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Exploration on the resource integration model of "mass entrepreneurship and innovation" practical education community in agricultural-related universities

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Abstract:

In the context of mass entrepreneurship and innovation, the construction of a mass entrepreneurship and innovation practice education community in colleges and universities is highly valued and plays a decisive role in the education system of colleges and universities. However, there are also many problems that cannot be ignored, among which resource integration constraints are particularly important. The article sorts out the resources that have been explored and utilized in the mass entrepreneurship and innovation practice education of Nanjing Agricultural University, and identifies the resources that have not yet been developed, through reference to typical cases, explore the all-round and three-dimensional resource integration model, and build a mass entrepreneurship and innovation practice education community resource integration optimization, community construction path and effectiveness based on the innovative integration of new quality resources. Improvement suggestions, etc. The research results provide new ideas for exploring and integrating mass entrepreneurship and innovation practice education resources, and have guiding significance for other agricultural-related universities to carry out related work.

Keywords:

Agriculture-related colleges and universities; mass entrepreneurship and innovation; practical education; resource integration

With the acceleration of the global economic integration process and the deepening of domestic economic structural adjustment, the agricultural field is facing unprecedented opportunities and challenges. In this context, cultivating high-quality agricultural talents with innovative abilities and entrepreneurial spirit has become the key to promoting agricultural modernization and realizing the rural revitalization strategy. Agricultural-related colleges and universities, as the main battlefield for cultivating specialized talents in the agricultural field, have carried out many practical explorations in building a community of practice for mass entrepreneurship and innovation education, but they are still relatively fragmented and unsystematic, with a low level of resource integration, shallow cooperation, and lack of long-term results. Integration mechanism, etc. Relying on the development trend of mass entrepreneurship and innovation, fully integrating resources is

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still a key factor in building a community of mass entrepreneurship and innovation practice and education. In view of this, it is very necessary to systematically sort out the current situation and existing problems of the resource integration of the mass entrepreneurship and innovation practice education community in colleges and universities, accurately refine the key constraints, and explore an efficient resource integration model for the "mass entrepreneurship and innovation" practice education community.

1. The results of resource sorting and integration of Nanjing Agricultural University's Mass Entrepreneurship Practice Education Community

Nanjing Agricultural University has accumulated rich resources in the field of mass entrepreneurship and practical education and formed a relatively complete system, which contains many unique and advantageous resources and plays a key and core role in practical education.

1.1 Agricultural Science Characteristics Mass Entrepreneurship Practical Education Curriculum System

Focusing on the characteristics of agricultural science, the school comprehensively enhances students' innovative spirit, entrepreneurial awareness and ability to solve practical problems through a multi-dimensional and multi-level education model. On the one hand, enrich and improve the on-campus curriculum system. Construct a three-level innovation and entrepreneurship curriculum system of "general education + professional education + expansion education", covering college students' entrepreneurship. Basics of new entrepreneurship, subject introduction, common courses for professional education and innovation and entrepreneurship education, open courses for graduate students, open courses for professors, open courses for industry and enterprise experts, etc. Provides online courses such as MOOCs (Massive Open Online Courses), online lectures, and video tutorials related to innovation and entrepreneurship. Regularly hold innovation and entrepreneurship lectures and seminars, invite entrepreneurs, experts and scholars to share experiences and insights. On the other hand, innovative school-enterprise joint courses have been launched. And cooperate with enterprises to develop customized courses based on industry needs, such as continuing education related to pet health and nutrition management course. Industry experts and entrepreneurs are invited to teach students and share practical experience, such as the practical teaching class taught by Pan Pei, one of the top ten makers in the country.

1.2 Diversified mass entrepreneurship and innovation education community teaching practice platform

The school jointly builds practical teaching platforms and bases inside and outside the school through school-enterprise cooperation, industry-education integration and other methods. It is used for scientific research training, project implementation and competition promotion, providing students with a wealth of practical opportunities and resource support. On the one hand, many on-campus practice platforms have been newly built and expanded. Establish a college student innovation and entrepreneurship practical education center to provide students with project incubation, technical support, innovation and entrepreneurship training and other services; it has practical teaching on seed quality testing. "Jianhu Jinlvfeng" Teaching Practice Base

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and many other provincial experimental teaching and practical education centers provide students with rich scientific research practice resources. On the other hand, schools and enterprises cooperate to build a practice base. The school actively cooperates with local governments, industrial parks, well-known enterprises, etc., and has successively built Jiangsu Sihong Economic Development Zone Internet Innovation Park, Nanjing Xintengrui Practical Teaching Base, Jiangning Lvkang Group Xitian Pastoral Complex Comprehensive Practical Teaching Demonstration Base and many other practical teaching bases, Jiangsu Tianshun Ecological Agriculture Development Co., Ltd. Joint Laboratory, etc., provide students with diverse practice platforms and practical projects.

1.3 High-level professional guidance and support resources

The school provides students with a wealth of guidance and support resources both inside and outside the school, online and offline, to ensure that students can receive comprehensive support for innovation and entrepreneurship. On the one hand, build a high-level team of full-time and part-time teachers. The School of Innovation and Entrepreneurship has a high-quality team of full-time teachers with rich experience and professional knowledge in innovation and entrepreneurship education. It can provide students with systematic theoretical guidance and practical guidance. Hire industry experts, entrepreneurs, alumni, etc. as part-time tutors to provide students with practical experience and practical experience through lectures, workshops, one-on-one tutoring, etc.industry insights. On the other hand, we deeply explore and cultivate alumni resources. Invite successful alumni to serve as mentors and share innovative ideas provide students with professional experience and career development advice; cooperate with alumni companies to provide students with internship, employment and entrepreneurial opportunities will form a good alumni network support system; through school-enterprise co-creation, more alumni's enthusiasm and potential for innovation and entrepreneurship are stimulated. The school provides a platform for the innovation achievements of alumni enterprises to display the innovative achievements of alumni enterprises through organizing the Nanjing Agricultural University Alumni Entrepreneurship Competition and other forms, and promotes alumni The docking and transformation of scientific research results between enterprises and schools, exploring and cultivating more high-quality alumni resources, and building a strong alumni network to provide students with experience sharing, career guidance and resource docking.

1.4 Special funds and financing resources for mass entrepreneurship and innovation

The school provides comprehensive financial guarantees for students and alumni’s innovation and entrepreneurship projects, and has established a variety of innovation and entrepreneurship scholarships and competition bonuses to encourage students and alumni to actively participate in mass entrepreneurship and innovation activities. The first is to provide strong on-campus financial support. The school has established a special fund to provide start-up capital for outstanding entrepreneurial projects. The student innovation and entrepreneurship project fund is mainly used for project start-up capital, equipment purchase, market research, technology research and development, etc. A student team. Innovative research in the field of agricultural Internet of Things obtained start-up funds, and the project made significant progress; the alumni entrepreneurship project established a special fund to help alumni enterprises obtain necessary financial support in the start-up stage. A biotechnology company founded by an alumni received alumni entrepreneurship in the start-up stage. With financial support and through technology transfer and market promotion, the company quickly became a

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leading enterprise in the industry. Establish special innovation and entrepreneurship scholarships to reward students and alumni who have outstanding performance in innovation and entrepreneurship activities; set generous bonuses in various innovation and entrepreneurship competitions to encourage students and alumni to actively participate. For innovative and entrepreneurial projects with scientific research background, the school can provide scientific research funding support. Help projects complete the research and development of key technologies; provide an innovation and entrepreneurship base for current students and alumni, exempt part or all of the site rent, and reduce entrepreneurial costs. The second is to develop diversified financing channels. Cooperate with a number of venture capital institutions to provide venture capital for innovative and entrepreneurial projects with high growth potential; introduce angel investors to provide. Provide financial support and entrepreneurial guidance for early-stage entrepreneurial projects; cooperate with commercial banks to provide low-interest loans for qualified innovative and entrepreneurial projects; cooperate with credit guarantee institutions to provide credit guarantees for entrepreneurs who lack collateral and lower financing thresholds. Encourage students and alumni to use crowdfunding platforms to raise project start-up funds, such as Kickstarter, Indiegogo, etc.; cooperate with public welfare foundations to provide financial support for innovative and entrepreneurial projects with a social welfare nature.

1.5 Expand other markets and social resources

Establish cooperative relationships with government agencies, well-known enterprises, and social organizations to provide students with market information and practical experience practice opportunities. Actively pay attention to various government innovation and entrepreneurship funds, subsidies and policy support, and help students apply for and benefit from using these resources; develop cooperative relationships with well-known enterprises, establish multiple internship and training bases, provide students with a real practical environment, invite corporate executives and senior employees to serve as student mentors, provide industry experience and career guidance; cooperate with foreign universities Cooperate with research institutions to carry out joint scientific research projects and academic exchanges, and actively participate in international exchange projects, such as the World Agriculture Awards, African Confucius Institutes, etc., to provide students with international perspectives and exchange opportunities; establish closer cooperative relationships with industry associations to obtain More industry information and resources. Carry out more social practice activities to enhance students' sense of social responsibility and practical ability.

2. Design of the resource integration model of Nanjing Agricultural University's all-round and three-dimensional mass entrepreneurship and innovation practice education community

In order to continuously improve students' innovation and entrepreneurship capabilities, while serving the national rural revitalization and agricultural and rural modernization. In order to meet the strategic needs of globalization, Nanjing Agricultural University continues to adopt multi-dimensional and in-depth methods in the practice of mass entrepreneurship and education. Through resource integration, we are gradually exploring and building an all-round, three-dimensional mass entrepreneurship and innovation education community resource integration model represented by Latome Innovation and Entrepreneurship, and are constantly ad-

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justing and improving it dynamically.

2.1 Efficient collaboration among multiple entities

Efficient collaboration among multiple entities is a working model that achieves common goals through multi-faceted cooperation and coordination. There are many subjects involved in the construction of a mass entrepreneurship and innovation education community in colleges and universities. It should give full play to the complementarity and synergy between different subjects through a clear division of responsibilities and good coordination. Through resource sharing, information exchange, responsibility sharing and interest Share to achieve higher efficiency and better results. A common model is to put students at the core, adhere to the leadership of universities, encourage enterprise participation, seek government support, and stimulate the full integration of social resources. The school is mainly responsible for formulating teaching plans, providing theoretical courses, organizing scientific research activities, etc. The company provides practical resources, including practice bases, technology patents, corporate culture, etc., and sends experienced professionals to serve as tutors or lecturers to help students apply theoretical knowledge to practice. The government provides policy guarantees, financial support, etc. to ensure the smooth implementation of projects and create a good external environment for mass entrepreneurship and innovation education. Introduce third-party resources such as industry associations and public welfare organizations to provide students with a broader practical platform and more opportunities, and help students understand social needs. As beneficiaries and participants, students can improve their innovation and entrepreneurship capabilities through more active learning and practice.

2.2 Innovation in combination of factor resources

In order to adapt to the new requirements of practical operation and experiential learning for mass entrepreneurship and innovation education in colleges and universities, it is necessary to analyze various elements of resources. Through effective combination and innovation of resources, through the integration of various resources inside and outside the school, an educational ecosystem is formed with the goal of cultivating students' innovative consciousness, entrepreneurial spirit and practical ability. First, integrate and build a composite teaching team. Build a diversified teaching team composed of on-campus teachers, corporate mentors, and industry experts to realize theory and practice organic combination. Promote a dual-qualified teacher system, encourage teachers to participate in corporate projects or entrepreneurial activities, and enhance teachers' practical experience and guidance capabilities. Nanjing Agricultural University focuses on the combination of introduction and training of comprehensive teachers, introducing and cultivating a large number of comprehensive talents who understand professional knowledge and can guide innovation and entrepreneurship. It also focuses on carrying out teacher training projects to improve teachers' teaching and guidance abilities. In terms of mass entrepreneurship and innovation education, it has a strong teaching staff, including Jiangsu Province's "Mass Entrepreneurship" talents, Jiangsu Province's chief scientist of the modern agricultural industry system, Jiangsu Province's "Qinglan Project" scientific and technological innovation team, Jiangsu Province's "Qinglan Project" Academic leaders, "Mass Entrepreneurship Doctors" and other "Mass Entrepreneurship Talents" in Jiangsu Province, faculty members have rich experience and achievements in their respective fields, Nanjing Agricultural University Food Science and Technology Associate Professor Rui Xin of the School of Science and Technology, who has made a lot of innovations in protein nutrition and

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function, food allergy and biodegradation, and the development of functional miscellaneous bean probiotic products. Dr. Hu Yang, School of Economics and Management, Nanjing Agricultural University, has made a lot of innovations in food consumption and safety, and marketization of new products. They carry out innovations in areas such as, consumer behavior, food marketing, and agricultural policy. They provide students with valuable guidance and support in teaching and scientific research. In addition, the school also has institutions and individuals specifically responsible for mass entrepreneurship and innovation education, such as Zhang Wei, dean of the School of Innovation and Entrepreneurship, who is responsible for building an innovation and entrepreneurship education system for agricultural colleges and universities and promoting an education model that integrates innovation and entrepreneurship. The second is to build a multi-level mass entrepreneurship and innovation practice platform. In order to promote students' innovative and entrepreneurial spirit, the school organizes a series of mass entrepreneurship and innovation practice activities move. It provides students with and builds various mass entrepreneurship and innovation practice platforms at all levels, allowing students to display their creativity and technological achievements, and also promotes interdisciplinary cooperation and learning. The school has established a comprehensive service platform to support innovation and entrepreneurship, such as the "Student Home" to provide students with guidance and support information on innovation and entrepreneurship. On the one hand, students are actively organized to participate in various types of Internet plus mass entrepreneurship and innovation competitions at all levels, and have achieved good results in competitions such as the "Challenge Cup", "Revitalization Cup" and "China International Internet + College Student Innovation and Entrepreneurship Competition". On the other hand, organize mass entrepreneurship and innovation competitions at the school level within the school, such as the Agricultural Internet of Things "Mass Entrepreneurship and Mass Entrepreneurship" competition held by the College of Agriculture for college students. Encourage students to use Internet of Things technology to solve practical problems in agricultural production and stimulate students' innovative thinking and practical abilities. The third is to expand the field of industry-university-research cooperation in “schools, places, schools and enterprises”. The school has always been very active in industry, academia and research. It implements industry-university cooperation collaborative education projects and cooperates with enterprises, scientific research institutions, government departments, etc. Conduct research and promote the transformation and application of scientific and technological achievements. First, in terms of school-enterprise cooperation, it has carried out in-depth cooperation with Wuxi Spectrum Vision Technology Co., Ltd. in the field of hyperspectral high-tech. By holding the Zhongshan Forum on Plant Extraction and other methods, the school has signed industry-university-research cooperation agreements with many companies to promote the application of plant extracts in different fields.Second, the school actively connects with local governments and participates in government industry-university-research promotion projects. Actively connect with local governments. For example, Suhuai High-tech Zone in Huai'an City signed an industry-university-research cooperation agreement, expanding the scope of cooperation with local governments. It has participated in the industry-university-research cooperation projects of the Jiangsu Provincial Department of Science and Technology in 2021 and 2023, strengthening the joint technological research and development between universities and Jiangsu enterprises and promoting the transformation of university results. Participated in the Ministry of Education's industry-university-research cooperation collaborative education project. In 2021, a number of industry-university-research collaborative education projects were launched, including new agricultural sciences, new liberal arts, and new engineering construction projects, teaching content and curriculum system reform projects,

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and teacher training projects , practice conditions and practice base construction, innovation entrepreneurship education reform project, innovation and entrepreneurship joint fund project, six types of projects to improve students' practical and innovative abilities, as well as promote teachers' professional development, school teaching resource construction and scientific research results transformation. The fourth is to comprehensively strengthen the creation of an innovative and entrepreneurial atmosphere. The school has created a strong atmosphere for innovation and entrepreneurship by holding innovation and entrepreneurship competitions, building an innovation and entrepreneurship education system, and providing practice platforms. Open agricultural-related majors for college students to innovate and create

We provide vocational training classes to enhance students' entrepreneurial awareness and abilities; build an entrepreneurship education base to provide students with practical opportunities; establish multiple innovation and entrepreneurship projects every year to provide students with entrepreneurship consulting and financial support to help students realize their entrepreneurial dreams. By holding commendation conferences, standardizing students and societies participating in innovation and entrepreneurship activities, and holding alumni enterprise innovation and entrepreneurship competitions, we provide alumni with a platform to showcase their companies and projects, and can also encourage current students to pay attention to entrepreneurship.

2.3 Establish a scientific and reasonable evaluation and feedback mechanism

The construction of an evaluation feedback mechanism for mass entrepreneurship and innovation education in colleges and universities can help teachers understand the teaching effect in a timely manner and guide. Guide students to correctly understand their own strengths and weaknesses, and then adjust their learning strategies to improve their innovation and entrepreneurial abilities. The first is to design a diversified evaluation system. Pay attention to students' performance during project implementation, including teamwork, task completion, etc.; evaluate the quality of the final results, such as the innovation and feasibility of the project; encourage students. Conduct self-reflection and mutual evaluation to enhance self-awareness and teamwork skills; professional mentors or industry experts provide guidance and evaluation to student projects and provide suggestions from a professional perspective. The second is to establish timely and effective feedback channels. Organize regular project progress reporting meetings to provide a communication platform for teachers and students; use online platforms to collect feedback to achieve rapid response and continuous improvement; provide personalized guidance and support based on the characteristics and needs of different students. The third is to strengthen the application of evaluation results. Adjust teaching content and methods based on evaluation results, and do not continuously optimize course design; help students formulate personal development plans based on feedback to promote the improvement of their comprehensive abilities; establish incentives such as scholarships and outstanding project awards to stimulate students' enthusiasm and creativity. The fourth is to focus on continuous improvement. Establish a long-term tracking mechanism and regularly review the effectiveness and applicability of the evaluation feedback mechanism; strengthen cooperation with enterprises and scientific research institutions, introduce more diversified evaluation standards and resources; learn from international advanced mass entrepreneurship and innovation educational concepts and practical experience continue to improve the level of mass entrepreneurship and innovation education in domestic universities.

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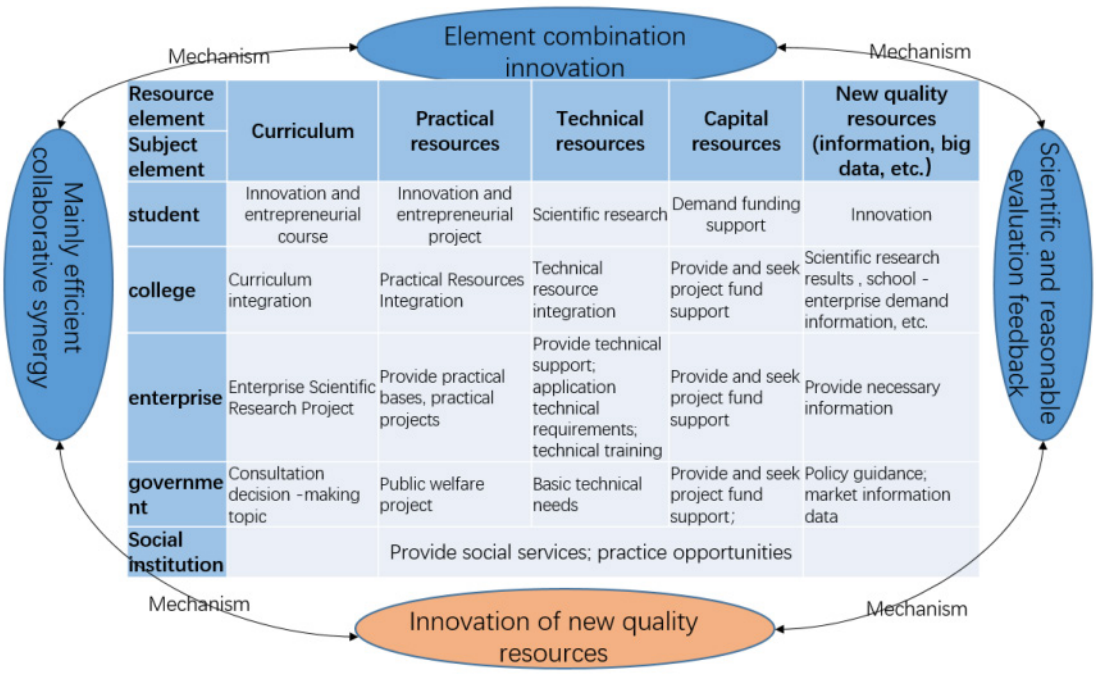
3. Suggestions on resource integration and optimization for mass entrepreneurship and innovation education community based on innovative integration of new quality resources

3.1 The dilemma of resource integration in Nanjing Agricultural University's "mass entrepreneurship and innovation" practical education community

Agricultural-related colleges and universities face a series of challenges in the process of promoting "mass entrepreneurship and innovation" practical education, especially in the construction of a "mass entrepreneurship and innovation" practical education community. Mainly reflected in the following aspects: First, backward concepts and insufficient attention. Some agricultural-related colleges and universities and their teachers and students lack sufficient understanding of the importance of innovation and entrepreneurship education and lack sufficient attention and support. Some students and teachers may be more inclined to traditional teaching models and career plans, and have a conservative attitude toward innovation and entrepreneurship. Second, resource utilization is inefficient and practice platforms are limited. The resource sharing system is not sound, resources inside and outside the school have not been effectively integrated, resulting in inefficient use of resources. Lack of sufficient practical opportunities and platforms makes it difficult for students to transform theoretical knowledge into practical skills. Third, the collaborative education mechanism and evaluation system are imperfect. There is a lack of effective communication and collaboration mechanisms between the government, enterprises and universities, making it difficult to form synergy. There is also a lack of a scientific and reasonable evaluation system to measure the effect and quality of mass entrepreneurship and innovation education. Fourth, the construction of teaching staff lags behind and lacks practical experience. The construction of a comprehensive teaching team lags behind. There is a lack of comprehensive talents who understand professional knowledge and can guide innovation and entrepreneurship. Some teachers themselves lack practical innovation and entrepreneurship experience and find it difficult to effectively guide students. Fifth, professional construction lags behind and is out of touch with the market. The mass entrepreneurship and innovation projects of some agricultural-related universities are inconsistent with market demand and find it difficult to gain social recognition and support. The disconnect between professional construction and the market is a common problem. On the one hand, colleges and universities need to cultivate professional talents that can meet market demand. On the other hand, due to various reasons, lagging course content, insufficient practical experience, and insufficient school-enterprise cooperation have resulted in a gap between graduates' abilities and market expectations.

3.2 Resource integration plan for mass entrepreneurship and innovation education community based on innovative integration of new quality resources

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Resource element / Subject element	Curriculum	Practical resources	Technical resources	Capital resources	New quality resources (information, big data, etc.)
student	Innovation and entrepreneurial course	Innovation and entrepreneurial project	Scientific research	Demand funding support	Innovation
college	Curriculum integration	Practical Resources Integration	Technical resource integration	Provide and seek project fund support	Scientific research results , school - enterprise demand information, etc.
enterprise	Enterprise Scientific Research Project	Provide practical bases, practical projects	Provide technical support; application technical requirements; technical training	Provide and seek project fund support	Provide necessary information
government	Consultation decision -making topic	Public welfare project	Basic technical needs	Provide and seek project fund support;	Policy guidance; market information data
Social institution		Provide social services; practice opportunities			

Figure 1 All-round and three-dimensional resource integration model of the mass entrepreneurship and innovation practice education community

The construction of a mass entrepreneurship and innovation education community in universities is committed to solving the problem of efficient collaboration between universities and other entities, but there are still. There are many problems such as the mismatch between the development goals of the community and the resource integration mechanism, the insufficient depth of resource integration, and the unreasonable distribution of interests. The progress of the times is accompanied by the update and expansion of resources. We must fully tap new resources such as information technology and big data. Through the effective integration of emerging and traditional resources, we will study and judge technological iterations to trigger new requirements for mass entrepreneurship and innovation capabilities, and educate people around the practice of mass entrepreneurship and innovation in colleges and universities. In terms of value coordination, subject rights and responsibilities, benefit distribution, talent supply and demand, etc., innovative integration of new resources is the key to building an all-round and three-dimensional mass entrepreneurship and innovation practice education community. The first is to increase the development of virtual practice projects. With computer simulation technology, virtual reality technology, enhanced virtual practice projects represented by real-life technology, artificial intelligence, etc. can provide students with experiences close to the real environment. Hands-on experience, highly interactive and flexible. With the development of the times, the information age has ushered in virtual. The "raid" of practice, currently the use of virtual practice has been included in the resources available for practical education, but its advantages in scene depiction and cross-time and space application in practical education show that virtual practice has The application should also be included in the scope of practical education applications. Agriculture-related colleges and universities should actively explore the application scenarios and scope of virtual practice projects in practical education, integrate them more into the existing curriculum system, continue to optimize the involvement and implementation of virtual practice projects, cooperate with enterprises to develop virtual practice projects, and introduce real Cases

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and data improve the practicality and attractiveness of the project, learn from international advanced virtual practice education experience, and improve the level of virtual practice projects. The second is to use digital technology to improve the efficiency of resource integration for mass entrepreneurship and innovation practice. With the scope of resources in the digital age. As an extension, the development of the traditional mass entrepreneurship and innovation education community model in colleges and universities urgently needs to improve quality and efficiency. fully explore big data, the Internet and other digital resources, find paths and mechanisms for effective integration with traditional resources, and actively explore how to give full play to the synergy of core subject resources such as universities, governments, enterprises, and industry associations in the practice community of mass entrepreneurship and innovation, and explore Construct a personalized and customized mass entrepreneurship and innovation practice education and training mechanism and model that is adapted to the new development trends of information and intelligence, and help cultivate mass entrepreneurship and innovation practice talents that are highly matched with the development of universities in the new era. Use intelligent recommendation systems and adaptive learning systems to establish personalized learning platforms; use big data to conduct accurate analysis of learning behavior analysis, students' psychological activities, etc., evaluate learning effects in a targeted manner, identify learning difficulties, and provide personalized improvement plans; through the establishment of Online discussion platform, provide knowledge sharing function, establish online and offline three-dimensional tutoring system, strengthen teacher-student interaction, improve tutoring efficiency; use virtual reality technology to establish virtual laboratory, conduct virtual experiments, improve experimental skills, and use augmented reality technology , integrating virtual elements into real teaching to enhance the interactivity and interest of teaching.

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6. College Fund Cultivation Project (2024kj45);

7. "Rural Revitalization" special research topic (nyhzwy202303).

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