

# Construction of an Integration Mechanism for Psychological Support and Career Planning in Heart-to-Heart Conversations Empowered by AI from the Perspective of Vocational Education

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**Abstract:** Under the demand for improving the quality and efficiency of vocational education, heart-to-heart conversations, as a crucial vehicle for psychological counseling and career guidance, face challenges such as limited coverage and insufficient pertinence. The advantages of AI technology in data processing and intelligent analysis offer a pathway to address these challenges. This paper constructs an integration mechanism for psychological support and career planning in heart-to-heart conversations empowered by AI, taking into account the characteristics of vocational college students and the laws of their career development. The paper clarifies the guiding ideology and principles, refines the core content, supporting system, and operational aspects, proposes implementation strategies, and establishes an effectiveness evaluation system to support vocational colleges in enhancing the quality of their educational endeavors.

**Keywords:** Vocational education; AI empowerment; Heart-to-heart conversations; Psychological support; Career planning; Integration mechanism

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## 1. Introduction

As a vital component of talent cultivation in higher vocational colleges, mental health education plays a unique role in enhancing students' career development capabilities. Currently, higher vocational students face multiple challenges, including diverse career choices, a complex employment environment, and specialized job requirements. Mental health education not only helps students establish correct career development concepts but also strengthens their workplace adaptability and career development potential. Focusing on cultivating technical and skilled talents, higher vocational colleges regard heart-to-heart conversations as a key approach

to providing psychological support and career planning guidance to students. However, current heart-to-heart conversations face issues such as insufficient faculty, lack of targeted support, inadequate coordination, and insufficient long-term effectiveness. The in-depth application of AI technology can break through human resource limitations in terms of time and space, enabling precise empowerment in psychological support and career planning. From the perspective of vocational education, this paper explores the construction path of an integration mechanism between the two to overcome real-world challenges.

## **2. Construction of the integration mechanism**

### **2.1. Guiding ideology and construction principles**

**Guiding Ideology:** Guided by President of the CPC Thought on Socialism with Chinese Characteristics for a New Era, and based on the fundamental task of “fostering virtue and cultivating talents” in higher vocational education, this paper relies on AI technology to break down barriers between psychological support and career planning, constructing a precise empowerment and collaborative integration mechanism to support students’ all-round development <sup>[1]</sup>.

**Construction Principles:** First, prioritize a people-centered approach that meets students’ individualized needs; second, ensure precise empowerment through AI-based precise assessment and delivery; third, promote seamless integration between the two; fourth, establish a closed-loop operational model for long-term effectiveness.

### **2.2. Core Framework**

The integration mechanism follows a “1-1-4-4-1” structure: one guiding ideology, one set of core content, four supporting systems (technology, faculty, resources, and institutions), four operational stages (data collection, precise assessment, intervention guidance, and feedback optimization), and one closed-loop operational process. These five modules work together to achieve deep integration <sup>[2-3]</sup>.

### **2.3. Construction of core content**

#### **2.3.1. Core carrier**

The “AI-powered Heart-to-Heart Conversation Platform” serves as the core carrier, integrating AI technology with various resources. It encompasses five functional modules: data collection, intelligent analysis, precise delivery, communication and exchange, and dynamic tracking, providing technological support for the mechanism’s operation <sup>[4]</sup>.

#### **2.3.2. Integrated design of two core contents**

A model is constructed that “empowers career planning through psychological support and promotes psychological growth through career planning,” advancing through synchronous and complementary integration. Integration content is designed based on students’ growth stages, as shown in **Table 1**. Addressing issues such as students’ unclear self-awareness, high psychological stress, strong frustration psychology, and career confusion, this approach achieves complementary empowerment between psychological counseling and career planning, forming a synergistic educational force <sup>[5]</sup>.

**Table 1.** Design of integrated content based on students' growth stages

Student Growth Stage	Core Content of Psychological Support	Core Content of Career Planning	Key Integration Points
Freshman (Adaptation Stage)	Adjustment guidance for new students, self-awareness guidance, emotional regulation, interpersonal relationship adaptation	Career awareness initiation, connection between major and careers, career interest assessment, study planning	Foster career awareness and alleviate confusion/anxiety by guiding self-awareness combined with interest assessments.
Sophomore (Development Stage)	Academic stress counseling, resilience building, confidence building, deepening interpersonal communication	Career positioning refinement, career competency assessment, skill enhancement, career practice planning	Identify shortcomings through competency assessments and enhance career-related psychological qualities by fostering resilience.
Junior (Employment Stage)	Job-hunting anxiety counseling, stress management, mindset adjustment, psychological intervention for setbacks	Career choice guidance, resume optimization, interview training, employment information push	Alleviate anxiety, clarify direction through career guidance, and enhance job market competitiveness.

### 2.3.3. Four supporting systems

The first is technological support, which involves building an AI platform, introducing advanced AI technologies, and establishing data security mechanisms. The second is faculty support, which includes constructing a multidisciplinary faculty team, conducting specialized training, and establishing collaborative mechanisms. The third is resource support, which involves integrating online and offline resources and strengthening school-enterprise cooperation. The fourth is institutional support, which entails establishing systems for heart-to-heart conversations, platform management, faculty training, and incentive assessments <sup>[6]</sup>.

### 2.3.4. Four operational stages

A closed-loop operational model is constructed, encompassing data collection (building student profiles through multiple channels), precise assessment (integrated analysis of psychological and career data), intervention guidance (AI-driven recommendations combined with manual guidance), and feedback optimization (adjusting plans based on diverse feedback), ensuring the mechanism's precision and long-term effectiveness.

## 2.4. Operational process

A closed-loop process of “data collection—precise assessment—intervention guidance—feedback optimization—data update” is established, enabling dynamic tracking and continuous guidance throughout students' growth <sup>[7]</sup>.

## 3. Implementation strategies for the integration mechanism of psychological support and career planning in AI-empowered heart-to-heart conversations from the perspective of vocational education

### 3.1. Strengthening the concept of integrated education and AI empowerment

#### 3.1.1. At the institutional level

Incorporate the integrated education model of AI-empowered psychological support and career planning into the overall institutional planning. Establish a framework led by the Party committee, coordinated by student affairs, with collaboration from the psychological and career centers, and implemented by departments and faculties.

Communicate this concept through special meetings to break down traditional perceptions of “psychological and career disconnection” and “AI and conversation isolation.”

### **3.1.2. At the Faculty-Student Level**

Conduct specialized training for teachers to establish the concept of integrated education and encourage them to actively learn AI technology applications. Popularize the concept and platform value among students through various forms, guiding them to recognize the importance of the synergy between psychological and career abilities, and actively participate in platform interactions to foster a collaborative atmosphere between teachers and students.

## **3.2. Optimizing the AI-empowered heart-to-heart conversation platform**

### **3.2.1. Platform optimization and upgrades**

Iterate the platform to optimize data collection, streamline processes, and support multi-system integration. Upgrade the intelligent analysis module to enhance the accuracy of psychological and career analysis <sup>[8]</sup>. Improve precise content delivery by tailoring content based on students’ states. Simplify the operational interface to lower the barrier to use.

### **3.2.2. Technical cooperation and investment**

Increase financial investment to ensure platform upgrades and maintenance. Deepen cooperation with AI enterprises and research institutions to introduce advanced technologies and engage in joint research and development. Hire professional teams for maintenance and establish a rapid response mechanism. Encourage in-house teachers to participate in optimization to enhance platform adaptability.

### **3.2.3. Data security assurance**

Establish a comprehensive data security management system to regulate the entire data management process. Use encryption technology for storage and conduct regular backups. Form a supervision team to regularly inspect and address potential risks. Clearly inform students of data usage purposes and sign privacy agreements to enhance trust.

## **3.3. Enhancing integrated education and AI application capabilities**

### **3.3.1. Establishing a specialized**

Training System: Create a tiered and categorized training system for counselors, psychological teachers, and career guidance teachers, focusing on different aspects of AI application and integrated education capabilities. Adopt an “online + offline” and “theory + practice” model to ensure training effectiveness.

### **3.3.2. Strengthening teaching and research exchange and practice**

Establish a cross-departmental teaching and research mechanism to regularly discuss challenging issues and share case studies. Build a practice platform to encourage teachers to participate in pilot projects and research to promote teaching through research. Organize external study tours to learn from advanced experiences.

### **3.3.3. Improving faculty incentive mechanisms**

Incorporate the effectiveness of integrated education work, teaching, and research achievements into

performance evaluations and awards. Clearly define incentive standards and provide rewards and support to outstanding performers. Establish a fault-tolerant mechanism to encourage innovative attempts and stabilize a multidisciplinary team.

### **3.4. Tailoring to the characteristics and needs of vocational college students**

#### **3.4.1. Personalized content design**

Based on the practical and goal-oriented characteristics of vocational college students, utilize AI-generated student profiles to develop personalized guidance plans for students of different grades and majors. Adjust content focus dynamically according to grade level and link it to professional development.

#### **3.4.2. Innovative content forms**

Transform psychological and career content into short videos, animations, scenario simulations, and other forms that students enjoy. Incorporate interactive elements into AI conversations. Retain manual channels to handle complex issues and achieve a human-machine combination.

#### **3.4.3. Dynamic content updates**

Regularly update platform content to keep pace with policy, industry trends, and student needs<sup>[9]</sup>. Pay attention to stage-specific psychological issues and intervene early. Collect student feedback to optimize content and delivery strategies.

### **3.5. Building a collaborative education framework involving multiple parties**

#### **3.5.1. On-campus collaboration**

Strengthen collaboration among the student affairs office, psychological center, career center, academic affairs office, departments, faculties, and the youth league committee. Clarify the responsibilities of each department and establish regular collaborative meetings to report progress, address issues, and form a cohesive force.

#### **3.5.2. Off-campus collaboration**

Deepen school-enterprise cooperation by inviting enterprises to participate in content design and guidance, providing internships, and industry information. Collaborate with professional institutions in mental health and career guidance to compensate for shortcomings in on-campus resources<sup>[10]</sup>. Strengthen home-school collaboration by guiding parents to cooperate and form a joint educational force.

## **4. Construction of the effectiveness evaluation system**

### **4.1. Evaluation objectives and principles**

The objectives are to objectively, specifically, dynamically, and comprehensively understand the implementation effects, identify issues, optimize the mechanism, summarize experiences, and guide all parties to prioritize integrated work.

### **4.2. Evaluation index system**

A multi-level system of “primary indicators—secondary indicators—tertiary indicators” is constructed, encompassing 4 primary indicators, 12 secondary indicators, and 26 tertiary indicators, as detailed in **Table 2**.

**Table 2.** Evaluation indicators

<b>Level 1 Indicator (Weight)</b>	<b>Level 2 Indicator (Weight)</b>	<b>Level 3 Indicator (Weight)</b>	<b>Evaluation Criteria</b>
Student Development Outcomes (40%)	Enhancement of Psychological Literacy (15%)	1. Psychological Stress Relief Degree (5%)	Psychological stress is alleviated, and negative emotions are reduced.
		2. Self-Awareness Clarity (5%)	Clearly understands one's own characteristics, strengths, and weaknesses.
		3. Psychological Adjustment Ability (5%)	Can proficiently use emotion regulation methods.
	Enhancement of Professional Competencies (15%)	4. Career Awareness Clarity (5%)	Understands the connection between major and career, as well as industry trends.
		5. Career Orientation Clarity (5%)	Has a clear career orientation and development direction.
		6. Career Competitiveness (5%)	Professional skills and communication abilities are improved.
Platform Operation Outcomes (20%)	Employment Outcomes (10%)	7. Employment Rate (5%)	Employment rate is higher than the school's average.
		8. Employment Satisfaction (5%)	High satisfaction with the job position and salary.
		9. Function Completeness (4%)	Functions are comprehensive and meet the needs of teachers and students.
	Platform Functionality (8%)	10. Operational Convenience (4%)	Simple to operate with a good user experience.
		11. Data Collection Accuracy (3%)	Data is comprehensive, accurate, and reflects the real situation.
		12. Content Push Precision (4%)	Pushed content aligns well with student needs.
Teacher Competency Outcomes (20%)	Platform Security (5%)	13. Data Security Assurance (3%)	Systems are well-established with no data leaks.
		14. Privacy Protection (2%)	Privacy is protected, and users have minimal concerns.
		15. Platform Operation Proficiency (3%)	Can skillfully operate the platform to carry out work.
	Integrated Education Ability (7%)	16. Data Interpretation Ability (4%)	Can accurately interpret data and formulate plans.
		17. Psychological Counseling Ability (3%)	Can conduct targeted psychological counseling.
		18. Career Planning Guidance Ability (4%)	Can provide professional career planning guidance.
Collaborative Education Outcomes (20%)	Teaching & Research Ability (6%)	19. Integrated Work Research Ability (3%)	Can conduct related research and publish findings.
		20. Experience Summarization Ability (3%)	Can summarize experiences and form typical cases.
		21. Department Collaboration Efficiency (4%)	Smooth inter-departmental cooperation and efficient advancement.
	External Collaboration (7%)	22. Teacher Collaboration Effectiveness (4%)	Teacher collaboration forms a joint educational force.
		23. School-Enterprise Cooperation Effectiveness (3%)	Close cooperation providing high-quality resources.
		24. Home-School Collaboration Effectiveness (4%)	Smooth communication with active parental cooperation.
Mechanism Perfection (5%)	Mechanism Perfection (5%)	25. Institutional Development Perfection (3%)	Systems are well-developed, standardized, and orderly.
		26. Mechanism Optimization Timeliness (2%)	Can promptly optimize and improve the mechanisms.

### **4.3. Evaluation methods and implementation process**

The evaluation methods combine quantitative and qualitative approaches, involving multi-stakeholder evaluations (students + teachers + experts + parents). These methods comprehensively utilize questionnaires, interviews, case studies, and other techniques. The implementation process is divided into four stages: evaluation preparation, evaluation execution, evaluation analysis, and result application, forming a closed loop to provide a basis for optimizing the mechanism.

## **5. Conclusion**

This paper, grounded in the fundamental task of vocational education in higher vocational colleges, addresses the current challenges, such as the disconnection between psychological support and career planning in heart-to-heart conversations and the lack of effectiveness. Leveraging the advantages of AI technology, it constructs an AI-empowered integration mechanism for heart-to-heart conversations, characterized by “guiding ideology leadership, core content support, supporting system safeguards, operational stage advancement, and evaluation system verification.” It clarifies the core framework, content design, implementation strategies, and effectiveness evaluation system of the mechanism, achieving a deep integration of psychological support and career planning. This provides a practical and actionable pathway for higher vocational colleges to overcome educational challenges and enhance the quality of talent cultivation. The integration mechanism, centered around an AI-powered intelligent heart-to-heart conversation platform, ensures its operation through four supporting systems and advances through four operational stages, forming a closed-loop model. It not only harnesses the precision, efficiency, and comprehensive coverage advantages of AI technology but also takes into account the individualized psychological needs and career development patterns of higher vocational students, achieving a bidirectional linkage between “psychological empowerment for career development and career promotion of psychological growth.” Meanwhile, the accompanying implementation strategies and effectiveness evaluation system ensure the mechanism’s feasibility and long-term effectiveness, providing robust support for higher vocational colleges in conducting psychological support and career planning guidance for students.

Given the limitations of research conditions and perspectives, there is still room for further refinement of the integration mechanism proposed in this paper. Future research could refine the content design and implementation strategies of the integration mechanism by considering the professional characteristics of different types of higher vocational colleges, enhancing the mechanism’s pertinence and adaptability. Additionally, it could delve deeper into exploring pathways for the profound integration of AI technology and heart-to-heart conversations, optimizing AI intelligent analysis algorithms, and improving the level of precise assessment and personalized guidance. This would drive the quality enhancement and content-rich development of vocational education in higher vocational colleges, facilitating the comprehensive growth of technical and skilled talents.

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