

Research on the Teaching Model of Liberal Arts Courses in Vocational Colleges with a Focus on AI Empowerment and Humanistic Literacy Development

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Abstract

This paper, based on an analysis of the current state of humanistic literacy cultivation in vocational colleges, leverages AI technology to design a teaching model centered on student learning and holistic integration. From four dimensions—educational philosophy, curriculum system, instructional methods, and cultural atmosphere—it proposes strategies for the construction of liberal arts courses.

Keywords

Humanistic Literacy, AI Methods, Vocational Education, Interdisciplinary Integration

1. Introduction

The core of cultivating students' humanistic literacy in vocational colleges lies in internalizing the humanistic spirit as the stable character, enabling students to become modern professionals with sound personality, social responsibility, and sustainable development capabilities while mastering professional skills. While advancing students' technical and vocational competencies, higher-vocational colleges must concurrently intensify humanistic-literacy education so as to cultivate professional ethics and vocational attributes, thereby furnishing a robust humanistic substrate for the inculcation of craftsmanship (Cui, 2023). At present, the cultivation of humanistic literacy among vocational college students faces several challenges. In general, these issues stem from insufficient emphasis and a lack of comprehensive qualities. Under this condition, we will focus on the development

of humanistic literacy with AI tools, such as deepseek which is often used in our class for general vocational colleges.

By leveraging AI tools to analyze student cognitive patterns and emotional engagement, the model enhances personalized learning pathways within liberal arts education. It emphasizes critical thinking, ethical reasoning, and cross-cultural communication as core competencies, aligning curriculum design with real-world societal needs. Through blended instructional methods—such as project-based learning and collaborative inquiry—it fosters an inclusive academic environment that bridges technical skills with humanistic values.

2. Current State of Humanistic Literacy Cultivation in Colleges

I) Traditional Educational Philosophy: Emphasizing Skills over Humanities

Traditionally, people have long held the belief that higher vocational education is primarily about equipping students with “a specific skill”, often prioritizing the cultivation and enhancement of students’ vocational skills over the development of their humanistic literacy. This philosophy has crowded out the time and space for nurturing humanistic qualities. Furthermore, this educational mindset directly influences students’ own perceptions of humanistic literacy, leading them to mistakenly believe that mastering professional skills is sufficient for success, thereby relaxing or completely neglecting the cultivation of their humanistic qualities.

II) Insufficient Emphasis on Humanistic Education

From the current state of colleges, it is evident that humanistic education for students has not yet received the attention it deserves. On one hand, there is a strong call to prioritize quality education; on the other hand, many practices, including educational philosophy, teaching models, and management approaches, still reflect remnants of exam-oriented education. Influenced by pragmatic trends, there has been a tendency to diminish or even eliminate humanistic education. Consequently, many vocational college students lack sufficient humanistic knowledge and have relatively low levels of humanistic literacy. Numerous students fail to meet the expected standards in areas such as language expression, writing quality, and literary and artistic cultivation.

III) Low Overall Level of Humanistic Literacy

Currently, vocational college students generally exhibit shortcomings in areas such as literary cultivation, narrow knowledge horizons, inadequate historical knowledge, limited understanding of philosophical ideas, and superficial artistic appreciation. Students often adopt an overly pessimistic attitude toward issues arising in societal development, leading to various feelings of confusion and bewilderment.

Humanities courses are primarily focused on cultivating critical thinking, creative thinking, and cultural heritage capabilities among vocational college students. In addition to imparting knowledge, these courses place greater emphasis on self-awareness, understanding of human civilization, and the ability to analyze and address complex issues. AI tools can quickly gather vast amounts of infor-

mation, assisting students in integrating and analyzing knowledge. Therefore, to establish a balanced training system that prioritizes humanistic literacy, it is essential to innovate teaching models.

3. Discussion

The integration of artificial intelligence (AI) in cultivating humanities literacy represents a significant frontier in enhancing students' comprehensive quality and vocational capabilities. This model is not developed in a vacuum but is grounded in and extends existing research across several key domains: AI in education (AIED), pedagogy in vocational settings, and humanities curriculum development.

In the realm of AI in Education (AIED), research consistently demonstrates the potential of AI to personalize learning and optimize educational processes. As exemplified by Professor Xu Min from Central China Normal University, AI can serve as a bridge, integrating traditional humanities content with modern digital technology. This aligns with the broader scholarly pursuit of using AI for adaptive learning, where systems tailor the presentation of materials—such as literary texts or philosophical concepts—to individual student's pacing and comprehension levels, thereby more effectively fostering literacy and aesthetic appreciation. Furthermore, initiatives like the seminar "AI-Human Collaboration in Digital Humanities Course Construction" at Shandong Yingcai Institute highlight an emerging research focus: the synergistic role of AI in instructional design. This mirrors studies on AI as a cognitive tool that can assist in structuring course objectives, generating interactive learning scenarios, and managing complex information, thus freeing educators to focus on higher-order mentoring and facilitating deep discussion.

Regarding pedagogy in vocational contexts, the proposed model directly addresses the unique requirement to intertwine humanistic qualities with practical skills. The application of AI in vocational education is increasingly studied not just for technical skill acquisition but for cultivating the "soft skills" integral to professional competence. Research in this area suggests that technology-enhanced learning environments can simulate real-world professional dilemmas that require ethical reasoning, communication, and cultural understanding. By leveraging AI to create such immersive and reflective scenarios, the model is positioned within a pedagogical framework that seeks to make humanities education directly relevant to vocational practice, moving beyond abstract theory to applied competence.

Finally, in the field of humanities curriculum development, there is a well-established scholarly conversation about moving beyond knowledge transmission to capacity building. The goal of cultivating critical thinking, empathy, and aesthetic judgment is central to modern humanities education. The AI-empowered model contributes to this discourse by offering a new, technologically mediated pathway. It draws on principles of curriculum design that emphasize student engagement, interdisciplinary connections (between humanities and technology), and the development of a sustainable, lifelong learning mindset. The emphasis on

using AI for objective design and process optimization, as seen in the Shandong Yingcai example, reflects a research-informed approach to making the development of these intangible qualities more structured, visible, and assessable within a curriculum.

In conclusion, by synthesizing insights from these three interconnected research streams, the proposed model gains a robust scholarly foundation. It positions AI not as a replacement for humanistic teaching but as a powerful catalyst that, when pedagogically integrated, can deepen and operationalize the cultivation of humanities literacy within the specific context of vocational education.

4. Principles for the Cultivation of Humanistic Literacy among Vocational College Students

The cultivation plan adheres to the principles of “student-centered” and “integration and unity” in its design.

I) Adherence to the Principle of Student-Centeredness

This approach rejects traditional “lecture-based” and “rote learning” teaching methods, as well as an overemphasis on systematicness and completeness. Instead, it adopts teaching methods suitable for the characteristics of vocational college students to cultivate humanistic literacy.

Implementing this principle involves adopting forms and content that students find easy and enjoyable to accept. Methods such as discussion, debate, and inquiry-based learning, which are centered on student engagement, are employed to help students internalize humanistic knowledge into humanistic literacy. This approach aims to enhance the effectiveness of cultivation by fostering a deeper understanding and appreciation of humanistic values.

In summary, the focus is on creating an educational environment that prioritizes student engagement and active learning, moving away from passive, traditional methods. This shift is intended to better suit the needs and characteristics of vocational college students, thereby improving the overall effectiveness of humanistic literacy education.

II) Adherence to the Principle of Integration and Unity

The cultivation of humanistic literacy should integrate knowledge transmission, capability development, and quality enhancement into a unified approach. This ensures that students, while mastering humanistic knowledge, also develop humanistic thinking and practical skills, and improve their cultural literacy in areas such as Chinese traditional culture and internationalization. Guided by the concept of integrated cultivation, relevant teaching and practical activities should be conducted to comprehensively enhance the quality and effectiveness of humanistic literacy education for vocational college students.

5. Objectives for the Cultivation of Humanistic Literacy among Vocational College Students

The overarching objective of cultivating humanistic literacy among vocational

college students is to nurture outstanding talents with good language and cultural literacy, knowledge and skills, certain thinking and innovative abilities, well-rounded personalities, and healthy aesthetic interests.

I) Enable Students to Possess Good Language and Cultural Literacy and Knowledge Skills

The core of learning ability lies in the capacity to sense, understand, express, and think in language. The significant role of humanistic education in cultivating these abilities cannot be replaced by any other discipline. Language serves as the tool for acquiring all knowledge and is the vehicle of thought. The development of language skills directly stimulates the growth of thinking abilities. Through humanistic education, we can strengthen students' language application skills, enhance their cultural interpretation abilities, language expression skills, and knowledge and skills in understanding and writing, thereby achieving an organic integration of quality cultivation and skills training. This is an extremely important task in the humanistic literacy education of vocational college students.

II) Foster Students' Development of Thinking and Innovation Abilities

The cultivation of humanistic literacy places a strong emphasis on enhancing students' capabilities, which encompasses not only general skills such as listening, speaking, reading, and writing, but also promoting the development of their thinking and innovation abilities. By leveraging the distinctive features of the humanities—such as their openness, societal relevance, aesthetic appeal, and artistic expression—we aim to unlock students' potential, enrich their imagination and reasoning abilities, and foster the growth of their visual thinking, divergent thinking, and critical thinking skills. Furthermore, through language and writing courses, along with practical activities, students are trained to enhance their logical thinking abilities.

Building upon the expansion of their thinking horizons and the refinement of their thinking skills, students are encouraged to engage in re-creation by applying their acquired knowledge and various thinking competencies. This process involves the appreciation and critique of literary and artistic works, the interpretation and evaluation of cultural phenomena, as well as the composition of written documents and articles. These activities serve as a foundation for nurturing innovative abilities, thereby laying the groundwork for students to develop their capacity for creativity.

In summary, the objective is to create an educational environment that not only sharpens students' critical and creative thinking but also equips them with the skills necessary to approach challenges innovatively, ultimately preparing them to contribute meaningfully in a rapidly evolving world.

III) Enable Students to Possess a Well-Developed Personality and Healthy Aesthetic Interests

Humanistic education has the power to inspire and influence individuals imperceptibly through literature, art, emotions, and moral values, thereby refining students' sentiments, purifying their souls, and fostering virtues such as caring for

others, respecting others, and collaborating with them. This holistic approach helps students develop an optimistic and upward-looking spirit, cultivate a broad-minded outlook characterized by “equanimity in the face of honor or disgrace”, and subtly cultivate their willpower and resilience against setbacks. Additionally, literature and art enrich the inner world of individuals, elevate their life interests, awaken aesthetic experiences, and provide them with intense aesthetic enjoyment. This, in turn, infuses their thoughts with vitality and enhances their aesthetic sensibilities, ultimately equipping them with healthy aesthetic tastes.

6. Implementation Strategies for Humanistic Literacy Education

The successful implementation of humanistic literacy education requires a comprehensive approach that integrates scientific education with humanistic values, focusing on the holistic development of students. This involves strategic efforts from leadership, educators, and students themselves, each contributing to the cultivation of a well-rounded and thoughtful individual. Below are the key strategies for achieving this objective:

I) Establish Advanced Educational Concepts

Leadership Perspective: It is imperative for leadership to adopt an educational philosophy that seamlessly combines scientific education with humanistic literacy, aligning with the principles of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the military strengthening concepts. By formulating a well-structured talent development plan and enhancing the campus environment, leadership ensures that humanistic education is effectively integrated into the educational framework.

Educator Perspective: Educators must transcend the confines of narrow technical education and the mere imparting of knowledge. They should embrace a holistic approach that balances teaching with nurturing, effectively integrating humanistic elements into the curriculum. By guiding students to pursue the essence of truth, goodness, and beauty, educators help students understand the profound meaning of life and the true value of existence.

Student Perspective: Students are encouraged to abandon the mindset of seeking immediate benefits and instead focus on the comprehensive enhancement of their physical and mental well-being. By aligning personal growth with societal needs, students contribute to the advancement of both military and societal progress, thereby realizing their personal value.

1. Foster a Holistic Development Environment

Integration of Scientific and Humanistic Education: The curriculum should be designed to incorporate both scientific rigor and humanistic values, ensuring that students develop not only technical skills but also a deep appreciation for culture, ethics, and aesthetics.

Promotion of Critical Thinking and Creativity: Encouraging students to think critically and creatively is essential. This can be achieved through interdisciplinary

studies, innovative projects, and collaborative learning environments that stimulate intellectual curiosity and problem-solving skills.

2. Enhance Aesthetic and Ethical Sensibilities

Exposure to Literature and Art: Students should be exposed to a rich array of literary and artistic works that foster an appreciation for beauty and cultivate ethical values. This exposure helps in refining their sentiments and broadening their cultural horizons.

Moral and Ethical Education: Integrating moral and ethical education into the curriculum ensures that students develop a strong ethical compass, enabling them to make responsible and compassionate decisions in their personal and professional lives.

3. Supportive Institutional Framework

Policy and Resource Allocation: Establishing policies that support humanistic education and allocating sufficient resources for its implementation are crucial. This includes funding for cultural activities, artistic programs, and ethical training initiatives.

Faculty Development: Continuous professional development for educators is essential to ensure they are equipped with the latest pedagogical techniques and humanistic values, enabling them to effectively impart these principles to their students.

4. Cultural and Community Engagement

Community Involvement: Encouraging students to engage with the community through volunteer work and cultural activities fosters a sense of social responsibility and enhances their practical understanding of humanistic values.

Cultural Exchange Programs: Organizing cultural exchange programs allows students to experience diverse perspectives, enriching their understanding of different cultures and fostering global citizenship.

By implementing these strategies, educational institutions can create an environment that nurtures not only academically proficient individuals but also socially responsible, ethically grounded, and culturally aware citizens. This holistic approach to education ensures that students are well-equipped to face the challenges of a rapidly evolving world, contributing meaningfully to society with a blend of scientific knowledge and humanistic values.

II) Constructing a Rational Curriculum System

In response to the characteristics of humanities courses, which include a wide range of subjects and a short education duration for associate degree programs, it is essential to optimize and integrate the curriculum system to establish a well-structured course framework.

1. Establishing Mandatory Courses in the Humanities

During the associate degree stage of vocational and technical education, compulsory courses such as composition and English should be offered. These courses aim to equip students with knowledge of Chinese and Western cultures, language application skills, and an understanding of how Chinese traditional culture, liter-

ature, and philosophical thought are applied and manifested in the context of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and Xi Jinping's Thought on Strengthening the Military. This understanding will highlight the contemporary significance and value of these traditions, thereby enhancing students' international literacy.

Through the study of composition courses, students are guided to establish the essential foundational knowledge system required for writing. By reading, analyzing, and deeply contemplating carefully selected model essays and other materials, students deepen their understanding of writing knowledge. They cultivate a sensitivity and comprehension of various applied writing styles and their linguistic characteristics, thereby improving their ability to appreciate different forms of applied writing.

Through diligent observation, conceptualization, and practice in writing, students strengthen their training in writing skills, honing their practical writing abilities. By actively participating in discussions and exchanging ideas, students enhance their capacity for value judgment, logical reasoning, and verbal expression, ultimately elevating the quality of their writing.

By mastering the fundamental knowledge and skills of composition, students develop a deeper appreciation of the importance of writing and foster an emotional connection to the subject.

As language courses are intrinsically linguistic in nature, the infusion of humanistic concern is indispensable (Wang, 2021). Through the study of English courses, students will gain an understanding of English phonetics, vocabulary, grammar, and discourse as language knowledge; master the fundamental skills of listening, speaking, reading, writing, and translating in English; acquire basic English terminology; engage in simple conversations in English; and effectively communicate in both daily and specific contexts using English. Additionally, students will be able to utilize reference books to read and translate English materials related to their professional fields. Furthermore, they will develop an understanding of the cultural backgrounds of English-speaking countries, thereby enhancing their etiquette literacy, cross-cultural communication skills, and cultivating an international perspective.

2. Offering Elective Courses in Humanities

Acquiring linguistic and literary knowledge, enhancing the ability to read, comprehend, appreciate, and write in one's native language, and laying a solid foundation for the sustainable development capabilities required for future professional roles. Additionally, it aims to enhance cultural literacy, moral cultivation, and aesthetic sensibilities, deepen understanding and appreciation of Chinese mother tongue culture, and strengthen cultural confidence.

3. Embedding Liberal Arts Education in Professional Courses

Due to the single-discipline nature of the curriculum system and the relatively short duration of education in higher vocational institutions, it is impractical to offer a substantial number of liberal arts general education courses. Therefore, the

cultivation of liberal arts literacy among higher vocational students should be grounded in their educational context and the practicalities of their institutions. This involves fully exploring the inherent liberal arts elements within military professional courses to foster the integration of professional knowledge learning with liberal arts education. In the teaching of professional courses, it is essential to not only impart specialized knowledge but also strengthen the cultivation of liberal arts ethos. This can be achieved through the integration of ideological and political education, liberal arts case studies, and other pedagogical approaches, enabling higher vocational students to comprehend and internalize the liberal arts ethos inherent in their roles as military personnel.

III) Leveraging AI-Driven Empowerment: Employing Diverse Methodologies and Approaches

Rational utilization of AI technology should be promoted with respect for students' status and spirit of autonomy, and their proactive role in learning should be fostered. This approach can expand the avenues for cultivating the humanities literacy of vocational college students.

1. Establishing AI plus media with Humanities Interest Groups

University clubs serve as a vital platform for higher education institutions to develop students' comprehensive competencies and qualities. By leveraging these platforms to establish AI-related and humanities-related interest groups, students can be provided with opportunities for communication and regarding the holistic development of their humanities literacy. Additionally, through various club activities, students' collective consciousness can be cultivated, and the humanities literacy of vocational college students can be subtly enhanced.

The cultivation of humanistic literacy among higher vocational college students should be achieved through the construction of a new media-based humanistic literacy education platform, the development of teaching resources, the implementation of personalized instruction, the strengthening of faculty development, the organization of online and offline cultural activities, and the establishment of a diversified evaluation system for humanistic literacy via new media. These approaches aim to foster a new generation of craftsmen who possess not only exquisite technical skills but also profound humanistic qualities (Wang, 2025).

2. Organizing Multilayered and Multifaceted Humanities Competitions

It is imperative to organize a diverse array of humanities-related competitions, including knowledge contests, eloquence contests, and Model United Nations simulations. For instance, in speech contests, participants are encouraged to select themes such as campus life, politics, and military affairs. Through varied forms of public speaking, contestants articulate their perspectives on military issues, thereby enhancing their logical reasoning abilities. Similarly, debate competitions provide students with opportunities to explore contentious political topics. By engaging in argumentation and refutation, participants systematically develop their understanding of logical fallacies, ultimately elevating their literary, artistic, and dialectical reasoning skills.

IV) Constructing a Distinctive Campus Cultural Environment and Atmosphere

The educational function of campus culture should be fully utilized to strive for the creation of a distinctive campus culture that integrates humanistic education with scientific education.

1. Building a Cultural Environment Favorable for the Development of Humanistic Literacy

The campus cultural environment serves as a hidden curriculum for nurturing humanistic literacy, reflecting commonly advocated values and cultural norms. It helps to strengthen cultural confidence, foster patriotic sentiments, and instill an awareness of cherishing, creating, and upholding honor.

2. Creating a Cultural Atmosphere with a Strong Humanistic Flavor

The cultivation of humanistic spirit is not merely achieved by completing specific courses or participating in regular activities. It requires not only close collaboration between teachers and students but also the creation of a sustained and effective educational atmosphere by the institution. For instance, in classroom settings, fostering an atmosphere that encourages student participation and guided discussions can cultivate innovative thinking and proactive learning attitudes. Beyond the classroom, positive teacher-student relationships, a relaxed living environment, and diverse extracurricular activities can refine students' dispositions and nurture their humanistic spirit.

7. Evaluation Framework: Measuring the Model's Effectiveness

To ensure that the proposed AI-empowered model for cultivating humanities literacy possesses not only theoretical soundness but also practical value, it is essential to establish a corresponding multi-dimensional evaluation framework. The construction of this framework is directly derived from the core objective of internalizing humanities literacy as stable character and vocational ability. Therefore, it must move beyond traditional knowledge assessment and employ mixed methods to comprehensively verify the model's effectiveness.

First, a combination of quantitative and qualitative methods should be used to assess the effectiveness of the internalization process.

Pre- and Post-Intervention Surveys: Administer validated scales at the beginning and end of the course or program. These scales should not only cover students' cognitive understanding of humanities knowledge but, more crucially, measure changes in affective and attitudinal dimensions such as their sense of professional ethics, social responsibility, and cultural inclusivity, thereby quantifying the development of their inner character.

In-Depth Interviews and Focus Groups: Collect qualitative evidence through semi-structured interviews with students, specialized course instructors, and internship mentors. For instance, explore whether students demonstrate stronger ethical considerations when solving technical problems (professional virtue) or exhibit more effective communication and empathy in teamwork (sound person-

ality). This narrative data provides rich context and deep explanation for the survey results.

Second, incorporate formative assessment and outcome analysis to examine the externalization and application of literacy.

Portfolio Analysis: Systematically collect and evaluate students' project reports, ethical case analyses, creative writings, or designs completed within AI-created humanities scenarios. Evaluation criteria must explicitly include dimensions such as critical thinking, aesthetic judgment, and value negotiation to determine if students can translate abstract humanities literacy into the ability to solve complex, realistic problems.

Observational Methods and Behavioral Assessment: Use structured observation protocols to record student behavior in simulated work environments or project-based learning activities. For example, assess their decision-making process when facing ethical dilemmas or their negotiation and conflict resolution strategies within teams, which directly reflects the externalization of their humanities literacy in professional conduct.

This comprehensive evaluation framework translates the model's core theoretical propositions—namely, the internalization of humanities literacy, the development of a sound personality, the strengthening of social responsibility, and the formation of sustainable development capabilities—into a series of observable, measurable, and verifiable indicators. Thereby, it provides robust data support for the model's effectiveness and a basis for its continuous improvement.

8. Conclusion

Vocational Colleges should collaboratively advance the reshaping of educational philosophies, optimization of curriculum systems, and development of faculty teams. This integrated approach aims to cultivate interdisciplinary talents equipped with both scientific literacy and humanistic spirit, thereby promoting the connotative development of higher education (Lu, 2025).

The innovation of teaching models in humanities courses aims to achieve the organic integration of “technology empowerment” and “cultivation of humanistic values”, effectively addressing the monotony of current teaching approaches. This reform holds significant importance for enhancing the teaching standards of humanities courses in vocational education and improving the quality of talent cultivation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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