

Research on the Path of Integrating the Space Spirit into the Ideological and Political Course in Universities in the New Era

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Abstract: As a vital component of the Chinese Communist Party's spiritual heritage, the Space Spirit of the New Era epitomizes the ethos of patriotism, dedication, independent innovation, collaborative problem-solving, and the pursuit of excellence. It serves as a crucial intellectual resource for developing comprehensive ideological and political education in higher education institutions. However, current integration efforts face challenges including insufficient depth, fragmented content, limited practical platforms, inadequate faculty resources, and insufficient regional characteristics. This study examines the Space Spirit from three dimensions—value connotation, practical dilemmas, and implementation pathways—to provide insights for Hainan universities in enhancing ideological education and establishing a distinctive talent cultivation model for the Free Trade Port.

Keywords: space spirit; comprehensive ideological and political education; practical approaches; free trade port development

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1. Introduction

As Hainan Free Trade Port accelerates its development, universities play a vital role in nurturing talent and fostering collective spirit for regional progress. The aerospace ethos, forged through decades of space exploration, embodies profound cultural heritage and contemporary significance, resonating deeply with the spirit of Hainan Special Economic Zone. Integrating this ethos into university ideological and political education not only enriches curricula and enhances educational impact, but also helps young students strengthen their convictions, cultivate patriotic values, and develop into versatile professionals equipped to meet the Free Trade Port's developmental needs^[1].

2. The value implication of integrating the spirit of spaceflight into the ideological and political course in universities in the new era

The construction of ideological and political education requires fresh spiritual resources and practical carriers. The value pursuit contained in the new era space spirit is highly consistent with the goal of moral education in colleges and universities.

2.1. Enriching the content supply of ideological and political education courses to enhance the targeted and influent value guidance

Integrating the aerospace spirit into comprehensive ideological and political education can effectively enrich teaching content, diversify classroom formats, and enhance the appeal and persuasiveness of such courses. The aerospace spirit, characterized by its practical nature and contemporary relevance, addresses the limitations of traditional ideological education—its theoretical focus and abstract materials—by making educational content more relatable and accessible to students. Moreover, the heroic deeds, significant achievements, and struggles in aerospace development can be brought into the classroom through tangible and relatable narratives, allowing students to experience the power of inspiration through role model stories. Most importantly, the aerospace spirit facilitates a shift in ideological education from knowledge transmission to spiritual cultivation, and from one-way indoctrination to two-way mutual recognition, thereby continuously elevating the attractiveness and influence of comprehensive ideological and political education^[2].

2.2. Aligning with the talent development needs of the free trade port to cultivate high-quality new generation

The development of Hainan Free Trade Port imposes higher demands on the comprehensive qualities of talents, which align closely with the spirit of aerospace. On one hand, the construction of the free trade port requires a large number of professionals with patriotic sentiments, innovative spirit, collaborative awareness, and a sense of responsibility—qualities that form the core of the aerospace spirit. On the other hand, integrating the aerospace spirit into ideological and political education can guide students to align their personal aspirations with the broader goals of national development and the free trade port's progress, and to channel their youthful endeavors into the cause of national rejuvenation. The scientific attitude, rigorous approach, and tenacity embodied in the aerospace spirit can also help young people establish correct values, outlook on life, and worldviews, fostering them into capable individuals of the new era^[3].

2.3. Building a distinctive brand for ideological and political education courses in hainan universities by leveraging local aerospace resources

Leveraging regional resources for ideological and political education is a vital approach to cultivating distinctive talent, where Hainan holds inherent advantages. Firstly, the Wenchang Space Launch Center, Hainan's unique national space culture hub, offers unparalleled educational value and regional strengths. Secondly, exploring local expressions of aerospace spirit can transform Hainan's ideological education from uniformity to uniqueness, establishing an educational model integrating "space technology + ideological education + free trade port". Thirdly, utilizing local aerospace resources not only bridges the gap between educational content and students but also enhances the distinctiveness and influence of Hainan's higher education. This demonstrates that local aerospace resources constitute a unique advantage for Hainan's universities in building distinctive ideological education brands.

2.4. Promote the integration of scientific spirit and humanistic literacy to achieve holistic student development

The core mission of ideological and political education lies in fostering students' holistic development, where the aerospace ethos exemplifies the organic integration of scientific literacy and humanistic values. In the new era, this ethos embodies both patriotic dedication and the spirit of perseverance, while also showcasing scientific rigor and innovative thinking. From an educational perspective, incorporating aerospace ethos helps strengthen students' scientific understanding and innovative mindset, cultivating qualities of truth-seeking and rigorous scholarship. Regarding personal growth, it guides students to enhance professional competencies while nurturing patriotic sentiments and teamwork, achieving balanced development of both abilities and character. Fundamentally, this fusion of science and humanities aligns with the core mission of moral education in modern higher education^[4].

3. The realistic dilemma of integrating the spirit of spaceflight into the ideological and political course in hainan universities

Although the integration of the space spirit into the ideological and political education in Hainan universities is of great value, there are still many practical problems in the actual process.

3.1. Shallow integration levels and superficial educational activities

From a holistic perspective, the integration of aerospace spirit with comprehensive ideological and political education remains superficial, failing to achieve deep embedding. The most prominent issue currently is that most universities still conduct education through themed class meetings, video viewing, short lectures, and group visits, lacking systematic design and long-term planning. More notably, these activities are often temporary and context-driven, failing to truly integrate into talent development plans, curriculum systems, and evaluation mechanisms, making it difficult to achieve stable and lasting educational outcomes. The root cause lies in insufficient exploration of the aerospace spirit's essence, leading to educational activities that prioritize form over substance.

3.2. Fragmented content supply with insufficient systematic development

A systematic content framework is fundamental to enhancing educational effectiveness, yet current educational materials remain fragmented and lack cohesive integration. In terms of system development, aerospace spirit education primarily relies on scattered resources, lacking stratified and progressive teaching arrangements, as well as effective connections across different grade levels and academic disciplines. Regarding collaborative education, ideological and political courses (IPOCs) and interdisciplinary curricula (ICCs) demonstrate insufficient synergy, with redundant content and dispersed resources that hinder the establishment of a comprehensive educational ecosystem. From a local resource perspective, existing materials predominantly use generic content, with inadequate exploration of Wenchang launch missions, Hainan's aerospace industry, and local aerospace figures, resulting in a noticeable deficiency in localized content^[5].

3.3. Single practice platform with insufficient functional utilization of the base

Practical education is a vital component of comprehensive ideological and political education, yet the development of platforms for aerospace spirit-related practices remains significantly underdeveloped. In terms of university-local collaboration, institutions have yet to establish stable partnerships with space launch centers, science museums, and aerospace enterprises. Most practical activities remain limited to visits, lacking immersive experiences and active participation. Regarding teaching methodologies, there is a scarcity of immersive, experiential, and research-based projects, hindering students' ability to grasp the essence of aerospace spirit through hands-on engagement. Furthermore, the construction of on-campus practice facilities lags behind, and the integration of online and offline resources remains inadequate, making it challenging to bridge the gap from awareness to acceptance and ultimately to action.

3.4. Faculty competence requires enhancement, with inadequate support systems

Teachers are pivotal to the development of comprehensive ideological and political education. However, the current faculty structure and support mechanisms fall short of meeting the demands of integrated development. In terms of professional competence, ideological and political educators and subject teachers generally lack systematic training in aerospace knowledge and culture, making it challenging to deeply integrate aerospace elements into classroom instruction. Regarding team composition, there is a notable shortage of interdisciplinary teachers proficient in both ideological education and aerospace science popularization, coupled with insufficient capabilities in curriculum development and teaching research. In terms of resource allocation, funding, base construction, and incentive mechanisms remain inadequate, resulting in limited progress in implementation.

3.5. Insufficient integration with local characteristics and inadequate manifestation of regional features

Hainan, endowed with the status of a free trade port and aerospace resources, has yet to fully showcase its regional distinctiveness in integration efforts. Some universities have mechanically replicated external models without adapting to Hainan's unique context for localized innovation. In terms of cultural integration, the intrinsic connection between aerospace ethos and special economic zone spirit remains underexplored, failing to effectively communicate Hainan's distinctive aerospace narratives. Regarding educational relevance, curricula lack close alignment with students' daily lives, developmental needs, and future aspirations, requiring enhanced engagement and practical effectiveness.

4. The practice path of integrating the spirit of spaceflight into the ideological and political course in hainan universities

To address the practical challenges in the current integration process, we will align with the development needs of Hainan Free Trade Port and leverage local aerospace resources. By implementing targeted strategies and systematic approaches, we aim to establish a scientifically sound and highly effective implementation pathway, thereby fostering a deep integration of aerospace spirit with comprehensive ideological and political education.

4.1. Deepening the connotation integration to comprehensively enhance the educational level and practical effectiveness of education

To resolve the issues of superficial and formal integration, we should promote the transformation of aerospace spirit and comprehensive ideological education from superficial superposition to substantive integration, achieving long-term and in-depth education, so that the aerospace spirit can truly penetrate the mind and heart.

First, we must strengthen top-level design by integrating the aerospace spirit into talent development plans, curriculum systems, and evaluation mechanisms, with clear objectives and content to avoid ad-hoc activities. Simultaneously, we should deepen the interpretation of this spirit by linking it to the aerospace industry's development history, mission launches, and exemplary deeds, thereby elucidating its contemporary significance and core tenets. Additionally, we need to facilitate value transformation, guiding students to internalize the aerospace spirit and externalize it through actions, ultimately turning it into unwavering ideals and conscious actions.

4.2. Reconstructing content framework to establish a systematic and distinctive educational model

To address the current limitations of fragmented content and limited resources, we should consolidate resources and establish a framework to create a tiered, categorized, and collaborative content system. On one hand, we should develop a step-by-step content structure tailored to different grade levels to achieve precise education. On the other hand, we should strengthen the synergy between ideological and political courses and other subjects, breaking down resource barriers to ensure coordinated efforts. Meanwhile, we should deeply explore distinctive materials such as Wenchang's space launches and local space figures, building a localized resource library to make educational content more relevant to Hainan's realities and students' daily lives.

4.3. Innovative practice scenarios: building an immersive and multidimensional educational platform

To address the challenges of inadequate practical platforms and limited educational functions, we should diversify practice formats and expand learning spaces, shifting from observational to immersive and research-based approaches. We will deepen school-community collaboration by establishing practice bases with Wenchang Space Launch Center, Science Museum, and aerospace enterprises, while regularly conducting field teaching and study tours. Innovative programs like aerospace simulations, cultural design workshops, and science lectures will be developed to boost student engagement. Simultaneously, we will upgrade campus platforms, create aerospace-themed cultural environments, and leverage new media to expand online channels, achieving integrated online-offline education.

4.4. Strengthening team support and improving comprehensive and sustainable guarantee mechanisms

To address the challenges of insufficient faculty capabilities and weak support systems, we must strengthen the teaching team and establish robust institutional safeguards to provide solid support for integrated development. We should enhance professional training for teachers, organize specialized learning sessions on the aerospace spirit, and improve their ability to integrate curricula. The team structure should be optimized by hiring aerospace experts and technical specialists as part-time mentors, forming a composite team combining full-time and part-time members. Financial and institutional support should be strengthened, with increased investment in curriculum development, base construction, and teaching research. The effectiveness of education should be incorporated into performance evaluations to motivate teachers.

4.5. Highlighting free trade port characteristics and promoting localization and innovation of aerospace spirit

Only by highlighting local characteristics can the aerospace spirit take root and thrive in Hainan's universities. Addressing the challenges of insufficient regional focus and shallow integration with local contexts, we must ground our efforts in the realities of Hainan Free Trade Port to localize and characterize the aerospace spirit. By exploring shared values and explaining its intrinsic connections with the special economic zone spirit and free trade port ethos, we guide students to align personal growth with regional development and national strategies. Telling compelling local aerospace stories—highlighting Wenchang's launch milestones and the achievements of local aerospace professionals—empowers communities through relatable narratives. Through developing distinctive educational programs and practical projects under the 'aerospace + ideological education + free trade port' framework, we create replicable and scalable Hainan models.

Disclosure statement

The author declares no conflict of interest.

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