

The Influence of Native Cultural Schema on Second Language Reading

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Abstract. In the process of second language reading learning, native cultural schema exerts a significant impact on learners' efficiency of text reading comprehension. There are inherent differences between Chinese and Western cultures in modes of thinking, values and living customs, which tend to cause cognitive biases among second language learners and further result in obstacles in reading comprehension. Adopting the method of literature review, this study systematically sorts out and integrates relevant domestic and foreign research findings, and conducts an in-depth exploration on the specific manifestations, influence paths and existing academic controversies of native cultural schema functioning in second language reading. The research reveals that native cultural schema bears an obvious dual function: the rational activation of original native cultural cognition can assist learners in quickly understanding texts and improving reading adaptability; when conflicts arise between Chinese and Western cultural schemata, native thinking stereotypes will trigger negative cultural transfer, lead to semantic distortion and cultural misinterpretation, and hinder the comprehension of textual connotation and in-depth logic. It can thus be seen that cultural schema serves as a crucial factor restricting the proficiency of second language reading. To reverse this situation, English reading teaching should attach importance to the integration of Chinese and Western cultures, scientifically infiltrate two-way cultural knowledge, incorporate the cultural schema theory into the regular teaching system, help learners optimize their cognitive structure, reduce the negative interference brought by cultural conflicts, and fundamentally enhance the comprehensive literacy and quality of second language reading.

Keywords: Cultural Schema, Second Language Reading, Chinese and Western Cultures, English Reading Teaching

1. Introduction

In second language reading research, reading ability relies not only on linguistic knowledge but also is closely bound up with learners' cultural cognition. According to the cultural schema theory, readers' comprehension of texts is based on a set of organized cognitive structures formed through long-term experience accumulation under specific cultural backgrounds. As the mother-tongue cultural system where learners have lived for a long time, native cultural schema profoundly shapes comprehension in second language reading.

At present, domestic English reading teaching usually emphasizes linguistic training such as vocabulary and grammar, while insufficient attention is paid to the interactive relationship between native culture and Western culture, so learners are prone to comprehension deviations due to cultural differences. Furthermore, existing empirical studies feature narrow sample coverage and inadequate stratified research. Comparisons across multiple learning stages and groups with different English proficiency levels are lacking, making it difficult to draw universally applicable conclusions. In addition, researches on culturally adaptive teaching overemphasize theoretical design while neglecting long-term implementation experiments. Most teaching researches only consist of one-off short-term classroom experiments, without long-term follow-up investigations lasting a semester or an academic year. Meanwhile, existing studies adopt a single research perspective and lack exploration of subdivided dimensions. Most papers generally discuss the overall influence of native cultural schema without distinguishing the differentiated effects of various native schemas such as values and historical cognition.

Through synthesizing relevant domestic and foreign research findings, this study aims to clarify the influence of native cultural schema on second language reading, explore the effects of cultural adaptation and conflicts on reading efficiency and comprehension, and provide theoretical references and practical approaches for improving English reading teaching and lowering barriers to cultural understanding.

2. Core concepts of cultural schema theory and second language reading comprehension

2.1. Connotation of cultural schema

The concept of "schema" was first put forward by the German philosopher Immanuel Kant in 1781 within his philosophical system to describe an intermediary cognitive structure linking intellectual concepts and perceptual experience. With the development of linguistics, schema theory has been introduced into the field of second language acquisition. In her pioneering research *Cultural Schemata and Second Language Reading Comprehension*, Carrell [1] further developed this concept into "cultural schema". It specifically means the structured cognition of cultural background knowledge existing in people's minds, including cognitive patterns involving daily social conventions, values, thinking modes and behaviors. Carrell [1] verified in her research that cultural schema is not merely a collection of background knowledge, but a core variable affecting second language reading comprehension, which directly determines learners' interpretation mode and comprehension depth of textual information.

2.2. Definition of native cultural schema

A native cultural schema is a cognitive framework deeply bound up with native culture, which second language learners form through a long-term socialization process in the mother-tongue cultural environment. Serving as the internal logic for learners to interpret external information, it carries strong thinking inertia and frequently intervenes in the processing and comprehension of information in second language reading. For Chinese English learners, their native cultural schema is rooted in the fine traditional Chinese culture spanning five thousand years as well as the creative transformation and innovative development of such culture. It is specifically manifested in three dimensions. In terms of thinking, Chinese people advocate holistic and dialectical thinking as well as implicit expression, tend to perceive things from an overall perspective, and prefer to convey opinions in an implied manner. In terms of values, collectivism is taken as the core, highlighting

individual obedience to the collective and emphasizing a sense of group belonging. In terms of social customs, it includes cultural symbols such as rituals for traditional festivals, food culture and social behaviors.

2.3. Definition of second language reading comprehension

Second language reading is not a simple decoding process of linguistic symbols, but a complex psychological activity featuring two-way interaction between readers' prior cognitive structure and textual content. Carrell [1] clearly pointed out that the essence of reading comprehension is "a process in which readers make predictions, inferences and meaning reconstruction of texts by virtue of background knowledge". Its ultimate goal is not only to grasp the literal meaning of texts, but also to understand the cultural connotations and values behind them. This viewpoint breaks the cognitive limitation in traditional second language reading teaching that attaches excessive importance to linguistic forms while neglecting cultural implications, and highlights the vital role of cultural background knowledge in reading comprehension.

3. Theoretical basis and research context of the influence of native cultural schema on second language reading

3.1. Native cultural schema and cross-cultural communication theory

Cross-cultural communication theory holds that cognitive differences amid diverse cultural backgrounds constitute the root of cross-cultural misunderstanding, and native cultural schema is exactly the embodiment of such cognitive discrepancies. Essentially, second language reading is a form of cross-cultural communication in written form. Learners engage in so-called remote dialogue with the target language culture through texts, and their native cultural schema acts as a natural reference frame for interpreting second language cultural content. When there are commonalities between native cultural schemas and target language cultural schemas, a bridge for cross-cultural comprehension can be built to reduce cognitive difficulties in reading. On the contrary, textual comprehension will be impeded.

Cross-cultural communication theory furnishes theoretical support for explaining the dual impacts of native cultural schema on second language reading, and also offers guiding principles for balancing the two types of cultural schemata in subsequent teaching practice. Chunlan Chai and Yue Liu [2], in their paper *A Study on the Two-way Cultural Introduction Teaching Model of Senior High School English Based on the Cultivation of Intercultural Communicative Competence*, integrated Cross-cultural communication theory with second language reading teaching and put forward a two-way cultural introduction model. Exposure to diverse cultures enables students to develop a balanced understanding of both their native culture and the target language culture, thereby minimizing cultural misunderstandings.

3.2. Evolution of overseas research on cultural schema and second language reading

Overseas research on cultural schema and second language reading started relatively early, generally following a developmental path from theoretical construction to practical expansion and ultimately to localized reflection. During the theoretical construction phase, Carrell [1] explored the influence of cultural schema on second language reading comprehension and verified that the lack of cultural background knowledge stored in readers' minds constitutes a major cause of reading obstacles,

laying a theoretical foundation for research in this field. In recent years, overseas research has shown a tendency of localized reflection. Some scholars have begun to rethink the Western-centric research perspective and proposed that importance should be attached to the role of native cultural schema. Nguyen and Hamid [3], in their paper *Reclaiming local epistemologies: Indigenous cultural schemata and English reading comprehension in Vietnamese secondary schools*, advocated a return to local epistemology and emphasized the unique value of indigenous cultural schemata in second language reading comprehension. They pointed out that learners can reconstruct their understanding of target language texts by activating their native culture and daily life experience. This breaks the limitation of previous research centered on target language culture and offers a new research paradigm for this field.

3.3. The development of domestic research on cultural schema and second language reading

Domestic research generally follows a developmental trend from introducing foreign theories to focusing on cultural differences and eventually reflecting on indigenous culture. During the phase of theoretical introduction and preliminary exploration, Yajun Zhao [4] systematically elaborated on cultural schema theory and conducted empirical research to explore the characteristics of native cultural schemata among Chinese English learners as well as their impacts on reading comprehension. Subsequently, relevant research entered the stage of analyzing cultural differences and comprehension barriers. In her paper *A Review of Domestic Research on Western Culture Teaching for English Majors—An Analysis of CNKI Papers Published from 2007 to 2016*, Jing Tan [5] sorted out the evolution of domestic studies concerning western culture teaching. She pointed out that relevant research was inclined toward one-way input of western culture, failed to tap the positive value of native culture, overlooked the significance of indigenous cultural resources, and suffered from excessive repetitive studies and insufficient research depth.

In recent years, domestic research has entered the phase of two-way cultural integration and teaching practice. Scholars have started to rethink the problematic teaching tendency that prioritizes Western culture while marginalizing indigenous culture, and advocate the concept of two-way cultural teaching. Mingrui Li, Mingshuo Du, and Yuxuan Zou et al. [6], in their paper *Research on Senior High School English Reading Teaching Strategies Under Cultural Schema Theory—A Case Study of School Life in the UK from Unit 1, Compulsory Volume 1 of Yilin Edition Senior High School English Textbook*, discussed reading teaching strategies guided by cultural schema theory, and emphasized integrating learners' native cultural experience to facilitate their comprehension of texts embedded with target language culture; Chunlan Chai and Yue Liu [2] proposed a two-way cultural introduction teaching model, which emphasizes the balance between native culture and target language culture. In addition, researches such as Hua Zhu's [7] *The Application of Schema Theory in College English Reading Teaching* and Meijin Gao's [8] *Research on Senior High School English Vocabulary Teaching for the Cultivation of Cultural Awareness* explore the approaches and importance of fostering cultural awareness from the perspectives of college English reading teaching and vocabulary teaching respectively, further enriching the research findings in this field.

4. Specific impacts of native cultural schema on second language reading

4.1. Facilitating effects of native cultural schema on text comprehension

Second language reading is not a simple process of vocabulary translation and grammar splicing, but a process in which readers rely on their own cognitive reserves to carry out two-way interaction and

construction with text content. The native cultural schemata accumulated by learners are inherently high-quality cognitive resources, which can effectively make up for the shortcomings of second language proficiency, assist reading comprehension in three dimensions, including text prediction, semantic complementation and logical integration, and significantly reduce the difficulty of defamiliarization of foreign language texts.

Carrell [1] pointed out in the classic research on cultural schema that the cultural cognitive framework stored in readers' minds serves as the core prerequisite for reading comprehension. When the content of second language texts overlaps with learners' local life and cultural experience, native schemata will be automatically activated, helping readers skip some unfamiliar linguistic forms and infer the main idea of paragraphs based on background cognition. Empirical studies targeting Asian second language learners have further verified this positive effect. Taking Vietnamese middle school students as research subjects, Nguyen and Hamid [3] explored the value of native cultural schemata in English reading. The study found that when reading texts involving content consistent with Vietnamese native culture, such as traditional southeast Asian festivals and family clans, students achieved markedly higher accuracy in exercises and better reading fluency. Native cultural frameworks filled gaps in linguistic knowledge, enabling students to construct textual logic based on their life experience rather than translating word by word.

Domestic studies have drawn consistent conclusions. Hua Zhu [7] demonstrated through classroom experiments on college English reading that university students read English passages containing elements, such as Chinese collectivism and traditional folk customs, at a faster speed and scored higher on questions concerning detail summarization and reasoning. Native cultural schemata can mobilize learners' existing cognitive reserves, reduce the sense of unfamiliarity brought by second language texts, simplify semantic processing procedures, and serve as an auxiliary tool for second language reading comprehension. In a teaching experiment on texts from the Yilin edition senior high school English textbook, Mingrui Li et al. [6] also found that reading materials incorporating familiar local campus and family life scenarios strengthened students' willingness to take the initiative in text interpretation and noticeably improved their efficiency in understanding complex sentences and inferred emotional attitudes.

4.2. Reading barriers caused by deviations of native cultural schema

The cognitive inertia of native cultural schemata can also bring negative effects. Differences between Chinese and Western values, social customs and thinking modes will lead to misalignment between native schemata and target language cultural schemata, resulting in cognitive bias. Readers tend to misinterpret the original text information from the perspective of their mother tongue culture, thus causing systematic reading obstacles.

The survey conducted by Nguyen & Hamid [3] indicated that when Vietnamese students interpret English texts related to Western individualism and independent parent-child relationships, they tend to apply the native clan and collectivist cultural schemata to comprehension, misjudge the behavioral motivations of characters in the texts, and lose many points on reasoning questions. Researches on linguistic distance further explain the underlying logic behind such deviations. Kuperman [9] proposed that the greater the linguistic and cultural distance between the mother tongue and English, the more prominent the interference effect of native cultural schemata. There is an inherent separation between the collectivist cognitive framework rooted in East Asian learners' native culture and the Western individualist framework commonly embedded in English texts, which is highly likely to result in interpretive biases.

Domestic teaching researches have fully verified the reading difficulties brought about by deviations of native cultural schemata. In a study on senior high school English teaching, Chunlan Chai and Yue Liu [2] found that when students interpret reading materials concerning Western social etiquette and family values, they tend to understand texts based on Chinese interpersonal norms and clan-dependent thinking, which leads to misjudgment of emotional attitudes and the author's viewpoints. In the research on cross-cultural interpretation of English-translated literary texts, Shanshan Jiang and Ying Huang [10] pointed out that Chinese readers often reconstruct the connotation of original Western literary texts with traditional Chinese ethics and narrative logic and distort the original cultural meanings of the texts. Such cognitive deviations are essentially caused by the excessive intervention of native cultural schemata in reading processing.

5. Practical reflections on second language reading teaching from the perspective of native cultural schema

5.1. Manifestations of differences between Chinese and Western cultural schemata in second language reading within current teaching practice

In the context of exam-oriented education, domestic second-language reading teaching mainly focuses on vocabulary explanation, complex sentence analysis and exercise training. Cultural teaching merely involves the superficial introduction of Western festivals, history and other basic cultural knowledge, lacking comparative analysis between Chinese and Western cultures. By sorting out domestic literature on English cultural teaching from 2007 to 2016, Jing Tan [5] concluded that Western culture dominates classroom cultural teaching. Students are deprived of opportunities to reflect on interpretive biases based on their inherent native cognitive frameworks, so the interference of native cultural schemata cannot be effectively eliminated in long-term teaching.

In senior high school English classes, Mingrui Li et al. [6] conducted classroom observations based on unit reading texts from the Yilin edition textbook. They found that when explaining reading passages themed on Western campus life and family relationships, teachers only gave one-sided introductions to European and American campus systems and parent-child concepts, without guiding students to make comparisons with their inherent cognition of Chinese campuses and families. Consequently, students kept interpreting the behaviors of Western characters with native thinking and made a high proportion of mistakes in reasoning questions. Chunlan Chai and Yue Liu [2] further pointed out that the one-way input mode of Western culture fails to help students construct two independent sets of cultural cognitive frameworks, and native schemata will unconsciously interfere with text interpretation all the time.

Similar problems also exist in college English classrooms. A survey by Hua Zhu [7] indicated that college public English reading teaching rarely connects with students' native cultural experience, completely separating native schemata from reading instruction. This not only wastes the auxiliary advantages of native cognition in reading comprehension, but also fails to resolve cultural cognitive conflicts in a targeted manner.

5.2. Discussions and divergences on cultural adaptation in existing researches

With the popularization of cultural schema theory in the field of domestic second language teaching, the academic community has formed two mainstream research approaches regarding how to realize adaptive teaching between native and Western cultures in reading classes, accompanied by obvious

ideological divergences centered on the positioning of native cultural schemata in reading instruction and the implementation approaches of cultural adaptation.

The first viewpoint takes native cultural schemata as the entry point of teaching. Teachers stimulate reading interest by activating learners' native cognition before supplementing the cultural frameworks of target western cultures step by step. Relevant studies hold that native cultural schemata are inborn cognitive resources for students and ought to serve as the fundamental starting point of reading teaching. In class, teachers first explore overlaps between reading texts and native culture to activate native schemata and facilitate comprehension, then compare Western cultural elements within texts to distinguish the two cognitive frameworks and gradually eliminate deviations derived from native schemata. Hua Zhu [7] verified the effectiveness of this approach through classroom experiments in college English teaching, proposing that teaching should actively connect with students' native life, folk customs and values to fully leverage native schemata and lower reading barriers. The teaching research conducted by Nguyen & Hamid [3] in Southeast Asia also endorses this idea, regarding native culture as an indispensable teaching medium at the initial stage of second language learning.

The second viewpoint emphasizes prioritizing the construction of target language cultural schemata and restricting excessive intervention of native schemata. Relevant studies point out that the core goal of second language reading is to accurately understand the western cultural connotations carried by English texts, and cognitive biases caused by native schemata constitute the major obstacles to reading comprehension. Therefore, classroom teaching should first comprehensively supplement the Western history, society and value systems corresponding to the texts; establish an independent cognitive framework of the target language culture; and reduce the interference of students' inherent native cognition on text interpretation. Based on senior high school classroom data, Mingrui Li et al. [6] proposed that systematic input of target language cultural background in advance when dealing with reading passages dominated by Western culture can greatly reduce the possibility that students misinterpret the original texts from the perspective of native thinking.

6. Conclusion

This study systematically reviews relevant research on the influence of native cultural schemata on second language reading through the literature review method and clarifies the dual functions of native cultural schemata in text interpretation. By activating familiar cognitive systems, native cultural schemata can improve learners' comprehension efficiency of texts with cultural commonalities. However, differences between native and Western cultures may also trigger reading obstacles such as comprehension and logical biases. This study also finds that current teaching practice pays insufficient attention to native cultural schemata, and there is room for further expansion in the systematic discussion of their functions in existing studies.

In the future, to enable native cultural schemata to empower second language reading teaching, it is necessary to further explore the integration path of native cultural cognition and Western cultural teaching through the coordinated efforts of classroom teaching, textbook research and academic research. Teachers should adopt dialectical teaching thinking, stimulate students' reading interest and reduce text comprehension difficulty based on native cultural experience, and distinguish the two sets of cognitive systems through regular Chinese and Western cultural comparisons to avoid cognitive misalignment and text misinterpretation caused by native schemata. In addition, textbook development should balance the proportion of Chinese and Western cultural content, add reading materials for cultural comparison, and make up for the deficiency of native cultural content in

current textbooks. Meanwhile, based on the characteristics of Chinese second language learners, academic circles should avoid mechanically copying foreign research conclusions; fill the research gaps in subdivided dimensions, long-term empirical studies and cognitive mechanisms; and construct a localized schema teaching and research system adapted to domestic learning conditions. Guided by empirical findings, front-line teaching reform can be promoted to transform second language reading teaching from single language skill training to the coordinated development of linguistic competence and cultural cognition. This helps learners eliminate cultural reading barriers, steadily improve their in-depth reading comprehension ability, and facilitate the localized optimization of second language reading teaching.

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