full chain practical support system, we provide students with a real, coherent, and challenging innovative practice environment, strengthening their comprehensive ability to respond to the requirements of the development of new quality productivity.

3.4 Improving the Multi-Dimensional Collaborative Education Evaluation Mechanism

The educational evaluation mechanism should shift from a single result oriented approach to a comprehensive evaluation model that emphasizes both process and ability, weakening the excessive focus on the number of entrepreneurial entities established or the level of competition awards, and instead emphasizing a systematic examination of core competencies such as students' innovative thinking level, teamwork effectiveness, and technological application ability. A diversified evaluation method combining learning portfolio, phased project defense, peer evaluation, and teacher observation records can be used to comprehensively track the growth trajectory of students' abilities in innovation and entrepreneurship activities. In the dimension of teacher evaluation, the teaching quality of innovation and entrepreneurship courses, project guidance effectiveness, and interdisciplinary teaching participation should be included in the index system for professional title promotion and performance evaluation, to stimulate the enthusiasm of professional teachers to deeply integrate into innovation and entrepreneurship education. At the same time, a third-party evaluation mechanism involving universities and industries should be established, and industry experts should be regularly invited to independently evaluate the cutting-edge nature of course content, the rationality of project design, and the matching degree of student

ability output, to ensure that the direction of education is consistent with the actual demand for talent quality in the development of new quality productivity. Through a scientific, dynamic, and multi-party evaluation system, we guide innovation and entrepreneurship education to return to the essence of educating people, achieving an organic unity of quality improvement and goal achievement.

4. Conclusion

The rise of new quality productivity has put forward profound reform requirements for higher education. As a key link between talent cultivation and social needs, innovation and entrepreneurship education for college students must break free from the constraints of traditional models and shift towards a more systematic, cutting-edge, and practice oriented development path. By updating concepts, restructuring courses, integrating platforms, and optimizing evaluations, universities can more effectively cultivate students' core abilities to adapt to and lead the development of new quality productivity. This process is not simply adding new content, but a deep adjustment of educational logic, organizational methods, and value orientation. Only in this way can innovation and entrepreneurship education truly become a fundamental project supporting the national innovation driven development strategy.

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