

# **Is Liushu still a helpful classification for learning and teaching Modern Standard Chinese? Evidence from Phonological Representation of Chinese Characters with Various Internal Structure of Italian Chinese Learners**

Haoming Liu

The structure of Chinese character cannot only be interpreted by external structure, but also by internal structure. External structure leads to the classification of Chinese characters based on the visual and spatial features, i.e., Left-Right Structure and Top-Bottom Structure Chinese character (Cheng-Lin Liu, 2007; Henry Roger, 2005, p.39). While, internal structure leads to the classification based on the manner in which Chinese characters are formed or used, which is called Liushu (六書 liù shū ‘six scripts’), including four character forming types: pictographs, ideographs, compound ideographs and phono-semantic compounds, and two character usage types: phonetic loans, and mutually defining characters (Insup Taylor, 2014, p.45).

Liushu is always a popular topic in the research field of Chinese characters. Although, with the development of Chinese language and the evolution of Chinese characters, Liushu has still been inescapably applied in teaching Chinese native speakers as well as foreign learners and had an influence on their learning of Chinese language, on account of the pictographic visual patterns of Chinese characters (Zhang et al. 2009). However, most of the research on Liushu are qualitative, for instance, what are the definitions of different types of Liushu (Insup Taylor, 2014, p.46) and which type of Liushu a Chinese character belongs to (Henry Roger, 2005, p32), rather than quantitative. Hence, it is meaningful to investigate Liushu and to explore the difference among different Liushu from a second language acquisition perspective, using a quantitative method.

This study focused on the phonological representation of Chinese characters with various Liushu and tried to answer these following research questions:

- Does the phonological representation ability of pictographs, ideographs, compound-ideographs and phono-semantic compounds vary?
- Do the fundamental elements of Pinyin, initial, final and tone, show different activation pattern?
- Do the abovementioned activation patterns change across different language proficiency levels?

So as to answer these questions, I administered a read-aloud task, followed by a phonological decision task, realized by a program designed by E-Prime. Participants are divided into 4 groups according to their HSK level and a character-based test: elementary, intermediate, advanced Chinese learners, and Chinese native speakers. 48 Chinese characters were shown to the participants in random: 12 pictographs, 12 ideographs, 12 compound ideographs and 12 phono-semantic compounds. Behavioral performance was calculated and analyzed in terms of the percentage of their correct oral productions.

There are two main findings: 1) compared with other types of Liushu, pictograph always have the best performance; the phonological representation of pictograph can be well mastered at the elementary level, that of compound ideograph and phono-semantic compound can be mastered well at the advanced level, while that of ideograph cannot be well mastered well even participants reach advanced level; 2) initial and final always have better performance than tone, participants can acquire initial and final well at the advanced level, while they cannot acquire tone well even they reach advanced level and the tone of phono-semantic is particularly difficult to learn.

These results suggest that Liushu is still an instructive classification for learning and teaching Modern Standard Chinese to some extent. More specifically, they make us see the phonological acquisition process of characters with different Liushu and give us some useful suggestions for teaching Chinese.

## References

- Dai, R., Liu, C., & Xiao, B. (2007). Chinese character recognition: history, status and prospects. *Frontiers of Computer Science in China*, 1(2), 126-136.
- Henry Rogers (2005), Writing systems: A linguistic approach. *Written Language & Literacy*, 8(1), 72-76 (p 32). New Jersey: Blackwell Publishing.
- Luo, C., Chen, W., & Zhang, Y. (2017). The inversion effect for Chinese characters is modulated by radical organization. *Journal of Psycholinguistic Research*, 46(3), 791-803.
- Taylor, I., & Taylor, M. M. (2014). *Writing and literacy in Chinese, Korean and Japanese: Revised edition (Vol. 14)* (pp. 45, 46). Amsterdam: John Benjamins Publishing Company.