Teaching Practice for Developing Self-Identity Based on Space-Place Thought—An Analysis of Shougang's Location and Its Transformation

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Abstract: Current high school geography teaching on "industrial location" often remains confined to rational decision-making model analysis, lacking emotional and value dimensions, and exhibits a narrowed thinking tendency of "seeing things but not people." Simultaneously, mental health education urgently requires deep integration with subject teaching to guide students in coping with change and constructing their self-identity. Using "Space-Place" thought as a bridge, this paper integrates humanistic geographical ideas with the psychological theory of "self-identity" to innovatively reconstruct the teaching of "industrial location and its changes." Taking the transformation of Beijing Shougang as a case study, a dual-thread teaching framework of "Location Decision (Space) - Place Identity - Identity Crisis - Integration and Rebirth" is designed. This aims to broaden the analytical perspective of location theory and provide a valuable reference for advancing the deep integration of subject teaching and mental health education.

Keywords: Space-Place Thought; Self-Identity; Interdisciplinary Integration; Industrial Location

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Under the background of the core competencies-oriented education reform, promoting the deep integration of subject teaching and mental health education has become an important pathway to implement the fundamental task of "Fostering Virtue through Education" [1]. Human geography is a discipline that studies how "humans" create, experience, contest, and endow space with meaning and value. Its core is the "human-environment relationship," filled with warmth and conflict. However, in current teaching, especially regarding industrial location theory, the focus is predominantly on economic logic, emphasizing the rational decision-making model of "location theory" [2-3]. This "spatial" optimization analysis, based on cost, market, and transportation, is logically rigorous but easily falls into the narrow trap of "instrumental rationality," stripping away the emotions, meanings, and values that people assign to place, leading to the teaching dilemma of "seeing things but not people." Self-identity refers to an individual's conscious, coherent, and stable understanding of their past, present, and future, and is a crucial issue for the mental health development of high school students [4]. The issue of human identity involves both the consistency of external forms across different spatiotemporal contexts and the internal consistency of psychology, emotions, and values. In the context of rapid urbanization, the crisis in constructing "self-identity" among adolescents is particularly prominent [5]. How to deal with the changing past and face the future has become a key issue in mental health education.

The "Space-Place" thought in human geography and the "self-identity" theory in psychology provide an integrated perspective for this study. The "Space-Place" thought proposed by human geographer Yi-Fu Tuan (Tuan, 1977) reveals the duality of the human-environment relationship: "Space" is an objective, analyzable location, corresponding to the rational cognition in geography; "Place" is space endowed with meaning, memory, and emotion, corresponding to psychological identification and belonging [6]. The "self-identity" theory developed by psychologist Erikson and Marcia (Marcia, 1966) explains the developmental process through which individuals form a coherent self-perception via "exploration" and "commitment" [7]. There is a profound inherent isomorphism between the two: the openness of "Space" provides a field for

self-exploration, while the stability of "Place" gives direction to self-commitment. The rise and fall of a region is a vivid portrayal of the transformation of its "Place" meaning and the reshaping of people's "self-identity." Based on this, this paper takes the transformation of Beijing Shougang as a case study, aiming to construct a dual-thread teaching path of "Location Decision - Place Identity - Identity Crisis - Integration and Rebirth," providing an example for interdisciplinary integrated teaching.

1 Teaching Path for Developing Self-Identity Based on Space-Place Thought

Based on the above theoretical integration, the following four-stage teaching path is constructed:

1. Spatial Analysis (Exploration): Starting from an unfamiliar, open "Space," through specific location decision-making tasks, analyze and utilize various geographical factors to make rational judgments, initiating the exploration process of self-identity.

2. Place Experience (Continuity): Using materials such as oral histories and video footage, engage in embodied experience to feel how "Space" gradually transforms into a "Place" with "people," comprehending the formation process of a "sense of place." Transition from rational thinking to perceptual cognition, promoting the continuous development of self-identity.

3. Crisis Perception (Moratorium): In the context of a "Place crisis," use role-playing and multi-perspective debates to perceive the dilemma, confront emotional conflicts and cognitive dissonance, and stimulate deep reflection on self-worth, thereby simulating a state of "identity moratorium."

4. ntegration and Rebirth (Commitment): Guide individuals to transcend binary oppositions, engage in creative planning and meaning reconstruction tasks, dialectically examine the "change" and "constancy" within transformation, and achieve the integration and commitment of self-identity through creative meaning reconstruction, experiencing a sense of personality integration.

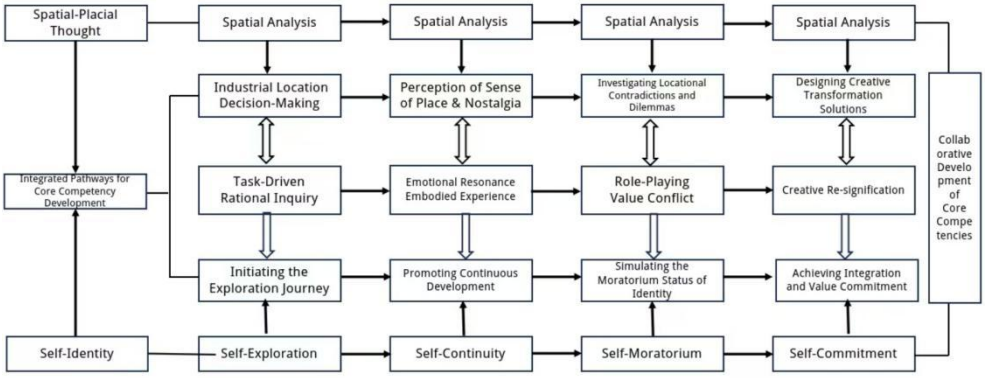

Figure 1. Development of Self-Identity through Spatial-Placial Thought: An Instructional Pathway

The construction of this path aims to transcend the limitations of "instrumental rationality" in traditional location theory teaching. It concretizes the concept of human-environment coordination into both adapting to local conditions in "location selection" and emotional harmony in "place transformation," achieving a dual interpretation of the human-environment relationship. The dual threads add a dimension of value judgment to comprehensive thinking, and through the transformation of "Space-Place," supplement regional cognition with dual perspectives of rational analysis and perceptual experience. Ultimately, it guides students to seek creative solutions within the "identity crisis," which is a high-level manifestation of geographical practice capability at the level of social emotion and value construction. This methodology provides an operable practical path for implementing the fundamental task of "Fostering Virtue through Education" and promoting interdisciplinary integration. The rise and fall of industrial zones, due to the intense transformation of their "Space-Place" meanings, serve as an excellent case for illustrating this path.

2 Teaching Practice Case — Using Shougang's Location Factors and Their Changes as an Example

2.1 Teaching Objectives

Through analyzing the case of Shougang's location changes, students will be able to dialectically view the dynamic nature of industrial location advantages and understand the human geographical connotations of "Space" and "Place." In exploring its transformation path, students will enhance their abilities in comprehensive analysis and creatively solving geographical problems. Ultimately, students will comprehend that development involves innovation through inheritance and reflect on how to build a stable self-identity amidst era changes.

2.2 Teaching Approach

This section corresponds to the curriculum standard "illustrate the factors affecting the location of industries with examples." Students already have a foundation in agricultural location but are prone to economic rational analysis, lacking observation of the "humanistic" dimension in industrial transformation—specifically, the "sense of place" disruption and identity crisis faced by workers. Therefore, this paper uses Shougang's "prosperity-relocation-transformation" as the thread, advancing teaching along dual lines: "Location Change" (explicit thread) and "Identity Transformation" (implicit thread).

The specific path is as follows: Begin with the visual contrast between the Shougang Big Air platform and industrial relics; then trace back the "spatial" logic of its site selection; next, understand its transformation into a "Place" by experiencing "industrial nostalgia"; then explore the relocation dilemma through role-playing, experiencing the "identity crisis"; finally, explore its path of creative rebirth, achieving "meaning integration." This design aims to elevate geographical knowledge learning into the internalization of values.

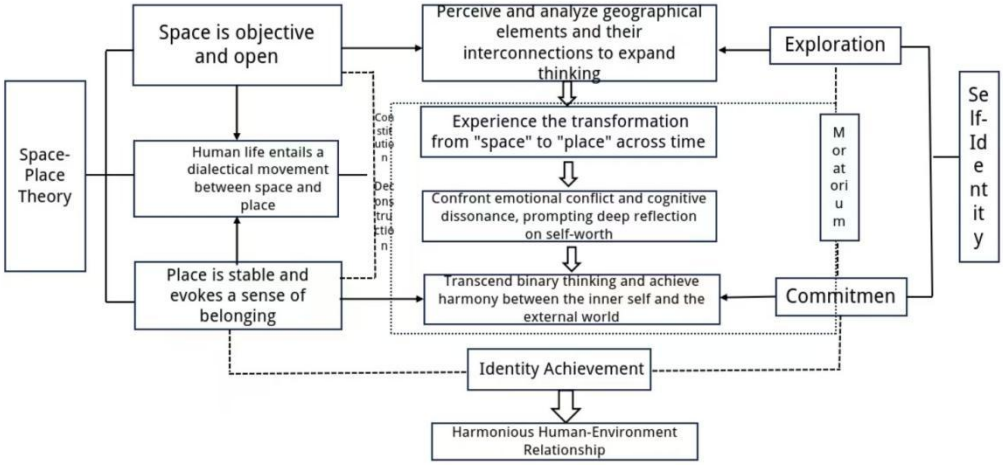

Figure 2. Instructional Conceptual Framework

2.3 Teaching Process

2.3.1 Visual Contrast, Introduction and Inquiry

Teacher Activity: Present side-by-side the 2022 Winter Olympics Shougang Big Air victory scene and the 1919 old factory area image, creating a strong visual contrast. Pose core guiding questions: "As a national political and cultural center, why did Beijing once host a large steel plant? Why was it ultimately relocated? How could this industrial site transform into an Olympic venue and a new urban landmark?"

Design Intent: Create cognitive conflict through comparison; the question chain stimulates student interest in inquiry, setting the overall tone for subsequent deep learning around "Space-Place-Crisis-Rebirth."

2.3.2 Segment 1: The "Spatial" Logic of Industrial Location (Rational Analysis)

Task and Activity: Students work in groups to analyze the location factors for Shougang's 1919 site selection in Shijingshan based on maps of mineral resources, transportation, etc. (proximity to raw materials, water sources, market, policy support, etc.), and examine its environmental limitations from a contemporary perspective (located upwind).

Teacher Summary: Point out that the early site selection followed a "efficiency-first" spatial optimization logic.

Design Intent: Consolidate knowledge of location factors, cultivate comprehensive thinking and regional cognition; simultaneously foreshadow the dynamic nature of location advantages.

2.3.3 Segment 2: From "Space" to "Place"—The Birth of "Industrial Nostalgia" (Emotional Experience)

Task and Activity: Play video materials containing certificates of honor, model worker photos, and oral histories from veteran workers. Guide students to think: "Beyond material output, what else did Shougang's glory represent?"

Teacher Summary: Guide students to understand the senses of security, social status, and belonging. Point out that it was the workers' labor, honors, and memories that transformed the 冰冷的 space into a warm Place, forming "industrial nostalgia" and place identity.

Design Intent: Through embodied experience, guide students from rational thinking to perceptual cognition, cultivate empathy, enrich historical understanding, and promote comprehension of the "Place" concept. The emotional connection and place identity established in this segment form the cognitive and emotional basis for the "identity crisis" in the next segment's "place crisis."

2.3.4 Segment 3: Resource Depletion and "Place" Crisis (Problem Inquiry)

Task and Activity: Students form "expert diagnosis teams" by role-playing, exploring the comprehensive challenges faced by Shougang from four dimensions. Groups conduct cooperative inquiry based on specific material packets.

• Urban Planning Group: Compare Beijing city maps from 1919 and 1990 to analyze the pressure of urban spatial expansion on Shougang;based on the description of Beijing's core functions in the "Beijing City Master Plan (2004-2020)," demonstrate the fundamental conflict between its industrial role and the city's functions as a "center for politics, culture, international exchanges, and technological innovation."

• Guiding Questions:

1. In the national planning of the 1990s, what was the position of heavy industries like Shougang?

2. Comparing the maps, describe the dramatic change in the spatial relationship between Shougang and the Beijing urban area.

• Environmental Assessment Group: Based on the 1980s SO_2 concentration distribution map and 1998 Beijing air quality data, demonstrate the environmental pressure and public opinion pressure Shougang faced as one of the city's largest polluters, and discuss the limitations of technological transformation and the fundamental solution.

• Guiding Questions: What problems do the above materials reveal about Shougang? What solutions can you think of?

• Economic Analysis Group: By comparing the cost per ton of steel between Shougang and coastal steel plants (e.g., Baosteel), and analyzing the advantages of deep-water berths at ports like Caofeidian from maps, reveal the dissolution of its inland location advantages and the economic necessity of relocating to the coast.

• Guiding Questions: From an economic cost perspective, where is Shougang's cost per ton of steel higher than that of coastal steel plants? What solutions can you think of?

• Social Impact Group: Combining Beijing's "Green Olympics" bidding concept and the International Olympic Committee's air quality requirements, from the perspective of Shougang employees' families, describe the emotional impact and identity dilemma caused by the relocation decision, and dialectically consider the relationship between personal feelings and the national development agenda.

• Guiding Questions: How would you balance Beijing's Olympic bid and Shougang's environmental problems? Do you think Beijing's Olympic bid was the main reason for Shougang's relocation?

Teacher Summary: Synthesize the diagnoses from all groups to guide students to conclude that Shougang's relocation was an inevitable choice resulting from the development of urban functions, environmental capacity, and economic efficiency to a new stage, not due to a single cause.

Design Intent: Rationally: Use the expert group inquiry model to guide students to consider problems from different dimensions, realizing that the advantages and disadvantages of location are dynamic, and promoting the development of dialectical thinking and problem analysis skills in this process. Emotionally: Make macro issues micro, starting from the dilemmas of specific individuals, simulate the "identity crisis" and psychological "identity moratorium" state people experience when facing major environmental changes, transforming "sense of place" and "location disadvantages" into perceptible real experiences, enriching students' learning cognition.

2.3.5 Segment 4: Transformation and Rebirth—The Transformation of "Place" Meaning (Solution)

Task and Activity: ① Watch a "Past-Present" comparison video of Shougang Park,realizing the visual impact. ② Analyze a triple image (blast furnace turned into a bookstore, Big Air platform, unmanned vehicles) to say its core transformation strategy of "preserving the industrial soul, injecting new functions."

Teacher Summary: Using side-by-side photos of old and new Shougang people smiling, explain that transformation is not a "clean break," but a creative "translation," converting historical identity into future value, achieving the synergistic rebirth of place meaning and self-identity.

Design Intent: By analyzing creative solutions, elevate the conclusion to philosophical reflection on the human-environment relationship and personal growth, achieving the integration and commitment of self-identity.

3 Conclusion

Human geography teaching and mental health education possess a natural advantage for integration. The "warmth" of human geography provides an emotional vehicle for psychological education, and its spatial analysis perspective also construct the physical environmental basis for mental health development. The integration of the two not only enriches the connotation of the subject but also expands the path of mental health education, representing an effective attempt to implement "Fostering Virtue through Education." The four-stage teaching path of "Space-Place-Crisis-Integration" proposed in this paper aims to guide students beyond the mechanical pursuit of the "optimal location," to focus on the human-environment emotional connections and individual value adjustments behind regional changes. This deepens geographical core competencies such as the "human-environment coordination view" and "comprehensive thinking," and also makes the geography classroom a hidden vehicle for emotional education and psychological growth. Through specific geographical cases, students can be cognitively and emotionally prepared to cope with real-world challenges, constituting a beneficial practice of the "Integration of Five-Sphere Education" and the "Healthy China" strategy at the micro-level of teaching. This model places relatively high demands on teachers' interdisciplinary literacy, and assessing teaching effectiveness presents challenges—positive changes at the psychological level are difficult to quantify and rely more on situational observation and qualitative analysis. Furthermore, the universality of this path across different themes (e.g., agricultural geography, urban spatial structure) remains to be verified. Future research can proceed in two directions: first, developing a diverse teaching case library to verify the adaptability of the path; second, constructing a comprehensive evaluation plan primarily qualitative, supplemented by quantitative methods, to scientifically examine its educational value. This paper is an exploration of deeply "embedding" humanistic spirit and psychological growth goals into subject teaching, offering new possibilities for breaking through the "seeing things but not people" teaching dilemma and constructing a more vibrant geography classroom.

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