Research proposal of Systematic Review on Hanzi Learning Strategies among CSL learners in sphere and non-sphere Hanzi culture

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Abstract:

This proposed study aims to exploring the relationship between CSL learner's mother tongue background and learning strategies among Chinese learners within both Sphere & non sphere Hanzi culture contexts. Hanzi known for its efficiency, its unique configuration provides advantages in terms of faster reading and higher processing efficiency, However Hanzi' intricacy and memory burden were significant factors in learners' avoidance. To acquire Hanzi efficiently, students must use certain strategies. This particular strategy is defined as a Hanzi learning strategy. We regard native language background as the key determinant, as learners from various linguistic backgrounds encounter unique challenges in learning Hanzi, which determines their choice of Hanzi learning strategies. This review will synthesize existing research on the influence of CSL learner's mother tongue background and Hanzi learning strategies, intend to use a systematic review study approach to investigate the relationship between CSL learner's mother tongue background and Hanzi learning strategies. We will specifically look at how these strategies interact with students from various cultural backgrounds.

Keywords: Background of mother tongue, Chinese learning strategies, Sphere Hanzi culture, Non-native Mandarin speaker, Chinese as Second Language.

1. Introduction

As the global stage witnesses the soaring stature of China and its profound cultural resonance, the impact of China's cultural heritage becomes increasingly significant. An increasing number of people are learning Chinese, recognizing that language is not only a tool for communication but also a conduit for cultural exchange and understanding. Hanzi, which embody thousands of years of history and cultural

values, play a crucial role in this process. Hanzi are an essential part of Chinese language learning, serving as more than just a linguistic component; they are a gateway to understanding China's rich cultural heritage and historical depth. Each character encapsulates layers of meaning, history, and cultural significance, offering insights into the philosophies and traditions that have shaped Chinese society. The widespread learning of Hanzi highlights their importance in bridging cultural gaps and fostering a global appreciation of Chinese civilization. As learners engage with Hanzi, they not only acquire language skills but also connect deeply with the intricate tapestry of Chinese thought, art, and identity, making the study of Hanzi a profound cultural exploration and a means to promote international cultural exchange.

Everson (1998) noticed that the intricate structure and wide range of Hanzi can produce significant anxiety and feelings of powerlessness among L2 learners, frequently leading to a desire to avoid learning them [1]. To acquire Hanzi efficiently, students must use certain strategies. Koda conducted a study that examined the impact of various cultural backgrounds on the strategies used to acquire Hanzi [2]. Jiang and Zhao conducted additional research on this subject. Researchers found significant differences in the adoption of Hanzi learning approaches among people from Hanzi culture circles and those from non-Hanzi culture circles. These studies show that second language learners' linguistic background influences their choice of techniques for learning Hanzi [3].

Existing studies have denoted the significant role of mother tongue background in influencing the effectiveness of learning strategies. We intend to use a systematic review study approach to investigate the relationship between CSL learners' mother tongue background and Hanzi learning strategies. We will specifically look at how these strategies interact with students from various cultural backgrounds. Understanding this association may provide useful insights for enhancing Hanzi acquisition methodologies and educational outcomes.

2. Literature Reviews

2.1 . CSL strategies for learning Hanzi

There are efficient techniques to learn Hanzi. The six basic methods for learning Hanzi are: memorizing through repetition; creating personalized narratives; using ideograms and phonetic symbols; engaging in substantial writing practice; using word cards; deconstructing glyphs; and adopting cognitive processes. Many rookie learners rely on rote memory, which is repetitious, time-consuming, and inefficient, yet is extremely effective for learning Hanzi [4,5]. Furthermore, some students use the strategy of creating personalized tales based on Hanzi characters' shapes and sounds. Researchers discovered that this method improves Hanzi understanding and retention more efficiently. Shen's work from 2005 serves as a reference. The strategy of using ideograms and phonetic symbols entails students using Hanzi radicals and phonetic symbols to understand and retain the language [4,2]. Furthermore, some students improve their memory by repeatedly transcribing Hanzi characters, similar to rote memorization, as a way of cementing it through repeated exercises [6]. In addition, learners will use word cards to commit Hanzi characters to memory and breakdown complex Hanzi characters into fundamental radicals, easing the memorization process [7]. Techniques such as regular repetition, the ability to recognize distinct fonts, and the breakdown of complex Hanzi characters into their constituent radicals are all examples of cognitive methods. Hanzi learning usually incorporates metacognitive approaches, such as meticulous preview and revision, in addition to cognitive procedures.

This article primarily uses two scales to evaluate the efficacy of Hanzi learning approaches. The Hanzi Learning Strategies Scale (CCLS) is the initial scale. The scale, developed by scholar Shen Honghua [4], primarily analyzes and quantifies different Hanzi learning strategies used by students. The scale contains 59 commonly used learning strategies, including memory strategies and cognitive strategies. For example, the strategy of Hanzi coding (including font, semantic and phonetic), systematic preview and review is adopted by using radicals. The second is Jiang and Zhao (2001) developed the Scale (CCLS) to assess and evaluate the various ways in which foreign students learn Hanzi at the elementary level [3], they used Language Learning Strategies Scale (LSS) [8], as well as McGinnis' and Ke's study on strategies for learning Hanzi [9,2], to develop a Chinese Character Learning Strategies Scale.

Hanzi learning strategies vary between native and foreign language learners. Native language learners are more likely to acquire new knowledge using their pre-existing language abilities and Hanzi structure. Their core strategy involves four steps. To begin, kids frequently use Hanzi radicals to learn and retain the meaning and pronunciation of words. This enables them to blend the newly acquired Hanzi with their existing knowledge of glyphs and phonology [4]. The second method is repetitive practice; native learners can improve their Hanzi memory by writing and reading frequently. This strategy is similar to rote memorization, but it emphasizes memory consolidation through continuous repetition [6]. Third, learners will assess Hanzi's structure in order to understand its meaning and deconstruct it into smaller pieces, such as radicals or strokes, to aid memorization and comprehension [4]. Learning Hanzi through contextual learning involves ac-

tively reading and using Hanzi to enhance comprehension and memory. This strategy makes it easier to learn Hanzi and understand its practical applications [2] . Nonetheless, non-native Chinese learners rely heavily on mechanical and associative memory skills to deal with the complexities of Hanzi. One method is rote memorization. Because Hanzi is so intricate and strange to non-native learners, many beginners rely on rote repetition to recall it. Despite its mechanical and plodding nature, this technique can memorize a large number of new words [4,5]. Furthermore, certain CSL students may create storylines or links between the shape of the typeface and the sound of Hanzi in order to improve memory retention [4]. The third strategy uses word cards and glyph decomposition to break down complex information into smaller, more easily understandable components [7]. Furthermore, learning about Hanzi's ideographic radicals and phonetic symbols helps foreign Chinese language learners increase their comprehension and memory of Hanzi [10,4]. Finally, cognitive strategies like repetition exercises and identifying distinct fonts help learners Hanzi integrate newly learned Hanzi characters into their previous knowledge. People typically use cognitive strategies because they have a direct connection to memory and literacy [3,4]. Researchers found one relevant study on adept learners which study identified seven key traits that distinguish skilled Hanzi learners from those who struggle. 1) Proficient Hanzi learners use a variety of learning tactics and actively participate in metacognitive planning. 2) They typically use inductive approaches, which include connecting previously learned knowledge with new information. 3) When practicing writing, they prioritize stroke-based strategies and rigorously adhere to the suggested stroke order. 4) They excel at Hanzi. Language learners employ strategies that incorporate the three parts of Hanzi learning: meaning, pronunciation, and shape. 5) Proficient Hanzi learners use memory techniques to practice Hanzi without repeating them. 6) Those who excel at studying Hanzi have a strong drive to apply their knowledge in various settings, both within and beyond the classroom [11].

The complexity of Hanzi, the learners' native language competency, and their learning motivation will all have an impact on CSL learners' strategic options. We regard native language background as the key determinant, as learners from various linguistic backgrounds encounter unique challenges in learning Hanzi, which determines their choice of learning strategies.

2.2 . Influence of CSL learner's mother tongue background on strategy selection

The "Hanzi culture sphere" refers to East Asian countries and territories that have traditionally used Hanzi in their writing systems. These countries view the study of Hanzi as an integral component of their educational systems [12]. In contrast, the 'non-Hanzi culture sector' has not incorporated Hanzi into its writing system. Hanzi had little impact on the evolution of these countries' languages; instead, they evolved their own distinct phonetic writing systems. Individuals from non-Hanzi cultures often face difficulties when learning Chinese as a second language, mostly due to the significant differences between the ideographic and pinyin writing systems. According to the study [13], persons who lack a foundation in Hanzi often face significant challenges. The sophisticated nature of Hanzi, namely the delicate relationship between their form, sound, and meaning, frequently presents a significant obstacle to persons from cultures that do not utilize Hanzi.

Lu Weiping and Peng Ru revealed the most common learning strategies used by Vietnamese international students (with a background in Hanzi culture) to learn Hanzi. The method entailed rigorous training in the composition of Hanzi and the consistent execution of repetitious exercises for writing Hanzi outside of the classroom [14]. This finding is similar to the conclusions made by Jiang and Zhao. Following that, the most popular methods were learning Hanzi through social encounters with native speakers, watching Chinese films and television shows, and reading Hanzi books and newspapers. We can categorize these as applied tactics. The least effective strategies included actively participating in the instructor's presentation on Hanzi writing, consulting dictionaries, listening to music and audio recordings, and practicing sentence formation with Hanzi. We can classify these as phonological techniques. The least often used strategies were breaking down raw characters to identify their links with recognizable characters and posting difficult characters on the wall to improve memorization and writing. We can classify these strategies as inductive methods [14].

Wi-vun Taiffalo Chiung's paper investigates changes in the writing system of the Hanzi cultural sphere during the twentieth century, focusing on Vietnam, South Korea, and Japan. Despite Hanzi's historical prevalence in these regions, academics contend that a convergence of internal and external forces has resulted in the emergence of unique writing systems in each country over time [15]. Takuya Okimor's research investigates the differing approaches to Hanzi use in South Korea and Japan also thoroughly examines Hanzi's treatment in Korea and Japan. It is clear that the current Korean writing system mostly prohibits the use of Hanzi characters, although Japan has seen an increase in the use of regularly used Hanzi characters. The use of Korean Manju readings and Japanese Mamba kana also draws attention to differences in how languages are organized and shows how cultural background affects learning Hanzi [12].

Zhao Zhiyi (2015) looked into the Hanzi acquisition pro-

cess among international students from non-sphere Hanzi cultures. The researcher revealed that the compensatory technique was the most commonly employed approach, followed by cognitive strategies such as phonological, inductive, application, stroke, and character form. Students frequently employed memory techniques, while they used social, metacognitive, and emotional tactics less often [16]. According to Yuqi Chen, Chinese students who come from a Spanish-speaking background and are unfamiliar with Hanzi culture are more likely to employ cognitive procedures than metacognitive strategies. The application strategy was the most popular, followed by glyphs, monitoring, reviewing, strokes, phonology, memory, and planning techniques. Inductive methods were the least commonly utilized [17]. According to Wang, W. J., advanced American foreign students used the review approach the most, followed by the phonological, metacognitive, application, glyph, inductive, and stroke strategies. The utilization of Hanzi learning approaches varied greatly between the two student groups, specifically 'advanced learners' and struggling learners. Higher-level students were more likely to use approaches centered on evaluating Hanzi' strokes and glyphs. In contrast, the students who struggled the most avoided writing Hanzi in favor of using Pinyin. This study identified a direct association between learners' techniques for learning Han characters and their Han character exam scores demonstrated strong positive correlations between glyph tactics, application strategies, inductive strategies, and stroke techniques, as well as a negative relationship between review methods and test scores [18].

In 2014, Xu, Ming, Yang, and Yi conducted a study comparing learners from the Hanzi cultural circle to those from the non-Hanzi cultural circle. The study's goal was to determine how cultural background influences the choice of learning tactics. Hanzi Culture International students tended to prefer inductive approaches in the early stages. As people's Chinese language skills improved, they used more application approaches and fewer memorization strategies. Overseas students with non-Hanzi cultural backgrounds learned Hanzi primarily through the application process. However, at the postgraduate level, the most widely used technique shifted to the review strategy, while the inductive strategy became less popular as Chinese language proficiency improved. Hanzi Culture Circle's international students have demonstrated exceptional ability in summarizing and finishing Hanzi. Non-Hanzi Cultural Circle abroad students used metacognitive strategies more frequently than their Hanzi Cultural Circle counterparts [19].

According to the statistics, learners from various cultural backgrounds use Hanzi learning strategies in very diverse ways. Individuals in the Hanzi cultural sphere may be more likely to use summary approaches, whereas learners outside of this cultural sphere may rely heavily on application strategies. Furthermore, learners have the ability to use multiple learning strategies at different stages of the learning process. Beginner-level learners typically rely on fundamental cognitive processes like stroke and character learning, whereas advanced-level learners employ more metacognitive tactics like planning and monitoring. Although these studies provide useful insights, they have limitations such as a small sample size, scope, and methodology. We need additional research to gain a deeper understanding of the Hanzi learning methods employed by students from diverse cultural backgrounds. This will provide a more in-depth investigation of how variables associated with one's original language background influence one's choice of Hanzi learning tactics.

This systematic review aims to answer the following research questions:

RQ1: What is the nature of the association between CSL learner's mother tongue background and Hanzi learning strategies, as demonstrated by existing studies?

RQ2: What does current research show about Hanzi learning strategies' CSL learner's mother tongue background in both sphere and non-sphere cultures?

3. Methodology

The method to be employed in this proposed study is a systematic literature review. In this proposed study, both quantitative analysis and meta-analysis will be employed to synthesize the effect sizes of individual studies. The effect sizes will be calculated to evaluate the impact of CSL learner's mother tongue background on Hanzi learning strategies among learners from Chinese based-character cultures and Chinese non-based-character cultures. Quantitative analysis will be used to aggregate and interpret data from the included studies, providing a statistical summary of the relationships observed. The meta-analysis will further quantify these relationships by combining effect sizes across studies, allowing for a more robust assessment of the overall impact of CSL learner's mother tongue background on learning strategies.

3.1 . Source of literature and searching terms

To conduct a thorough literature search, we used the following databases: Scopus, Web of Science, ProQuest, EBSCO, ERIC, CNKI, Google Scholar. Below the Table 1 summarizes the searching terms for CSL learner's mother tongue background and Hanzi learning strategies.

Table 1 Search terms used in the systematic review of Hanzi learning strategies and CSL learner's mother tongue background

Population	Method & Technology	Language & literacy skills
Non-native mandarin speakers	Hanzi Learning Strategies Scale	Language factor
Non-Sphere of Hanzi culture	CSL learner's mother tongue background	Literacy skills

3.2 . Literature screening criteria

We carefully developed the criteria for our systematic review to ensure the selection of only the most relevant and high-quality publications. We have listed the criteria below, along with the reasons that support them.

Table 2 Inclusion and Exclusion Criteria with Justifications

Inclusion criteria	Exclusion criteria	Reason
published between 1994 and 2024	published before 1994 or after 2024	The earliest research on Hanzi learning strategies which was set after 1994, Therefore other temporal does not reflect current educational practices or the most recent understanding of CSL learner's mother tongue background and Hanzi learning strategies.
Peer-reviewed	Non-peer-reviewed	Peer-reviewed studies typically undergo rigorous evaluation, ensuring higher research quality and reliability.
Written in English or Chinese	written in other languages except English and Chinese	Choosing to include only Chinese or English papers ensures research accuracy, cultural relevance and representation.
Studies focusing on second language learners	Studies focusing unrelated to language learning or those studying only first language acquisition.	Encompass a second language acquisition population or Chinese learners will not contribute pertinent data for understanding Hanzi learning strategies and CSL learner's mother tongue background.
Robust methodological frameworks and appropriate data analysis techniques	Significant methodological flaws, such as lack of control variables	methodologically weak studies may lead to biased or unreliable conclusions, thus reducing the overall quality of the review.

The literature screening process will divide into two independent phases, with each incrementally improving the screening criteria and methodologies. This technique will ensure the incorporation of relevant and high-quality literature.

3.2.1 . Title and Abstract Screening.

In the initial phase, a preliminary title and abstract screening will be conducted using the Rayyan tool. The screening process will be based on a predefined list of keywords. All retrieved documents will first be screened by title and abstract, and any irrelevant documents will be screened by keywords, tags, and automated filtering in order to exclude studies that clearly do not fit the topic.

3.2.2 . Full-text review and quality assessment.

Following the initial screening of titles and abstracts, literature that meets the requisite criteria will then be subjected to a comprehensive full-text review. At this juncture, the researchers will undertake a detailed examination of each article using the Covidence tool. This assessment will encompass the overall relevance of the literature and the study design. The evaluation will include an appraisal of the clarity of the study objectives, the appropriateness of the methodology, the validity of the data analysis, and the appropriateness of the study population.

4. Conclusion

This review primary objective is to systematically review and synthesize existing research on the correlation between CSL learner's mother tongue background and the effectiveness of various Hanzi learning strategies. gain insight into the Hanzi learning strategies employed by diverse groups of learners, with a particular focus on representative groups from Hanzi-based cultural contexts (e.g., Japan and Korea) and non-Hanzi-based cultural contexts (e.g., England and France). These populations will facilitate the analysis of the efficacy of Hanzi learning strategies and CSL learner's mother tongue background in diverse cultural. Ultimately, this study hopes to provide a basic demonstration of the relationship between the use of Hanzi learning strategies and the CSL learner's moth-

er tongue background of Chinese learners from different linguistic backgrounds, in order to provide some evidence for future related studies.

Due to the small number of Hanzi learners, there is litter literature on the relationship between Hanzi learning strategies and CSL learner's mother tongue background, and there is no direct research method. Therefore, the method of relevant literature can only be transferred to this paper for further research.

What's more, the focus of the language category is narrow, and only English and Chinese research documents are selected in the literature selection. While this ensures the accuracy, cultural relevance and representativeness of the study, it also excludes the results of studies in other languages, may miss the strategies used by people in different countries to learn Hanzi, and limits the comprehensive understanding of the relationship between CSL learner's mother tongue background and Hanzi learning strategies.

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