International Educational Research; Vol. 8, No. 3; 2025
ISSN 2576-3059 E-ISSN 2576-3067
https://doi.org/10.30560/ier.v8n3p47

A Study on the Current Situation and Countermeasures of Integrating the Traditional Culture of the 24 Solar Terms into the Kindergarten Curriculum

Wu Junmei[1]

[1] School of Education, Weifang University of Science and Technology, China

Correspondence: Wu Junmei, School of Education, Weifang University of Science and Technology, Weifang, Shandong, 262700, China. E-mail: 979611509@qq.com

Received: May 30, 2025; Accepted: June 9, 2025; Published: June 10, 2025

Shandong Province Education Science 14th Five-Year Plan 2023 (Self-financing) Project "Enjoying Nature-Children's Tour of the Four Seasons: A Study on the Development and Practice of the Garden-based Ecological Curriculum of the Twenty-four Sets of Seasons and Traditional Cultures", Stage Results, Project No.: 2023ZC683.

Abstract

As a crystallization of the wisdom of Chinese farming civilization, the 24 solar terms carry the natural philosophy of the unity of man and nature and the aesthetics of life. The current kindergarten curriculum has a superficial tendency to absorb the culture of festivals and seasons: activities focus on single festivals such as the winter solstice and the Qingming Festival, and lack a systematic design throughout the year; urbanization has weakened the children's direct experience of perceiving changes in the weather, and the lack of teaching materials and teachers has further exacerbated the faults in the cultural inheritance. Incorporating festivals into early childhood education is not only a response to the policy direction of traditional cultural revival, but also an inevitable way to cultivate children's natural cognition and humanistic sentiments by observing the awakening of insects in the wake of hibernation and measuring the sunshine at the summer solstice, etc. It is urgent to build a scientific and localized curriculum paradigm.

Keywords: Twenty-Four Solar Terms, traditional culture, kindergarten curriculum, countermeasures research

1. Introduction

The 24 solar terms are the crystallization of the wisdom of Chinese agriculture civilization, containing the philosophical idea of harmonious coexistence between human beings and nature, the integration of 24 solar terms into kindergarten curriculum has specific cultural inheritance and educational value. Kindergarten festival education is currently generally fragmented, superficial phenomenon, and activities are mostly focused on individual festival nodes, and lack systematization of curriculum design and in-depth cultural development. For example, when children participate in activities such as making dumplings at the winter solstice and trekking in the Ching Ming festival, they often remain at the experience form and are unable to comprehend the pattern of change, and the wisdom of life behind the festivals. The current state of education not only diminishes the nurturing function of traditional culture, but misses an important opportunity to nurture young children's natural observation, and a sense of cultural identity. Important steps in reconstruction of festival education system can be based on curriculum design, resource development, teacher training and other dimensions, so that traditional culture can truly become the spirit of food to nurture the growth of young children [1].

2. The Theoretical Basis of Integrating the Twenty-Four Solar Terms into the Kindergarten Curriculum

The Twenty-Four Solar Terms embody the aggregated wisdom of an ancient Chinese agricultural civilization's observations and experiences of natural cycle phenomena, when solar trajectories and phenological categories induced a cognitive time system that directed productive activities and modes of daily life. In the context of kindergarten education, solar term culture embodies implicit values such as valuing seasonal transition (phenology) and understanding the philosophical notion of harmonious coexistence between human and nature. Children can build emotional connectedness with nature through solar term activities, such as recognizing the awakening of insects at Jingzhe (Awakening of Insects) or noticing sunlight changes at the winter solstice, which advances children's observational skills and ecological consciousness. This culturally contingent experience of children's

life-context corresponds far more favourably with children's embodied cognitive traits rather than abstract forms of didactic education.

3. Problems and Challenges of Integrating the 24 Solar Terms into the Kindergarten Curriculum

3.1 Insufficient Systematicity of the Curriculum

The current kindergarten festival program generally suffers from the dual dilemmas of chronological rupture and cultural divestiture, with the majority of kindergartens selecting only a few festivals, such as the winter solstice and Ching Ming, to carry out dumpling or tomb-sweeping activities, and failing to incorporate the twenty-four festivals as an organic whole throughout the entire year of teaching. This fragmented approach to implementation has fragmented the physical and climatic connections between the seasons. For example, children's observation of insects waking up during the hibernation is not followed up by an exploration of the balance of day and night on the vernal equinox, making it difficult for children to understand the logic of the continuum of climate change. Curriculum design also often strips away the agricultural civilization behind the festive seasons, reducing the custom of “weighing people” in summer to a game of weight measurement and ignoring the wisdom of life inherited from the regulation of summer heat. What's more, there is a lack of age-specific target gradients, as children in younger classes and older classes often participate in the same wheat sheaf sticking crafts, which fails to satisfy the sensory exploration needs of younger children, and also makes it difficult to stimulate older children's scientific inquiries into the seasonal phenomena, and ultimately undermines the value of the gradient of the seasonal education to cognitive development [2].

3.2 Lack of Educational Resources and Support

The implementation of festival education faces the constraint of a structural shortage of resources. The festival picture books circulating on the market often focus on lists of knowledge, and lack interactive teaching aids such as props for summer weighing or materials for experiments on small fullness irrigation that can be operated by young children. Urban kindergartens are generally confined to concrete forest environments, making it difficult to provide a real natural field for observing persimmon trees changing color in the frosty season and recording the growth of seedlings in the rainy season, and it is difficult to replace the sensory experience of touching soil moistened with morning dew with virtual videos. In the teacher training system, thematic training on the agricultural wisdom of festivals has been absent for a long time, and most kindergarten teachers can only rely on fragmented information on the Internet to design courses, such as simplifying the “fishing festival” for the summer festival into a fish-coloring activity, which strips away the cultural context of fishermen's rituals for praying for blessings. The development of resources does not take regional differences into account, and there is a lack of localized programs in northeastern gardens that correspond to the “rotting grasses become fireflies” of the three summer holidays, which ultimately results in the activities of the festival being reduced to mechanical reproductions of standardized cultural symbols.

3.3 Lack of Teachers' Traditional Cultural Literacy

Early childhood teachers' understanding of the culture of festivals is mostly limited to the names and dates of the festivals, and their lack of knowledge of the deeper agricultural proverbs and climatic conditions directly affects the depth of the curriculum design. Some teachers confuse the climatic characteristics of the summer solstice, when the deer antlers are broken, and the summer solstice, when the warm winds arrive, and set the activities of the summer festival as simply eating watermelon to relieve the summer heat, failing to guide children to think about the wisdom of ecological transformation behind the concept of “rotting grasses become fireflies”. It fails to guide children to think about the wisdom of ecological transformation behind “rotting grasses become fireflies”. The curriculums of teacher training colleges and universities rarely provide training on the festival, and in-service teachers often rely on short videos to obtain fragmented information, for example, simplifying the “fishing festival” in the summer heat as an activity of drawing fishing boats, and ignoring the traditional ethic of respecting nature in the ceremony of offering sacrifices to the sea. Weak cultural interpretation skills have led to curricula that deviate from the essentials; the custom of drinking chrysanthemum tea at the cold dew is mechanically enforced, but no one expounds on the chrysanthemum's philosophy of health maintenance, which ultimately reduces the festivals to empty cultural performances rather than the transmission of wisdom for life [3].

3.4 Inadequate Cooperation Mechanism Between Kindergarten and Home

Currently, home and family collaboration in the education of festive seasons mostly stays at the level of task transmission. After the kindergarten issued the task list of making dumplings at the winter solstice, parents often replace the process of kneading and rolling the skin with the purchase of quick-frozen finished products, thus losing the original intention of labor education. Young parents generally lack experience in the festive seasons,

and the agricultural activity of harvesting hawthorns at the cold dew is difficult to carry out because urban families are far away from the land, and the agricultural proverb of "hitting jujubes at the white dew and planting wheat at the fall equinox" handed down by ancestors has gradually become an unfamiliar word. Community resources have not been effectively integrated, and the sweet potato digging activities at community farms are misaligned with kindergarten curriculum time, resulting in children missing the opportunity to observe the growth of tubers in the field. What's more, there is a lack of a continuous interactive mechanism. Teachers did not provide families with feedback on seedling growth photos during the rainy season planting activities, so parents were unable to continue their children's interest in exploring the changes in plants, which ultimately weakened the value of the extension of the festival's culture in the family context.

3.5 Lack of Evaluation System

The evaluation of the solar term curriculum has long relied on results-based assessment, and teachers often use children's completed winter solstice dumpling crafts or Qingming willow weaving works as the basis for effectiveness, neglecting to track the continuity of observation of the weather and the depth of cultural understanding and other core qualities. The lack of evaluation criteria leads to ambiguity in the teaching objectives, and there is a lack of systematic behavioral observation scales to verify whether children really understand the scientific connotation of the autumn equinox, which is the equal division of day and night, or whether they only remember the customary symbols of eating dumplings in the mango season. The problem of a single evaluation subject is obvious. Parents were not included in the collaborative evaluation of the hawthorn harvesting activity, and it was difficult to record the children's active observation of the persimmon tree's color change in frost at home. What's more, there is a lack of vertical comparison mechanism [4]. The same children's cognition of "rotting grass turning into fireflies" in the summer is a developmental leap from mythological imagination to ecological understanding, and the lack of comparative analysis of the growth archive fails to show the educational effectiveness, which ultimately reduces the festival weather program to an immediate activity rather than a progressive learning process.

4. Optimizing the Integration of the 24 Solar Terms into the Kindergarten Curriculum

4.1 Constructing a Systematic Curriculum System

The key to transforming the profound natural wisdom and cultural essence embedded in the 24 Solar Terms into developmentally appropriate curriculum content lies in establishing a comprehensive pedagogical system with clearly defined objectives, well-structured tiers, and coherent content. This system should transcend the limitations of fragmented holiday celebrations by using the natural rhythm of seasonal transitions as its underlying framework, weaving together diverse cultural elements including climatic changes, traditional farming customs, folk art expressions, and dietary wisdom into the fabric of daily kindergarten education. Curriculum objectives should be precisely formulated to cultivate children's keen observational skills and investigative interest through direct engagement with seasonal changes, while fostering initial comprehension of the philosophical concept of harmony between humans and nature in Chinese traditional culture, as well as nurturing basic cultural identity and emotional connection to their native environment. Content design must adhere to children's developmental patterns, demonstrating a spiral progression of cognitive complexity: nursery classes focus on sensory stimulation to establish preliminary awareness through vivid seasonal experiences; middle classes deepen engagement by guiding children to observe and document subtle changes in flora and fauna, while participating in life-connected customs like spring outings during Qingming or weight-measuring rituals during Start of Summer; senior classes advance to culturally richer practices such as preparing simple seasonal foods, performing folk tales or songs, and understanding the intrinsic connection between solar terms and human productive activities. Implementation emphasizes natural integration into authentic life contexts and play-based scenarios, employing multiple synergistic approaches including thematic inquiry, learning centers, outdoor observation, artistic creation, and home-kindergarten collaboration. This allows solar term culture to permeate children's daily experience as gently as spring rain nourishing the earth, creating an immersive cultural learning environment that respects children's developmental needs while preserving the authenticity of traditional wisdom [5]. The curriculum's effectiveness ultimately manifests in children's growing ability to recognize nature's cyclical patterns and appreciate the cultural heritage embedded in their immediate environment, laying foundations for lifelong cultural literacy and ecological awareness.

4.2 Developing Diversified Educational Resources

The profound integration of the Twenty-Four Solar Terms culture into kindergarten education necessitates the careful design and extensive exploration of diverse educational resources that align with this tradition, forming an indispensable foundation for curriculum implementation. Resource development must transcend the limitations of

single teaching materials by embracing the vast living environment and rich cultural heritage, systematically integrating multidimensional elements including physical objects, environmental settings, digital media, and community assets. Creating physical environments imbued with solar term characteristics proves particularly vital - the nature corner could display seasonal flowers and fruits for children's observation, the art area might incorporate models of traditional farming tools or semi-finished folk handicrafts related to solar terms, while the role-play zone could provide simulated props of seasonal food customs, enabling children to physically engage with cultural traditions through direct sensory experiences and hands-on manipulation. Equally important is excavating quality literary and artistic works connected to solar terms, including picture books, nursery rhymes, folktales, and classical poetry, adapting them into age-appropriate listening materials or drama scripts that convey cultural significance through beautiful language and vivid narratives. Modern technology should be strategically employed through carefully selected or custom-made digital resources such as animated shorts, interactive games, and documentary clips that visually demonstrate phenological changes and farming activities, compensating for children's limited direct life experiences. Community and family resources offer invaluable supplements - inviting parents or elderly community members with traditional farming or handicraft knowledge to share firsthand experiences, organizing safe agricultural activities for children, or visiting local cultural sites associated with specific solar terms, all serving to transform abstract cultural symbols into tangible life experiences. This multidimensional resource network, combining physical artifacts, artistic expressions, technological aids, and human interactions, provides rich sensory channels and experiential platforms for children to perceive and understand traditional culture, making the learning process both culturally authentic and developmentally appropriate [6].

4.3 Strengthening Teacher Training

The effective integration of the Twenty-Four Solar Terms culture into daily kindergarten teaching fundamentally relies on teachers' professional competence and cultural literacy, making targeted teacher training particularly crucial. The core objective of such training should focus on deepening educators' understanding of solar terms' essence and enhancing their ability to translate this knowledge into pedagogical practice, moving beyond superficial knowledge transmission to help teachers grasp the underlying natural philosophy, agricultural wisdom, and life aesthetics embedded in solar terms, thereby developing authentic cultural insight. Training methodologies must balance theoretical and practical components through immersive experiences such as field observations where teachers document phenological changes and connect them with classical poetry descriptions, hands-on workshops for making traditional seasonal foods or crafts to strengthen emotional connection, and case study discussions of exemplary solar term picture books or nursery rhymes to collaboratively develop age-appropriate learning activities. Special emphasis should be placed on cultivating teachers' ability to identify teachable moments in daily life, skillfully guiding children's natural observations or seasonal questions into meaningful solar term explorations—for instance, extending a child's interest in falling leaves to discussions about the Autumn Equinox. Sustainable professional support systems are essential, including establishing in-house solar term research groups or regional teacher learning communities that regularly share practical experiences and challenges. This ongoing support should encourage teachers to localize and creatively adapt training content while continuously reflecting on and refining their instructional strategies, ensuring the solar term curriculum remains both culturally authentic and pedagogically responsive to children's developmental needs. Only when teachers themselves develop genuine appreciation and practical mastery of solar term culture can they naturally create immersive learning experiences that bring this traditional wisdom to life in the classroom [7].

4.4 Deepening the Synergy Between Home and Community

The deep integration of the Twenty-Four Solar Terms culture into kindergarten curricula requires establishing a trilateral coordination mechanism among families, kindergartens, and communities to create educational synergy that compensates for the limitations of single-entity implementation. Kindergartens should proactively build regular communication platforms with solar term themes, periodically providing parents with seasonal living guides containing local phenological characteristics and folk activities, helping young parents understand the educational value of traditional practices like collecting dew during White Dew or preserving meat during Major Snow, thus preventing family participation from becoming mere procedural task completion. The integration of community resources proves particularly crucial, as kindergartens can establish collaborative research partnerships with nearby farms to organize children's observation of hawthorn harvesting during Cold Dew or coordinate traditional game spaces in the community during Spring Equinox, transforming textbook knowledge of solar terms into experiential social practices. A shared mechanism for children's solar term growth portfolios should be established, where teachers systematically document data such as summer solstice shadow measurements in kindergarten, parents supplement with home records like autumn equinox egg-standing attempts, and community

workers contribute observational feedback on winter solstice folk activities, creating a multidimensional evaluation through cross-verified records. Special emphasis should be placed on cultivating grandparents as cultural bridges by inviting them to share personal solar term memories and demonstrate nearly-lost folk skills like making glutinous rice cakes during Minor Snow, allowing the natural transmission of intergenerational wisdom. This multi-party collaborative model breaks through the spatial constraints of kindergarten walls, extending solar term education from classroom activities to intergenerational and community-based cultural practices, enabling children to understand in real-life contexts that solar terms represent not just natural cycles but also the accumulated life philosophy of generations, ultimately achieving a profound transformation from cognitive understanding to cultural identification [8].

4.5 Establishing a Dynamic Evaluation Mechanism

The effectiveness of integrating the Twenty-Four Solar Terms culture into kindergarten curricula requires a scientifically appropriate evaluation mechanism for continuous improvement. This assessment should transcend static outcome-based approaches and instead focus on children's authentic learning experiences, cognitive development, and evolving cultural awareness during solar term activities. At the heart of this dynamic evaluation system lies the adoption of diversified observation and documentation methods to systematically track children's emerging interests, investigative behaviors, emotional expressions, and progressive understanding of cultural concepts throughout seasonal learning experiences. Educators must intentionally collect process-oriented evidence including children's dialogue during phenological observations in nature corners, operational details when participating in seasonal food preparation, creative thought processes demonstrated in solar term-themed artwork, and emotional attitudes revealed while narrating traditional solar term stories. The evaluation framework should balance individual differences with collective patterns - meticulously analyzing each child's unique comprehension trajectory of specific solar terms (such as a child's developmental journey from simply noticing insect awakening during Jingzhe to gradually understanding its connection to spring plowing initiation), while simultaneously assessing the class's overall progress in grasping cyclical patterns and cultural customs of solar terms [9]. A collaborative evaluation approach proves essential, encouraging teachers and parents to jointly document children's spontaneous application of solar term knowledge in home settings, like reminding family members to follow Winter Solstice dietary traditions or attempting the egg-standing game during Spring Equinox. These natural behaviors provide complementary perspectives for comprehensive assessment. The ultimate value of evaluation lies in its timely feedback to teaching practice - educators should regularly analyze observational records to identify common cognitive challenges or emerging interests, then flexibly adjust subsequent activity designs and instructional support accordingly, ensuring the solar term curriculum remains responsive to children's authentic learning needs and cultural comprehension levels [10].

5. Conclusion

The essence of solar term education lies in guiding children to establish cultural identity through the cyclical rhythm of the four seasons. Addressing current challenges requires multidimensional collaboration: teachers must deeply comprehend the ecological wisdom behind solar term proverbs, develop kindergarten-based curriculum resources tailored to regional characteristics, encourage family participation in seasonal practices like pickling vegetables during Frost's Descent or storing grains during Light Snow, and establish nature journal assessment systems to document children's long-term observations. When children personally sow seeds during Grain Rain and witness grain filling during Grain Buds, traditional culture transcends textbook symbols to become cultural DNA imprinted in lived experience - this represents the most authentic educational vision of cultural heritage transmission.

References

[1] Yifan, W., Lu, Z., & He, W. (2023). A probe into the path of integrating “24 solar terms” into international Chinese language education from the perspective of cultural communication. *International Journal of New Developments in Education, 5*(12), 12. https://doi.org/10.25236/IJNDE.2023.051204

[2] Zhang, J., & Wang, M. (2022). Investigation on the integration of Chinese traditional culture into kindergarten curriculum—Take Shan district of Shanghai as an example. *Asian Journal of Social Science Studies, 7*(7), 38. https://doi.org/10.20849/ajsss.v7i7.1242

[3] Wu, C. (2024). *A case study on the integration of the 24 solar terms culture into kindergarten environment creation* [Master’s thesis, Southwest University], 13. https://doi.org/10.6007/IJARPED/v13-i2/21145

[4] Liu, G. (2024). *Practical exploration of integrating the twenty-four solar terms into kindergarten pro-nature activities* [Master’s thesis, Dali University], 23.

[5] Wang, D. (2022). A practical study of kindergarten carrying out the garden-based curriculum of the twenty-four solar terms. *Contemporary Family Education*, (01), 85–87.

[6] Zhang, M. (2021). *Action research on integrating the twenty-four solar terms into kindergarten games* [Master's thesis, Hebei University], 19.

[7] Ma, C. (2021). Reflections on integrating the traditional culture of the twenty-four solar terms into elementary school language classes. *Tianjin Education*, (05), 112–113.

[8] Yang, H. (2020). *A case study of integrating the 24 solar terms into kindergarten education activities* [Master's thesis, Anshan Normal College], 12–14.

[9] Li, Z. (2018). Integrating "twenty-four solar terms" into campus culture construction. In *Secondary Education Research 2018, No.2 (Total 225)* (pp. 39–41). Tianzhu First Middle School, Wuwei City, Gansu Province.

[10] Wang, R. (2025). *Action research on integrating the 24 solar terms into kindergarten curriculum* [Master's thesis, Southwest University].