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The Seasons as a Medium, Ice and Snow as Educators: Cultural Inheritance and Practical Exploration in Study-Based Education

-- Taking the "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project as an example

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Abstract: The "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project is grounded in the cultural heritage of the Twenty-Four Solar Terms and the intangible cultural heritage resources of Beijing's Central Axis, aiming to construct an educational system for study-based learning centered on traditional culture. Drawing on the project's practice and the author's professional experience in a ski winter camp, this paper explores how the transmission of solar term culture and the transformation of educational value can be achieved in outdoor education settings. By analyzing the intersection of solar term culture and ice and snow sports, the relationship between children's cognitive development and the design of study-based curricula, and the role of educators in informal learning environments, this paper proposes the educational philosophy of "teaching in accordance with the seasons, educating in accordance with the place," offering practical pathways and theoretical support for the integration of traditional culture and modern study-based education.

Keywords: Twenty-Four Solar Terms, Study-Based Education, Cultural Inheritance, Central Axis Intangible Cultural Heritage, Child Development.

1. Introduction

The Twenty-Four Solar Terms represent the accumulated wisdom of China's long-standing agricultural civilization, embodying the philosophical concept of harmonious coexistence between humanity and nature. As the Ministry of Education continues to promote the integration of outstanding traditional Chinese culture into schools and curricula, solar term culture is gradually becoming an important vehicle for fostering cultural identity and aesthetic education among young people[5]. However, how to bring solar term culture from textbooks into daily life and from classrooms into nature remains a challenge in current educational practice.

The "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project is an attempt to address this issue. Using Beijing's Central Axis as a spatial framework and the Twenty-Four Solar Terms as a temporal thread, the project designs a series of study-based courses that integrate cultural experience, intangible cultural heritage transmission, nature observation, and aesthetic education. This paper, grounded in the project and informed by the author's professional experience in a ski winter camp, explores how the educational transformation of solar term culture can be realized in an ice and snow study-based context, and reflects on the dual construction of professional competence and cultural literacy in study-based education[5].

2. Project Overview: The "Timeline of the Central Axis: Solar Terms in the Capital Study Tour"

The "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project was developed by the team as an extension of the "Poetic Reflections on Solar Terms" project. It aims to enable young people to perceive seasonal transitions and understand traditional wisdom in authentic cultural settings through immersive study-based activities. The project is structured around three core components:

Solar Term Cultural Corridor: Utilizing images, objects, interactive installations, and other forms, this component presents the origins of the solar terms, agricultural activities, folk customs, and related content, creating a tangible cultural space.

Intangible Cultural Heritage Walking Classroom: Themed study routes are designed based on intangible cultural heritage resources along Beijing's Central Axis, such as the Temple of Heaven's ritual ceremonies, stargazing at Jingshan, and ice-skating traditions at Shichahai.

Solar Term Poetry and Aesthetics Course: Using the solar terms as a guiding thread, students are guided to recite, appreciate, and compose poetry, enhancing their linguistic expression and aesthetic sensibility.

The project emphasizes "experience as learning," integrating cultural cognition, physical participation, and emotional experience in an effort to achieve knowledge internalization and value identification during the study process. Huang Qin and Zhang Xinyue (2025) note that the design of study tour activities within the context of the Twenty-Four Solar Terms should emphasize resource integration and context creation-an approach that aligns closely with the design philosophy of this project[1].

3. Practical Case: Solar Term Education in the Ice and Snow Classroom

3.1. The Encounter of Solar Terms and Ice and Snow: From "Major Snow" to "Beginning of Spring"

During the winter vacation of 2026, the author participated in a ski winter camp organized by Beijing Joy Sports Company, serving in the dual roles of ski instructor and life teacher. Although this camp was not a direct implementation of the project itself, its educational philosophy was highly consistent with the "Timeline of the Central Axis: Solar Terms in the Capital Study Tour": both emphasized education in harmony with natural rhythms, both focused on the creation of informal learning environments, and both pursued the integration of professionalism and empathy.

The winter camp period coincided with the solar terms from "Major Snow" to "Beginning of Spring." The author integrated solar term elements into the teaching process, such as organizing campers to observe the morphological characteristics of snowflakes on the day of Major Snow and explaining its symbolic significance in agricultural culture. During Minor Cold and Major Cold, the author guided children to understand how ancient peoples engaged in winter activities in accordance with the season, drawing on ice-skating traditions along Beijing's Central Axis. This approach of embedding solar term culture into ice and snow sports added cultural depth and emotional resonance to the camp, which had originally been focused primarily on skills training.

3.2. Educational Practice in a Dual Role

During the winter camp, the author held the dual responsibilities of lead snowboard instructor and camp life teacher. This role arrangement effectively addressed the dual requirements of "teaching" and "nurturing" in study-based education.

As an instructor, the author worked with three beginner campers aged 8 to 12, developing differentiated teaching plans based on their cognitive characteristics and learning styles. In instruction, the author attempted to translate solar term culture into concrete pedagogical language-for example, comparing the "heel-edge push" movement to "snow pressing on pine branches," and linking the rhythm of edge transitions to the cadence of seasonal changes. This helped children experience the rhythmic quality of the solar terms through physical movement.

As a life teacher, the author accompanied the children in their daily routines, from organizing their living spaces in the morning to evening sharing sessions, weaving solar term culture into everyday details. For example, around the "Minor New Year" festival, children were guided to create solar term-themed journals, recording daily weather, emotions, and personal growth. This allowed the solar terms to serve as a framework for observing the world and expressing themselves. Zhang Pei and Li Qiong (2021), in their study on the design of study tour courses centered on the Winter Solstice solar term, emphasized the importance of making such courses life-oriented and experiential-an approach fully validated by this practice[4].

3.3. The Application of Educational Theory in Practice

The author's background in primary education provided theoretical tools for understanding child development. In the winter camp practice, these theories were organically integrated with solar term-based study-based education.

Piaget's theory of cognitive development demonstrated its practical relevance in teaching. Children aged 8 to 12 are in the concrete operational stage: logical thinking is developing, but still requires concrete, tangible support. When explaining the "heel-edge push" movement in snowboarding, rather than directly conveying technical principles, the author guided the children to imagine "sitting like a little penguin on an invisible chair." This concrete metaphor immediately elicited understanding and imitation. This instructional strategy is equally applicable to conveying abstract concepts in solar term education (such as "the waxing and waning of yin and yang" or "phenological changes")[6].

Vygotsky's concept of the "zone of proximal development" was also applied throughout the teaching process. When a child encountered a bottleneck with a particular skill, the author provided timely "scaffolding" support, gradually withdrawing it to allow the child to experience the sense of accomplishment that comes from independent completion. This process aligns seamlessly with the solar term education principle of "following natural rhythms and proceeding step by step"[7].

In terms of creating and utilizing informal learning environments, the role of life teacher made the author realize that education occurs far beyond the confines of the ski slope. Table manners during meals, sharing sessions before bed, and casual conversations during breaks are all critical moments for cultivating character and transmitting values. One evening, a young camper became homesick and emotional. Instead of simply offering comfort or distraction, the author guided the child to reflect on the new skills learned that day, helping him recognize his own growth. This strengths-based conversational approach exemplifies the application of positive intervention principles in educational psychology[8].

4. Mechanisms of Cultural Inheritance in Study-Based Education

4.1. From "Skill Transmission" to "Cultural Immersion"

Traditional study-based education often overemphasizes knowledge explanation and skills training, neglecting the deep transmission of cultural meaning. This case demonstrates that when educators embed solar term culture into instructional language, activity design, and everyday life, culture ceases to be an add-on and becomes the intrinsic soul of education.

In ski instruction, the author integrated the rhythm of the solar terms into movement practice, allowing children to perceive natural rhythms through physical activity. In daily companionship, solar term customs were transformed into conversational topics, making culture a tangible life experience. This "immersive" approach to cultural transmission is far more effective than one-way explanation in evoking children's emotional resonance and value identification.

4.2. From "Individual Experience" to "Collective Memory"

Another important function of study-based education is to create shared collective memories for children. In the winter camp, the author organized solar term-themed group activities (such as a snowman-building contest on Major Snow day and storytelling sessions on Minor New Year's Eve), enabling children to develop a collective identification with solar term culture through shared participation. This memory is embedded not only at the cognitive level but also in emotion and social relationships, forming an integral part of their cultural identity construction.

4.3. From "Seasonal Activities" to "Cyclical Education"

Solar term culture is inherently cyclical. The long-term goal of this project is to establish a cyclical study-based system with the solar terms as a temporal axis and Beijing's Central Axis as a spatial axis. By conducting themed study-based activities corresponding to different solar terms, young people can develop a comprehensive understanding and emotional connection to solar term culture through sustained participation. The winter camp practice provides a replicable experiential model for winter solar term study-based programs.

5. Educators' Professional Competence and Cultural Awareness

5.1. The Dual Construction of Professional Competence and Cultural Literacy

This practice has deeply impressed upon the author the need for study-based educators to possess not only professional skills (such as ski instruction ability) but also cultural literacy and educational dedication. In the ice and snow classroom, only when instructors can accurately convey movement techniques while also translating solar term culture into instructional language can the educational goal of "nurturing people through sports and culture" be truly realized.

Liu Jia (2023), in a study on the development of ski curricula in Changchun's primary schools from the perspective of integrating sports and education, notes that ski instruction requires teachers to possess composite competencies[2]. Jiang Bowen (2023), in a study on the construction of ski curriculum systems in Changchun's primary schools in the post-Beijing Winter Olympics era, further emphasizes that curriculum improvement depends on teachers' deep understanding of educational principles and cultural connotations[3]. These research findings resonate with the insights gained from this practice.

5.2. Educator Development: The Transition from "Teaching" to "Nurturing"

Over the five-day winter camp, the author gradually transitioned from a "skills instructor" to an "educator nurturing hearts." This transformation stemmed from keen observation of children's needs, accurate identification of educational opportunities, and a deep understanding of cultural meaning.

On the first day, the youngest camper refused to attempt any movement due to fear. Rather than rushing to teach, the author sat with her in the snow, building snowmen and chatting, gradually establishing a connection. The next day, she took the author's hand and said, "Teacher, I want to try." In that moment, the author understood that the starting point of education is always reaching the heart, not transmitting knowledge. Such relationship-building requires genuine care as well as professional insight-knowing when to push and when to wait requires precise judgment.

The experience as a life teacher revealed that education's defining moments often occur not in planned instructional segments but in seemingly minor details: a quiet "good night" while tucking in a child, a warm hand offered after a fall, silent companionship during moments of homesickness. These seemingly trivial moments constitute the very foundation of education. At the end of the camp, one camper secretly slipped the author a note: "Teacher, you are as gentle as my mom." This statement profoundly conveyed the meaning of the saying, "In education, no detail is trivial; everything nurtures."

Figure 1. Ski Teaching Scene

6. Practical Value and Future Prospects

6.1. Implications for Study-Based Education

This case offers the following insights for study-based education:

First, cultural integration must permeate the entire educational process. Solar term culture should not exist merely as a knowledge module but should be embedded in instructional language, activity design, and daily management to achieve a "nourishing without being obvious" educational effect.

Second, educators need composite competencies. Study-based education requires educators to possess professional skills, cultural understanding, and knowledge of child development-none of which can be overlooked.

Third, informal learning environments possess unique value. Cultural transmission within everyday life contexts is often more engaging and enduring than classroom instruction and should become an essential component of study-based education.

6.2. Prospects for Project Development

Based on this practice, the team plans to further expand the

winter study-based content within the "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project. Focusing on solar terms such as Major Snow, Winter Solstice, Minor Cold, and Major Cold, and integrating intangible cultural heritage resources along Beijing's Central Axis-including ice-skating traditions, ritual ceremonies, and stargazing-the team aims to design more systematic winter study-based courses. Concurrently, the team will strengthen educator training, enhancing members' comprehensive capabilities in cultural understanding, child development, and curriculum design, thereby facilitating the project's transformation from an "activity-based" to a "curriculum-based" model.

7. Conclusion

From the ice and snow classroom to solar term-based study-based education, from skill transmission to cultural immersion, this professional experience has profoundly demonstrated for the author that education can take such rich forms, and cultural inheritance can be such a vivid process. Five days, 120 hours-a brief moment in the span of a life-yet the gains from this period will surely influence the author's educational journey. From theory to practice, from the classroom to the ski slope, from student to "teacher," the shift in roles has brought about a transformation in perspective, and practical experience has deepened theoretical understanding.

As a future educator, the author feels a profound sense of responsibility, as well as great inspiration. The responsibility lies in the fact that every educational act can influence the trajectory of a life; the inspiration comes from the realization that when we engage in education with professionalism and empathy, we have the opportunity to illuminate the futures of more children.

The "Timeline of the Central Axis: Solar Terms in the Capital Study Tour" project will continue to use the solar terms as a medium and study-based learning as a pathway to explore the integration of traditional culture and modern education. May more educators join this mutual pursuit of culture and nurturing, so that the beauty of the solar terms and the charm of the Central Axis may take root and blossom in the hearts of young people, giving rise to the cultural flower of this era.

Figure 2. Closing Ceremony Group Photo

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