

Exploration of the Current Situation and Path of Innovation and Entrepreneurship Education in Higher Vocational Colleges under the Background of Integration of Industry and Education

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Abstract: With the evolving global economic landscape and technological advancements, the significance of innovation and entrepreneurship in higher vocational education has surged. Particularly in China, driven by the "double innovation" initiative, merging industry and education has steadily become the cornerstone of vocational college reforms. This paper delves into the present state of innovation and entrepreneurship teaching in vocational institutions, set against the backdrop of industry-education integration. It seeks to identify innovative solutions for present challenges. Critical aspects like curriculum structure, pedagogical techniques, partnerships between academia and industry, and faculty development were scrutinized. To address these challenges, a range of reformative recommendations were made, encompassing fortified industry ties, enhanced curriculum planning, refined teaching strategies, and bolstered faculty development. This study offers invaluable insights for vocational institutions, guiding them to effectively impart innovation and entrepreneurship knowledge amidst industry-education amalgamation. The ultimate goal is fostering a genuine blend of theoretical knowledge with practical application, thus shaping adept, innovative professionals.

1. Introduction

In the modern era, characterized by economic globalization, technological upheaval, and industrial evolution, innovation and entrepreneurship education have emerged as central pillars in global educational frameworks. In China, this significance is further accentuated, given the amplification of the "double innovation" strategy and the emergence of a novel economic paradigm, leading to heightened focus on this education within the higher vocational sector. The confluence of industry and education offers a fresh perspective for vocational institutions. This approach aims to transcend the confines of conventional education, fostering a learning environment intertwined with authentic industrial, market, and societal contexts [1]. This integration arises from the interplay between contemporary industrial advancements and educational metamorphosis. As technologies like Industry 4.0, big data, cloud computing, and AI shape the global economic landscape, the talent requisites for this transformative era are evolving in tandem. It is no longer only satisfied with technical or academic talents, but also pays more attention to compound talents with practical application ability, innovative thinking and interdisciplinary collaboration ability [2]. In this context, higher vocational colleges need to re-examine their educational objectives and methods to ensure that the trained talents can meet the needs of modern industry and society. Amidst the emergence of a novel economic landscape and a surging entrepreneurial wave, an increasing number of youth are contemplating the entrepreneurial path. Concurrently, the Chinese government is fervently advancing its innovation and entrepreneurship initiative, urging university students, scholars, and the broader public to dive into the innovation and entrepreneurship surge [3-4]. Given this milieu, the role of innovation and entrepreneurship education in higher vocational institutions transcends merely academic pursuits or credit acquisition. It's geared towards nurturing students' innovative mindset, entrepreneurial capabilities, and hands-on skills. The melding of industry and education, a pioneering educational approach, seeks a more holistic blend of the two realms. Within this

framework, higher vocational colleges forge profound ties with corporations, technological hubs, and research entities, collaboratively spearheading educational studies, curriculum crafting, and practical training infrastructure [5]. Students, thereby, don't just amass theoretical insights but also gain tangible industrial exposure and market acumen, facilitating a robust integration of theory and practice, and enhancing their practical and innovative prowess. Nonetheless, the intertwining of industry and education, despite its newfound opportunities, presents a set of challenges. Ensuring genuine industry-education synergy, establishing an education system inherently tied to the actual industrial, market, and societal needs, and molding talents equipped with professional acumen, inventive thought, and interdisciplinary collaboration skills are all intricate subjects warranting thorough exploration within higher vocational institutions [6-7]. In light of these considerations, this article endeavors to meticulously scrutinize the state of innovation and entrepreneurship education in these colleges, within the canvas of industry-education amalgamation, pinpoint the inherent challenges, and proffer potential solutions. It's envisaged to furnish invaluable insights for the pedagogical evolution and progression of higher vocational schools.

2. The Current Situation of Innovation and Entrepreneurship Education in Vocational Colleges

In current vocational colleges, the curriculum of innovation and entrepreneurship education is still very basic, and most of it is still dominated by traditional business management and marketing, lacking curriculum content that is closely integrated with modern innovation and entrepreneurship. The current situation of innovation and entrepreneurship education in vocational colleges is shown in Figure 1.

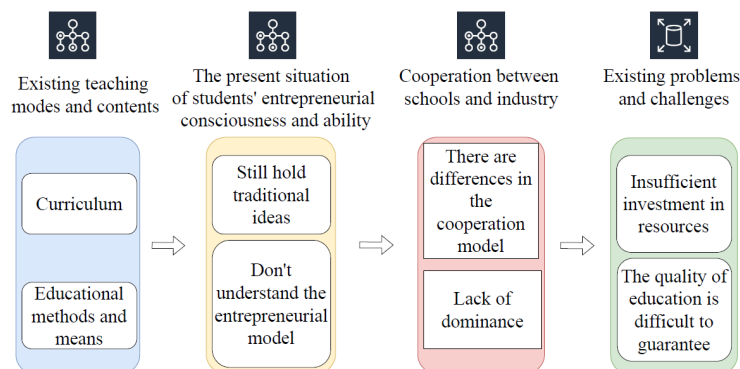


Figure 1 Current Situation of Innovation and Entrepreneurship Education in Vocational Colleges

While some institutions have initiated the inclusion of courses like innovative thought, product creation, and business model evolution, the scope and depth of these offerings often fall short of students' genuine requirements. In vocational colleges, conventional pedagogies, such as didactic lectures and case studies, remain prevalent. While these approaches might offer students a foundational grasp of innovation and entrepreneurship, their efficacy in nurturing tangible entrepreneurial skills and preparing students for real-world market adversities is debatable [8]. In addition, emerging educational methods such as sandbox education, project-based learning, and team collaboration have not yet been widely adopted in most vocational colleges. At present, most vocational college students still hold a traditional concept of innovation and entrepreneurship, believing that entrepreneurship is only about opening a company or store. Lack of understanding of modern entrepreneurial concepts such as emerging entrepreneurial models, Internet plus, and sharing economy. In terms of abilities, students have gained more theoretical knowledge, but there are still significant shortcomings in practical abilities such as market analysis, business model design, and team management. While the idea of melding industry and education has gained traction, practical collaboration between vocational colleges and industries encounters numerous hurdles. Primary among these is the disparity between educational institutions and businesses concerning profit distribution, collaborative frameworks, and resource allocation. Given the nature of higher vocational education, partnerships with industries often lack profound engagement,

typically manifesting as brief internships or project-based collaborations [9-10]. Additionally, vocational colleges frequently find themselves in a reactive stance, devoid of a commanding voice in these collaborations. As vocational colleges strive to elevate innovation and entrepreneurship education, several challenges persist. The course content and pedagogical techniques often fall short in honing students' hands-on skills. Strengthening ties between colleges and industries remains an uphill task, further complicating the provision of authentic entrepreneurial experiences for students. Moreover, students' entrepreneurial mindsets are often traditional, hindering alignment with contemporary entrepreneurial demands. Lastly, some vocational institutions lag in dedicating adequate resources to innovation and entrepreneurship education, jeopardizing educational quality.

3. Exploration on the path of innovation and entrepreneurship education under the integration of production and education

3.1. Establish a student-centered education model

Traditional curriculum often attaches importance to the granting of theoretical knowledge and lacks synchronization with actual industrial technology and market demand. In addition, the course content is often too isolated and lacks systematicness and foresight. It should cooperate with enterprises to integrate the latest technology and market trends, ensuring that students' learning aligns with market demands, combine theoretical knowledge with practical application to cultivate students' practical operation skills and foster teamwork through real or simulated projects. Additionally, it include real business cases to enhance students' problem-solving abilities in practical challenges. It utilizes advanced technology to offer immersive learning experiences, such as virtual production lines and market environments. Lastly, it encourage cross-disciplinary collaboration, such as merging business management with technology research and development, enabling students to approach problem-solving from multiple perspectives. In this regard, this paper establishes a student-centered education model, the content of which is shown in Figure 2.

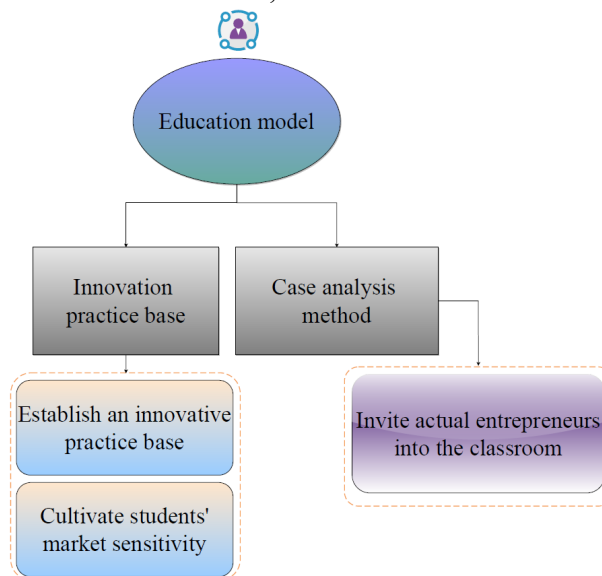


Figure 2 Education Mode

It is recommended that vocational colleges establish innovation practice bases and collaborate with local enterprises, innovation teams, incubators, etc. to provide students with practical entrepreneurial scenarios. This not only helps students better integrate theoretical knowledge with practice, but also provides authentic market feedback, cultivating students' market sensitivity and adaptability, strengthening the research and analysis of both successful and failed cases of innovation and entrepreneurship domestically and internationally. This approach will guide students to learn through practical examples, thereby nurturing their problem-solving skills. In addition, by collaborating with enterprises, actual entrepreneurs can be invited into the classroom to share their entrepreneurial experiences and challenges.

3.2. Optimize course system and content

Amidst the evolving landscape of industry-education integration, higher vocational colleges are compelled to holistically re-evaluate and rejuvenate their approach to innovation and entrepreneurship education. Be it curriculum design, pedagogical strategies, practical platforms, or faculty development, every facet must be contemporized to ensure students' learning aligns with market trends and technological advances. Further, the linchpin of this integration is the collaboration between educational institutions and businesses. It's imperative for colleges to bolster their dialogue and partnership with industries to furnish students with a more holistic educational resource palette. To more aptly cater to market needs, vocational colleges must coalesce with industries in curating and refining their curriculum. Incorporating real-world enterprise projects as part of the academic content could be a potential strategy, allowing students to immerse themselves in an authentic market milieu during their educational journey. Encouraging students to participate in entrepreneurial projects can not only learn the practical operation of entrepreneurship, but also cultivate their practical abilities such as teamwork and risk management. In addition, the school can provide students with internship and practice opportunities through cooperation with local business incubators and business teams.

3.3. Strengthen tripartite cooperation between industry, academia, and research

Vocational colleges can collaborate with enterprises to build research centers, laboratories, etc., to achieve resource sharing and complementarity. At the same time, new cooperation models can also be explored, such as joint training, two-way deployment, resource sharing, etc. It establishes strategic partnerships with industrial parks, incubators, accelerators, and other institutions to broaden students' access to diverse practical opportunities, develop practical learning centers within enterprises, where students can gain hands-on experience in real corporate settings, encourage students to apply their knowledge to practical projects and enhance their innovation and entrepreneurship skills by participating in competitions, implement a corporate mentoring system by involving industry experts and leaders as mentors, providing students with essential career planning and entrepreneurship consulting services. Furthermore, it strengthens collaboration with businesses to increase the availability of internships and practical experiences, enabling students to gain deeper insights into current market trends.

3.4. Enhancing the faculty capacity

In response to the characteristics of innovation and entrepreneurship education, vocational colleges should strengthen the training and further education of teachers. For example, teachers can be organized to participate in entrepreneurial competitions, project evaluations, and other activities to improve their understanding and judgment of entrepreneurship. In addition to the existing teaching staff, schools should actively introduce industry experts and leaders as part-time or visiting professors, providing students with more practical and cutting-edge knowledge and experience. The path of innovation and entrepreneurship education under the integration of industry and education not only requires vocational colleges to carry out internal reform and innovation, but also requires deep cooperation with the external environment, especially the industry, to achieve true integration of industry and education, and provide students with more practical and cutting-edge innovation and entrepreneurship education.

4. Conclusions

Amid the intertwining of industry and education, higher vocational colleges find themselves at the crossroads of unique challenges and prospects regarding innovation and entrepreneurship education. A deep dive into the present educational landscape highlights issues spanning crucial areas like curriculum structuring, pedagogical methods, industry-academia collaboration, and faculty qualifications. In light of these issues, several reformative avenues and tactics have been explored. Primarily, it's vital to recognize that the essence of higher vocational education lies in

honing students' practical competencies and applied skills. Consequently, all aspects of innovation and entrepreneurship education should orbit around this central theme. Moreover, the depth and scope of collaborations across industry, academia, and research sectors warrant enhancement. Presently, such partnerships often remain superficial, restricted to rudimentary internships and guest lectures. Further, the caliber and composition of the teaching cadre dictate the quality of education. There's a pressing need to amplify professional development for existing educators and to usher in industry stalwarts, offering students a more comprehensive and varied learning reservoir. Lastly, the purview of innovation and entrepreneurship education in vocational colleges shouldn't be confined merely to pedagogy. It should also encompass realms like entrepreneurial hands-on experiences, start-up incubation, and sustained entrepreneurial backing. Institutions ought to leverage their intrinsic strengths to deliver holistic, multi-tiered entrepreneurial support for their student body.

References

- [1] Zhengjiang C. The Appropriateness of Innovation and Entrepreneurship Education in Higher Vocational Colleges[J].*Modern Education Management*, 2018.
- [2] Shaowen MA. Innovation and Entrepreneurship Education of Higher Vocational Students and the Inheritance of "Artisan Spirit"[J].*The Guide of Science & Education*, 2022, 16(5):27-34.
- [3] Zhimei W, Qiming T. Research on the Innovation and Entrepreneurship Education Based on the Application of New Technology in Higher Vocational Colleges: the Idea, Connotation and Practice[J]. *Research in Higher Education of Engineering*, 2021, 5(4):11-19.
- [4] Qiaoxia C. Exploration of Organic Integration of Professional Education and Innovation and Entrepreneurship Education in Higher Vocational Colleges[J].*The Theory and Practice of Innovation and Entrepreneurship*, 2022, 36(17):36-41.
- [5] Dong-Yue Z. Exploration on the Effective Path of Building Innovation and Entrepreneurship Education System in Higher Vocational Colleges[J]. *Journal of Hubei Correspondence University*, 2018, 16(4):8-14.
- [6] Zhuolin X. Exploration on Integrating Innovation and Entrepreneurship Education into Professional Education in Higher Vocational Colleges——Taking Qingyuan Vocational and Technical College as an example[J].*The Theory and Practice of Innovation and Entrepreneurship*, 2019, 33(14):19-24.
- [7] Yunpeng L, Wensheng X. Research on the Integration Path of "Innovation and Entrepreneurship" Education and Professional Education in Higher Vocational Colleges from the Perspective of Cooperative Innovation[J]. *Innovation Science and Technology*, 2018, 30(5):19-28.
- [8] Jing SI. On the path of Innovation and Entrepreneurship Education in higher Vocational Colleges[J].*The Theory and Practice of Innovation and Entrepreneurship*, 2019, 30(16):21-28.
- [9] Yue-Hua S. Research on the path of integrating innovation and entrepreneurship education in professional education in higher vocational colleges[J].*Heilongjiang Science*, 2018, 20(6):18-24.
- [10] Bin LI. Research on the Integration of Innovation and Entrepreneurship Education and Marketing Education in Higher Vocational Colleges[J].*Journal of Qingdao Technical College*, 2019, 12(4):9-13.