

The Impact of Digital Technology Application on College Students' Digital Entrepreneurship

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Abstract: This thesis deeply explores the impact of digital technology application on college students' digital entrepreneurship. By analyzing the current application status of digital technology in college students' digital entrepreneurship, this paper expounds on its impacts from both positive and potential challenge aspects, and illustrates with actual cases. On this basis, suggestions are put forward to promote college students' entrepreneurship using digital technology, aiming to provide theoretical support and practical guidance for the development of college students' digital entrepreneurship, and help college students better carry out entrepreneurial activities in the digital economy era, realizing their self - value and social contribution.

Keywords: Digital technology; College students; Digital entrepreneurship

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1. Introduction

With the advent of the digital economy era, digital technology has widely penetrated into various fields, profoundly changing people's lives and working methods. In the field of entrepreneurship, digital technology provides unprecedented opportunities and innovative spaces for college students, and has become a key force driving the development of college students' digital entrepreneurship. As the main force in the digital age, college students possess strong digital literacy and innovative spirit, and actively engage in the digital entrepreneurship wave^[5]. Studying the impact of digital technology application on college students' digital entrepreneurship is of great theoretical and practical significance for guiding college students to rationally use digital technology in entrepreneurial activities, improving the success rate of entrepreneurship, and promoting the development of the digital economy.

2. The Current Application Status of Digital Technology in College Students' Digital Entrepreneurship

(1) Diverse technology applications

Digital technology covers multiple fields such as big data, artificial intelligence, cloud computing, blockchain, and mobile Internet, showing a diverse application trend in college students' digital entrepreneurship. Take the e

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- commerce field as an example. Big data technology helps college student entrepreneurs accurately understand consumer demands. By collecting and analyzing massive user browsing and purchasing data, entrepreneurs can clearly grasp consumers' preferences, purchasing habits, and market trends, thereby optimizing product selection, pricing strategies, and marketing promotion plans. For example, a beauty e-commerce store operated by a college student used big data analysis to discover the growing demand for beauty products with natural ingredients among consumers of a specific age group^[2]. The store promptly adjusted its product structure, introduced relevant brands, and achieved a significant increase in sales.

Artificial intelligence also plays a crucial role in college students' entrepreneurial projects. In the aspect of intelligent customer service, the intelligent customer service system based on natural language processing technology can quickly respond to customer inquiries and answer common questions, greatly improving customer service efficiency and reducing labor costs. In the content creation field, artificial intelligence writing tools can assist entrepreneurs in generating product descriptions, marketing copy, etc., improving the creation efficiency and quality. Cloud computing provides convenient and low-cost technical support for college students' entrepreneurship. Entrepreneurs do not need to invest a large amount of capital to purchase hardware devices such as servers. They can obtain powerful computing resources and storage services through cloud computing platforms, enabling the rapid construction and flexible expansion of business systems. For example, some start-up software development enterprises use cloud computing platforms to flexibly adjust computing resources according to business needs, saving a large amount of upfront investment.

(2) Extensive penetration in entrepreneurial fields

Digital technology has promoted the extensive development of college students' digital entrepreneurship in multiple fields. In the education field, online education platforms have emerged in large numbers. College student entrepreneurs use digital technologies such as video live-streaming and online interaction to break the time and space limitations of traditional education and provide personalized course services. Some teams have developed online programming courses for primary and middle school students. Through live-streaming teaching, online homework correction, and intelligent tutoring functions, these courses have attracted a large number of student users and received a good market response. In the medical and health field, digital technology also brings new opportunities for college students' entrepreneurship. For example, some entrepreneurial teams have developed mobile Internet-based health management applications. These applications collect users' health data, such as heart rate, blood pressure, and exercise steps, through wearable devices, and use big data analysis and artificial intelligence algorithms to provide users with personalized health advice and disease early-warning services^[1]. In the cultural and creative industry, digital technology provides broad creative spaces and communication channels for college student entrepreneurs. Virtual reality (VR) and augmented reality (AR) technologies are applied in fields such as cultural exhibitions and game development, creating immersive experience products. For example, a college student team used VR technology to create an online virtual art exhibition, allowing users to appreciate art works from around the world without leaving home, which was well-received by art lovers.

3. The Positive Impacts of Digital Technology Application on College Students' Digital Entrepreneurship

(1) Reducing the threshold and cost of entrepreneurship

The development of digital technology has made the infrastructure and tools required for entrepreneurship more convenient and low-cost. Through cloud computing services, college student entrepreneurs can obtain powerful computing and storage resources at a relatively low cost, without having to spend a large amount of money on purchasing hardware devices such as servers. At the same time, the popularization of open-source software and online development platforms has reduced the technical threshold for software development and other fields,

enabling college students without a profound technical background to develop functional and perfect products or services. For example, by using open - source e - commerce systems, college students can quickly build their own online stores, reducing the time and cost of development from scratch.

In terms of marketing and promotion, social media and digital advertising platforms provide accurate and low - cost promotion channels for college student entrepreneurs^[3]. Through social media platforms, entrepreneurs can release product information and brand stories for free or at a low cost, attracting the attention of potential customers. Digital marketing methods such as search engine optimization (SEO) and social media advertising placement can be accurately pushed according to the characteristics of target customers, improving marketing effectiveness and reducing marketing costs. Compared with traditional advertising placement methods, digital marketing greatly reduces the marketing costs of college student - run start - ups and improves the efficiency of capital use.

(2) Expanding entrepreneurial opportunities and market space

Digital technology has broken the limitations of region and time, creating a broader market space for college student entrepreneurs. With the help of Internet platforms, college students' entrepreneurial projects can easily carry out business nationwide and even globally. For example, cross - border e - commerce entrepreneurship allows college students to sell domestic characteristic products around the world, broadening sales channels and increasing profit - making opportunities. At the same time, digital technology has given rise to many emerging industries and business models, such as the sharing economy, live - streaming e - commerce, online education, and remote office services, providing rich entrepreneurial opportunities for college students.

In addition, digital technology enables college student entrepreneurs to capture market changes and consumer demands more timely. Through big data analysis, entrepreneurs can understand market dynamics, consumer preferences, and competitor situations in real - time, and promptly adjust product or service strategies to meet market demands and improve market competitiveness. This rapid response ability to market changes helps college student - run start - ups stand out in the fierce market competition and expand market share.

(3) Enhancing the innovation ability of entrepreneurial projects

Digital technology injects strong innovation impetus into college students' digital entrepreneurship projects. Big data and artificial intelligence technologies can help entrepreneurs deeply explore user demands, discover potential market opportunities, and thus develop more innovative products or services. For example, based on big data analysis and artificial intelligence algorithms, some college student entrepreneurial teams have developed personalized health management applications that provide customized health advice and services according to users' health data, meeting the growing personalized needs for health management.

The application of blockchain technology brings new trust mechanisms and business model innovations to entrepreneurial projects. In the financial field, some college student entrepreneurial projects use blockchain technology to develop decentralized financial service platforms, improving the security and efficiency of financial transactions and reducing transaction costs. In terms of copyright protection, blockchain technology can realize the traceability and trading of digital works, providing new development opportunities for cultural and creative entrepreneurial projects.

Digital technology also promotes the cross - integration of different fields, providing more innovative ideas for college student entrepreneurs. For example, the combination of artificial intelligence and the medical field has given birth to innovative projects such as intelligent medical diagnosis and telemedicine; the integration of Internet of Things technology and agriculture has brought about the development of smart agriculture. College student entrepreneurs can explore innovative business models in these emerging cross - fields and develop competitive products or services.

(4) Optimizing entrepreneurial team collaboration and operation management

Digital technology provides efficient collaboration tools and management platforms for college student entrepreneurial teams, breaking the limitations of time and space and improving team collaboration efficiency^[3]. Online document collaboration tools such as Tencent Docs and Shimo Docs enable team members to jointly edit documents, spreadsheets, and presentations in real - time, facilitating information sharing and communication. Project management tools such as Trello and Asana help entrepreneurial teams with task assignment, progress tracking, and risk management, improving project execution efficiency.

In terms of enterprise operation management, digital management systems such as enterprise resource planning (ERP) and customer relationship management (CRM) can help college student - run start - ups achieve information - based management. Through the ERP system, enterprises can integrate information from various links such as procurement, production, sales, and finance, realizing the optimized allocation and coordinated operation of resources. The CRM system helps enterprises better manage customer relationships, improving customer satisfaction and loyalty. The application of these digital management tools and systems enhances the operation and management level of college student - run start - ups, reduces management costs, and lays a foundation for the sustainable development of enterprises.

4. Potential Challenges of Digital Technology Application in College Students' Digital Entrepreneurship

(1) Pressures brought by the rapid updating of digital technology

Digital technology is developing rapidly, and the speed of technological updating is extremely fast. This is both an opportunity and a challenge for college student entrepreneurs. On the one hand, the continuous emergence of new digital technologies provides more innovative possibilities for entrepreneurial projects; on the other hand, rapid technological changes require college student entrepreneurs to continuously learn and master new technical knowledge, and promptly update the technical architecture on which products or services rely to maintain market competitiveness. If entrepreneurs cannot keep up with the pace of technological development, their entrepreneurial projects are likely to be eliminated by the market. For example, in the field of mobile application development, with the continuous upgrading of mobile operating systems and the emergence of new development frameworks, college student entrepreneurial teams need to continuously learn and adapt to new technical standards^[1]. Otherwise, the developed applications may not run properly on new devices, affecting user experience and market promotion.

In addition, the rapid updating of technology also leads to an increase in the technical R & D costs of entrepreneurial projects. In order to maintain technological leadership, college student entrepreneurs need to continuously invest capital in technical R & D and upgrading, which is a huge pressure for start - ups with relatively scarce funds. Moreover, frequent technological changes also increase the technical risks of entrepreneurial projects. Once mistakes occur in technology selection or technology upgrading, it may lead to project schedule delays, cost overruns, or even project failure.

(2) Data security and privacy protection issues

In the context of the widespread application of digital technology, data has become an important asset of enterprises. College students' digital entrepreneurship projects will collect a large amount of user data during operation, such as personal information, consumption records, and browsing behaviors. The security and privacy protection of these data are of great significance^[2]. If a data leakage incident occurs, it will not only damage the rights and interests of users but also seriously affect the reputation of start - ups, resulting in user loss and legal risks.

For example, some e - commerce start - ups may, due to technical vulnerabilities or poor management, leak users' personal information and payment information, triggering users' concerns about platform security and thus losing

user trust. Moreover, with the increasing improvement of data security and privacy protection laws and regulations, enterprises face stricter legal constraints in data processing. If college student entrepreneurs lack an understanding of relevant laws and regulations and do not meet legal requirements in data collection, storage, use, and sharing, they may face legal lawsuits and huge fines, bringing a heavy blow to start-ups.

(3) Intensifying market competition and entrepreneurial risks

The popularization of digital technology has reduced the threshold for entrepreneurship, attracting a large number of college students to engage in digital entrepreneurship, resulting in increasingly fierce market competition. Many entrepreneurial projects compete in the same track, and the phenomenon of homogeneous products and services is serious. College student entrepreneurs often face double competition pressures from mature enterprises and other entrepreneurs. Mature enterprises, with their advantages in brand, capital, technology, and market channels, occupy a favorable position in market competition; while other entrepreneurs are also constantly innovating and improving, trying to seize market share.

In such a fierce market competition environment, the success rate of college students' entrepreneurial projects is relatively low. Many entrepreneurial projects may fail to stand out in the competition, unable to obtain sufficient user and capital support, and ultimately face the risk of failure. In addition, the application of digital technology makes the market change more rapidly, increasing the uncertainty faced by entrepreneurial projects. Technological changes, competitors' innovations, and rapid changes in market demands may all lead to the failure of the business models of entrepreneurial projects, further intensifying entrepreneurial risks.

5. Suggestions for Promoting College Students' Entrepreneurship Using Digital Technology

(1) Strengthening digital technology education and training

Colleges and universities, as well as society, should strengthen digital technology education and training for college students to improve their digital literacy and technical application capabilities. Colleges and universities can offer relevant courses covering digital technology fields such as big data, artificial intelligence, cloud computing, and blockchain, enabling students to understand the basic principles, application scenarios, and development methods of these technologies. At the same time, through practical teaching, entrepreneurial competitions, and other activities, students' abilities to solve practical problems using digital technology and their innovative thinking can be cultivated.

Social training institutions can provide professional digital technology training courses tailored to the entrepreneurial needs of college students, helping them quickly master the technical skills required for entrepreneurship. In addition, industry experts and successful entrepreneurs can be invited to hold lectures and experience-sharing sessions, enabling college students to understand the practical application cases and development trends of digital technology in entrepreneurship, broadening their horizons and stimulating their entrepreneurial enthusiasm.

(2) Improving the data security and privacy protection mechanism

College student entrepreneurs themselves should attach great importance to data security and privacy protection issues and establish a sound data security management system. In the data collection process, follow the principles of legality, justness, and necessity, clearly inform users of the purpose, method, and scope of data collection, and obtain user consent. During data storage and transmission, encryption technology should be used to ensure data security. Regularly conduct security inspections and vulnerability repairs on data systems to prevent data leakage incidents.

At the same time, the government and relevant departments should strengthen the supervision of data

security and privacy protection, improve laws and regulations, and increase the punishment for illegal acts such as data leakage. A data security certification system should be established to evaluate and certify the data security management levels of enterprises, guiding college student - run start - ups to standardize data processing behaviors and protecting users' data security and privacy.

(3) Enhancing the core competitiveness of entrepreneurial projects

Facing fierce market competition, college student entrepreneurs should focus on enhancing the core competitiveness of their entrepreneurial projects. On the one hand, it is necessary to deeply explore market demands, combine the advantages of digital technology, and develop innovative and differentiated products or services. Through technological innovation and business model innovation, meet the unmet needs of users and increase the added value of products or services. For example, in the sharing economy field, entrepreneurs can explore new sharing models, expand the types and application scenarios of shared products, and differentiate themselves from existing competitors^[5].

On the other hand, it is necessary to strengthen brand building and marketing. Use digital marketing methods to create an influential brand image, improve brand awareness and reputation. Through social media, content marketing, and other means, establish a good interactive relationship with users and enhance user stickiness. At the same time, actively expand market channels, establish mutually beneficial cooperation relationships with partners, and increase the market coverage and share of entrepreneurial projects.

6. Conclusion

The application of digital technology has brought many opportunities for college students' digital entrepreneurship. It has significantly reduced the threshold and cost of entrepreneurship, expanded entrepreneurial opportunities and market space, enhanced the innovation ability of entrepreneurial projects, and optimized entrepreneurial team collaboration and operation management. However, it also faces challenges such as rapid technological updates, data security and privacy protection, and intensified market competition. By strengthening digital technology education and training, improving the data security and privacy protection mechanism, and enhancing the core competitiveness of entrepreneurial projects, college students can make better use of digital technology in entrepreneurial activities, improve the success rate of entrepreneurship, and promote the development of the digital economy. As the innovative main force in the digital economy era, college students should actively embrace digital technology, give full play to their advantages, create more value in the field of digital entrepreneurship, and contribute to the development of the social economy. In the future, with the continuous development and improvement of digital technology, it is believed that college students' digital entrepreneurship will usher in a broader development prospect and inject new vitality into the innovative development of the economic society.

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