Journal of Contemporary Educational Research, 2025, Volume 9, Issue 7
http://ojs.bbwpublisher.com/index.php/JCER
ISSN Online: 2208-8474
ISSN Print: 2208-8466

Digital Intelligence Technologies Empower the Integration of Innovation and Entrepreneurship with Ideological and Political Education in Colleges and Universities

Chenxue Li*

School of Innovation and Entrepreneurship, The University of Shanghai for Science and Technology, Shanghai 200093, China

**Author to whom correspondence should be addressed.*

Abstract: With the rapid development of the economy and society, digital intelligence technology, as a technology that organically combines digitalization and intelligence, is promoting the development of all industries. Introducing digital intelligence technology in the field of education can help improve the quality of talent cultivation and promote the comprehensive development of students. In response to the call for mass entrepreneurship and innovation, colleges and universities should focus on the integration of innovation and entrepreneurship with ideological and political education, introduce new technological means to carry out educational work, and build a good ecosystem for innovation and entrepreneurship education. Based on this, this paper conducts an analysis and research on the integration of innovation and entrepreneurship and ideological and political education in colleges and universities empowered by digital intelligence technology for reference.

Keywords: Digital intelligence technology; Universities; Innovation and entrepreneurship; Ideological and political education; Education

Online publication: July 31, 2025

1. Introduction

In the context of the new era, society's demand for talents has changed. At this stage, not only talents with basic professional knowledge and technical skills are needed, but also those with a certain sense of social responsibility, good professional ethics, and an innovative spirit. Therefore, the integration of innovation and entrepreneurship with ideological and political education in colleges and universities is particularly important. As an essential technological means in the context of the new era, the application of digital intelligence technology in the integration of innovation and entrepreneurship education and ideological and political

education can help cultivate talents with strong quality and ability.

2. Problems in the integration of innovation and entrepreneurship with ideological and political education in colleges and universities

2.1. The educational model does not match the educational content

In previous teaching work, ideological and political education has placed more emphasis on the imparting of theoretical knowledge and values, with a focus on theoretical teaching. Teachers master basic knowledge points by imparting teaching knowledge to students and using reading materials to guide students to analyze problems. Innovation and entrepreneurship education, on the other hand, focuses more on the development of students' practical abilities and project-driven teaching, enabling students to master key operational experiences. In this case, there will be conflicts in educational concepts, and it will be difficult to achieve good teaching results. In addition, colleges and universities do not develop the ideological and political education capabilities of their teaching staff and lack a comprehensive understanding, which also leads to their lack of experience in interdisciplinary education [1].

2.2. The evaluation system does not match the teaching resources

There are differences in the evaluation system. Ideological and political education mainly assesses students' learning as a whole through test scores and academic papers, while innovation and entrepreneurship education pays more attention to students' learning outcomes and makes evaluations through project outcome presentations. However, the current form of evaluation is more focused on traditional theoretical learning, assessing students' mastery of knowledge, and less on evaluating students' practical abilities and innovative qualities. Not only that, there is a lack of resource input in teaching evaluation. Education requires more financial input, but the budget of colleges and universities is relatively limited and cannot meet the basic educational needs [2].

2.3. The educational mechanism is not in line with the collaborative work

At present, the integration of innovation and entrepreneurship education with ideological and political education is rather ambiguous. However, it is difficult to effectively combine the two educational forms and find the appropriate educational methods, mainly due to insufficient top-level design, unclear implementation paths, and problems with mechanism coordination. There is a problem of information communication within colleges and universities, and it is impossible to achieve coordination among internal departments, which also leads to incomplete implementation and enforcement of policies and difficulty in improving the efficiency of resource integration [3].

3. Significant values of applying digital technology to the integration of innovation and entrepreneurship and ideological and political education in colleges and universities

3.1. Promoting the integration of innovation and entrepreneurship education with ideological and political education

As a technological means born in the context of modern education, digital intelligence can provide more support for innovation and entrepreneurship education as well as ideological and political education, and

support the early design, middle implementation, and later summary and reflection of teaching, thus better promoting the integration and development of the two. In practical teaching, educators can effectively utilize digital intelligence technology to carry out educational work, better achieve the integration of innovation and entrepreneurship education and ideological and political education, build an integrated education platform, improve the quality of education through modular design, and divide the content of innovation and entrepreneurship education into several modules. It can be divided into modules such as basic theoretical knowledge, basic skills, innovative thinking, communication skills, business model, financial management, team management, etc. The content of ideological and political education can be integrated into the practical work of innovation and entrepreneurship education to further solve problems such as insufficient educational integration and unclear educational thinking in teaching [4].

3.2. Improving the quality of education on innovation and entrepreneurship and ideological and political education

In order to improve the quality of education on the basis of the integration of innovation and entrepreneurship education and ideological and political education, the introduction of digital and intelligent technologies can meet the basic requirements. First, achieve effective sharing of information and resources, utilize big data technology and cloud storage technology, gather various innovation and entrepreneurship and educational resources, provide more data support for teachers' teaching and students' learning, and promote their development. Second, push more precise educational content to students and teachers. Use big data technology to analyze the basic learning situation of students, understand their learning characteristics and career development plans, generate corresponding learning training, and conduct targeted teaching based on students' characteristics to avoid waste of resources. Third, professional teacher training will be carried out, and through online training courses and collaborative communication, teachers will acquire more technical means to further enhance their practical ability in innovation and entrepreneurship education, and ensure the quality and effectiveness of education and the scientific nature of teaching evaluation [5].

3.3. Enhancing students' enthusiasm for participating in innovation and entrepreneurship practice activities

Digital intelligence technology enhances students' enthusiasm for employment through diverse means, which also helps improve their overall quality and ability, providing support for their growth and development. The introduction of digital technology in innovation and entrepreneurship education in colleges and universities can help bring more support to teaching, increase students' interest in learning, and enhance their participation in learning. The use of big data technology and artificial intelligence technology can provide more guidance and assistance for students' learning status. This immediate feedback mechanism is also conducive to improving students' learning outcomes, thereby breaking down information barriers, allowing students to have more unobstructed learning and communication, and improving the quality and effectiveness of education [6,7].

4. Strategies for digital intelligence technology to empower the integration of innovation and entrepreneurship and ideological and political education in higher education institutions

With the development of big data, artificial intelligence, blockchain, and other digital intelligence technologies, higher education is undergoing transformation. Innovation and entrepreneurship education, as a key path to

cultivating innovative talents, and ideological and political education, as a core link in fulfilling the fundamental task of fostering virtue and nurturing talent, the deep integration of the two is a trend in higher education. Digital intelligence technology, with its powerful data processing and intelligent analysis capabilities, can provide a guarantee for education. It can not only innovate teaching models but also promote the transformation and upgrading of educational concepts, enabling students to master innovation and entrepreneurship skills while strengthening their own ideals and beliefs.

4.1. Attaching importance to resource building and enriching the curriculum system

To ensure the effective implementation of the integration of innovation and entrepreneurship education with ideological and political education, colleges and universities should focus on the development characteristics of teachers and students, flexibly utilize regional advantages to promote the construction of intelligent education infrastructure, and thereby establish a complete education service system, improve the quality of Internet services, and ensure the effectiveness of information services. Colleges and universities should encourage teachers and students to participate in inter-school cooperation projects in the same region, organize a series of social practice activities, carry out various forms of innovation and entrepreneurship practice exercises, further ensure the participation of teachers and students, and improve students' innovation and entrepreneurship capabilities. In the work of promoting the reform of student innovation and entrepreneurship education, local colleges and universities need to deeply explore various types of educational resources, strengthen infrastructure construction, establish and improve the curriculum system, and formulate a perfect curriculum system norm.

Colleges and universities are the main front for promoting innovation in innovation and entrepreneurship education, which requires strengthening resource development, designing online educational courses, and solving the problem of resource scarcity. This requires universities to build educational network resource service platforms, create a number of high-quality organizational forms for innovation and entrepreneurship education, and expand the content of education and teaching. Colleges and universities can use online courses for teaching, allowing students to study in the online courses and choose the innovation and entrepreneurship courses and projects they are interested in, making the learning of innovation and entrepreneurship education more timely and reasonable. Local colleges and universities also need to attach importance to the construction of educational informatization data platforms, develop corresponding courses based on the development characteristics and transformation needs of the school, enrich the teaching content, and provide convenience for students' learning and development [8–10].

4.2. Creating a virtual environment to enhance practical ability

Colleges and universities should strengthen infrastructure construction and introduce technologies such as VR and AR to provide more guarantees and support for education. Therefore, teachers should combine digital technology to create a virtual environment for entrepreneurship practice, simulate various situations encountered in the process of entrepreneurship, immerse students in the virtual environment for practical learning, provide them with a more realistic learning experience, and thereby improve their entrepreneurial skills. Among them, teachers can use digital technologies such as VR, AR, 3D modeling and rendering to create more realistic virtual scenarios, allowing students to immerse themselves in the relevant entrepreneurial situations, enabling them to complete practical operations in the virtual environment, providing them with more feedback and enabling them to recognize their own problems. Teachers can use virtual reality technology to create a good learning environment, increase students' participation, and deepen their sense of identity with innovation and

entrepreneurship.

Colleges and universities should use digital intelligence technologies such as cloud computing and social network analytics to provide a centralized platform that supports the sharing of information and discussion of problems between teachers and students, enables students to communicate and interact online, builds a positive learning environment, and better realizes the sharing and mutual assistance of knowledge. In addition, colleges and universities should set up ideological and political education sections on the platform, encourage students to engage in in-depth communication and discussion, and jointly complete practical projects of innovation and entrepreneurship, thereby promoting students' growth and development and enhancing their sense of social responsibility and collective honor [11,12].

4.3. Providing individualized guidance through intelligent learning analysis

College teachers should utilize digital and intelligent technologies for teaching guidance. They should also take advantage of their data analysis capabilities to track students' learning behaviors, grades, and online activity data. Then, they can establish personalized archives for students and use machine learning models to predict students' interests and development needs, thereby formulating more scientific and reasonable course and activity arrangements. Update the teaching content based on the individual learning progress of the students to ensure that they are in a good learning state. Teachers can incorporate elements of ideological and political education and content of innovation and entrepreneurship education into personalized teaching, recommend courses with themes of social responsibility or moral ethics, and combine the characteristics of innovation and entrepreneurship projects to enable students to enhance their sense of responsibility in the process of entrepreneurship and form good learning qualities.

In addition, teachers need to use intelligent technologies such as big data processing and natural language processing to deeply analyze students' specific learning situations and characteristics, and generate corresponding improvement suggestions and methods. By identifying students' learning situations and their emotional conditions, they can provide them with corresponding psychological support. In practical teaching, teachers should emphasize the importance of ideological and political education, introduce more elements of values education, and push corresponding educational resources to students to promote their learning and development [13,14].

4.4. Paying attention to school-enterprise cooperation and playing an auxiliary role

The combination of innovation and entrepreneurship education and ideological and political education for college students is more in line with the development needs of students in the new era. This requires the combination of educational theory and practice to further reduce the cost and risk of students' entrepreneurship. In the information age, more support should be provided for school-enterprise cooperation and the construction of innovation and entrepreneurship incubation bases. College students hope to gain more practical learning opportunities, and with the help of enterprises and schools, receive support in terms of venues, funds, policies, and technologies, and thereby gain more enterprise experience to lay a solid foundation for subsequent entrepreneurship and employment. Both schools and enterprises should make full use of digital and intelligent technologies to build corresponding educational practice bases, encourage students to participate in practical training activities, help students avoid entrepreneurial risks from multiple perspectives, and form strong innovation and entrepreneurship capabilities. In the process of school-enterprise cooperation, teachers should adopt an online + offline educational approach, build an educational system that combines theory with practice,

improve their overall quality and ability, and develop them into talents that meet the development requirements of the new era [15].

5. Conclusion

To sum up, digitalization and intelligence are important supports for the construction of the curriculum system for innovation and entrepreneurship education in colleges and universities and the implementation of ideological and political education. However, in the current stage of building the innovation and entrepreneurship education system in colleges and universities, there are problems such as insufficient informatization construction of the course platform and untimely management, which leads to insufficient integration of innovation and entrepreneurship education and ideological and political education in colleges and universities. To this end, it is necessary for colleges and universities to be able to accurately grasp the trends of industry development and market demands through technologies such as big data, cloud computing, and artificial intelligence, so as to achieve effective integration of educational resources and provide more targeted innovation and entrepreneurship education services for students. Only by strengthening the effective integration of digital technology and innovation and entrepreneurship education and building an integrated education mechanism can the quality and effectiveness of education be further improved.

Disclosure statement

The author declares no conflict of interest.

References

[1] Zhang L, Zhang S, 2025, Research on the Integration of Innovation and Entrepreneurship and Ideological and Political Education in Colleges and Universities Empowered by Digital Intelligence Technology. China Employment, (04): 98–99.

[2] Zhang X, Ma B, 2025, Innovative Approaches to Integrating Chinese Fine Traditional Culture into Ideological and Political Courses in Colleges and Universities. Popular Literature and Art, (07): 184–186.

[3] Jiang H, 2025, Integration and Development of Ideological and Political Education and Innovation and Entrepreneurship Education in Colleges and Universities. Journal of Shanxi University of Finance and Economics, 47(S1): 271–273.

[4] Cao S, 2025, Research on the Integration of Innovation and Entrepreneurship Education and Ideological and Political Education in Colleges and Universities, Xinxiang Daily, March 26, 2025, (008).

[5] Dong R, Yang X, Chen L, 2025, Research on the Integration of the “All-Round Education” Spirit into the Ideological and Political Construction of the “Foundation of Innovation and Entrepreneurship” Course in Colleges and Universities. University, (06): 94–97.

[6] Song Q, 2025, Research and Exploration on the Diversified Integration Model of “Ideological and Political Education + Innovation and Entrepreneurship + Professional Education” in Local Applied Universities. Journal of Hubei Open Vocational College, 38(02): 14–15 + 24.

[7] Li X, Liu M, 2025, Research on Teaching Reform of Innovation and Entrepreneurship Education in Colleges and Universities under the Background of Ideological and Political Education in Courses. Journal of Suzhou University, 40(01): 81–84.

[8] Yuan J, Rong M, 2025, An analysis of the Path of Innovation and Entrepreneurship Education for College Students from the Perspective of Ideological and Political Education in Courses. University, (01): 188–191.

[9] Wang Z, Zhang W, Ma D, 2025, Research on the Integration Path of Professional Education and Innovation and Entrepreneurship Education in Private Colleges and Universities under the Background of Ideological and Political Education in Courses. Southern Accent and Northern Tune, (01): 93–96.

[10] Zhu Z, 2024, Strategies and Methods for Broadening Employment Channels for Students Based on the Integration of Innovation and Entrepreneurship Education and Ideological and Political Education in Colleges and Universities. Employment and Security, (11): 127–129.

[11] Sun Y, 2024, Research on the Curriculum Model of Innovation and Entrepreneurship Education in Colleges and Universities in the Information Age. China New Communications, 26(20): 131–133.

[12] Yu X, 2024, Talent Cultivation Strategies for Innovative and Entrepreneurial Enterprises in Colleges and Universities under the Background of Informatization. Chinese and Foreign Corporate Culture, (08): 217–219.

[13] Lei G, 2024, Specific Application of Blended Teaching Mode in Innovation and Entrepreneurship Teaching in Colleges and Universities. Journal of Hubei Open Vocational College, 37(09): 6–7 + 10.

[14] Zhang J, Zhan Y, Tian M, et al., 2023, Research on the Design and Practice of Online Studios for Innovation and Entrepreneurship in Universities Based on Smart Teaching. Computer Knowledge and Technology, 19(34): 170–172.

[15] Su X, Feng X, 2023, Exploration of the Innovative Reform Path of the Innovation and Entrepreneurship Education System in Colleges and Universities under the Background of Informatization. Chinese Science and Technology Paper, 18(11): 1289.