

Research on the Integration Path of Ideological and Political Education, College Students' Psychology, and Innovation and Entrepreneurship Education under the Guidance of Cultural Confidence in Universities

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ABSTRACT The independent operation of ideological and political education, mental health education, and innovation and entrepreneurship education in universities leads to fragmented educational goals and weak collaborative effects. To address this problem, this study constructs a three-dimensional integrated theoretical framework guided by cultural confidence and designs an operational path of "curriculum integration-practical linkage-faculty collaboration." The framework integrates value guidance, psychological development, and practical innovation into a unified education system. A quasi-experimental design, action research, and mixed-methods evaluation are used for empirical testing. The results show that students in the experimental group achieved significantly greater improvement in cultural confidence than those in the control group, with an effect size of 41.7%. Their psychological resilience and innovation efficacy also improved substantially, and innovation performance in practical projects was significantly higher. The findings demonstrate that the proposed integrated path can effectively address educational fragmentation and promote coordinated development of value identity, psychological quality, and innovation competence in higher education.

INDEX TERMS higher education, cultural confidence, ideological education, psychological resilience, innovation education

I. INTRODUCTION

CURRENTLY, ideological, mental health, and innovation education in universities often operate independently. This separation creates a disconnect between value guidance, personality development, and practical skill cultivation. These three areas often belong to different management departments and follow different teaching logics, leading to a disconnect between value guidance, personality shaping, and practical ability cultivation, making it difficult to form a cohesive educational force [1,2]. This fragmented state not only weakens the overall effectiveness of the educational system but also fails to meet the requirements of the new era for cultivating compound talents. Therefore, exploring effective paths for the deep integration of these three areas and constructing a systematic and collaborative new pattern of education has become an urgent and important task for deepening higher education reform and implementing the fundamental task of cultivating morality

and talent [3,4]. Existing research often focuses on the "dual integration" of two dimensions. For example, Lin aims to study the impact of ideological and political education on students' value orientation and plans to further explore the role of gender and race factors in students' ideological attitudes and political activities, as well as the dynamics of value orientation and the characteristics of ideological and political education in foreign language teaching [5]. Mei and Symaco, based on interviews and policy document analysis, explored the problems and challenges in the implementation of entrepreneurship education in Chinese universities and proposed that it is necessary to promote interdisciplinary development and strengthen stakeholder collaboration [6]. Wang et al. studied the integration path of music teaching and ideological and political education. They constructed and optimized a collaborative model of music education and ideological and political work in universities by introducing deep learning methods to reduce the impact of data errors

and promote the effective combination of the two [7]. Yun *et al.* proposed an innovative ideological and political education platform based on deep learning, which aims to optimize the efficiency of multinational companies in obtaining teaching quality funds and transactions [8]. Most studies remain at the level of theoretical explanation and necessity demonstration. The proposed integration strategies are often macroscopic and lack operable and verifiable specific implementation paths and solid empirical data support, resulting in a gap between theoretical ideas and practical effects. In order to make up for the shortcomings of existing research in practical paths and empirical testing, this study introduces a mixed method research design to systematically respond to the above problems. In response to the problem of macroscopic strategies and weak operability, this study first constructed a three-level integration theory model of "value-psychology-practice" and used it as a guide to design a concrete curriculum and practical intervention program. Next, addressing the deficiency in empirical evidence, this study comprehensively employs both quasi-experimental design and action research. The former uses quantitative comparison to verify the overall effectiveness of the integration path, while the latter uses qualitative in-depth description to reveal its intrinsic mechanism of action, thus achieving a comprehensive examination of the integration effect—both "knowing what" and "knowing why." Based on the cultural confidence, this study attempts to explore and prove an integrated path of ideological and political education, mental health education and innovation and entrepreneurship education in universities. Firstly, the theoretical integration framework is established; Secondly, based on the framework, the implementation strategy of "curriculum penetration, practice linkage and faculty cooperation" with three levels is designed; Finally, the objective effectiveness of the path is evaluated through quasi-experimental study with control group, and the process mechanism is analyzed through action research. We evaluate effectiveness through a quasi-experimental study with a control group and analyze processes through action research.

II. RECONSTRUCTION OF A THREE-DIMENSIONAL PERMEABLE CURRICULUM SYSTEM

First, in ideological and political theory courses, the focus is not limited to theoretical indoctrination and value indoctrination. For example, when explaining the Marxist thoughts and the theory of socialism with Chinese characteristics, the wisdom of the sages in China for thousands of years (for example, "self improvement" and "great virtue carries all things") is integrated with case studies of psychological development in the arduous pioneering construction process of the Communist Party of China (combining value shaping and cultivating positive psychological quality). At the same time, case studies such as "Huawei's adherence to core values in innovation" and "the modern innovative transformation of traditional cultural IP" are introduced to guide students to explore how to make choices and adhere to value

positions in innovative practices and enable ideological and political education to complete the function of psychological empowerment and innovative enlightenment.

Second, in the mental health education course, the focus is not limited to the general emotion adjustment and adaptation counseling. The course focuses on taking excellent traditional Chinese culture as the resource to cultivate mental health. For example, "peace of mind without fear" and "the benevolent are free from worry". Guide students to establish a positive self concept and sense of life meaning based on the cultural identity. When teaching stress coping and setback handling, in addition to the psychological method teaching, the belief and willpower of excellent people in revolutionary culture in the face of difficulties and the process of socialist construction are introduced as case studies to guide value orientation not limited to limited scope. At the same time, the course also introduces two special courses "Cultivating Psychological Qualities for Entrepreneurs" and "Communication and Conflict Resolution in Team Innovation" directly linked to the innovation and entrepreneurship scene [9].

Finally, the innovation and entrepreneurship education curriculum focuses not limited to the simple business plan and skills training. From the beginning, the curriculum focuses on the value orientation of innovation, hoping that students will think about "why to innovate", and clarify the cultural responsibility and social mission of innovation for the prosperity of the country and the happiness of the people. In the creative inspiration stage, guide students to draw inspiration from excellent traditional Chinese culture, revolutionary culture and advanced socialist culture to create projects with cultural connotation and positive social effect. In the teaching of building teams and project management, leadership psychology, team dynamics and frustration tolerance are introduced in a whole, forming the innovation process into a practical process of cultivating will and personality.

III. CONSTRUCTION OF A DUAL-TRACK LINKAGE PRACTICAL EDUCATION PLATFORM

Curriculum reshaping offers an important cognitive basis for inclusive education, while the internalization of values, formation of psychological qualities, and emergence of innovative abilities still rely on practice in real-life situations. In this regard, we designed and constructed a "dual-track linkage practice-based education platform." In the "on-campus cultural practice track," we focused on enhancing cultural confidence and designed a number of immersive and experiential project-based learning activities. For instance, in a "Digital Innovation Workshop on Red Cultural Resources," in addition to exploring the spiritual connotations of local revolutionary history (ideological and political dimension), students also need to face technical issues and argumentations with teammates, manage stress and communicate well (psychological dimension), and finally produce an educational digital product prototype or

a business model concept (innovation dimension). Through such activities, the vague and floating cultural confidence becomes concrete creative practice, and students can achieve the integrated and improved three dimensions and solve complex real-life problems simultaneously [10].

In the "off-campus industry-education integration track," we focused on constructing a platform to connect with local cultural industries, science and technology parks, and rural revitalization projects. Under the guidance of teachers, student teams complete practical projects such as "Contemporary Market Transformation of Intangible Cultural Heritage" and "Innovation of Community Mental Health Service Models" inside and outside the school. In this track, students will face and confront the needs and constraints of real society directly; their value judgments, psychological qualities, and innovative abilities are tested and enhanced in practice. This track not only trains students' practical abilities but also enables them to understand the intrinsic link between their innovative actions and the development of national culture and real society, and further enhances their value identification. The two tracks are not disconnected but constructed as a closed loop of "incubation inside the school, testing outside the school, and feedback iteration." The excellent results obtained from practical projects inside the school can be recommended to platforms outside the school for further implementation and pilot projects; while the core value dilemmas or typical psychological problems faced by students outside the school can also function as vivid teaching cases to refine and design workshops inside the school.

IV. CONSTRUCTION OF A TEACHER COLLABORATION MECHANISM GUIDED BY CULTURAL IDENTITY

The effectiveness of integrated education pathways ultimately depends on the depth of understanding and collaborative efficiency of their implementers—the teaching community. Without a corresponding teacher development mechanism, curriculum restructuring and practical platforms will struggle to take root due to ideological barriers and divergent actions among implementers. Therefore, building a teacher development mechanism based on strengthening teachers' own cultural identity and aiming to promote substantive interdisciplinary collaboration becomes a key support for integrated reform.

The key to this exploration lies in overcoming the "disciplinary tribe" separation among ideological and political education, psychology, and innovation and entrepreneurship teachers. First, we established a regular interdisciplinary teaching and research community. We regularly organized the three-field teachers to conduct joint teaching and research based on integrated themes such as "The Responsibility of Youth in the Process of Modernization of China" and "Traditional Cultural Genes and Contemporary Innovative Thinking" not only to exchange teaching methods but also to enhance cross-field understanding and explore values consensus and connection points in the discussion

of common cultural issues to establish a collaborative force from the very beginning [11].

Second, we practiced immersion training on enhancing confidence in culture. We organized teachers to participate in thematic workshops based on red education bases and the innovative development of cultural heritage. Through shared learning experiences, we prompted teachers to deepen their understanding of the current meaning of confidence in culture from the perspective of their own professional fields and discuss with teachers from other fields how to transform this understanding into concrete teaching cases and teaching resources for integrated education. This process prompted our teachers' collaborative resonance of values first and injected motivation from within.

Finally, we promoted the institutional construction and incentive mechanisms for integrated teaching teams. We encouraged teachers to form regular interdisciplinary course groups and project guidance teams across disciplines to jointly undertake tasks related to the development of interdisciplinary teaching courses and practical project guidance. In terms of evaluation mechanisms, participation in interdisciplinary collaborative teaching research and integrated teaching achievements were included in the bonus points for teacher performance appraisals and professional title evaluations to provide motivation and sustained guarantees for teachers' collaborative input from the institutional level. Through the design of these mechanisms, we integrated scattered teacher resources into a unified interdisciplinary educational force with common goals and complementary abilities, aiming to turn the integrated path from a blueprint into the conscious teaching behavior of every teacher [12].

V. MODEL PERFORMANCE VALIDATION AND ANALYSIS

A. OVERALL EXPERIMENTAL SETUP

To validate the effectiveness of the inclusive pathway, this study adopted a randomized controlled trial (RCT) design with a pre-test and post-test control group. The effectiveness of the integrated education model was validated through a combination of quantitative and qualitative methods. Four parallel classes (totaling 160 second-year university students with high homogeneity) were chosen as research subjects and randomly assigned to either the experimental group or the control group. Before the semester began, both groups were measured to establish a baseline. Subsequently, the experimental group underwent an 18-week systematic intervention using the integrated education pathway, while the control group continued with the original segregated teaching mode. This study employed a self-developed composite scale encompassing dimensions of cultural confidence, psychological resilience, and innovation efficacy (defined as students' self-perceived confidence in their ability to innovate). The scale underwent rigorous validation prior to the main study: exploratory factor analysis ($n=120$) confirmed a three-factor structure explaining 68.4% of variance, and confirmatory factor analysis ($n=150$) yielded acceptable fit indices ($\chi^2/df = 2.34$, CFI = 0.92, RMSEA = 0.06).

Criterion-related validity was established through strong correlations with established instruments, including the CD-RISC-10 resilience scale ($r = 0.76$, $p < 0.001$). Reliability was excellent, with Cronbach's α ranging from 0.87 to 0.91 across dimensions, and test-retest ICC values from 0.82 to 0.88. The scale was administered to students twice, before and after the intervention. Paired-samples t-tests, independent-samples t-tests, and regression analysis were used to process the quantitative data. Additionally, in-depth student interviews and project text analysis were adopted for triangulation verification. This study was approved by the Ethics Committee of Jiangsu Vocational Institute of Commerce, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form. The detailed experimental design is shown in Table 1 below.

B. QUASI-EXPERIMENTAL DESIGN AND QUANTITATIVE EFFECT EVALUATION EXPERIMENT

This study employed a randomized controlled trial design, establishing an experimental group and a control group to quantitatively evaluate the effects. Four parallel classes were randomly selected from highly homogeneous second-year students and randomly assigned to either the experimental group (80 students) or the control group (80 students). The experimental group received a one-semester systematic inclusive education intervention, while the control group maintained the traditional teaching model. Table 2 shows a composite scale including dimensions such as cultural confidence, psychological resilience, and innovation efficacy, administered twice at the beginning of the semester (T1) and the end of the semester (T2). Paired-samples t-tests, independent-samples t-tests, and multiple regression analysis were used to analyze the data. The details are shown in Table 2.

Quantitative data showed that the experimental group students scored significantly higher on the post-test than on the pre-test in three core indicators: cultural confidence (post-test score 4.21 ± 0.48), psychological resilience (3.95 ± 0.55), and innovation efficacy (3.89 ± 0.62) ($p < 0.001$), with significantly greater increases than the control group. Further regression analysis revealed a significant positive correlation between the measured variables: increases in cultural confidence were significantly associated with higher levels of psychological resilience ($\beta = 0.42$, $p < 0.01$) and innovation efficacy ($\beta = 0.38$, $p < 0.01$), indicating that the three dimensions co-vary in a mutually reinforcing manner. It is important to note, however, that these associations are correlational and do not imply causality; the observed relationships may be bidirectional or influenced by unmeasured confounding variables such as prior educational experiences or personality traits. The experimental results confirm that an inclusive education path guided by cultural confidence can effectively and synergistically promote the overall development of college students' values, psychological qualities, and innovative abilities.

C. ACTION RESEARCH AND PROCESS EFFECTIVENESS EVALUATION EXPERIMENTS

To evaluate the effectiveness of inclusive education pathways, we selected 80 second-year university students randomly as the experimental group and implemented the inclusive teaching intervention for 18 weeks. Another 80 students who had no significant differences in the related preliminary indicators served as the control group under the traditional teaching model. We used the composite scale containing cultural confidence, psychological resilience, and innovation efficacy in two times at the beginning and end of the semester. We used the paired-samples t-tests, independent-samples t-tests, and multiple regression analysis method to analyze the experimental data. See Figure 1. It is important to note that the data presented in this action research section and Figure 1 are derived from a different measurement instrument than the scale data reported in Table 2. While Table 2 reports results from the standardized composite scale, the values in this section represent the average scores from three practical project assessments designed to evaluate students' applied competencies in real-world tasks. These project-based scores utilize a 5-point Likert scale and provide complementary insights into students' performance outcomes.

Figure 1(a) visually demonstrates the significant improvement in the three core competencies of cultural confidence, psychological resilience, and innovation efficacy after the inclusive education intervention. The correlation analysis in Figure 1(b) further confirms a strong positive correlation between students' end-of-term comprehensive competence and their project practice performance. The score for cultural confidence increased from 2.92 to 4.14, an increase of 41.8%; psychological resilience increased from 2.95 to 3.96, an increase of 34.2%; and innovation efficacy increased from 2.88 to 4.12, an increase of 43.1%. The average scores for the three inclusive practice projects were 8.31 ± 0.76 , 8.45 ± 0.75 , and 8.39 ± 0.67 , respectively, with an overall average of 8.38 ± 0.44 . The correlation analysis shows a strong positive correlation between students' end-of-term comprehensive competence and project performance ($r = 0.742$, $p < 0.001$). The results show that this integration approach effectively promotes the coordinated development of students' values, psychological qualities and innovative abilities, and that theoretical learning outcomes can be stably transformed into high-quality practical outputs.

D. EXPERIMENTAL DISCUSSION

This study used quasi-experimental method and action research method to validate the possibility and effectiveness of integrated education pathway from different levels. Quasi-experimental method strictly controlled variables and subjected them to quantitative comparison to provide objective and solid evidence for the core hypothesis that "cultural confidence integrate these three elements and generate synergistic effect in education, which is effective in changing the situation of scattered traditional education system".

TABLE 1. Comparison of Experimental and Control Group Setups System

Dimension	Experimental Group (N=80)	Control Group (N=80)
Design Type	Quasi-experimental Design (Pre-test/Post-test)	Parallel Control
Intervention	Implementation of the Integrated Education Pathway (curriculum, practice, teacher collaboration)	Maintenance of Traditional Segregated Teaching Mode
Core Measurement Tool	Questionnaire on Cultural Confidence and Comprehensive Competency Development	Same as Experimental Group
Measurement Time Points	T1 (Beginning of Semester), T2 (End of Semester)	Same as Experimental Group
Primary Analysis Methods	Paired T-test, Independent T-test, Multiple Regression Analysis	Used for Inter-group Comparison
Supplementary Data Collection	Student Interviews, Project Logs, Outcome Evaluations	Not Conducted

TABLE 2. Comparison of pre- and post-test scores of core indicators between the experimental and control groups

Indicator Dimension	Group	Pre-test (T1)	Post-test (T2)	t-value (within-group)	p-value
Cultural Confidence	Experimental	3.45 ± 0.52	4.21 ± 0.48	12.367	< 0.001
	Control	3.42 ± 0.49	3.51 ± 0.50	1.845	> 0.05
Psychological Resilience	Experimental	3.28 ± 0.61	3.95 ± 0.55	10.892	< 0.001
	Control	3.30 ± 0.58	3.38 ± 0.60	1.324	> 0.05
Innovation Efficacy	Experimental	3.15 ± 0.66	3.89 ± 0.62	11.245	< 0.001
	Control	3.18 ± 0.63	3.25 ± 0.65	1.102	> 0.05

Note: Independent samples t-test showed significant differences in post-test scores between the experimental and control groups across all dimensions.

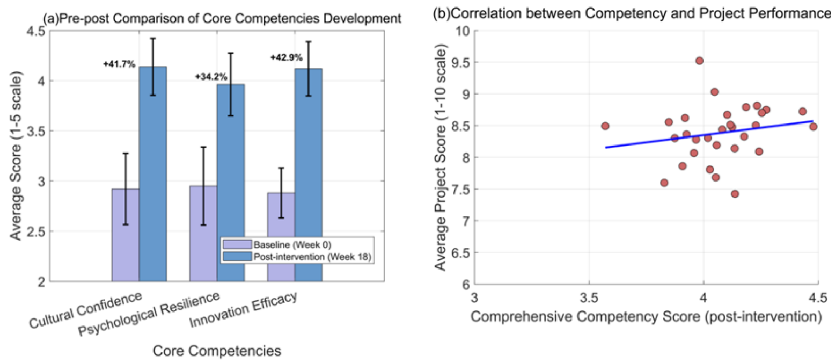


FIGURE 1. Action Research and Process Effectiveness Evaluation

While action research focused on internal education process, observed and tracked the process and mechanism of competency training through in-depth observation and tracking, and explored how the synergistic effect generated by integration is not a simple linear addition but a practical effect gradually generated and accumulated. The two research methods are complementary to answer "whether it is effective" and "how it takes effect", and complete the chain of evidence of integration pathway.

The combination of above two studies shows that using cultural confidence as core value and spiritual link, we can establish common framework of meaning and enhance the deep motivation for value guidance of ideological and political education, emotion training for mental health education, and exploration of innovation and entrepreneurship education, not only can solve the problem of "mechanical splicing" of courses and activities at operation level, but also promote the deep unity of educational goal at conceptual

level. Therefore, in the future, education reform should transcend the cultivation of single course or ability, but try to form the organic integrated education system guided by core value, so as to cultivate students' comprehensive quality more systematically and meet the comprehensive requirements of cultivating talents from the era.

VI. CONCLUSION

By centering the theoretical framework on the inheritance of culture, this study verifies the effectiveness of integrating ideological, mental health, and innovation education in universities to cultivate industry talents grounded in cultural confidence. Experiments show that this integration path significantly enhances students' cultural confidence, psychological resilience, and innovative efficiency, effectively addressing the dilemma of educational fragmentation and promoting the synergistic educational effect of the three elements. The significant positive correlations observed

among these three dimensions suggest they develop in a coordinated manner within the integrated educational framework. However, several limitations must be acknowledged. The sample size and scope of this study are still limited, and the applicability differences among different types of universities and disciplinary backgrounds were not fully examined. Furthermore, while the regression analysis reveals strong associations between cultural confidence, psychological resilience, and innovation efficacy, the correlational nature of this single-semester study with 160 participants does not permit causal claims. The observed relationships may be bidirectional—for example, higher psychological resilience could also enhance cultural confidence, or innovative success might strengthen both—or may be influenced by unmeasured variables such as family background, prior exposure to entrepreneurial education, or individual personality factors. Future research could expand the empirical scope by developing diversified integration models tailored to engineering education, establishing long-term longitudinal tracking mechanisms to examine causal pathways, and employing more sophisticated statistical methods such as structural equation modeling or cross-lagged panel analysis to better understand the directional relationships among these constructs. Such approaches would optimize path design and promote the in-depth development of integrated systems for industry professionals.

AUTHOR CONTRIBUTIONS

Conceptualization - Qiyun Zhang and Yan Wang; methodology - Qiyun Zhang and Yan Wang; investigation - Qiyun Zhang and Yan Wang; writing-original draft preparation - Qiyun Zhang and Yan Wang. All authors have read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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