

# Research on Ideological and Political Teaching of College Chinese Courses Based on Aerospace Characteristics

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**Abstract.** Aiming at the demand of higher education in the information technology era, this paper focuses on integrating aerospace characteristics into the ideological and political teaching practice of college Chinese courses, aiming at exploring an innovative humanistic education path. Based on this, a set of teaching content system that deeply integrates the spirit of space education with language and literature education is designed, and diversified teaching methods such as thematic teaching, case analysis and integration of information technology are emphasized to stimulate students' resonance and reflection on the spirit of space education. At the same time, the evaluation system focusing on process evaluation and reflective learning is constructed to ensure the comprehensiveness and depth of teaching effect. Finally, the paper looks forward to the continuous optimization and development direction of ideological and political teaching of Chinese courses in universities with aerospace characteristics in the future, and emphasizes its important significance in cultivating new talents with both humanistic heritage and scientific spirit.

**Keywords:** Curriculum ideological and political, College Chinese, Aerospace characteristics;

## **1** INTRODUCTION

In the context of today's increasingly fierce global scientific and technological competition, the space industry, as an important symbol of the country's comprehensive strength, not only represents the forefront of science and technology, but also the concentrated embodiment of the national spirit and national will. With the vigorous development of China's space industry, "space dream" has become an important source to motivate young students to work hard and pursue excellence. In this context, higher education bears the heavy responsibility of cultivating new people with a high sense of social responsibility, innovative ability and profound cultural heritage. As a basic course of humanities, college Chinese is not only an important platform for inheriting national culture and improving humanistic quality, but also a key position for carrying out ideological and political education and cultivating socialist core values. However, how to maintain the traditional advantages of Chinese teaching while innovating the teaching content and methods to adapt to the development of The Times, especially the

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progress of aerospace science and technology, has become an urgent issue to be solved. Therefore, with the theme of "Research on Ideological and Political Teaching of College Chinese Courses based on aerospace characteristics", this study aims to explore a new path of organic combination of aerospace spirit, aerospace culture and ideological and political education, and aims to enrich the connotation of college Chinese courses by mining ideological and political elements in aerospace materials, stimulate students' learning interest and patriotic feelings, and promote the overall improvement of students' comprehensive quality<sup>[1-2]</sup>.

Firstly, this study theoretically expounds the necessity and feasibility of the integration of aerospace education with curriculum ideology and politics, and clarifies the starting point and direction of the study. Subsequently, the research will deeply analyze the integration strategies of aerospace characteristics in college Chinese course content design, teaching method innovation, evaluation system construction and other aspects, and strive to form a set of operable and effective teaching mode. In short, this study expects that through the deep integration of aerospace characteristics and ideological and political teaching of college Chinese courses, it can not only promote the modernization of Chinese teaching, but also plant the seeds of aerospace dreams in the hearts of students, and stimulate their enthusiasm and determination to study hard and make unremitting efforts to achieve the great rejuvenation of the Chinese nation.

#### 2 THEORETICAL BASIS

The research on ideological and political teaching of college Chinese courses based on aerospace characteristics is an educational innovation practice carried out on the profound theoretical foundation, aiming at exploring how to more effectively train highquality talents with international vision, humanistic feelings and scientific spirit under the background of the new era, so as to contribute to the sustainable development of education and the long-term strategy of the country<sup>[3-5]</sup>.

# 2.1 The Theoretical Origin and Core Idea of Curriculum Thinking and Politics

The theoretical basis of curriculum ideology and politics originates from the Marxist educational view, especially the all-round development education thought, which emphasizes that education should promote the harmonious development of human intelligence, physical strength and moral character. In the context of the new era, curriculum thought and politics is the inheritance and innovation of this idea, aiming to integrate socialist core values, excellent traditional Chinese culture, rule of law concepts, moral cultivation and so on into all curriculum education and teaching activities, so as to achieve the same frequency resonance of knowledge transmission and value guidance. Its core concept includes full staff, whole process and all-round education, requiring all teachers, all courses and all teaching links to assume the responsibility of moral cultivation and forming a good ecology of collaborative education. The introduction of space features into college Chinese courses is a concrete practice of this idea, aiming at

inspiring students' patriotic feelings, innovative spirit and sense of responsibility with the help of the unique charm of space spirit and space culture.

#### 2.2 Theoretical Exploration of Space Culture and Educational Value

Space culture is a special cultural form formed along with the development of space industry. It combines the rational brilliance of scientific and technological exploration with human's romantic imagination of the universe, and embodies human's brave pursuit of the unknown world and yearning for a better life. The space spirit contained in space culture, such as the courage to explore, the courage to take responsibility, sincere cooperation, and unremitting self-improvement, is a vivid embodiment of the core so-cialist values in the space field. From the perspective of pedagogy, the educational value of space culture is mainly reflected in the following aspects: first, it can stimulate students' curiosity and desire to explore, and cultivate the spirit of scientific exploration; Second, through the study of space heroes and deeds, establish a correct view of the country, the nation and history, and enhance national pride and cultural confidence; The third is to show the importance of teamwork and innovation through the achievements of space science and technology, and guide students to learn cooperation and innovation. Therefore, integrating aerospace culture into college Chinese curriculum is an important way to improve the ideological and political effectiveness of the curriculum.

# 2.3 The Theoretical Framework of Humanistic Education and Science and Technology Integration

Under the background of knowledge economy and information society in the 21st century, the integration of humanities education and science and technology education has become an important trend of education development. This kind of integration is not only reflected in the cross-complement of content, but more importantly, the mutual enlightenment and promotion of thinking mode and value concept. Humanistic education emphasizes human concern, moral ethics and aesthetic appreciation, while scientific and technological education focuses on logical reasoning, experimental verification and technological innovation. The combination of aerospace characteristics and college Chinese just reflects this integration trend. As the foundation of humanities and social sciences, Chinese can provide students with rich cultural background and profound ideological resources. Space features represent the forefront of science and technology, showing human exploration of the unknown and the challenge to the limit. The combination of the two can not only enable students to comprehend life philosophy in the ocean of language, but also feel the charm of science in the vast exploration of the universe, so as to cultivate compound talents with profound cultural heritage, scientific spirit and innovative ability.

# **3** IDEOLOGICAL AND POLITICAL TEACHING CONTENT DESIGN OF COLLEGE CHINESE COURSE

The ideological and political teaching of the Chinese course of the university with aerospace characteristics aims to deeply integrate the spirit of aerospace with language and literature education, not only to teach the beauty of language, but also to shape the young people of the new era with the feelings of home and country, the consciousness of innovation and the global vision. The structure diagram is shown in Figure 1.



Fig. 1. College Chinese ideological and political teaching content design structure diagram

#### 3.1 Aerospace history and literary classics

In the teaching content section of "Space History and Literary Classics", the aim is to connect the ancient poetic fantasy of the starry sky with the brilliant achievements of modern space science and technology through the literary bridge across time and space, so that students can shuttle between the romance of literature and the magnificence of space, and deeply understand the eternal desire and unremitting pursuit of human beings for the exploration of the universe.

**Starry Visions in Classical Literature.** Starting from ancient poetry, such as Du Mu's "silver candle autumn cold painting screen, light Luo small fan flutter firefly." The night is as cool as water, lying down to see the morning glory Vega." Such depictions guide students to appreciate the ancient people's infinite reverie of the vast sky and beautiful legends, such as the story of the Cowherd and the Weaver Girl, not only let students feel the romantic feelings of the ancient people, but also inspire them to think about

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how these ancient stories echo the spirit of space exploration in modern society, such as the scientific exploration of the possibility of other life in the universe.

Literary Reflections of Modern Spaceflight. Combining important events in the history of modern space with literary works, such as the documentary literature "Flight to Spaceport" is selected to describe in detail the historic moment of the establishment of China's space launch site and the first launch of a foreign satellite by a Long March rocket, so that students can witness the difficult course of China's space industry from scratch, from weak to strong. Feel the national will contained in it and the spirit of the astronaut "especially able to bear hardships and fight". At the same time, the introduction of the astronaut's autobiography and diary, such as Yang Liwei's "Heaven and Earth Nine Heavy", through the first-person perspective of narration, so that students can feel the astronaut's mind, experience their loyalty to the country and love for the space industry.

**Dialogue and Thinking Across the Ages.** Through the organization of "Dialogue under the Stars" activity, students try to build a virtual dialogue between ancient poets and modern space heroes in the form of literary creation, such as writing poems, short stories or essays, to explore the changes in human cognition of the universe from ancient times to today, and the unchanged desire to explore. This kind of literary creation across time and space not only exercises students' ability of literary expression, but also encourages them to deeply think about the impact of scientific and technological progress on cultural inheritance, as well as the common humanity in exploring unknown fields.

#### 3.2 Science Fiction Literature and Future Prospects

In the teaching section of "Science Fiction Literature and Future Outlook", the cuttingedge exploration of space science and technology is deeply integrated with the infinite imagination of science fiction literature, guiding students to shuttle between reality and fantasy, deeply thinking about the close connection between human civilization and the future of the universe, and stimulating their innovative thinking and sense of responsibility.

Science Fiction: Wings of Imagination. Focusing on classic works of science fiction, such as the Three-Body Problem series by Liu Cixin, it shows the smallness and greatness of Earth civilization in the face of alien civilization through grand cosmological setting and profound philosophical thinking, and inspires students to have in-depth discussions on survival, cooperation and conflict. At the same time, international science fiction classics such as Arthur C. Clarke's 2001: A Space Odyssey are introduced to analyze the technological predictions of artificial intelligence, interstellar travel and other technologies, as well as their potential impacts on social ethics and human identity, so that students can realize that science fiction is not only a prediction of future technology, but also a profound reflection on the changes of human society and culture.

**Space Science and Technology: Dreams Come True.** Compare the imagination of science fiction with the latest advances in space technology today, such as Mars exploration missions, the construction and operation of the space station, and the rise of commercial spaceflight, and explore how these technological advances have gradually turned once-fantasy into reality. By analyzing the long-term plans and recent achievements of NASA, ESA and other organizations, students will understand the development path and challenges of space science and technology, and encourage them to think about their roles and contributions in the future space era.

**Future Outlook: A Blueprint for Building a Sea of Stars.** Students are encouraged to build their own vision for the future of space in the form of group discussion or creative writing, based on current technological trends and science fiction literature. This includes, but is not limited to, the idea of extraterrestrial colonies, new modes of space navigation, interplanetary economic and cultural exchanges, etc., guiding students to think boldly on the basis of respecting scientific principles, while focusing on the principles of sustainable development and common well-being of mankind, and cultivating their sense of responsibility and mission as citizens of the future space age.

#### 3.3 Space Heroes and Spiritual Inheritance

In the teaching section of "Space Heroes and Spiritual Inheritance", the focus is on those heroes who have left brilliant footprints in the journey of human exploration of the universe, through their life stories and outstanding contributions, inherit and carry forward the space spirit, and encourage students to establish lofty ideals, courage to take responsibility, and diligence in practice under the background of the new era.

Heroic Biographies: Beacons of the Mind. Selected biographies of space pioneers, such as Qian Xuesen's Biography and Yang Liwei's Space Diary, and so on, through in-depth analysis of the growth experience, academic achievements and personal character of these space heroes, show how they persevered in the face of adversity, the courage to break through, and ultimately contribute to the country's space industry. In the reading, students not only learn aerospace knowledge, but also are moved by the perseverance and selfless dedication of these heroes, and stimulate the patriotic feelings and social responsibility in their hearts.

**Story Sharing: The Baton of Spirit.** Organize the "Space hero Story Sharing meeting", invite experts in the space field, retired astronauts or through video materials, live to tell the touching stories behind the space mission, such as the hard struggle of the "two bombs and one star" founders, the details behind the successful launch of Shenzhou spacecraft, etc., so that students can intuitively feel the difficulty of space exploration and the essence of the space spirit. Through interactive questions and answers, students are encouraged to think about how to practice the space spirit in their daily learning life, such as persistence in the face of difficulties, collaboration and sacrifice in teamwork.

**Theme Creation: Emotional Resonance.** On the basis of emotional resonance, the theme of "Space heroes Praise" creation activities are carried out, encouraging students to express their admiration for space heroes in the form of poems, short stories, speeches, etc., or personal understanding and commitment to the space spirit. Through creation, students deepen the internalization of the space hero spirit in artistic expression, and exercise their own literary literacy and creative expression ability.

# 4 INNOVATION OF IDEOLOGICAL AND POLITICAL TEACHING METHODS AND MEANS IN COLLEGE CHINESE COURSES

Through a variety of strategies such as situational simulation, digital resources, projectbased learning and flipped classroom, the aim is to build a three-dimensional and interactive learning environment, which not only deepends students' understanding of space culture, but also imperceptitiously improves their comprehensive quality and social responsibility, and truly realizes the organic unity of knowledge imparted and value guided.

#### 4.1 Situational Simulation and Role Play

Teachers can design a series of simulated situations around space missions, such as simulated mobilization meetings before spacecraft launch, emergency handling in the space capsule, etc., so that students can play the roles of space engineers, astronauts, and ground controllers. Through personal experience and role immersion, students can not only deeply understand the rigor of space work and the importance of teamwork, but also integrate language learning into the interaction of role play, such as writing space logs, creating space-themed poems or short stories, so as to exercise their written expression and literary creation ability, while naturally penetrating ideological and political education elements into the situation. Such as responsibility, patriotism and so on.

#### 4.2 Integration and Application of Digital Teaching Resources

Make full use of digital teaching resources, such as virtual reality technology to reproduce historical space feats or simulate future space exploration scenes, so that students feel as if they are in the vast universe and intuitively feel the charm and challenge of space. Combined with the online course platform, multimedia courseware, interactive questions and answers and online discussion areas on aerospace topics are developed to promote students' independent learning and cross-regional communication, and enhance the interest and interaction of teaching. Through digital means, remote lectures by domestic and foreign space experts can also be introduced to broaden students' horizons, deepen their understanding of space science and technology and culture, and integrate into ideological and political education to guide students to establish a correct scientific outlook, outlook on life and values.

#### 4.3 Integration of Project-based Learning and Research

Implement project-based learning, focusing on practical problems or research topics related to space, such as designing the ecological circulation system of a Mars colony, writing a drama script reflecting the spirit of space, etc., guiding students to work in interdisciplinary teams and participate in the whole process from research, planning to implementation and demonstration. This teaching model encourages students to actively explore and solve problems, while learning language knowledge in practice, such as literature search, report writing, oral presentation, etc. Through cooperation with space research institutions, internship opportunities or research assistant positions are provided for students to closely combine theoretical learning with practical operation, and further strengthen the integration of aerospace characteristics and ideological and political education.

# 5 CONSTRUCTION OF TEACHING EVALUATION SYSTEM

Through the construction of teaching evaluation system, the aim is to form a threedimensional and multi-dimensional evaluation mechanism to comprehensively promote the balanced development of students' knowledge, skills, emotional attitudes and values.

#### 5.1 Comprehensive Quality Evaluation Model

Build an evaluation system with comprehensive quality improvement as the core, go beyond the traditional single knowledge assessment, and cover the four dimensions of knowledge mastery, skill improvement, emotional attitude and value concept. In the language courses of universities with aerospace characteristics, this means not only evaluating students' mastery of aerospace history, culture, and scientific and technological knowledge, but also examining their language application ability demonstrated through literary analysis and creative writing, as well as their exploration spirit, teamwork, patriotic feelings and other emotional attitudes displayed in the learning process. In particular, the degree to which the spirit of space is internalized into personal values.

#### 5.2 Self-evaluation and Peer Evaluation

Introduce self-evaluation and peer evaluation mechanism to encourage students to self-reflect and learn from each other. By writing learning logs and completing self-assess-

ment forms, students can regularly review learning gains, shortcomings and improvement measures, and cultivate the ability of self-management and self-driven learning. Peer evaluation is implemented in group activities to promote the exchange of mutual observation, positive feedback and constructive suggestions among students, which is conducive to enhancing team cohesion and improving the objectivity and comprehensiveness of evaluation.

#### 5.3 Evaluation of Practical Ability and Innovation Ability

The evaluation criteria of practical ability and innovative ability are set up to evaluate the practical activities, scientific research projects and simulated tasks of space theme that students participate in. Focus on students' performance in solving practical problems, applying knowledge to new situations, and innovative thinking and methods. By setting up evaluation awards such as "Best Creative Solution Award" and "Most Influential team Project", students are encouraged to apply what they learn in practice, dare to explore the unknown, and transform the spirit of space into practical action.

## 6 CONCLUSION AND PROSPECT

#### 6.1 Conclusion

The research on ideological and political teaching of college Chinese courses based on aerospace characteristics shows that the integration of aerospace elements with traditional Chinese teaching content not only enrichis teaching resources, enhances the sense of The Times and attractiveness of the course, but also effectively promotes the internalization of ideological and political education while improving students' language ability. Through the construction of thematic teaching modules, the innovation of teaching methods, and the design of comprehensive evaluation system, students not only master a wealth of space knowledge, but also resonate with the space spirit emotionally, forming a positive outlook on life and values. Furthermore, the teaching mode with space characteristics can effectively stimulate students' pride in the national space industry, enhance their cultural self-confidence, and cultivate their sense of innovation and teamwork ability, laying a solid foundation for training complex talents needed in the space field and other fields in the future.

#### 6.2 Prospect

This research should continue to deepen the following aspects of work: First, strengthen the dynamic update of the curriculum content, keep up with the latest development of the national space industry, integrate the latest space science and technology achievements and space events into the teaching in a timely manner, and maintain the cuttingedge of the teaching content. Secondly, further explore the deep integration of information technology and traditional teaching, and use emerging technologies such as artificial intelligence and big data to optimize the teaching process and achieve a more personalized and intelligent teaching experience. Thirdly, strengthen practical teaching, increase the opportunities for students to participate in space projects through schoolenterprise cooperation and off-campus practice base construction, combine theoretical learning with practical operation, and improve students' practical ability and innovation ability.

In addition, we should pay attention to the cultivation of international vision, strengthen exchanges and cooperation with other countries in space education, and broaden students' international vision and enhance cross-cultural communication ability through international academic conferences and joint research projects, so as to cultivate internationally competitive talents for the common development of the global space industry.

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#### REFERENCES

- 1. Yang C, Wen H, Zhou Y ,et al.Family cohesion and intuitive eating in Chinese college students: A serial mediation model[J].Appetite, 2023:190.
- Krishnan G , Kesavadev J , Mohammed R ,et al.Personalized Intervention in Correcting Insulin Injection Errors and its Impact on A1C in the Study: A Cross-sectional Study[J].International Journal of Diabetes and Technology, 2024, 2(4):112-115.
- 3. Mason J , Hardwicke J .Repositioning the value of sociology for students studying sport in post-92 higher education institutions[J].Journal of Hospitality, Leisure, Sport & Tourism Education, 2024, 35.
- Abdullahi A, Chimbo B.Co-designing a framework for a persuasive educational technology tool for motivating female students for enrolment into Science, Technology, Engineering and Mathematics disciplines[J]. The Journal for Transdisciplinary Research in Southern Africa, 2023.
- 5. Briganti P , Volpe T , Veglianti E ,et al.Technology for sustainability in the educational context: A portrait of the Italian universities[J]. 2024.

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