

# ***Value and Practical Innovation of "Knowledge-Subject-Ability" College Ideological and Political Education in New Quality Productive Forces***

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**Abstract:** The formation and development of new quality productive forces have put forward new era requirements for the cultivation of talents in universities, and also provided an important opportunity for the reform and innovation of ideological and political courses in universities. Traditional ideological and political courses have encountered practical problems such as the relative separation of knowledge imparting and value shaping, insufficient cultivation of innovative spirit, and the breakage of the practical transformation chain in the educational practice. They are unable to meet the strategic demands of the coordinated development of education, science and technology, and talents. Based on the development logic of new quality productive forces, this paper proposes the "Science-Spirit-Creation (SSC)" full-chain ecological education concept, integrating scientific cognition (Knowledge), ideological guidance (Spirit), and innovative creation (Creation) into the entire process of ideological and political course teaching, and constructing a full-chain educational system of "cognitive enlightenment - value shaping - ability cultivation - innovative practice - transformation of results". The research suggests that the "Science-Spirit-Creation" full-chain ecological education is not only an important innovative path for implementing the fundamental task of cultivating virtue in ideological and political courses, but also a practical need for cultivating new era individuals with patriotism, scientific spirit, and innovative ability. The article further proposes implementation paths from the dimensions of ecological collaboration, scenario reconstruction, digital empowerment, and practical innovation, with the aim of providing theoretical references and practical lessons for the high-quality development of ideological and political courses in universities in the new era.

## **1. Introduction**

The 20th National Congress of the Communist of China clearly stated that it is necessary to comprehensively promote the coordinated development of education, science and technology, and talent. We should accelerate the construction of an education power, a science and technology

power, and a talent power. With the acceleration of the new round of technological revolution and industrial transformation, "new quality productivity" as an advanced productive form with scientific innovation as the core driving force and high-quality talents as the key support, is profoundly reshaping the logic of national development and the paradigm of talent cultivation. In this context, higher education is no longer merely responsible for knowledge transmission, but has increasingly become an important foundational link supporting the national innovation system and strategic scientific and technological forces. From a theoretical perspective, the development of new quality productivity essentially relies on the collaborative generation mechanism of "high-level scientific cognitive ability - high-level value leadership ability - high-quality innovation creation ability". This mechanism not only requires college talents to have a solid professional knowledge foundation, but also emphasizes the unity of scientific spirit, innovative consciousness, and social responsibility [1-2]. Therefore, college ideological and political courses, as the key course for implementing the fundamental task of fostering virtue and cultivating talents, are also transforming their functional positioning from the traditional "single dimension" of value education to a "value guidance + innovation enlightenment + practical transformation" comprehensive educational system. However, from the perspective of actual operation, college ideological and political courses still have structural tensions in adapting to the requirements of new quality productivity development, mainly manifested in the following three "breakdown dilemmas": First, there is still a certain degree of separation between knowledge transmission and value shaping in some classroom teaching. In some classroom teaching, ideological and political courses still mainly rely on theoretical lectures and concept explanations, although they have strengthened the completeness of the knowledge system, there is still a lack in converting theoretical knowledge into students' internal value recognition and action consciousness, resulting in a less smooth transformation chain between "knowing" and "believing" [3-4]. Second, the integration of ideological guidance and innovation ability cultivation is not deep enough. Currently, ideological and political education focuses more on value norms and ideological guidance, while the systematic cultivation of students' scientific spirit, critical thinking, and innovation ability is relatively insufficient, making ideological and political courses still have functional tension in responding to "innovative talents needed by new quality productivity". Third, the linkage between classroom teaching and practical innovation is insufficient. Some college ideological and political courses still remain in the "classroom-centered" teaching structure, lacking deep coupling with social practice, research training, and innovation and entrepreneurship, resulting in a segmented and fragmented characteristic in the education process and not yet forming a closed-loop educational chain throughout the learning process. These "threefold breakdowns" jointly restrict the overall leap of the educational function of college ideological and political courses in the context of new quality productivity, and also highlight the urgency of constructing a systematic, ecological, and full-chain educational system [5-6]. Under this logic, this paper proposes the "Covestro" full-chain ecological education model, that is, with "scientific cognition (Knowledge) - ideological guidance (Spirit) - innovation creation (Creation)" as the core logical main line, integrating cognitive generation, value shaping, and innovation practice, promoting the transformation of ideological and political courses from "single classroom knowledge transmission" to a "multi-dimensional collaborative ecological education system". Constructing a full-chain ecological education model with "Covestro" as the core logic not only has significant theoretical innovation significance, but also has prominent practical value.

## 2. The Value Implications of New Quality Production Power Enabling the "Scientific-Intellectual-Creative" Full-Chain Ecological Education Model of College Ideological and Political Courses

New quality production power is not only a technological leap in the form of productivity, but also a systematic structural reorganization centered on innovation-driven. Its essence lies in achieving an overall leap in development momentum through the collaborative transformation of knowledge production methods, organizational methods, and value generation methods [7-8]. In this macro context, college ideological and political courses are no longer merely a "single channel" for value education; instead, they are gradually embedded in the key nodes of the national innovation system and the talent cultivation system. Based on this, the proposal of the "Scientific-Intellectual-Creative" full-chain ecological education model essentially reflects the structural projection of the logic of new quality production power in ideological and political education. Its value implications mainly lie in the following four aspects.

### 2.1 From knowledge transmission to innovation generation: Reconstructing the internal logic of the educational function of ideological and political courses

The operational logic of traditional ideological and political courses is mainly based on the one-way linear structure of "knowledge transmission - value recognition", with its core function concentrated on theoretical explanation and value indoctrination. However, in the knowledge society and innovation society driven by new quality production power, a single knowledge transmission is no longer able to meet the growth needs of high-level talents [9-10]. The educational logic must shift from "knowledge possession" to "ability generation and innovation emergence". The "Scientific-Intellectual-Creative" model introduces a progressive structure of "scientific cognition - ideological guidance - innovation creation", transforming ideological and political courses from a static knowledge system into a dynamic generation system, enabling students to simultaneously achieve value internalization and awakening of innovative consciousness during the cognitive construction process, thereby promoting the educational logic from "input-oriented knowledge education" to "output-oriented innovative education". As shown in Figure 1, the "Scientific-Intellectual-Creative" full-chain educational logic model realizes a closed-loop transformation from scientific cognition to social contribution through a multi-stage progressive mechanism.



Figure 1. The Logical Model of "KSC" Whole-Chain Education

## 2.2 From Value Leadership to Value-Innovation Synergy: Reconstructing the Relationship between Moral Education and Technological Innovation

For a long time, ideological and political courses have emphasized the independence and priority of value leadership. However, in practice, this often leads to a structural tension where "value education" and "professional education" are relatively separated. In the context of new quality productive forces, technological innovation is no longer a value-neutral technical process; instead, it is a complex practical process deeply embedded in national strategic goals and the social value system. Therefore, ideological and political courses must achieve a transformation from "one-way value leadership" to "synergistic generation of value and innovation capabilities". The "SSC" model has achieved a breakthrough in this sense [11-12]. Its core lies in integrating the spirit of scientists, the spirit of serving the country through science and technology, and innovation activities into the entire teaching process, so that value shaping no longer remains at the cognitive level but is transformed into practical, operational, and transferable innovation action logic. As shown in Table 1, compared with traditional innovation education, the "SSC" education model shows structural differences in target positioning, educational subjects, and outcome orientation, reflecting the trend of deep integration of the value system and the innovation system.

Table 1 Comparison of "SSC" Education and Traditional Innovation Education.

| Dimension           | Traditional innovative education | Korsun creates talents                   |
|---------------------|----------------------------------|------------------------------------------|
| Target positioning  | Skill training                   | Value and ability cultivation            |
| Core content        | Innovative methods               | Innovative spirit and innovative ability |
| Educational subject | Professional teachers            | All-staff collaboration                  |
| Practical scenario  | Laboratory                       | Social innovation scenarios              |
| Outcome orientation | Competition results              | Social value creation                    |

Thus, cultivating virtue and fostering talents is no longer merely a normative requirement embedded in the innovation process, but rather an intrinsic value structure inherent in the innovation activities themselves. It has achieved an integrated and integrated mechanism of "value shaping - ability generation - innovation output".

## 2.3 From Closed Classrooms to Open Ecosystems: Promoting the Structural Reconfiguration of the Ideological and Political Education System

From a systems theory perspective, the leap in productivity necessarily requires the educational system to shift from a closed structure to an open ecosystem. The new quality productivity emphasizes the system ability generation mechanism of multi-factor collaboration, multi-party interaction, and cross-border integration [13]. This logic is also applicable to the reform of ideological and political courses. Traditional ideological and political courses often focus on the classroom, presenting characteristics of spatial closure, single subject, and resource segmentation, making it difficult to effectively support the continuous generation of students' innovation capabilities. The "SSC" model achieves the cross-integration of educational resources and scene reconstruction by constructing a learning community involving universities, enterprises, research institutions, social organizations, and digital platforms through collaborative participation. As shown in Figure 2, the full-chain ecosystem-based learning community, through the multi-party collaborative mechanism, forms an open learning network structure, promoting ideological and political education to move from "isolated classroom islands" to "ecosystem".



Figure 2. The Structure of the Whole-Chain Ecological Education Community

The key significance of this ecological transformation lies in the fact that ideological and political education courses are no longer confined to the field of knowledge dissemination, but are embedded in real social practices and innovation systems, enabling the educational process to possess continuity, openness and generativity.

#### 2.4 From stage-based cultivation to full-chain generation: Establishing a closed-loop mechanism for the growth of innovative talents

The core requirements of new-quality productive forces for talents lie not only in the completeness of the knowledge structure, but also in the continuous generativity of innovation ability and the systematicity of transformation ability. This means that talent cultivation cannot merely reach the achievement of goals, but must form a continuous growth mechanism that runs through the entire learning process. The "SSC" model achieves the systematic reconfiguration of the talent growth path by constructing a five-dimensional progressive chain of "cognitive enlightenment - value shaping - ability cultivation - innovation practice - transformation of results", enabling students to achieve a spiral ascent of ability and value at different learning stages. As shown in Table 2, this five-dimensional system not only clarifies the educational goals and implementation carriers at each stage, but also builds a complete transformation path from classroom learning to social contribution.

Table 2 "SSC" Full-Chain Ecological Education Five-Dimensional System

| Chain links             | Educational Goals                  | Implementation platform                  |
|-------------------------|------------------------------------|------------------------------------------|
| Cognitive enlightenment | Scientific Understanding Formation | Classroom teaching                       |
| Value formation         | Ideal Belief Cultivation           | Ideological and political course         |
| Ability cultivation     | Innovation Ability Enhancement     | Project training                         |
| Innovation practice     | Practical Innovation Application   | Social Practice                          |
| Outcome transformation  | Social Value Creation              | Innovation and Entrepreneurship Platform |

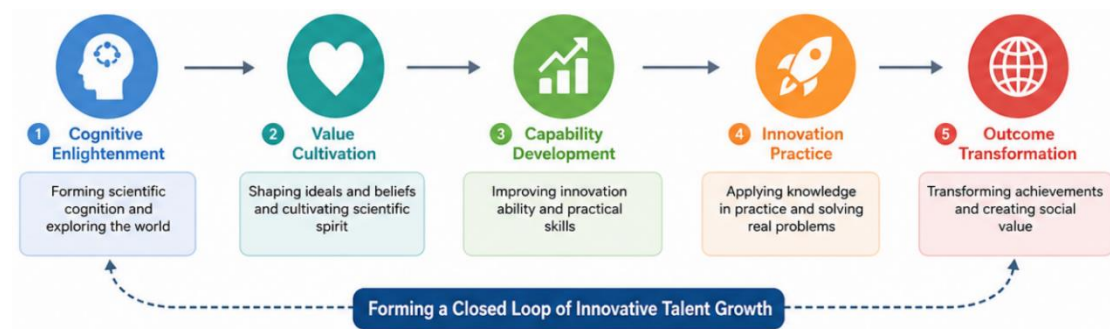


Figure 3. The Five-Dimensional Progressive Growth Path

Furthermore, as shown in Figure 3, this progressive structure forms a typical "growth closed-loop mechanism", making innovation ability no longer a phased outcome but an inherent ability structure for sustainable evolution.

### 3. Current Realistic Dilemmas of the "Knowledge-Science-Creation" Full-Chain Ecological Education Model in University Ideological and Political Courses

Under the dual background of the accelerated evolution of new quality productive forces and the systematic transformation of higher education, university ideological and political courses are currently in a critical stage of transitioning from the "traditional classroom teaching system" to the "full-chain ecological education system". However, from the actual operation situation, the "knowledge-science-creation" full-chain ecological education concept still faces multiple structural constraints in the process of practical promotion, and its systematic implementation has not been fully realized. The main manifestations of these are as follows:

#### 3.1 Education concept lagging behind: The knowledge-oriented orientation still restricts the integration of value and innovation

From the perspective of the concept, some university ideological and political courses still adhere to the traditional educational paradigm centered on "knowledge impartation", with their core focus concentrated on the completeness of the theoretical system and the degree of examination achievement, while the attention to "value generation" and "innovation inspiration" is relatively insufficient. This education logic centered on knowledge makes ideological and political courses easily solidify into "lecture-based courses" rather than "ability-generation and innovation-driven courses" in practice. As a result, the integrated logic of "scientific cognition - thought guidance - innovation creation" emphasized by the "knowledge-science-creation" model is difficult to naturally emerge in the classroom, leading to an implicit division between value education and innovation education, and presenting a tension structure of "advanced concepts but insufficient implementation" in the education process.

#### 3.2 Insufficient collaborative mechanism: The multi-party educational ecology has not effectively formed

From the system structure perspective, the "knowledge-science-creation" full-chain ecological education relies on the multi-collaboration of universities, enterprises, research institutions, social organizations, and digital platforms. However, in actual operation, the various educational entities still mainly engage in "functional cooperation" rather than "mechanistic collaboration", and have not yet formed a stable institutionalized collaborative structure. On one hand, there are certain

resource barriers among different disciplines and departments within universities, and there is a lack of deep integration mechanism between ideological and political courses and professional courses. On the other hand, the cooperation between universities and enterprises, research institutions is mostly at the project level and has not yet formed a regular and continuous collaborative education mechanism.

The ideal state of the "full-chain ecological education community" should present a multi-party coupling structure. However, in reality, this structure is still at the "weak connection, shallow collaboration" stage, and the overall resilience and stability of the ecosystem are insufficient.

### **3.3 Broken practice chain: The path from classroom cognition to social transformation is not smooth**

From the perspective of the education process, the "knowledge-science-creation" model emphasizes the full-chain progressive mechanism of "cognition enlightenment - value shaping - ability cultivation - innovation practice - transformation and application", but in the actual teaching process, this chain often presents a phased fragmentation feature.

Specifically, classroom teaching mainly undertakes the functions of "cognition enlightenment" and "value shaping", while "ability cultivation" and "innovation practice" mainly rely on the second classroom or independent practice sessions, and there is a lack of systematic connection mechanism between them, resulting in a fragmented learning experience for students. More critically, the key link from "innovation practice" to "transformation and application" is generally weak, and students' practical achievements are difficult to effectively enter social application scenarios or the innovation and entrepreneurship system, thus causing a significant break in the education chain at the "last mile". Although the educational goals at each stage are clear, there are problems of weak connection and poor transformation in actual operation.

### **3.4 Insufficient digital empowerment: Technical support has not yet been transformed into the driving force for reshaping the educational structure**

In the context of digital transformation, big data, artificial intelligence, and virtual simulation technologies have provided important technical support for the reform of ideological and political education courses. However, from the perspective of practical application, the application of digital technologies in ideological and political education courses still mainly remains at the level of "tool embedding", rather than truly transforming into "structural reshaping" power. Some universities have introduced online teaching platforms, smart classroom systems, and digital resource libraries, but these technologies are more focused on optimizing teaching forms rather than deeply integrating into the "all-round education logic" required by "science, thought, and creation". Although this model has introduced digital technologies, it has not yet formed an intelligent education mechanism that drives the optimization of students' growth paths based on data. The "five-dimensional progressive education growth path" should have relied on digital technologies to achieve dynamic tracking and feedback optimization, but in reality, this path still mainly relies on static evaluation, lacking continuous data feedback and intelligent control mechanisms.

## **4. Conclusion**

In the context of the accelerated evolution of new quality productive forces, the "science, thought, and creation" (STC) full-chain ecological education model of ideological and political education courses in universities has a core logic of "scientific cognition - ideological guidance - innovative creation", and has constructed a systematic educational framework that integrates cognitive

generation, value shaping, and practical transformation. Research shows that this model effectively promotes the transformation of ideological and political education courses from traditional knowledge transmission-type courses to an ecological and innovative educational system by reconfiguring the educational logic, optimizing the collaborative mechanism, and strengthening the practical chain. From a theoretical perspective, the "science, thought, and creation" model expands the intrinsic connection between ideological and political education and new quality productive forces, providing a new interpretation path for constructing a pedagogical paradigm of knowledge, value, and innovation collaborative generation. From a practical perspective, it helps solve the current practical problems in ideological and political education courses, such as ideological fragmentation, practical disconnection, and insufficient collaboration. However, this model still faces issues such as unstable collaboration mechanisms, insufficient digital empowerment, and the need for improvement in the adaptability of the evaluation system during its actual implementation. Further optimization and improvement are needed in subsequent practices. Future research can deepen in three aspects: first, conducting differentiated adaptation studies for different types of universities; second, strengthening the deep embedding of digital technologies in the entire process of ideological and political education; third, improving the multi-dimensional evaluation system oriented towards innovation ability and value growth to further enhance the precision and sustainability of the educational system.

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