

Development of a Reference Book for the HSK (Chinese Proficiency Test): A Study on the Development of the “HSK Pictophonetic Character Mnemonic Guide”

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Abstract

This paper focuses on the development of the “HSK Pictophonetic Character Mnemonic Guide”. Based on an analysis of the current situation and problems of existing HSK Chinese character learning materials, this paper explains the significance of developing this guide, and details its writing ideas, including the innovative approach of using phonetic components to connect content, strictly defining levels, introducing words and sentences through characters, and incorporating images and bilingual comparisons. Additionally, the paper conducts a comparative experiment on the application effect of the “HSK Pictophonetic Character Mnemonic Guide”, showing that it significantly enhances learning effectiveness for intermediate and advanced learners.

Keywords: HSK, Pictophonetic characters, phonetic components

1. Introduction

With the rapid development of international Chinese education, Chinese character teaching remains a major challenge for both teachers and learners. Chinese characters, as an important part of the Chinese language, have unique ideographic properties and a complex structure, which present challenges to learners from non-character-based language backgrounds. Furthermore, the requirements for assessing Chinese characters in the HSK have continuously increased. Existing Chinese character learning materials on the market have

certain shortcomings and are insufficient to meet the test preparation needs of second language learners. This paper aims to explore the systematic and regular development of a Chinese character and word mnemonic handbook based on the examination context, by starting from the study of Chinese characters themselves and combining the needs of second language learners.

2. Literature Review on Existing HSK Chinese Character Materials

2.1 Overview of Existing HSK Chinese Character

Materials

Comprehensive Chinese textbooks are a common way for second language learners to begin learning Chinese characters. Textbooks by Rong Jihua (2011), Quan Jun (2013), Liu Xun (2015), and Jiang Liping (2014) generally integrate Chinese character teaching into the text content, arranging character learning from simple to complex, and providing training in recognition and writing. This approach helps learners accumulate Chinese characters to some extent but lacks a systematic structure. The rules of character construction and cultural implications are not sufficiently explored, making it difficult for learners to form a complete knowledge system and use character rules effectively to improve learning efficiency.

Additionally, specialized Chinese character learning materials provide more comprehensive content. Textbooks by Wang Xiaojun (2009), Shi Dingguo and Luo Weidong (2009), for example, not only introduce the basic properties and characteristics of Chinese characters but also delve into their historical origins, artistic features, and related cultural knowledge, offering learners a broader cultural perspective. However, such materials are lacking in exam guidance and do not adequately address the needs of second language learners preparing for exams like the HSK. Zhang Jingxian (2004) and Ma Yanhua (2017) have provided some learning methods in their respective Chinese character tutorials. Fu Yunhua (2018) authored “Chinese Character Dominoes,” which explains commonly used characters in pinyin order and introduces related vocabulary, sentences, and Chinese cultural elements, offering some help for second language learners.

In addition to printed textbooks, auxiliary learning tools like flashcards have also been used in character teaching. For instance, Melissa Sconyers (2007) developed flashcards selecting 800 characters from the HSK character list and organizing common vocabulary and example sentences around them, which helps learners memorize characters and accumulate vocabulary. Overall, existing materials meet the basic needs of second language learners but are still lacking in materials designed for efficient exam preparation.

2.2 Overview of Chinese Character Studies

Xu Shen in *Shuo Wen Jie Zi* discusses six methods of character creation: pictograms,

indicative characters, associative compounds, phonetic compounds, derivatives, and borrowed characters. The productivity of phonetic compounds is particularly prominent in the development of Chinese characters. Research shows that phonetic compounds dominate the Chinese character system. According to statistics based on 7,000 common characters, phonetic compounds account for 80.5%, and in the 1,000 most frequent characters, phonetic compounds make up 58.3%. This underscores their significance as a key point of intervention for second language learners.

In the study of phonetic compounds, academic focus has been on their phonetic efficiency. Zhang Xichang (2007) found that the phonetic component has an overall phonetic efficiency of 66.02%, significantly higher than the semantic efficiency of the meaning component at 43.79%. This finding provides an ontological basis for the “phonetic component first” teaching strategy. Typical phonetic components like “qing” generate characters such as “qing” (please), “qing” (clear), “qing” (feeling), and “qing” (sunny), with phonetic consistency confirming the function of phonetic components to cue pronunciation. Research by Xu Caihua (2017) further supports this, categorizing phonetic components into five families and demonstrating that 93.72% of these families possess varying degrees of phonetic functionality.

Studies in second language acquisition further confirm the effectiveness of using phonetic components in teaching. Jiang Xin (2001) found that the effectiveness of phonetic rules for foreign students increases significantly with language proficiency, indicating that phonetic awareness develops dynamically.

3. System of Writing the “HSK Pictophonetic Character Mnemonic Guide”

3.1 Scientific Arrangement Based on Pinyin Phonemes and Phonetic Components

The “HSK Pictophonetic Character Mnemonic Guide” breaks from tradition by arranging Chinese characters in alphabetical order based on their initial pinyin phonemes, while also integrating the characteristics of phonetic compounds into the system. This arrangement has multiple advantages. From a cognitive perspective, the alphabetical order is familiar to most second language learners, lowering the learning threshold and enabling quick

engagement. For instance, in the “B” section, the root characters such as “ba” (eight) and “ba” (bash) are used to introduce related characters derived from these phonetic components, such as “ba” (to push), “ba” (climb), and “pa” (to lie down).

3.2 *Progressive Learning from Characters to Words to Sentences*

The “HSK Pictophonetic Character Mnemonic Guide” adopts a progressive learning method, starting from characters to words and then to sentences. This arrangement conforms to the cognitive rules of language learning, expanding from basic Chinese character knowledge to vocabulary and sentence usage, thereby improving the learner’s language ability as a whole. For example, starting with the character “包” (bāo), the guide first presents the pronunciation of “包” followed by words such as “包含” (bāo hán, to contain) and “包括” (bāo kuò, to include), reinforcing the learner’s understanding of the pronunciation and meaning of the character “包”. Then, related sentences like “这个账户里包含了你的所有信息” (This account contains all your information) and “他爱她, 包括她的缺点” (He loves her, including her flaws) are introduced. This method, progressing from character to word to sentence, helps learners learn Chinese characters within a practical context, improving both their ability to memorize characters and their flexibility in using them accurately in different contexts.

3.3 *Clear Level Differentiation*

This guide is based on the “International Chinese Language Proficiency Standards” and assigns levels to each character and word. For foreign students, the HSK exam serves as an important measure of their Chinese proficiency, and the level indicators in the guide provide learners with clear learning goals and directions for exam preparation. For example, the character “大” (dà, big) is marked as a level one character, which means it is essential for learners to master it. During exam preparation, learners can focus on reviewing characters and words corresponding to their proficiency level, efficiently distributing their study time and energy. For those preparing for the intermediate and advanced levels of the HSK exam, the clear differentiation of intermediate and advanced characters in the guide helps them tackle more difficult vocabulary, boosting their confidence for the exam.

3.4 *Bilingual Examples to Enhance Understanding and Application*

This guide uses English as the medium for providing bilingual example sentences, which offers several advantages. Since English is a widely used international language, most learners are familiar with it. Through English example sentences, learners can better understand the meaning of Chinese characters and their usage in sentences. For instance, for the word “抱怨” (bào yuàn, to complain), the guide provides a bilingual example sentence: “同学们经常抱怨寝室环境不好” (The students often complain about the bad environment in the dormitory). These examples help learners directly understand how the word is used in real-life contexts, minimizing misunderstandings caused by cultural differences and language barriers.

Additionally, the bilingual examples provide learners with models for translating between Chinese and English, helping them develop bilingual thinking skills. While learning Chinese, learners can compare the expressions in both languages, improving their flexibility in language conversion.

4. **Significance of Developing the “HSK Pictophonetic Character Mnemonic Guide”**

4.1 *Overcoming Learning Challenges*

The “HSK Pictophonetic Character Mnemonic Guide” effectively reduces cognitive load for learners by using phonetic component associations. For example, the phonetic component “青” (qīng) is used to link a series of characters such as “请” (qǐng), “清” (qīng), “情” (qíng), and “晴” (qíng). Learners only need to remember the pronunciation and meaning of “青” and the relationship between it and the other characters, making it easier to memorize these characters and significantly reducing the number of individual memory units. This approach breaks the traditional model of memorizing characters one by one, enabling learners to learn characters systematically and more efficiently.

Furthermore, Shi Xianghui (2022) mentioned, “HSK is the most internationally influential part of Chinese language teaching. As part of academic and national strategies, all Chinese textbooks inevitably have to address it.” By using the HSK vocabulary requirements as a benchmark and focusing on phonetic characters that appear frequently in the HSK exam, the

guide is tailored to help learners become familiar with exam-related character points and master test-taking strategies. This approach meets the learners' needs in terms of exam preparation.

4.2 Filling a Market Gap

Compared to traditional Chinese character learning materials, the "HSK Pictophonetic Character Mnemonic Guide" demonstrates significant advantages in its systematic approach. Traditional materials often present characters in isolation, making it difficult for learners to recognize the internal connections between characters, which increases the difficulty of constructing a knowledge system. In contrast, this guide groups characters with the same phonetic components together, creating an organic knowledge framework. Learners can clearly observe the relationships between phonetic components and their derived characters, gaining a deeper understanding of how pictophonetic characters are constructed, which helps them memorize and understand characters more efficiently.

5. Experimental Results on the Effectiveness of the "HSK Pictophonetic Character Mnemonic Guide"

5.1 Experiment Design

To verify the effectiveness of the "HSK Pictophonetic Character Mnemonic Guide," the author selected 30 Chinese learners with HSK level 4 to level 5 proficiency as subjects for the experiment. The participants were randomly divided into an experimental group and a control group, with 15 individuals in each group.

During the grouping process, factors such as language proficiency and learning background were considered to ensure similarity between the groups, minimizing experimental errors.

The experimental group used the "HSK Pictophonetic Character Mnemonic Guide" for learning, while the control group used traditional textbooks. Both groups were given the same study time (2 hours per week) for a period of 4 weeks.

The testing tools used were HSK level 4 test questions and specially designed tests for pictophonetic character skills. The HSK level 4 test assessed learners' performance in actual exam situations, while the pictophonetic character test evaluated learners' mastery of pictophonetic characters in terms of writing, distinguishing similar characters, and reading. Both groups were tested before and after the 4-week study period, and their performance changes were recorded.

5.2 Data Statistics and Analysis

After 4 weeks of study, the experimental group demonstrated significant improvement. In terms of correct rate for writing pictophonetic characters, the experimental group reached 72%, while the control group was at 63%, with an improvement rate of +9%. For distinguishing similar characters, the experimental group scored 75%, the control group 69%, with a +6% improvement rate. For reading pictophonetic characters, the experimental group achieved 88%, the control group 76%, with an improvement rate of +12%. The data is summarized in the table below:

Table 1. Effectiveness of the "HSK Pictophonetic Character Mnemonic Guide"

Indicator	Experimental Group	Control Group	Improvement Rate
Pictophonetic Character Writing Accuracy	72%	63%	+9%
Similar Character Discrimination Accuracy	75%	69%	+6%
Pictophonetic Character Reading Accuracy	88%	76%	+12%

These experimental results demonstrate that the "HSK Pictophonetic Character Mnemonic Guide" is highly effective in improving learners' ability to study pictophonetic characters. The experimental group showed clear improvement

in all key indicators, including writing, distinguishing similar characters, and reading, with improvement rates of 9%, 6%, and 12%, respectively. The guide's systematic arrangement based on pinyin phonemes and phonetic

components helped learners establish connections between character shapes and pronunciations, enhancing their ability to recognize and remember pictophonetic characters.

6. Conclusion

This study confirms that the “HSK Pictophonetic Character Mnemonic Guide,” based on phonetic component clues, significantly improves the effectiveness of Chinese character teaching. It successfully addresses the issues of lack of systematization and level adaptation present in existing materials. Through its innovative writing system and teaching methods, it enhances learners’ learning efficiency and exam preparedness. Moreover, the guide plays a positive role in promoting Chinese character culture, helping learners better understand the cultural connotations of Chinese characters.

In the future, the “HSK Pictophonetic Character Mnemonic Guide” can be further expanded and refined, creating a multilingual database for the interpretation of pictophonetic characters in various languages, providing more targeted learning resources for learners with different native languages, and further promoting the development of Chinese language education globally.

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