2024 International Conference on Finance and Economics, Humanistic Sociology and Educational Development (EHSED 2024)

Research on the Construction of Innovation and Entrepreneurship Platform for College Students in the Context of Digital Technology

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Abstract

Amidst the thriving backdrop of digital progression, the entrepreneurial pursuits of university students are revealing unprecedented vitality and promise. This study delves into the construction of an innovation and entrepreneurship platform tailored for college students within the context of digital technology. It explores the evolving landscape of digital advancement, particularly how it has transformed the traditional paradigms of innovation and entrepreneurship among university students. The study highlights the unprecedented vigor and potential that digital technologies such as big data and artificial intelligence have unleashed in fostering entrepreneurship among the youth. The research focuses on the methodologies, trajectories, and ecological environments that have been significantly altered by the integration of digital technologies into the innovation and entrepreneurship ecosystem. It analyzes how these technologies reshape the way students approach problems, collaborate, and create new ventures. Additionally, the study examines the opportunities and challenges that arise from this digital transformation, discussing potential strategies to overcome barriers and maximize the benefits for student entrepreneurs. By providing a comprehensive analysis of the current state and future implications of digital technology in innovation and entrepreneurship education, this thesis aims to contribute to the existing knowledge base and inform the design of more effective platforms that foster the growth and success of student entrepreneurs.

Keywords

Digital Technology, Innovation and Entrepreneurship, Platform Construction

1. Introduction

In the context of digital technology, the establishment of university student innovation and entrepreneurship platforms aims to respond to the current economic and social demands for high-quality development and the personal career aspirations of university students. The trends in the digital economy not only provide a vast stage for entrepreneurial endeavors among university students but also pose heightened demands. The utilization of big data and artificial intelligence significantly expands the boundaries of entrepreneurship, while the emergence of internet platforms injects new impetus into innovation and entrepreneurship. Against this backdrop, it is not only theoretically significant but also holds crucial practical implications to explore and investigate the construction of platforms that effectively support university student innovation and entrepreneurship activities.

2. Innovative and Entrepreneurial Environment for University Students in the Context of Digital Technology

2.1 Trends in the Digital Economy

In the backdrop of digital technology, the establishment of an entrepreneurial ecosystem for university students has become a focal point of discussion. With the flourishing of the digital economy, it not only alters business paradigms but also redefines the trajectory of innovation and entrepreneurship. Digital technologies such as artificial intelligence, big data, and cloud computing have presented unprecedented opportunities for university students to venture into entrepreneurship. Within such a milieu, students can leverage digital tools and platforms to validate their entrepreneurial ideas at lower costs, swiftly iterate products, and reach a broad user base. However, the trends of the digital economy also pose challenges. Market competition is intensifying, and the demands for technical prowess and innovative capacity are constantly escalating. Therefore, the construction of innovative entrepreneurial platforms not only necessitates technical support but also entails the cultivation of students' innovative thinking and market insights. By simulating authentic market environments and strengthening connections with enterprises and investors, the success rate of university student entrepreneurial projects can be significantly enhanced. In the era of digital economy, student innovation and entrepreneurship are no longer solitary endeavors but require integration into a broader socio-economic milieu. Thus, fostering a supportive entrepreneurial environment is not only a test of individual capabilities but also a means to elevate the overall societal innovation prowess. In this process, universities, governments, and businesses should leverage their respective strengths to collaboratively foster a culture that promotes innovation and embraces failure, thereby laying a robust foundation for the flourishing development of student innovation and entrepreneurship (Tong & Zeng, 2023).

2.2 The Impact of Big Data and Artificial Intelligence on Innovation and Entrepreneurship

Amidst the surge of digital technology, big data and Artificial Intelligence (AI) have emerged as twin engines propelling innovation and entrepreneurship among university students. These two technologies have not only reshaped business models but also presented unprecedented opportunities for young

entrepreneurs. The core value of big data lies in its capacity for integrating and analyzing information, enabling entrepreneurs to discern market trends and understand consumer demands, thereby formulating more precise business strategies. During the product development phase, analysis of extensive user data allows entrepreneurial teams to iterate products more swiftly and identify market entry points. Furthermore, big data can optimize operational efficiency, reduce costs, and facilitate data-driven decision-making, rendering resource allocation more scientifically rational. The impact of artificial intelligence is more prominently manifested at the technological level. The application of AI technologies such as machine learning and natural language processing brings innovative tools and methods to entrepreneurial endeavors. These technologies can facilitate the automation and intelligence of operations, enhancing the quality and efficiency of services. For instance, in the realm of customer service, the provision of uninterrupted 24/7 service through intelligent chatbots not only enhances user experience but also significantly reduces labor costs. More importantly, the integration of big data and AI technologies opens up possibilities for university student entrepreneurs to explore new domains. In fields such as health technology and financial technology, the application of AI and big data is propelling rapid industry development and transformation, unlocking new frontiers for innovation and entrepreneurship. However, the application of technology also brings challenges, such as concerns regarding data security and privacy protection, as well as algorithmic biases, which entrepreneurs need to address with sufficient attention. While enjoying the conveniences brought by technology, how to utilize technology reasonably within ethical and legal frameworks is a question that every entrepreneur needs to contemplate deeply.

2.3 The Role of Internet Platforms in Promoting Innovation and Entrepreneurship

Amidst the rapid evolution of digital technology, the landscape for entrepreneurial innovation among university students is undergoing unprecedented transformation. Particularly noteworthy is the emergence of internet platforms, which furnish young entrepreneurs with unprecedented impetus. This influence is not only evident in the convenience of resource integration and information exchange but also in its capacity to inspire innovative thinking and reduce barriers to entry in entrepreneurship. Internet platforms, by establishing a decentralized mechanism for information dissemination, dismantle the geographical and physical constraints traditionally associated with accessing entrepreneurial resources. This signifies that university-based entrepreneurs can effortlessly engage with collaborators, investors, and market insights from around the globe. Such globalization of resource allocation significantly broadens their horizons and enhances the success prospects of their ventures. Moreover, internet platforms offer a plethora of online tools and services that encompass nearly every facet of the entrepreneurial journey, spanning from market research and product design to marketing and promotion. These tools not only boast user-friendly interfaces but are also predominantly free or low-cost, thus markedly alleviating the financial pressures at the onset of entrepreneurship (Wang & Wang, 2023). For demographics such as university students, this undeniably constitutes a monumental boon. Furthermore, leveraging its robust social networking functionalities, internet platforms furnish

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young entrepreneurs with a stage to showcase themselves and exchange ideas. Here, they can connect with experts and advisors from diverse industries, garnering invaluable feedback and guidance. Concurrently, propelled by the power of social media, their entrepreneurial endeavors can swiftly capture public attention and endorsement, thereby attracting a broader clientele and investment.

3. Construction strategy of Innovation and Entrepreneurship Platform for College Students Based on Digital Technology

3.1 Technical Support and Platform Function Design

When discussing the construction strategy of a university student innovation and entrepreneurship platform in the context of digital technology, technical support and platform functionality design emerge as two pivotal factors, jointly shaping the platform's capability and efficiency. Digital technology not only furnishes the platform with an efficient operational milieu but also renders the functional design more humane and intelligent, greatly fostering the vigor and efficiency of university student innovation and entrepreneurship. Concerning technical support, the utilization of cloud computing, big data, artificial intelligence, and other technologies endows the innovation and entrepreneurship platform with robust data processing capabilities and resource sharing mechanisms. Through cloud computing technology, the platform can provide stable and efficient services, ensuring data security and privacy; big data technology enables the platform to analyze and process massive amounts of data, aiding entrepreneurs in discerning market trends and making more precise decisions; the application of artificial intelligence technology can bring intelligent service experiences to the platform, such as automated customer service and intelligent recommendation systems, significantly enhancing user experience and efficiency. In terms of platform functionality design, emphasis should be placed on precise capture of user experience and requirements. This implies that the platform should not only provide basic entrepreneurial resource information, project management tools, online communication, and collaboration functions but also design more personalized and innovative features based on the characteristics and needs of university student entrepreneurs. For instance, virtual simulated entrepreneurial environments could be established, allowing entrepreneurs to test their ideas and projects in simulated market environments; tailored guidance services for different entrepreneurial stages could be developed, such as initial market research guidance, mid-term financing strategy advice, and late-stage brand promotion strategies; additionally, artificial intelligence technology could be utilized to provide users with personalized entrepreneurial training and coaching, aiding them in rapidly enhancing their entrepreneurial capabilities and project maturity. In conclusion, the construction strategy of a university student innovation and entrepreneurship platform based on digital technology should fully consider the sophistication of technical support and the humanity and intelligence of platform functionality design (Yankui, 2022). Such a platform can not only provide university students with an efficient, convenient, and comprehensive innovation and entrepreneurship environment but also stimulate their entrepreneurial passion, enhance the success rate of entrepreneurship, and cultivate

more outstanding entrepreneurial talents with innovative spirit and practical capabilities for society.

3.2 Ecosystem Building and Partnerships

In the current landscape of advancing digital technologies, the establishment of platforms for entrepreneurial innovation among university students transcends mere technical implementation; it represents a sophisticated ecosystem engineering endeavor. The cultivation of partnerships within this ecosystem stands as a pivotal factor ensuring the successful operation of such platforms. Ecosystem development underscores a comprehensive, multi-layered integration process, encompassing the fusion and interaction of various aspects such as technology, resources, knowledge, and talent. Primarily, fostering an open and inclusive mindset is imperative for ecosystem construction. The rapid evolution of digital technologies, particularly the applications of cloud computing, big data, and artificial intelligence, enables information sharing and resource integration. Platforms for student innovation and entrepreneurship should embody this openness, shattering traditional boundaries through interdisciplinary collaboration and cross-industry linkage to construct an ecosystem involving diverse stakeholders. This not only broadens the practical and innovative horizons for students but also facilitates knowledge exchange, technological iteration, and consequently propels the sustainable development of the entire platform. The establishment and maintenance of partnerships constitute another crucial dimension for the healthy operation of the ecosystem. Platforms must identify and attract partners capable of providing complementary resources and technical support, such as enterprises, government agencies, and non-profit organizations. Establishing a cooperation model based on trust and mutual benefit serves as the foundation for long-term collaboration among parties. For instance, joint research projects, internships, technical competitions, and similar activities enhance students' practical experience and innovative capabilities while offering partners new perspectives and solutions, thereby enabling resource sharing and complementary advantages. In summary, the strategic construction of university student innovation and entrepreneurship platforms based on digital technologies should prioritize principles of openness and collaboration in ecosystem development and partnership establishment (Yankui, 2022). By building a diversified collaborative network and facilitating the flow of knowledge and resources, these platforms can provide students with a vibrant environment full of innovative opportunities, injecting new vitality into socioeconomic development.

3.3 User Experience and Service Optimization

In the context of digital technology, the establishment of platforms for university student innovation and entrepreneurship signifies not only technological innovation but also an elevation in service philosophy. User experience and service optimization emerge as pivotal elements in this endeavor. Exceptional user experience design fosters a seamless and delightful journey for users on the platform, concurrently enhancing user engagement and market competitiveness. Primarily, for user experience, a clear and intuitive interface design is of paramount importance. The rapid evolution of digital technology has heightened university students' expectations for information processing speed. Platforms need to eschew complex designs, lessen users' cognitive burdens, and facilitate swift access

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to desired functionalities or information. For instance, through intelligent content recommendation systems, tailored entrepreneurial information or projects can be proactively delivered based on users' historical behavior and preferences, reducing users' time costs in seeking information. Secondly, optimizing response speed is also pivotal in enhancing user experience. In the digital era, users anticipate immediate feedback and services. The platform's technical team must continually refine backend algorithms, enhance data processing efficiency, and ensure users perceive a seamless operational experience. Moreover, leveraging technologies like cloud computing to enhance server processing capabilities is an effective means of ensuring platform responsiveness. Furthermore, offering personalized services is an indispensable component of augmenting user experience. With the application of big data and artificial intelligence technologies, platforms can accurately capture users' needs and preferences. By analyzing users' browsing and interaction data, platforms can provide more personalized services and content, such as tailored entrepreneurial guidance and customized entrepreneurial resource matching, significantly enhancing user satisfaction and loyalty. Lastly, for innovation and entrepreneurship platforms, establishing an effective feedback mechanism is an aspect of user experience optimization that cannot be overlooked. By instituting user feedback channels like online surveys, user forums, and customer service hotlines, platforms can promptly gather user feedback and suggestions, adjusting service strategies and content accordingly, truly embodying a user-centric service optimization approach. In summary, university student innovation and entrepreneurship platforms based on digital technology must prioritize user experience and service optimization throughout their development. Through continuous technological innovation and service improvement, these platforms can offer users more efficient, convenient, and personalized services, thereby propelling the platform's healthy and sustainable growth.

4. Building the Innovation and Entrepreneurship Ecology of College Students in the Digital Era

4.1 Promoting the Integration of Innovation and Entrepreneurship Education and Practice

In the rapidly evolving landscape of digital technology, the imperative of fostering innovation and entrepreneurship among university students becomes conspicuously imperative. This imperative stems not only from the fact that innovation and entrepreneurship have emerged as formidable propellants of societal advancement but also due to the unprecedented platforms and opportunities afforded by the digital era to university students. Nevertheless, to truly ignite the innovative potential of this cohort and facilitate the profound integration of their entrepreneurial education with practice, it necessitates transcending the constraints of traditional educational paradigms and exploring pathways that are more agile and efficacious. At the core of cultivating an ecosystem for university student innovation and entrepreneurship in the digital age lies the creation of an environment that is open, inclusive, and interconnected. Within such an ecosystem, educational content transcends the mere impartation of classroom knowledge; the synthesis of theory and practice takes precedence. Employing project-driven learning methodologies becomes paramount, enabling students to learn and master the skills of

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innovation and entrepreneurship through practical application. Furthermore, encouraging and guiding students to actively engage in various innovation competitions and entrepreneurial challenges emerges as a potent avenue for fostering the integration of education and practice. These activities not only kindle students' entrepreneurial zeal and innovative thinking but also provide a platform for showcasing oneself, testing ideas, and even attracting potential investments. Through this approach, students can concurrently build their network resources, comprehend the entrepreneurial ecosystem, and amass real-world experience. Ultimately, achieving the profound integration of innovation and entrepreneurship education with practice among university students necessitates concerted efforts and support from multiple stakeholders including academia, businesses, and government entities. Universities must furnish more resources and platforms supportive of innovation, while corporations can offer internships and practical training opportunities. Governments, on their part, can foster a conducive environment for innovation and entrepreneurship through policy guidance and financial support. Only through such collaborative endeavors can the authentic innovative vigor of university students be truly unleashed, propelling their entrepreneurial success in the digital age.

4.2 Supporting the Cultivation and Dissemination of Innovation and Entrepreneurship Culture

In the current landscape where digital technology permeates various sectors, the cultivation of an ecosystem for university students' innovation and entrepreneurship stands as a pivotal element in fostering profound integration of higher education with economic and social development. Particularly, nurturing and disseminating a culture supportive of innovation and entrepreneurship transcends mere provision of technical tools and financial support; it pertains more to the cultivation of a mindset and social ambiance. When constructing platforms for university students' innovation and entrepreneurship aligned with the characteristics of the digital era, emphasizing the cultivation and dissemination of such a culture becomes especially paramount. At the heart of this culture lies the encouragement for students to embrace failure, to dare to venture, and to continuously pursue innovation. Within such a cultural milieu, students not only learn how to apply digital technology to solve real-world problems but, more importantly, they learn how to grow and progress amid continuous attempts and failures (Yongqiang, 2022). The culture of innovation and entrepreneurship among university students in the digital era should be open and inclusive, rather than closed and exclusive. This implies that any student interested in innovation, regardless of their disciplinary background, should be able to find their place and engage in entrepreneurial practices. Such openness not only facilitates interdisciplinary collisions of innovative thinking but also contributes to building a more diverse and inclusive entrepreneurial ecosystem. Additionally, the dissemination of a culture supportive of innovation and entrepreneurship heavily relies on the widespread application of advanced digital technology. Through online platforms, social media, and other tools, the efficiency and impact of disseminating stories of innovation and entrepreneurship can be greatly enhanced. More importantly, these digital tools enable the dissemination of the culture of innovation and entrepreneurship to transcend the constraints of time and space, inspiring and motivating more university students regardless of their location. To truly foster the

cultivation and dissemination of a culture of innovation and entrepreneurship, concerted efforts from universities, enterprises, governments, and other sectors of society are necessary. Universities should offer more practical platforms and opportunities, enterprises can provide practical guidance and financial support, while governments can contribute through policy guidance and incentives, collectively creating a conducive environment for university students' innovation and entrepreneurship. In summary, the cultivation and dissemination of a culture supportive of innovation and entrepreneurship play an indispensable role in the construction of platforms for university students' innovation and entrepreneurship in the context of digital technology. By fostering an open and inclusive cultural ambiance, leveraging digital technology to enhance cultural dissemination, and encouraging participation from various sectors of society, the prosperous development of university students' innovation and entrepreneurship ecosystem can be effectively promoted.

4.3 Promoting the Deep Integration of Digital Technology and Innovation and Entrepreneurship

In the realm of burgeoning digital technologies, the landscape of entrepreneurial endeavors among university students has transcended traditional paradigms, increasingly pivoting towards reliance upon the internet and emerging technologies. The profound integration of digital technologies injects newfound vitality into innovation and entrepreneurship, albeit accompanied by elevated demands and challenges. Foremost, the widespread application of digital technologies significantly reduces the barriers to entry for entrepreneurship, affording more university students the opportunity to manifest their ingenuity into reality. Whether through the convenient access to cloud computing resources, the intelligent decision support offered by big data analytics, or the market outreach facilitated by social media platforms, these tools and platforms greatly streamline the entrepreneurial process, fostering high efficiency and low-cost operations. However, the rapid evolution of technology also necessitates continuous learning and adaptation on the part of entrepreneurs to avoid obsolescence. In such a scenario, the construction of innovation and entrepreneurship platforms becomes paramount. These platforms not only furnish technical support and resource integration but, more crucially, cultivate an environment of ongoing learning and exchange, aiding university student entrepreneurs in grasping the latest market dynamics and technological trends. Furthermore, the deep integration of digital technologies with innovation and entrepreneurship is also evident in the exploration of solutions to societal issues. Presently, numerous university student entrepreneurial projects are centered on social innovation, leveraging digital technologies to address problems in environmental protection, educational equity, healthcare, and more. This not only underscores the social responsibility of the younger generation but also showcases the tremendous potential of digital technologies in driving societal progress. For universities, promoting the deep integration of digital technologies with innovation and entrepreneurship entails more than merely providing technical training or resource integration; it necessitates fostering students' innovative thinking, interdisciplinary learning abilities, and problem-solving skills. This demands profound reforms and innovations in curriculum design, teaching methods, and campus culture. In conclusion, the deep integration of digital technologies with

innovation and entrepreneurship constitutes not a solitary technological task but a complex systemic endeavor involving various facets such as technology, education, resources, and culture. It poses both a challenge to the capabilities of university students and a test for the entire educational system. Moving forward, with the continuous advancement of digital technologies and the expanding domains of application, university student innovation and entrepreneurship will demonstrate increasingly diversified and profound developmental trends.

5. Conclusion

In the realm of advancing digital technologies, the establishment of an innovative entrepreneurial platform tailored for university students has emerged as a pivotal avenue for fostering the progression of higher education and facilitating high-quality economic and societal advancement. Through technological support and platform functionality design, ecosystem construction and partnership cultivation, as well as user experience enhancement and service optimization, we not only broaden the horizons for student entrepreneurs but also propel the profound integration of innovation and entrepreneurship education and practice. This endeavor supports the cultivation and dissemination of a culture of innovation and entrepreneurship, ultimately achieving a profound integration of digital technology and innovation entrepreneurship. Looking towards the future, the construction and refinement of platforms for university student innovation and entrepreneurship will serve as a critical driver for societal innovation and the cultivation of future innovators.

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