

Research on the Construction Strategy of Curriculum Ideology and Politics in Colleges and Universities of Chongqing Based on Collaborative Education

Qian Zeng^{1,*}

¹School of Management Science and Engineering, Chongqing Technology and Business University, Chongqing 400067, P.R. China

* Corresponding author: Zeng Qian (Email: 2018071@ctbu.edu.cn)

Abstract: Curriculum ideology and politics is a key measure to implement the fundamental task of fostering virtue through education, and its collaborative education effectiveness is directly related to the realization of the mission of higher education to "cultivate talents for the Party and the country". Based on collaboration theory and the CIPP evaluation model, this study takes colleges and universities in Chongqing as the research object, systematically sorts out the practical status of collaborative education in curriculum ideology and politics, analyzes the core dilemmas, and finally proposes a "Three-Dimensional, Four-Cycle and Five-Path" collaborative education system and supporting strategies. The research finds that colleges and universities in Chongqing have formed a three-dimensional pattern of "policy-driven, school-based practice and multi-dimensional collaboration", but there are problems such as insufficient depth of collaboration, a single evaluation mechanism and inadequate condensation of characteristics. This study provides theoretical reference and a practical paradigm for the collaborative construction of curriculum ideology and politics in regional colleges and universities in the new era.

Keywords: Curriculum ideology and politics, collaborative education, strategy research.

1. Introduction

Curriculum ideology and politics is an educational concept that integrates ideological and political education elements into the teaching of various courses to realize the unification of knowledge impartation, ability cultivation and value guidance. In recent years, the state has successively issued policy documents such as the *Guiding Opinions on Comprehensively Promoting the Construction of Curriculum Ideology and Politics in Colleges and Universities*, emphasizing the need to "construct an all-staff, whole-process and all-round education mechanism". As a major hub of higher education in the central and western regions, Chongqing has the dual advantages of rich red cultural resources and distinct industrial characteristics. The construction of curriculum ideology and politics in its colleges and universities not only faces common problems nationwide, but also needs to explore a collaborative path in line with its regional characteristics.

Existing research findings have addressed the difficulties and problems in promoting the collaborative development of ideological and political education in courses (IPEC) among multiple subjects, and proposed governance countermeasures through approaches such as mechanism construction. Luo Zhongyou argues that in the development of IPEC, university party committees, as the leading body, should be responsible for overall coordination; management entities should consolidate institutional guarantees; and teachers, as the implementation subject, need to enhance their awareness of moral education and sense of responsibility^[1]. Zhou Song points out that in the current systematic operation of IPEC, there exists a problem of "fragmented operation" among management entities and implementation entities from different departments and colleges, which is caused by inconsistent goals and lack of overall coordination^[2]. Chen Shuli suggests that to tackle the practical dilemmas in the

development of IPEC from the perspective of collaborative education, it is necessary to construct a collaborative management mechanism among various departments of universities, a teacher interaction mechanism among different types of teachers, and a resource-sharing mechanism for ideological and political education^[3]. Gao Yan indicates that universities can achieve collaborative education in the development of IPEC by clarifying the responsibilities of teaching management entities, innovating interdisciplinary collaborative teaching carriers, improving the effect-oriented evaluation mechanism, and optimizing the teaching resources for "all-round education involving all staff and the whole process"^[4]. Additionally, some scholars have conducted research on the practice of collaborative education in IPEC at the university and secondary college levels^[5-6]. In recent years, discussions on the methods and systems of collaborative education in IPEC under the background of digital intelligence have also gradually increased^[7-8].

In summary, existing studies mostly focus on the ideological and political practice of a single course or a single university, and there is insufficient research on the systematic and institutional aspects of collaborative education. By integrating the theoretical framework of collaborative innovation in curriculum ideology and politics with the local practice in Chongqing, this study can enrich the collaborative theoretical system of curriculum ideology and politics. From the practical perspective, the exploration of Chongqing's colleges and universities in the transformation of red resources and the ideological and political integration of industry-education integration can provide replicable experiences for similar colleges and universities across the country.

Based on collaboration theory and the CIPP evaluation model, this study constructs a research framework of "current situation diagnosis, dilemma analysis, system construction and guarantee implementation". The core view of

collaboration theory is that various elements within a system can maximize the overall effectiveness through goal coordination, resource integration and functional complementarity. Collaborative education in curriculum ideology and politics needs to integrate elements such as teachers, courses and resources, break down disciplinary barriers and departmental divisions. The CIPP evaluation model includes four dimensions: Context, Input, Process and Product, which provides a scientific tool for the whole-process evaluation of curriculum ideology and politics, and is especially suitable for the dynamic monitoring and optimization of collaborative education. Taking the collaborative education of curriculum ideology and politics in colleges and universities of Chongqing as the research object, this study focuses on analyzing the practical cases of Chongqing University, Southwest University, Chongqing Jiaotong University, Chongqing University of Technology and other institutions, covering comprehensive, science and engineering, politics and law and other types of colleges and universities, and finally forms targeted strategies.

2. Practice in Colleges and Universities of Chongqing

2.1. Overall Pattern

The construction of curriculum ideology and politics in colleges and universities of Chongqing has formed a three-level mechanism of "municipal overall planning, university-level implementation and college-level innovation". At the municipal level, the Chongqing Municipal Education Commission has included curriculum ideology and politics in the first batch of pilot projects for the construction of a "city strong in education". In 2025, the Municipal Education Commission launched the "Reform Pilot of Integrated Construction of Ideological and Political Courses in Primary, Secondary and Tertiary Schools", led by the School of Marxism of Chongqing Jiaotong University, to promote the collaborative sharing of ideological and political resources between colleges and universities and primary and secondary schools.

At the university level, each university has formed a differentiated development path based on its own school-running orientation. First, comprehensive universities, such as Chongqing University, have built a collaborative system of "general education courses + professional courses + ideological and political courses", and developed the "China Series" courses relying on their advantages in liberal arts. Second, industry-characteristic universities, such as Chongqing Jiaotong University, are based on the transportation field and integrate the concept of "serving the country through transportation" into professional teaching. Third, normal universities, such as Chongqing Normal University, focus on the cultivation of teachers' ethics and style, and weave the professional spirit of "teaching and educating people" through the whole process of curriculum teaching, forming a full-chain ideological and political education system from the principles of pedagogy to subject teaching methods.

As of November 2024, Chongqing has built 200 ideological and political model classrooms and 300 demonstration classrooms. Thirteen institutions have been selected into the first batch of national "Great Ideological and Political Courses" practical teaching bases, and 80 practical training routes of "walking ideological and political courses"

have been launched. Three projects including "Red Rock Story Performance" have been selected into the national high-quality resource projects of "Great Ideological and Political Courses". In addition, 750 municipal-level curriculum ideology and politics demonstration courses and 12 teaching and research demonstration centers have been built.

2.2. Characteristics of Demonstration Course Construction

2.2.1. Digital Empowerment for Teaching Innovation

Colleges and universities in Chongqing actively use digital technologies such as VR, AI and big data to promote the innovation of curriculum ideology and politics teaching and improve the educational effect in aspects of teaching platform construction, curriculum diagnosis assistance and teaching content push. For example, the School of Marxism of Chongqing University of Technology has developed the "Cloud Marxism School" platform, which uses VR technology to restore red historical scenes, enabling students to experience red history in an immersive way and significantly improving the classroom interaction effect of ideological and political courses. Chongqing University of Finance and Economics has built an "AI and Knowledge Graph" curriculum diagnosis system, which can intelligently label the ideological and political elements in professional courses and help teachers grasp the integration direction of ideological and political elements more accurately. In the courses related to its advantageous disciplines, Chongqing University of Posts and Telecommunications uses big data to analyze students' learning behaviors, and precisely pushes ideological and political education content according to students' learning characteristics and needs, helping students establish correct scientific research values. Its course "Principles of Communication" has radiated to many colleges and universities across the country through the MOOC platform, benefiting more students.

2.2.2. Interdisciplinary Integrated Education Practice

Based on their own disciplinary characteristics, colleges and universities in Chongqing promote the interdisciplinary integrated education practice of curriculum ideology and politics by integrating knowledge of different disciplines, building a full-chain education system and focusing on the combination of theory and practice. For example, the course "Parking Planning and Management" of Chongqing Jiaotong University integrates multi-disciplinary content such as civil engineering, traffic management and ethics, and designs the module of "Smart Parking Ecological Construction", which has attracted a large number of learners on the national smart education platform. The Civil Procedure Law Teaching and Research Office of Southwest University of Political Science and Law has created a full-chain education system of "three teaching concepts, three course stages and two evaluation mechanisms", which closely combines legal practice with professional ethics, and many professional courses have been rated as Chongqing Municipal Demonstration Courses. The interdisciplinary courses of Chongqing Normal University focus on the combination of educational theory and practice. For instance, in the course "Educational Technology", multi-disciplinary knowledge such as psychology and information technology is integrated, which not only cultivates students' ability to innovate educational and teaching methods, but also integrates ideological and political elements such as educational equity and educational mission to help students establish correct educational concepts.

2.2.3. Practice-Oriented Collaborative Path

Some colleges and universities have jointly built practical bases with enterprises, transforming the production sites of enterprises into teaching scenarios. For example, Chongqing University of Arts and Sciences has cooperated with well-known local enterprises to introduce actual enterprise projects into relevant professional courses, allowing students to deeply understand the craftsman spirit and professional ethics in the process of participating in project practice. The course "Clinical Diagnostics" of Chongqing Medical University has established a "Medical Ethics Case Database" in its affiliated hospitals, and infiltrates the concept of "life first" through case discussions, effectively improving students' professional quality.

2.3. School-Based Characteristic Innovation Cases

2.3.1. Integration of Red Genes and Professional Education

Colleges and universities in Chongqing start from school-based red resources and local red resources, and carry out the educational practice of integrating red genes with professional education in combination with their own professional characteristics. For example, Chongqing University of Technology has fully explored its school-based red resources, and refined a red cultural spirit system with distinct recognition, centered on "the War of Resistance against Japanese Aggression culture", "war industry gene" and "Red Rock Spirit". The university has also built a "Great Ideological and Political Education" pattern with the linkage of "four classrooms" - the main theoretical classroom, the red "heart" classroom, the practical classroom and the online cloud classroom. In the course "Power System Analysis" of the School of Electrical Engineering, the "Red Rock Spirit" is used as an entry point to interpret the professional pursuit of power workers to "stick to their posts and ensure people's livelihood", inspiring students to engage in the national power industry after graduation. Relying on the rich red cultural resources in Chongqing, Chongqing Normal University carries out red education practice activities in education-related majors, organizes students to visit red education bases, integrates red culture into educational and teaching cases, and cultivates students' patriotic feelings and educational responsibility.

2.3.2. Collaboration between Industrial and Teaching Chain

Engineering colleges and universities in Chongqing have actively cooperated with industry enterprises and built a "Three-Integration and Three-Infiltration" model, which specifically refers to integrating industry standards into curriculum syllabuses, bringing enterprise cases into classroom teaching, and inviting enterprise experts to give lectures on campus. For example, in majors such as communication engineering, Chongqing University of Posts and Telecommunications has maintained close cooperation with communication enterprises and introduced practical cases such as 5G technology research and development and communication network construction. While learning professional knowledge, students can understand the development trend of the industry and establish the ideal of serving the country through science and technology.

2.3.3. Digital Transformation of Evaluation Mechanism

Many colleges and universities have introduced dynamic

evaluation tools in the digital transformation of evaluation mechanisms, and explored more accurate and comprehensive evaluation paths for curriculum ideology and politics in aspects of intelligent data collection and whole-process system construction. For example, Chongqing College of Electronic Engineering has promoted the reform of students' intelligent evaluation, collected various types of data such as students' classroom performance, social practice and voluntary services through a big data platform, and generated comprehensive student portraits in combination with the "Five Education" evaluation indicators to provide precise guidance for students' growth and development. Chongqing Normal University has established a curriculum ideology and politics evaluation system based on the whole process of students' learning. This system not only pays attention to students' mastery of knowledge, but also focuses on the formation of students' values and the improvement of practical ability. Through diversified evaluation methods, it comprehensively and objectively evaluates the educational effect of curriculum ideology and politics.

2.4. Summary of Collaborative Education Experience

The core experience of collaborative education in curriculum ideology and politics in colleges and universities of Chongqing can be summarized as "Three Collaborations and Two Empowerments", namely mechanism collaboration, resource collaboration, evaluation collaboration, digital empowerment and cultural empowerment.

In terms of mechanism collaboration, the School of Marxism of Chongqing Jiaotong University has taken the lead in establishing the "Integration Community of Ideological and Political Courses in Primary, Secondary and Tertiary Schools", established a joint meeting system and a joint teaching and research mechanism, realized the vertical connection between school stages and the horizontal linkage between universities, and promoted the efficient flow of ideological and political education resources between different school stages and different universities. In terms of resource collaboration, some colleges and universities have jointly developed "industrial ideological and political" course packages with local enterprises, transformed enterprise production lines and laboratories into practical classrooms, and invited enterprise experts to serve as "special ideological and political tutors" to make enterprise resources better serve ideological and political education. In terms of evaluation collaboration, many colleges and universities have introduced dynamic evaluation tools to enable the quantitative evaluation of educational effectiveness, facilitating the timely identification of problems and adjustment and optimization.

In terms of digital empowerment, some colleges and universities use generative AI to develop teaching plans, simulate teacher-student interaction scenarios, and improve the practicality and pertinence of teaching plans; at the same time, they build an "AI and Knowledge Graph" curriculum system, promoting the transformation of teaching from the traditional "experience-based" model to the "data-driven" model, and improving the accuracy and efficiency of teaching. In terms of cultural empowerment, the School of Art and Design of Chongqing Jiaotong University has integrated the educational concept of "Art, Tao, Skill and Heart" into relevant projects, enabling students to understand the social responsibility of design serving society while learning professional skills, and cultivating students' sense of social

responsibility and mission.

3. Analysis of Dilemmas

3.1. Insufficient Depth of Collaboration and Weak Linkage of Elements

3.1.1. Fragmented Internal Collaboration in Universities

There is a phenomenon of "teaching-ideological and political management" departmental division within universities, and there is a lack of effective communication and collaboration mechanisms between various departments. The cooperation between professional teachers and teachers from the School of Marxism mostly stays at the superficial level, and there is a lack of long-term cross-college joint lesson preparation mechanisms.

3.1.2. Formalized University-Enterprise Collaboration

Although many colleges and universities have signed "ideological and political education cooperation agreements" with enterprises, in practice, enterprises rarely participate in curriculum design substantively. In the university-enterprise cooperation courses of some colleges and universities, the teaching hours of enterprise tutors are far lower than expected, and even the situation that teaching cannot be carried out normally due to the absence of enterprise representatives occurs. This not only affects the normal progress of courses, but also leads to the decline of students' enthusiasm for participating in courses, greatly reducing the effect of university-enterprise collaborative education.

3.1.3. Obvious Barriers to Inter-University Collaboration

The sharing degree of high-quality ideological and political resources among colleges and universities in the region is not high, and there is a problem of redundant construction. For example, many colleges and universities have developed courses related to the "Red Rock Spirit" at the same time, but there is no resource integration and complementarity between them, resulting in a lot of duplication in course content and waste of resources; the professional course case databases of some universities of the same type are independent of each other, and there is no joint cross-university teaching and research activities, making it impossible to realize the sharing and optimization of case resources, which is not conducive to the improvement of the overall teaching quality.

3.2. Single Evaluation Mechanism and Difficulty in Quantifying Educational Effect

3.2.1. Evaluation Indicators Emphasize "Quantity" over "Quality"

Most colleges and universities take quantitative indicators such as "the number of demonstration courses" and "the scale of case databases" as the core assessment indicators for the construction of curriculum ideology and politics, but there is a lack of effective tracking and evaluation mechanisms for the effect of students' value internalization. From the perspective of causes, on the one hand, quantitative indicators are easier to operate and verify, which do not require complex evaluation processes and can quickly form intuitive feedback on construction results; on the other hand, the internalization of values itself is concealed and long-term, and its effect is difficult to be directly measured by simple data. At present, there is a lack of mature evaluation tools and methods, making it difficult to accurately capture changes in students' ideological cognition, value judgment and behavior habits.

3.2.2. Lack of Dynamic Feedback Mechanism

Only a few colleges and universities have established a full-chain evaluation system of "teaching-practice-employment" for curriculum ideology and politics. Some colleges and universities do not collect feedback from graduates for their courses, making it impossible to understand the practical application of curriculum ideology and politics content after students' employment and its impact on students' career development. As a result, the goals of curriculum ideology and politics are difficult to be continuously optimized according to the actual situation in the process of talent cultivation, which affects the long-term improvement of the educational effect of curriculum ideology and politics.

3.2.3. Single Evaluation Subject

Most of the evaluation work of curriculum ideology and politics is led by the academic affairs department of the university, and the participation of external evaluation subjects such as enterprises and social institutions is very low. The obstacles faced are, first, the lack of motivation for external subjects to participate. Enterprises take production and operation as their core goals, and participating in the evaluation of curriculum ideology and politics cannot directly bring economic benefits, but also requires additional allocation of human resources and energy, resulting in generally low enthusiasm. Second, it is difficult to unify evaluation standards and dimensions. Colleges and universities focus on the effect of students' ideological and political learning during their school years, enterprises pay attention to the professional ethics of students suitable for positions, and social institutions pay more attention to students' sense of social responsibility and public morality. The lack of a unified evaluation framework makes it difficult for the evaluation results of external subjects to be effectively connected with the internal evaluation of colleges and universities even if they participate in the evaluation.

3.3. Inadequate Condensation of Characteristics and Low Efficiency of Resource Transformation

3.3.1. Vague School-Based Characteristics

Except for some colleges and universities with distinct industry characteristics, some institutions have the problem of "rigid integration of ideological and political elements" in the process of curriculum ideology and politics construction. On the one hand, these institutions have a deviated understanding of the core connotation of curriculum ideology and politics, simply equating "integration of ideological and political elements" with "content superposition", and failing to find the connection point of ideological and political elements in combination with the internal logic of professional knowledge during the design process, resulting in the separation of ideological and political content from professional teaching. On the other hand, teachers have insufficient interdisciplinary integration ability. Most professional teachers lack systematic ideological and political theory reserves, and have little experience in how to excavate the ideological and political core from professional knowledge and how to naturally infiltrate value guidance through teaching links. As a result, they can only rigidly implant ideological and political cases or slogans, making it difficult to achieve in-depth integration between the two.

3.3.2. Low Utilization Rate of Red Resources

Chongqing has many red education bases, which contain rich ideological and political education resources, but the utilization rate of these resources in curriculum development by colleges and universities is not high. Most institutions only stay at the level of organizing students to visit and learn, and fail to deeply excavate the spiritual connotation behind the red resources, and cannot deeply transform the red spirit into the ideological and political core of professional courses.

4. Construction of Collaborative Education System

4.1. Framework

Based on collaboration theory and the practical experience of colleges and universities in Chongqing, a collaborative education system of "Three-Dimensional Goals, Four-Cycle Process and Five-Path Implementation" is constructed, as shown in Figure 1.

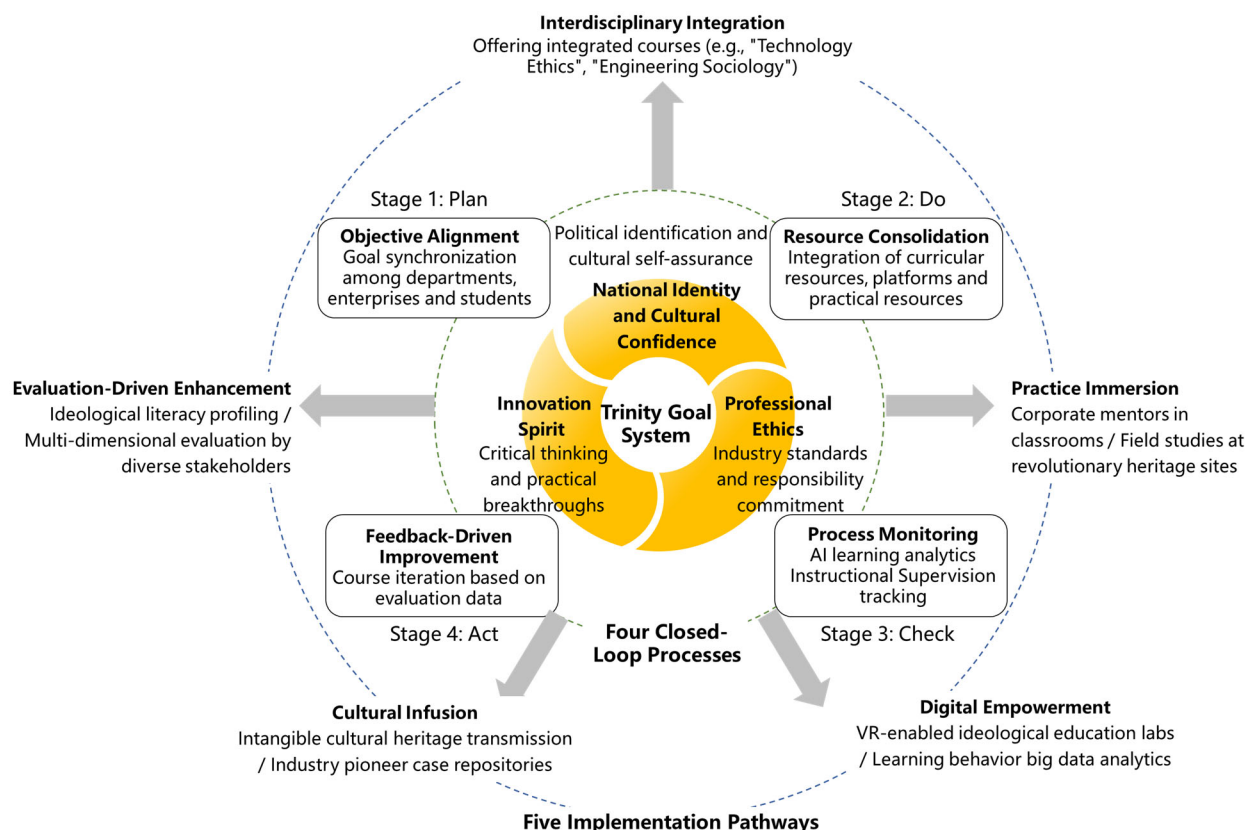


Figure 1. The Collaborative Education System of Curriculum Ideology and Politics

4.1.1. Three-Dimensional Goal Coordination

With "patriotism for the country, professional ethics and innovative spirit" as the core goals, this goal is woven through the three-level structure of discipline, major and course.

At the discipline level, the positioning of each discipline in ideological and political education is clarified. For example, engineering focuses on cultivating students' feelings of "serving the country through science and technology", enabling students to establish the ideal of serving national development with science and technology; liberal arts strengthen students' "cultural confidence", cultivating students' sense of identity and pride in Chinese excellent traditional culture, revolutionary culture and socialist advanced culture.

At the major level, ideological and political goals are incorporated into the talent training program, so that ideological and political education runs through the whole process of talent cultivation. For example, the major of "Road, Bridge and River-Crossing Engineering" of Chongqing Jiaotong University has added the module of "Green Transportation Ethics", integrating ideological and political concepts such as ecological protection and sustainable development into professional teaching, and cultivating students' awareness of environmental protection and social

responsibility.

At the course level, each course sets three-dimensional goals of knowledge, ability and value.

4.1.2. Four-Cycle Process Connection

A closed-loop process of "goal coordination, resource integration, process monitoring and feedback improvement" is constructed to ensure the orderly and efficient development of collaborative education.

In the goal coordination link, the university party committee takes the lead in formulating the curriculum ideology and politics construction plan, and clarifies the responsibilities of various departments of the university in the construction of curriculum ideology and politics. For example, the academic affairs department is responsible for the overall planning and standard formulation of curriculum construction, and the student affairs department coordinates students' practical activities, ensuring that all departments carry out work around the common goal of ideological and political education.

In the resource integration link, a municipal-level curriculum ideology and politics resource database is established to collect and sort out various resources such as red education base resources, enterprise case resources and virtual simulation resources, realizing the centralized

management and efficient sharing of resources, and providing rich resource support for the construction of curriculum ideology and politics in colleges and universities.

In the process monitoring link, the CIPP model is used to conduct dynamic evaluation on the teaching implementation and practical activities of curriculum ideology and politics. Through regular inspections and random spot checks, the teaching situation and practical effect are timely understood, and existing problems are found and urged to be rectified in a timely manner.

In the feedback improvement link, the curriculum design is optimized and adjusted based on students' feedback and evaluation data. For example, Chongqing University of Technology has adjusted the ideological and political module of the "Intelligent Manufacturing" course according to the feedback and suggestions from enterprises on graduates, adding professional ethics content related to the actual production needs of enterprises, and improving the practicality and pertinence of the course.

4.1.3. Five-Path Implementation

In terms of the interdisciplinary path, the "Liberal Arts and Science Dual-Teacher" model of Chongqing University is promoted, in which ideological and political teachers and professional teachers jointly give lectures, giving play to their respective professional advantages and realizing the in-depth integration of ideological and political education and professional education. For example, the course "Science and Technology Ethics" is jointly taught by a philosophy professor and an engineering academician. The philosophy professor explains from the perspective of ethical theory, and the engineering academician shares ethical issues in the development of science and technology in combination with practical cases, enabling students to fully understand the importance of science and technology ethics.

In terms of the practice integration path, relying on the relevant projects of the School of Art and Design of Chongqing Jiaotong University, a connection mechanism of "professional practice-social service" is established, allowing students to carry out social service activities in the process of participating in professional practice. In the process of serving society, students can have a deeper understanding of the connotation of responsibility and commitment, and cultivate their sense of social responsibility and service awareness.

In terms of the digital empowerment path, the model of the "Cloud Marxism School" platform is used for reference to increase the functions and resource quantity of the platform; at the same time, VR red course packages and AI teaching plan generation tools are developed, using digital technology to improve the intuitiveness and interactivity of teaching, enhance teaching accuracy, and make ideological and political education more attractive and appealing.

In terms of the cultural infiltration path, local cultural resources in Chongqing such as Dazu Stone Carvings and Red Rock Link are integrated to develop practical courses of "Chongqing Spirit Genealogy". For example, the concept of "cultural heritage protection" is integrated into the course "Tourism Planning", enabling students to understand the value and protection significance of cultural heritage while learning tourism planning knowledge, and cultivating students' awareness of cultural protection.

In terms of the evaluation-driven path, indicators such as grass-roots employment rate and technological poverty alleviation achievements are included in the college

assessment system. Through the assessment orientation, colleges are guided to pay more attention to cultivating students' sense of social responsibility and awareness of serving the grass-roots, so that the educational direction of curriculum ideology and politics can be better aligned with social needs.

4.2. Innovation of Key Mechanisms

4.2.1. Teacher Collaborative Mechanism

A "dual appointment and dual assessment" system is established to build a collaborative education mechanism between curriculum ideology and politics and ideological and political courses. Professional teachers participate in the teaching and research activities of the School of Marxism, and their participation is included in the teaching workload; teachers from the School of Marxism are involved in the professional curriculum design process to provide guidance for the integration of ideological and political elements in professional courses. At the same time, the "ideological and political tutor system" is implemented. For example, Southwest University of Political Science and Law assigns 1 ideological and political teacher to each major, who participates in the revision of professional curriculum syllabuses and teaching evaluation, ensuring that professional courses always run through the concept of ideological and political education.

4.2.2. Resource Integration Mechanism

A municipal-level curriculum ideology and politics cloud platform is built to realize the collaborative sharing of three major resources: red resources, industrial resources and inter-university resources.

In terms of red resources, cooperation with Red Rock Link is carried out to develop the course module of "Revolutionary Spirit and Professional Pursuit", deeply excavating the connotation of red cultural resources such as the Red Rock Spirit, transforming them into content suitable for classroom teaching, and making red resources better serve ideological and political education.

In terms of industrial resources, cooperation with local well-known enterprises such as Changan Automobile and Chongqing Machine Tool Group is carried out to build an "industry ideological and political case database", collecting and sorting out cases reflecting the craftsman spirit and professional ethics in the production and operation process of enterprises, and providing rich case support for the ideological and political teaching of professional courses.

In terms of inter-university resources, promotion is made for the sharing of high-quality MOOCs and virtual simulation experiment projects among Chongqing University, Southwest University and other colleges and universities, breaking down the inter-university resource barriers, enabling high-quality ideological and political education resources to flow efficiently among colleges and universities in the region, and improving the utilization efficiency of resources.

4.2.3. Dynamic Evaluation Mechanism

Based on the CIPP model, a four-dimensional evaluation index system encompassing Context Evaluation, Input Evaluation, Process Evaluation, and Product Evaluation is designed to assess the collaborative education system for ideological and political education in curriculum (IPEC) in colleges and universities of Chongqing. This targeted evaluation index system is constructed by integrating three core elements: the fundamental goal of IPEC (the integration of value guidance and knowledge impartment), the key

characteristics of "collaborative education" (multi-subject and multi-dimensional linkage), and the regional attributes of "colleges and universities in Chongqing" (including the

Chengdu-Chongqing Dual-City Economic Circle, red cultural resources, and local industrial demands).

Table 1. The Evaluation Index System of Collaborative Education in Curriculum Ideology and Politics

Evaluation Dimension	First-Level Indicator	Second-Level Indicator
Context Evaluation	1. Regional Demand Adaptability	1.1 Alignment with Local Strategies
		1.2 Adaptability to University Types
	2. Rationality of Educational Goals	2.1 Consistency with Core Goals
		2.2 Clarity of Collaborative Goals
	3. Diagnosis of Existing Problems	3.1 Identification Rate of Collaborative Pain Points
Input Evaluation	1. Scientificity of Collaborative Plans	3.2 Coverage of Demand Surveys
		1.1 Integrity of System Design
	2. Adequacy of Resource Input	1.2 Integration of Regional Resources
		2.1 Adaptability of Human Resources
	3. Feasibility of Implementation	2.2 Guarantee Degree of Material/Financial Resources
		3.1 Policy Adaptability
Process Evaluation	1. Implementation Degree of Plans	3.2 Rationality of Cost-Benefit
		1.1 Frequency of Collaborative Activities
	2. Effectiveness of Collaborative Interaction	1.2 Implementation Rate of Core Links
		2.1 Smoothness of Subject Communication
	3. Timeliness of Dynamic Adjustment	2.2 Efficiency of Resource Circulation
		3.1 Smoothness of Problem Feedback Channels
Product Evaluation	1. Goal Achievement Degree	3.2 Efficiency of Problem Resolution
		1.1 Improvement Degree of Students' Ideological and Political Literacy
		1.2 Improvement Degree of Teachers' Collaborative Competence
	2. Comprehensive Influence Degree	1.3 Compliance Rate of Collaborative Education Effect
		2.1 Influence on the Quality of Talent Cultivation in Colleges and Universities
	3. Sustainability	2.2 Contribution Degree to Regional Development
		3.1 Establishment Degree of Long-Term Mechanisms
		3.2 Extensibility of Experience

5. Supporting Strategies

5.1. Organizational Guarantee

5.1.1. Improving the Leadership Mechanism

The university party committee establishes a leading group for the construction of curriculum ideology and politics, with the secretary of the party committee as the leader, and incorporates collaborative education into the university's 14th Five-Year Development Plan, attaching importance to the construction of curriculum ideology and politics from the perspective of the university's development strategy. The leading group holds special meetings every semester to study and solve problems encountered in the construction of curriculum ideology and politics, ensuring the orderly advancement of collaborative education.

5.1.2. Breaking Down Departmental Barriers

A joint meeting system of "Academic Affairs Department - School of Marxism - Student Affairs Department - Secondary Colleges" is established, and regular meetings are held to clarify the division of responsibilities of various departments in the construction of curriculum ideology and politics. For example, the academic affairs department is responsible for formulating curriculum construction standards, the student affairs department coordinates extracurricular activities, and the secondary colleges are responsible for the implementation of specific courses, avoiding the problems of overlapping management and unclear responsibilities, and improving work efficiency.

5.1.3. Promoting University-Local Linkage

The Chongqing Municipal Education Commission takes the lead in establishing the "Collaborative Alliance for Curriculum Ideology and Politics in Colleges and Universities", promoting in-depth cooperation between colleges and universities, local governments and enterprises, and jointly building education bases. For example, cooperation with Liangjiang New Area is carried out to develop the "Intelligent Manufacturing Ideological and Political Course Package", transforming the intelligent manufacturing industrial resources of Liangjiang New Area into ideological and political education resources, and making ideological and political education more in line with the actual development of local industries.

5.2. Resource Guarantee

5.2.1. Transformation of Red Resources

Joint construction of "curriculum ideology and politics practical teaching bases" with units such as the Red Rock Revolution Memorial Hall is carried out to provide more practical learning venues for students. At the same time, a series of teaching materials on "Red Rock Spirit and Professional Ethics" are developed to systematically sort out the connection between the Red Rock Spirit and professional ethics, providing professional teaching material support for teachers' teaching. In addition, professional teachers are organized to participate in training on red resource excavation to improve their ability to excavate the ideological and political value of red resources.

5.2.2. Integration of Industrial Resources

Through the "Five Joint Constructions" model of university-enterprise party building (joint construction of organizations, joint cultivation of party members, joint sharing of resources, joint assumption of responsibilities and joint pursuit of development), the party building cooperation between colleges and universities and enterprises is strengthened, and the university-enterprise ideological and political education cooperation is led by party building. Enterprises are attracted to participate in curriculum design more actively. For example, Chongqing Jiaotong University has jointly developed the course module of "Craftsman Spirit in Automobile Intelligent Manufacturing" with Changan Automobile, integrating the craftsman spirit of Changan Automobile into curriculum teaching and cultivating students' craftsman spirit.

5.2.3. Construction of Digital Resources

Special funds are invested in the construction of a municipal-level curriculum ideology and politics cloud platform to collect various digital resources such as VR red courses, virtual simulation experiments and ideological and political case databases, realizing the cross-university sharing of these resources among colleges and universities in the region, enabling high-quality digital resources to benefit more students and improving the digital level of curriculum ideology and politics teaching.

5.3. Teacher Guarantee

5.3.1. Systematic Training

The "Curriculum Ideology and Politics Teacher Ability Improvement Program" is implemented, and teachers are provided with systematic training through various methods such as special training, joint lesson preparation and enterprise practice. Teachers are arranged to participate in no less than 50 hours of training every year, focusing on improving their ability to excavate ideological and political elements and carry out interdisciplinary teaching, helping teachers master more teaching methods and skills of curriculum ideology and politics.

5.3.2. Innovation of Incentive Mechanism

The achievements in the construction of curriculum ideology and politics are included in the index system of teachers' professional title evaluation and selection of excellent teachers, so that teachers' efforts in the construction of curriculum ideology and politics can be recognized and rewarded. At the same time, honorary titles such as "Curriculum Ideology and Politics Teaching Master" and "Collaborative Education Pioneer Team" are established, and special rewards are given to teachers and teams who have won the honors, stimulating teachers' enthusiasm and initiative to participate in the construction of curriculum ideology and politics.

5.3.3. Demonstration of Team Construction

Support is provided for colleges and universities to form interdisciplinary curriculum ideology and politics teaching teams, encouraging teachers with different disciplinary backgrounds to carry out cooperation, giving play to their respective advantages and jointly promoting the construction of curriculum ideology and politics. For example, the "Transportation Power" team of Chongqing Jiaotong University is composed of teachers from the School of Marxism, the School of Civil Engineering and the School of Economics and Management. This team has been rated as an

excellent municipal-level teaching team, providing a demonstration for the construction of curriculum ideology and politics teaching teams in other colleges and universities.

5.4. Evaluation Guarantee

5.4.1. Building a Diversified Evaluation Subject

A three-dimensional evaluation system of "university-enterprise-society" is established to change the previous single internal evaluation model of universities. External evaluation subjects such as industry associations and employers are introduced to participate in the evaluation of curriculum ideology and politics effect. For example, law firms are invited to evaluate the "professional ethics" of law majors, making the evaluation results more comprehensive, objective and in line with the social demand for talents.

5.4.2. Strengthening Process-Oriented Evaluation

Big data technology is used to track data such as students' classroom performance, practical activities and career development, and a "growth file" is established for each student. For example, the student "digital-intelligence portrait" system can record students' performance in the process of learning and practice in real time, and conduct a comprehensive evaluation of students through data analysis, realizing the transformation of evaluation from "result-oriented" to "process-oriented" and paying more attention to the process of students' growth.

5.4.3. Establishing a Rectification Mechanism

For the problems found in the evaluation process, a closed-loop management mechanism of "problem list - rectification plan - responsible subject" is formed. For example, in response to the problem of "low integration degree of ideological and political elements and professional courses", the School of Marxism and professional teachers are organized to carry out joint research and jointly study solutions. A review of rectification effects is carried out every semester to check the rectification of problems, ensure that the rectification work is implemented in place, and continuously improve the educational effect of curriculum ideology and politics.

6. Conclusion

The practice of collaborative education in curriculum ideology and politics in colleges and universities of Chongqing shows that to improve the efficiency of collaborative education, it is necessary to take goal coordination as the guidance to clarify the direction and goal of ideological and political education; take digital empowerment as the support to improve the quality and efficiency of teaching with digital technology; and take dynamic evaluation as the guarantee to timely find problems and carry out optimization and adjustment. At present, the "Three-Dimensional, Four-Cycle and Five-Path" system has shown effectiveness in solving the problems of fragmented collaboration and static evaluation. Its core value lies in breaking down the barriers between departments through mechanism innovation to enable the efficient collaboration of various educational elements; enhancing the appeal of education through the condensation of characteristics to make ideological and political education more attractive; and improving the accuracy of teaching through digital empowerment to make ideological and political education more in line with students' learning needs.

Future research needs to further explore the empirical

verification of the evaluation index system, test the scientificity and rationality of the evaluation indicators through a large number of practical data; conduct in-depth research on the ethical boundary of digital technology to ensure the rational application of digital technology in the teaching of curriculum ideology and politics and avoid ethical problems; and explore the cost-sharing mechanism of collaborative education to clarify the cost-sharing responsibilities of colleges and universities, enterprises, the government and other parties in collaborative education, so as to ensure the long-term and stable development of collaborative education. Through these studies, a more universal "Chongqing Model" can be provided for the construction of curriculum ideology and politics across the country. With the in-depth advancement of the concept of "all-staff, whole-process and all-round education", colleges and universities in Chongqing need to continuously optimize the collaborative mechanism, give full play to the advantages of Chongqing's red genes and industrial characteristics, transform them into the unique advantages of curriculum ideology and politics, and provide solid support for cultivating talents who can take on the responsibility of national rejuvenation.

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