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The Impact of the "Internet + Artificial Intelligence" Era on College Students' Innovation and Entrepreneurship

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Abstract

Under the tide of the "Internet + Artificial Intelligence" era, new momentum has been injected into college students' innovation and entrepreneurship. Based on the background of the times, this paper systematically analyzes the development space expanded, technical support provided, market demand spawned, and collaborative models optimized by this environment for college students' innovation and entrepreneurship. At the same time, it directly faces practical challenges such as accelerated technological iteration, insufficient practical capabilities, intensified market competition, and difficulties in resource integration. From four dimensions, interdisciplinary education reform, practical platform construction, deep cultivation of segmented fields, and construction of a diversified support system, targeted practical paths are proposed to provide reference for college students to seize the opportunities of the times, break through entrepreneurial bottlenecks, help them achieve high-quality innovation and entrepreneurship in the new technological environment, and inject youthful vitality into the innovative development of the economy and society.

Keywords

College students; Internet + artificial intelligence; Innovation and entrepreneurship; Interdisciplinary education; Practical paths

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1. Introduction

The in-depth integration of digital technology and intelligent technology has promoted "Internet + Artificial Intelligence" to become the core engine of global innovative development. Against this backdrop, innovation models, industrial forms, and market demands have undergone profound changes. The threshold for innovation and entrepreneurship has been continuously lowered, and the space has been continuously expanded [1]. As a group with active thinking and eagerness to accept new things, college students are an important new force in innovation and entrepreneurship. Stimulating their innovation and entrepreneurship vitality and improving their capabilities are not only related to their personal growth and development, but also of great significance for promoting economic restructuring and nurturing new drivers of development.

Currently, innovation and entrepreneurship education in colleges and universities is constantly advancing, but the knowledge transmission and practical training under the traditional model can no longer meet the development needs of the "Internet + Artificial Intelligence" era. When college students carry out innovation and entrepreneurship using new technologies and platforms, they face unprecedented opportunities as well as many new difficulties [2]. Based on this, this paper analyzes the impact of the "Internet + Artificial Intelligence" era on college students' innovation and entrepreneurship, explores practical paths adapting to the requirements of the new era, and provides useful reference for improving the quality of college students' innovation and entrepreneurship and improving the relevant support system.

2. The impact of the "internet + artificial intelligence" era on college students' innovation and entrepreneurship

2.1. Expanding the broad space for innovation and entrepreneurship

The popularization and application of the Internet have broken geographical restrictions, and the breakthrough of artificial intelligence technology has spawned a large number of new formats and models, opening up multiple tracks for college students' innovation and entrepreneurship. Traditional innovation and entrepreneurship are restricted by factors such as funds, venues, and channels, with a high threshold. However, in the "Internet + Artificial Intelligence" environment, college students can build online platforms without huge initial investment to carry out entrepreneurial projects such as e-commerce, content creation, and technical services. The in-depth integration of artificial intelligence with various industries has given birth to emerging fields such as intelligent education, smart medical care, and intelligent logistics.

These fields have strong market demand and are in the initial stage of development, providing a broad space for innovation for college students. For example, college students can develop personalized learning assistance systems for specific groups based on artificial intelligence technology, or build regional agricultural product traceability and sales platforms based on big data analysis. In addition, the maturity of technologies such as cloud computing and SaaS services allows college students to obtain the required computing resources and software tools at low cost without investing a lot of money in infrastructure construction [3]. This has greatly reduced the start-up cost of entrepreneurship, enabling more college students with ideas and abilities to participate in innovation and entrepreneurship, and the possibility of innovation and entrepreneurship has been greatly expanded.

2.2. Providing efficient and intelligent technical tools

The development of technologies such as big data, artificial intelligence, and cloud computing has provided strong technical support for college students' innovation and entrepreneurship, running through all links such as market analysis, product development, and precision marketing. In the stage of market analysis, college students can use big data analysis tools to collect and sort out information such as consumer behavior, demand preferences, and competitive patterns in the target market, quickly grasp market dynamics, accurately identify market gaps, and provide a scientific basis for the positioning of entrepreneurial projects to avoid blind decision-making [4]. In the process of product development, artificial intelligence technology can simulate product usage scenarios, predict product performance, optimize product design schemes, shorten the R&D cycle, and reduce R&D costs. For example, in the field of software development, artificial intelligence code generation tools can assist in completing repetitive coding work and improve development efficiency. In the field of industrial design, intelligent design software can quickly generate multiple design schemes for selection according to user needs.

Through in-depth analysis of user data using artificial intelligence algorithms, accurate user portraits can be outlined, and then personalized product information and service content can be pushed to improve marketing conversion rates. Cloud computing technology provides stable and efficient storage and computing support for entrepreneurial projects, ensuring the smooth operation of online platforms, allowing college students to focus on core businesses and improve the efficiency and quality of innovation and entrepreneurship.

2.3. Spawning new demands for personalization and customization

Under the trend of consumption upgrading, consumers are no longer satisfied with standardized and homogeneous products and services, and their demand for personalization and customization is growing day by day. The development of "Internet + Artificial Intelligence" technology has made it technically possible to meet such demands and created new market opportunities for college students' innovation and entrepreneurship [5]. Artificial intelligence technology can quickly process massive amounts of user data, accurately capture the differentiated needs of individual users, and provide data support for the R&D of personalized products and services. Internet platforms have broken information barriers, allowing college students to directly connect with consumers, understand their personalized needs, and realize on-demand production and precision services [6]. For example, in the field of clothing, college students can develop intelligent customization platforms to generate exclusive design schemes according to users' body data and style preferences.

In the field of cultural and creative industries, personalized cultural and creative product design and content creation services can be provided for users based on artificial intelligence technology. Personalized needs in segmented fields are often ignored by large enterprises. With their flexible thinking and quick response capabilities, college students can accurately enter these segmented markets, focus on the personalized needs of specific groups, build differentiated competitive advantages, occupy a place in the niche market, and achieve breakthroughs in innovation and entrepreneurship [7].

3. Challenges faced by college students' innovation and entrepreneurship in the "internet + artificial intelligence" era

3.1. Rapid technological iteration and insufficient knowledge reserve

The technology in the "Internet + Artificial Intelligence" field updates and iterates rapidly, with new algorithms, new models, and new applications emerging continuously, putting forward extremely high requirements for the knowledge reserve and learning ability of innovators and entrepreneurs. Currently, there is a certain lag in the curriculum setting of colleges and universities. The traditional professional curriculum system focuses on theoretical knowledge transmission, which is disconnected from actual industry needs and the forefront of technological development. The knowledge learned by college students during their school years is difficult to keep up with the pace of technological iteration [8]. Most courses related to artificial intelligence and big data are basic theoretical teaching, lacking in-depth explanations of the latest technological applications and industry practical cases, resulting in shortcomings in college students' knowledge systems.

3.2. Lack of technical application capabilities and practical experience

Although college students can access advanced technical tools such as artificial intelligence and big data, most of them only master basic operation methods and lack the application capabilities to combine technology with actual entrepreneurial scenarios. The practical teaching link in colleges and universities is weak, the laboratory equipment is not updated in a timely manner, and there is a lack of simulation of real entrepreneurial scenarios [9]. College students possess difficulties in improving their technical application capabilities through practical training. In addition, college students generally lack industry practical experience, have insufficient understanding of market operation rules, user demand mining, business logic construction, etc., and it is difficult to convert technical advantages into commercial value.

3.3. Intensified market competition and severe homogenization

The threshold for innovation and entrepreneurship has been lowered in the "Internet + Artificial Intelligence" era, and a large number of entrepreneurs have poured into this field, leading to increasingly fierce market competition. Majority of college students' innovation and entrepreneurship projects are concentrated in popular fields such as e-commerce, content creation, and mini-program development [10]. These fields have relatively low technical thresholds and are easy to be imitated and copied, resulting in severe homogenization. Some college students lack in-depth market research

and unique thinking, blindly follow popular projects, and lack differentiated competitive advantages. They imitate each other in product design, service models, marketing methods, etc., and it is difficult to form core competitiveness, eventually being eliminated in the fierce market competition.

3.4. Limited entrepreneurial resources and need to improve integration capabilities

Although Internet platforms facilitate access to resources, college students still face the problem of shortage of core resources in the process of innovation and entrepreneurship. In terms of funds, most college students' entrepreneurial projects are in the initial stage, lacking stable profit models and collateral, making it difficult to obtain support from traditional financing channels such as bank loans [11]. Emerging financing methods such as crowdfunding and angel investment have high requirements for project quality and business prospects, and most college students' entrepreneurial projects are difficult to meet the relevant standards, resulting in great financing difficulties. Additionally, college students lack the awareness and ability of resource integration, are not good at using Internet platforms to explore and integrate various resources, and it is difficult to convert scattered resources into entrepreneurial advantages, restricting the development and growth of projects.

4. Practical paths for college students' innovation and entrepreneurship in the "internet + artificial intelligence" era

4.1. Deepening interdisciplinary education and building a dynamic knowledge system

Colleges and universities should break traditional disciplinary barriers, promote interdisciplinary education reform, and reconstruct the innovation and entrepreneurship curriculum system. Centering on the core technologies and industry needs in the "Internet + Artificial Intelligence" field, integrate multi-disciplinary resources such as computer science, big data, management, and economics, and set up interdisciplinary course modules, such as Artificial Intelligence Application and Entrepreneurship Management, Big Data Analysis and Market Operation, to cultivate college students' interdisciplinary thinking and comprehensive capabilities.

Optimizing the course content, timely integrate cutting-edge industry technologies and the latest cases into the teaching process, reducing pure theoretical knowledge explanation, and increasing practice-oriented teaching content could tackle this issue [12]. On top of that, establishment of a continuous learning mechanism and encouragement of college students to update their knowledge reserves through various channels such as online courses, industry seminars, and technical training also aids in this issue. Colleges and universities can build online learning platforms, integrate high-quality learning resources, and provide convenient continuous learning channels for college students.

4.2. Strengthening the construction of practical platforms and improving technical application capabilities

Colleges and universities should strengthen cooperation with enterprises, co-build practical platforms such as artificial intelligence laboratories and innovation and entrepreneurship incubators, introduce the real technical environment, project resources, and industry standards of enterprises, and provide immersive practical experience for college students [13]. Enterprises can send technical backbones and industry experts to participate in practical teaching, guide college students to carry out project R&D, business practice and other activities, and help college students improve their technical application capabilities and practical experience. Implementation of a project-based teaching model, taking real entrepreneurial projects as the carrier, guiding college students to form teams, and participating in the whole process from market research, product design, technical development to market promotion, so as to exercise their ability to solve practical problems in practice strengthens their capabilities as well.

Encouragement of college students to participate in various innovation and entrepreneurship competitions and scientific research projects, such as the "Internet +" College Student Innovation and Entrepreneurship Competition and Artificial Intelligence Innovation Challenge [14]. Through competitions, students can learn and practice, accumulate practical experience, and improve team collaboration and project operation capabilities. Simultaneously, the supporting services of

practical platforms should be improved by equipping professional instructors and technical support personnel, providing project consulting, technical guidance, resource docking and other services for college students to ensure the smooth development of practical teaching and entrepreneurial projects, and help college students convert technical knowledge into practical application capabilities.

4.3. Focusing on innovation in segmented fields and cultivating core competitiveness

College students should avoid blindly following popular fields, strengthen market research, conduct in-depth analysis of market demand and competitive patterns, and focus on segmented fields for innovation in combination with their own professional advantages and interests. In the "Internet + Artificial Intelligence" era, personalized and niche market demands are becoming increasingly prominent. College students can tap these under-satisfied demands, deeply cultivate vertical fields, and create differentiated products and services [15].

They should pay attention to the combination of technological innovation and model innovation, improve the technical content of products through continuous R&D investment, form technical barriers, and innovate business models and service models to enhance user experience and market competitiveness. Furthermore, they should also strengthen the protection of intellectual property rights, promptly apply for patents and register trademarks for innovative achievements, safeguard their legitimate rights and interests, and prevent innovative achievements from being infringed [16]. By focusing on segmented fields, strengthening innovation, and protecting intellectual property rights, cultivate core competitiveness, they could gain a foothold in the fierce market competition.

4.4. Building a diversified support system and empowering resource integration

Colleges and universities should improve the innovation and entrepreneurship service system, establish professional innovation and entrepreneurship guidance centers, integrate resources such as on-campus tutors, off-campus industry experts, and successful entrepreneurs, and provide one-on-one entrepreneurship guidance and project incubation services for college students. Resource docking platforms should be built to help college students connect with core resources such as funds, technology, and supply chains, organize activities such as university-enterprise docking meetings and entrepreneurship exchange meetings, and promote cooperation between college students, enterprises, and investment institutions [17]. Enterprises should actively fulfill their social responsibilities, participate in the construction of the college students' innovation and entrepreneurship support system, provide internship positions, project cooperation, technical support and other opportunities for college students, invest in potential college students' entrepreneurial projects, and achieve mutual benefit and win-win results. Through the collaborative efforts of the government, colleges and universities, and enterprises, build a diversified support system, empower college students to improve their resource integration capabilities, and provide comprehensive guarantee for the development of innovation and entrepreneurship projects.

5. Conclusion

In short, college students should seize the opportunities of the times, actively adapt to technological development and market changes, improve their own quality through continuous learning, and focus on segmented fields to cultivate core competitiveness. Colleges and universities, the government, and enterprises should work together to deepen education reform, improve the support system, optimize the entrepreneurial environment, and escort college students' innovation and entrepreneurship. In the future, with the continuous progress of technology and the improvement of the support system, college students' innovation and entrepreneurship will usher in a broader development prospect and bloom greater value in the wave of innovation in the new era.

Disclosure statement

The author declares no conflict of interest.

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