

Strategies for Integrating the Cultural Attributes of Knowledge into Senior High School Geography Teaching

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Abstract: The profound articulation of the cultural attributes of knowledge is crucial for realizing its educational value and facilitating its transformation into pedagogical wisdom. Aiming at the problem of insufficient integration of cultural attributes in geography education, an integration path including four stages of cultural understanding, cultural exploration, cultural identity, and cultural confidence is constructed, which is based on the connotation and composition of cultural attributes in knowledge. At the same time, it clarifies the interrelated mechanism of the integration path and proposes specific strategies for the stage. In the course design, we should strengthen the exploration and organization of cultural understanding. In classroom teaching, cultural inquiry ability is cultivated through situational cases. In terms of practical activities, experiential participation promotes the formation of cultural identity. In teaching evaluation, cultural confidence is cultivated through diversified guidance methods. This provides a practical reference for the implementation of cultural education in geography.

Keywords: Cultural attributes of knowledge; Cultural education; Cultural confidence; Senior high school geography

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1. Introduction

The new curriculum reform has established “cultivating virtue through education” as its fundamental task. As an important part of basic education, senior high school geography curriculum is the key carrier to realize the goal of cultivating virtue and the function of cultural education. With the deepening of curriculum reform and the advancement of quality education, the country’s requirements for senior high school education have shifted from the traditional teaching of theoretical knowledge to the centralized cultivation of students’ cultural literacy. In the traditional teaching mode, educators pay more attention to cultivating students’ ability to use geographical knowledge to migrate and apply it. However, there are many limitations in teaching the cultural connotation of this knowledge^[1]. Senior high school geography teaching also faces some problems,

such as putting knowledge above culture, breaking the connection between the two, and even encountering the “structural silence” phenomenon of the cultural attributes of knowledge [2]. Based on this, this study clarifies the connotation and constituent elements of the cultural attributes of geographical knowledge, constructs a four-stage integration path, clarifies the interrelated mechanism of the path, and proposes a phased specific strategy. Its purpose is to provide a reference for geography teachers to integrate the cultural attributes of knowledge into teaching and implement cultural education.

2. The connotation of the cultural attributes of knowledge and their expression in the geography discipline

Knowledge is not an isolated series of facts, formulas, or conclusions. The generation and development of knowledge requires specific conditions and goes through specific historical processes, which give knowledge corresponding attributes. Knowledge possesses scientific, cultural, social, practical, and dialectical attributes [3]. Cultural attribute is a basic feature of knowledge, and fully displaying these cultural attributes is a necessary condition for carrying out cultural education in classroom teaching [4]. In order to clarify the composition of cultural attributes in geographical knowledge and their interrelationships, this paper draws on existing research results [2] and proposes that the cultural attributes of knowledge include six elements: cultural background, cultural thinking, cultural spirit, cultural values, cultural identity, and cultural lifestyle. These elements are intertwined and influence each other, which together constitute the overall framework of the cultural attributes of knowledge (Figure 1).

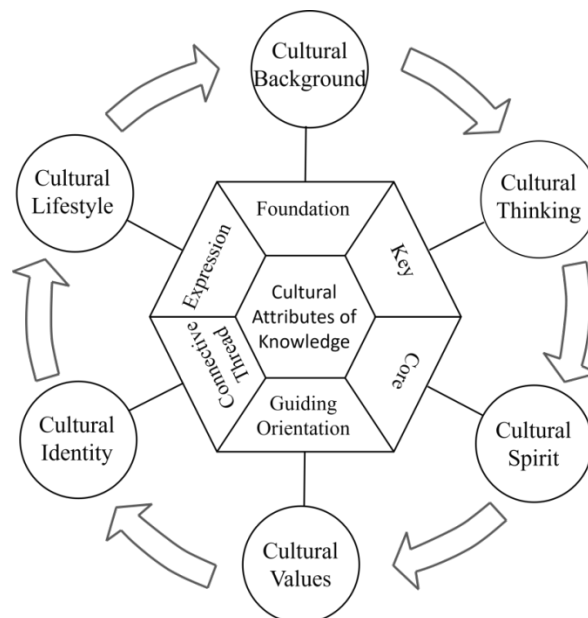


Figure 1. Elements of cultural attributes of knowledge

Cultural background is the basis for understanding the cultural attributes of knowledge and provides necessary support for subsequent cultural cognition. Cultural thinking is the key to grasping these cultural attributes, which determines the depth of interpretation and the cognitive dimension of understanding cultural connotation. Cultural spirit is the core of the cultural attribute of knowledge, which embodies the

essential characteristics and intrinsic value of a culture. As the guiding direction of these attributes, cultural value guides the value judgment contained in cultural cognition and practice. Cultural identity serves as a connecting link, maintaining the emotional bond and sense of belonging within the cultural group. The cultural lifestyle is the external expression of these attributes, which directly reflects the expression of cultural connotation in daily life.

Like the knowledge of other disciplines, geographical knowledge is also formed in a specific natural, social, scientific, historical, and cultural background. It is a fusion of thought and culture^[5], which makes it naturally have cultural attributes. These cultural attributes of geographical knowledge take the regional environment as its space and time carrier. They are rooted in the logic of interaction between human and environmental systems and are manifested in six interrelated elements, each of which corresponds to a specific disciplinary expression (**Table 1**).

Table 1. Cultural attributes of geographical knowledge and their disciplinary expressions

Cultural attribute content	Disciplinary expression in geography
Cultural background	The foundation of the natural environment; historical development process; religious and philosophical ideas.
Cultural thinking	Holistic view; adaptation to local environment; spatial thinking.
Cultural spirit	Exploration spirit; the spirit of adaptation and change; the spirit of ecological protection
Cultural values	Respect for nature; human-earth harmony; diversity and inclusiveness.
Cultural identity	Regional cultural identity; national cultural identity; global cultural awareness.
Cultural lifestyle	Production mode; settlements and buildings; clothing and diet.

3. The four-stage integration pathway for the cultural attributes of knowledge in senior high school geography teaching

Geography is a comprehensive subject combining comprehensiveness and regionality, which contains profound regional cultural connotation. Integrating the cultural attributes of geographical knowledge into senior high school geography teaching systematically can not only play its educational function of “cultivating individuals through culture,” but also guide students to understand the relationship between geographical environment and culture by using core abilities such as regional cognition and the concept of coordination between people and environment, so as to effectively cultivate cultural confidence. In order to achieve this educational goal and enhance cultural confidence, we must rely on a step-by-step teaching path of “cultural understanding, cultural inquiry, cultural identity, cultural confidence,” and promote teaching in this order (**Figure 2**).

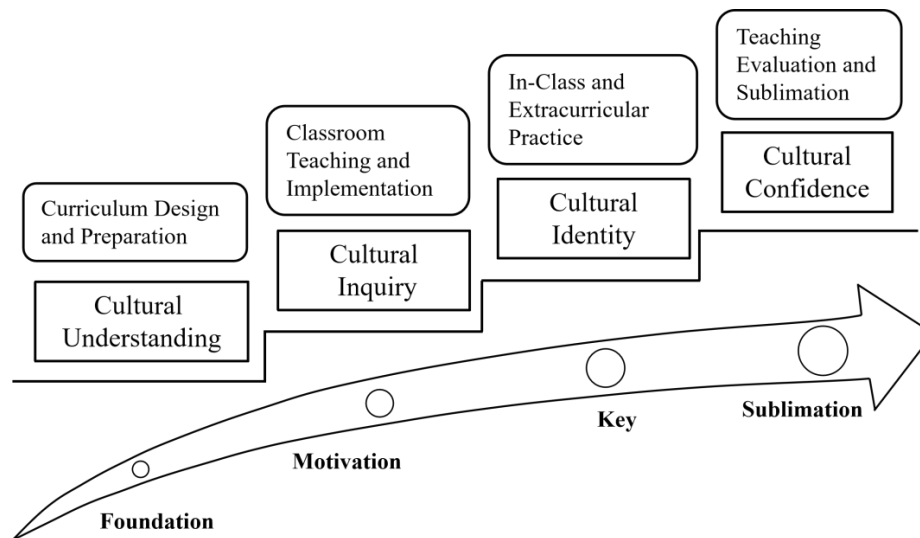


Figure 2. The four-stage progressive integration pathway

Cultural understanding involves experiencing, cognizing, and reflecting upon the connotation, characteristics, historical origins, and developmental trajectory of a culture, as well as the commonalities, differences, and mutual influences among different cultures [6]. Only by first understanding and observing culture, recognizing and understanding the connotation, characteristics, and background environment of different cultures can we lay the foundation for subsequent exploration, recognition, and self-confidence. For example, when students who study geography learn about the unique food culture formed in different regions due to different geographical environments, this represents a preliminary understanding of culture. This preliminary understanding provides a basis for more in-depth cultural exploration and encourages students to continuously deepen their appreciation and recognition of different cultures through exploration.

On the basis of cultural understanding, individuals will form the motivation to further explore culture. Cultural inquiry is a process of learning and practice about cultural reflection and awakening. This learning process moves from cultural understanding to cultural identity and cultural confidence, cultivating cultural reflection and awakening through exploration [7]. Taking geography teaching as an example, this paper explores the relationship between culture and geographical environment in different regions, and explores the principles, development models, and evolution rules behind cultural phenomena. This can deepen the understanding of culture, expand the breadth and depth of cultural cognition, and provide a more solid foundation for cultural identity, thus promoting exchanges and mutual learning between different cultures.

Cultural identity refers to an individual's recognition and acceptance of a culture's manifestations, including the aesthetic standards, moral principles, and ways of thinking embedded within it [8]. After a more in-depth understanding and exploration of a culture, people may have a sense of identity with this culture. They will recognize this culture, accept it, and feel a sense of belonging to it. The recognition of their own national culture can enhance the cohesion of the country, and the recognition of multiculturalism can promote cultural inclusion and communication. In geography learning, the recognition of local characteristic culture can stimulate students' awareness of cultural inheritance and protection. This consciousness will be transformed into practical action, prompting students to actively participate in cultural protection activities, so as to inject continuous impetus into the protection and development of local characteristic culture.

Cultural confidence is embodied as the profound conviction held by a nation, a country, or a political party regarding its own cultural ideals and cultural values^[9]. The cultural confidence established based on the understanding, exploration, and recognition of culture can make individuals or groups firmly adhere to their own cultural positions in the face of the influence of multiculturalism, actively spread and promote excellent culture, and promote the prosperity and development of culture. Cultivating students' cultural confidence in geography education helps them establish correct cultural concepts and participate in cultural exchanges and inheritance with a confident attitude.

In summary, in-depth understanding is a prerequisite for inquiry; real and in-depth inquiry has laid the foundation for the formation of self-identity, and a solid identity has become the cornerstone of sublimation into self-confidence. These four stages are closely related to each other and gradually promote each other to form a teaching practice framework, transforming abstract cultural attributes into teachable, learnable, and assessable content.

4. Teaching strategies for senior high school geography based on the four-stage integration pathway

From cultural understanding to cultural inquiry, then to cultural identity, and finally to cultural confidence, this constitutes a progressive teaching stage chain from cognition to practice, from rationality to emotion and values. This process is realized through the four key aspects of curriculum design, classroom teaching, practical activities, and teaching evaluation, thus forming a set of systematic strategies to integrate the cultural attributes of geographical knowledge into classroom teaching.

4.1. The curriculum design stage, excavating and organizing to deepen cultural understanding

As the leader of teaching activities, teachers' cognitive depth of the cultural attributes of knowledge and their ability to interpret it directly determine the effectiveness of cultivating students' cultural understanding ability. To integrate the cultural attributes of knowledge into senior high school geography teaching, first of all, teachers need to accurately grasp the basic connotation of cultural attributes, clarify the value of realizing the goal of cultural education in geography, and then master the ways and methods of integrating cultural attributes into teaching. Geography curriculum standards and teaching materials are the core basis for teaching implementation and an important carrier of cultural education content. Integrating the cultural attributes of knowledge into teaching should rely on these curriculum standards and textbooks, dig deep into the cultural elements, and organize them systematically. For example, in the curriculum design stage of the unit "Shaping the Earth's Surface," teachers can combine the core competencies of regional cognition and comprehensive thinking stipulated in the curriculum standards to explore the cultural connotations of the landforms and caves of the Loess Plateau, as well as the karst landforms and minority settlements of the Yunnan-Guizhou Plateau in the textbooks. By organizing how the geomorphological features of different regions affect the local traditional architectural style, production mode, and lifestyle, teachers can prepare to guide students to explore the symbiotic relationship between the natural geographical environment and regional culture in the classroom.

4.2. The classroom teaching stage, stimulating cultural inquiry through contexts and cases

The cultural connotation of geography is contained in the geographical knowledge system. To carry out cultural inquiry, we must take the teaching of geographical knowledge as the carrier to realize the deep integration of knowledge teaching and cultural inquiry in classroom teaching. Given the abstract nature of knowledge's cultural attributes, relying solely on lecturing makes effective understanding difficult to achieve; thus, contextual teaching methods become a key means of awakening interest in inquiry ^[10]. For example, in the teaching of the course "Differences in Natural Geographical Environment," teachers can design a teaching situation around the geographical significance of the Qinling-Huaihe line. By displaying teaching scenes such as pictures of vegetation landscapes on the north and south sides of the Qinling Mountains, pictures depicting rice cultivation in the south and wheat cultivation in the north, and audio clips of southern and northern dialects, students naturally question in contrast situations, such as "why the Qinling-Huaihe line is both a natural boundary and a cultural boundary." This prompted them to take the initiative to explore "how climate differences affect the types of agriculture in the north and south," and "how they further shape different regional cultural characteristics," effectively stimulating their awareness of cultural inquiry. Case teaching method can help students overcome the difficulty of understanding cultural attributes. For example, in the teaching process of the unit "Formation and Development of Industrial Areas," teachers can select "Jingdezhen's Ceramic Industry and Ceramic Cultural Heritage" as a case. By displaying information related to the distribution of mineral resources in Jingdezhen, the historical advantages of water transport, and the transformation of the contemporary ceramic industry, teachers can guide student groups to explore "the geographical conditions for the development of the ceramic industry in Jingdezhen," "how ceramic culture is passed down from generation to generation in the process of industrial development," and "the challenges and countermeasures brought by the transformation of modern industry to the protection of ceramic culture." Through in-depth analysis and critical thinking of the case, students can not only master the knowledge of the formation of industrial areas, but also understand the relationship between geographical environment and cultural heritage in the process of inquiry, so as to effectively improve their cultural inquiry ability.

4.3. The practical activity stage, fostering cultural identity through experience and participation

As an innovative teaching mode, the cultural practice activities in the geography classroom have deeply explored the educational connotation behind the text content through a series of practical operation links. By responding to cultural backgrounds, ways of thinking, and values, these activities enable students to experience cultural immersion, forming an understanding of and identity with culture ^[11]. Such practical activities have various forms, including drawing charts and graphics, making learning aids, and participating in cultural knowledge competitions. By participating in the cultural practice activities in the classroom, students can not only have a deeper understanding of geographical knowledge, but also experience the charm of culture. This helps to deepen their cultural identity and enhance their cultural confidence. In addition, according to the teaching content, teachers can comprehensively consider the actual resources of the school, teaching conditions, students' knowledge base, and learning ability. While ensuring the safety of students, teachers can make full use of local cultural resources to organize and carry out extracurricular cultural practice activities, combining textbook content with off-campus practice. By arranging students to visit

museums, memorial halls, and other places, students can form a sense of cultural protection and gradually establish a strong sense of cultural identity through the content they see and hear in these extracurricular cultural practice activities.

4.4. The teaching evaluation stage, forging cultural confidence through diversity and guidance

The results of cultivating students' cultural literacy and cultural confidence have implicit characteristics, which make it difficult to quantify them only through a single academic achievement indicator^[12]. Therefore, it is necessary to construct a diversified evaluation system, which takes the depth of cultural understanding, the degree of participation in inquiry, the expression of identity, and the display of confident behavior as its core dimensions (**Table 2**). This system comprehensively tracks students' changes and development across multiple aspects. Including cognitive construction, emotional experience, and behavioral practice, through various methods such as classroom observation, records of practical activities, open-ended tasks, interviews, and analysis of student work. This enables a comprehensive, multi-dimensional, and scientific assessment of the growth process of students' cultural literacy and cultural confidence.

Table 2. A multi-dimensional evaluation indicator system for the effectiveness of cultivating students' cultural confidence

Evaluation dimension	Observation points	Evaluation methods
Depth of cultural understanding	(1) Ability to explain the cultural causes behind geographical phenomena and landscapes. (2) Ability to compare the similarities and differences of different regional cultures and analyze the geographical background of their formation.	Classroom questioning, group discussion contributions, open-ended assignments, analytical questions in unit tests.
Degree of participation in cultural inquiry	(1) In case analysis and group work, whether the student actively collects and filters cultural information. (2) Ability to propose meaningful inquiry-based questions and attempt to solve them using geographical methods.	Structured observation records, inquiry-based learning task sheets, project-based learning outcome evaluations.
Expression of cultural identity	(1) In discussions, writing, or creative work, whether the student demonstrates appreciation and value for local culture. (2) Ability to view different cultures rationally, demonstrating an attitude of tolerance and respect.	Practical activity reports, reflective journals, thematic essays, speeches, interviews.
Demonstration of culturally confident behavior	(1) Whether the student actively pays attention to and disseminates excellent regional culture. (2) Ability to consciously uphold the dignity of national culture in communication and critique cultural biases.	Behavioral observation, presentation of outcomes, peer assessment.

5. Conclusion and prospects

The cultural attributes of geographical knowledge constitute an organic whole composed of multiple essential elements, including cultural background, thinking, spirit, values, identity, and lifestyle. They represent the fundamental source of value through which the geography discipline fulfills its function of cultural education.

The four-stage integration path constructed in this study establishes the core framework for senior high school geography culture education. Future work can further deepen its theoretical connotation and expand its practical path through interdisciplinary integration. For example, integration with history and archaeology can deepen cultural understanding within a unified spatial-temporal framework; cooperation with literature

and art can use the emotional carrier to promote cultural identity; integration with environmental science and ecology can endow the relationship between human and environment with contemporary ecological connotation. Collaboration with information technology and digital humanities can introduce quantitative tools such as geographic information systems to innovate cultural inquiry methods; the connection with sociology and anthropology can enhance the practical dimension of cultural confidence through field surveys. These interdisciplinary directions not only enrich the theoretical and practical dimensions of the four-stage integration path, but also promote the transformation of geography teaching to a comprehensive and geography-centered education model. At the same time, it also helps to build an innovative teaching model. They help to cultivate talents in the new era with interdisciplinary literacy, cultural confidence, and the ability to solve practical problems.

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Disclosure statement

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