Research and analysis of Computer Modernization in the Integration of Chinese Education in Education of Chinese Characters in Southeast Asia

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Abstract. With the development of global economic integration, Chinese language education has attracted more and more overseas scholars, and we also put forward higher requirements for Chinese character education. In this paper, the general situation of the teaching of Chinese as a foreign language and the deficiencies of the current teaching of Chinese as a foreign language are explained, and combined with the Chinese education in Southeast Asian countries computer education Chinese teaching modernization development to discuss, for the reference of readers.

Keywords: Chinese Education, Computer Education, Modernization of Chinese

1. Introduction
In the process of Teaching Chinese as a foreign language, the education of Chinese characters is a difficult point in Chinese teaching, and the teaching of Chinese characters is also an important part of Chinese teaching. In recent years, with the continuous development of information technology, computer technology has been widely used in the field of education. The application of computer technology in Chinese character teaching provides a new idea and carrier for Chinese character teaching.

2. Overview of research on teaching Chinese characters to foreign countries
2.1. Research status
In the teaching of Chinese as a second language, the teaching of Chinese characters started late. Since the mid-1990s, there has been a promising turn in the study of Chinese characters and the teaching of Foreign characters. At the fifth International Chinese language Teaching Seminar held in 1996, relevant experts issued a call to attach importance to the teaching and research of Chinese characters in view of the previous problems such as weak content, lagging research and predicament (Li Dazui, 2004). From 1996 to 2006, the research on Chinese character teaching has yielded fruitful results, and the scholars in this field mainly include Lv Bisong, Cui Yonghua, Zhang Wangjia, Wan Yexin, Li Dazui, etc. However, there is still a great space for progress in compiling textbooks of Chinese characters for foreign countries, which requires further research.
2.2. Research development trend

In recent years, the research on teaching Chinese characters to foreign countries has presented the following trends in terms of research content, research methods and research theory: In terms of research content, the perspective has been constantly broadened and refined. To be shown in the overall framework of Chinese character teaching, textbook compilation, Chinese character ontology research, acquisition research and other aspects, the research results are more abundant, the research framework is more perfect. For example, previous studies on the stroke sequence with few strokes have paid attention to, such as "Distinguishing stroke Combination From Character" in Teaching Chinese as a Foreign language (He Hongfeng,2005), "Starting from the Distinction between" Character "and" Character "in Pen Bit Variation and Stroke Teaching" (Gu Ying,2006; Yang Wenhui (2006), The Influence of Stroke Number and Structure On Chinese Characters Learning of Overseas Students (Liu Liping,2008), Stroke Research on Teaching Chinese as a Foreign Language (Su Yinxia,2012; Wang Hanwei,2012) et al., considered and studied the brush strokes in Chinese character teaching.

As far as the research method is concerned, it will become comprehensive and scientific. Traditional qualitative research tends to combine qualitative and quantitative (figure 1 regular script strokes).

![Regular script strokes](image)

**Figure 1.** Regular script strokes.

As far as research theory is concerned, the theoretical basis is constantly consolidated, and the interdisciplinary research trend is obvious, which is mainly manifested in the combination with cognitive psychology, database, statistics and other theories. For example, when combined with the database, statistical Analysis of Basic Chinese Word-Forming Characters (Zhang Kai, 1997), Analysis of Common Chinese Characters Components and Research on Teaching Chinese Characters to Foreign Countries (Li Ming, 2006), etc. Combined with cognitive psychology: An Analysis of the Phonetic Situation of 2905 Chinese Characters for Teaching Chinese as a Foreign Language (Feng Liping, 1998), etc. Combined with statistics: Statistical Analysis of Basic Chinese Word-Formation characters (Zhang Kai,1997), etc.

2.3. Research focus and weaknesses

The research framework of teaching Chinese characters to foreign countries has been improved to some extent, but comparatively speaking, there still exist research focus and weak links. From the perspective of the basic framework of the study of Chinese as a foreign language, the focus of academic research has gradually shifted from "how to teach" to "what to teach" and "how to learn", paying more attention to the ontology research of Chinese characters, and focusing on inspiring teaching from the perspective of students. This shows that the academic circle has gradually explored.
The teaching of Chinese characters from the perspective of the intrinsic nature of Chinese characters and the needs of students. There is still an imbalance in "how to teach", "what to teach" and "how to learn", which needs to be paid enough attention to. The weak links are mainly manifested in the study of cultural input in Chinese character teaching, textbook problems, and the analysis of Chinese character errors.

3. The current shortage of research on Chinese characters teaching abroad

3.1. There are cognitive illusions about the nature of words
This is the biggest problem in the field of Chinese character teaching. The most striking manifestation of this is the belief that the written word has both form and sound and meaning, which actually confuses the written word with the written word. We believe that text is the formal system of written language and the visual formal system of language as opposed to speech. The basic unit of a character is "character", which is also called "letter" in phonetic writing. Written language is a system of visual symbols for the written expression of information. Writing system and spoken system constitute the form and content system of written language respectively. It can be seen that sound and meaning are components of the spoken system that constitutes the written language, while form is components of the written system. This is the essence of the problem. Written record of spoken language, people see the text and relate it to the sound that it records or the meaning that the sound expresses. It is wrong to say that Chinese characters can directly express meaning, which is equivalent to treating Chinese characters as pictures. For example, "fear" is a pictographic character, and the physical meaning of "fear" cannot be seen. The cognitive illusion of character has brought great influence on the teaching and research of Chinese characters. Li Yunfu didn't see the difference of morpheme words and phoneme words, thought only record meaningful morpheme is a word or word visual unit, so he think in English, only a record of a word "word" truly record the English, and comparing the English words and Chinese characters, wrongly, that produced a series about the understanding of the characteristics of Chinese characters. For example, denying the objective fact that the number of Chinese characters is large, comparing the total number of alphabetic strokes recorded in English words with the strokes of Chinese characters, it is insignificant that the strokes of Chinese characters are complicated. In addition, Li Li also had a wrong understanding of Chinese characters. She believed that "Chinese characters are written symbols that record The Chinese language, so they must carry Chinese sounds and meanings". In fact, there is no necessary connection between form, sound and meaning. Such a statement is obviously somewhat arbitrary. Tan Yingli also mistakenly believes that "Chinese characters are planar characters with sound, sound and meaning integrated, while phoneme characters are linear characters". Here the external and internal relationships of words are confused. In fact, in any text, there are lines between words, and the inside of the word is flat. It is not accurate to say that "Chinese characters are planar characters". It should be said that "Chinese characters are planar complex characters".

3.2. Excessive reliance on experimental research
Using data to speak, in itself, is very persuasive. At no time can the role of experimental research be completely eliminated. However, the current research has such a phenomenon: "there are papers, there are experiments, there are experiments, the results are not the same", the conclusion is naturally not correct. Who do you trust? This reflects a serious defect of experimental research: experimental related factors are difficult to control. What are quantitative? What are the variables? Is the quantity necessarily stable? Does the variable lose its vitality under special conditions? Most of the papers focus on the conclusion. Although the experimental process is described in detail, the readers are still confused about some uncontrollable factors. The large presentation of data seems to enhance the credibility of his research. Due to the complexity of the process, it is not easy for readers to prove or falsify, thus creating a blind spot in the examination of research results. This problem is a chronic problem in The teaching of Chinese characters. Sun Dejin once said that if one makes any mistake,
one may fall into the mire of circular argument. "There is much to be said on both sides of the argument." So he went back to the reality and kept arguing, wasting a lot of energy.

4. The modernization of Chinese character teaching in computer education combined with Chinese education in Southeast Asian countries

With the widely application of the new media technology, mobile learning in the field of education especially the foreign Chinese character education occupies a more and more important position, promote mobile learning needs based on the characteristics of Chinese education, creative thinking, integration of resources, to develop Chinese mobile learn APP, can to a certain extent, break through the difficulties of Chinese second language teaching, improve quality, and the effect of foreign Chinese character teaching, combining with southeast Asia Chinese education under the modern development of the computer education of Chinese teaching in this paper.

4.1. Feasibility of constructing mobile learning mode in Chinese character education to foreign countries

The development and application of new media technology has provided the feasibility of constructing the mobile learning mode of Chinese character education in the technical level and the public acceptance level. From the technical level, new media technology to integrate rich audio data, speech recognition, artificial intelligence, speech synthesis, such as text classification technology development and mature of external Chinese education for the development of mobile learning model provides the foundation of technical support, make the pinyin of Chinese characters, font, meanings of mobile learning possible, based on the application of network information technology in line with the cognitive characteristics of Chinese characters to form complete information chain for learners to learn.

4.2. Advantages of constructing mobile learning mode in Chinese character education to foreign countries

Compared with traditional classroom teaching, the development and design of Chinese character mobile learning APP and the construction of mobile learning mode have the following advantages in Chinese language education [1-3]. One is to a certain extent, alleviate the growing number of learners and the contradiction between limited teaching resources, although in recent years Chinese as a foreign language professional development, and the increasing number of Chinese as a foreign language teacher, but in terms of traditional classroom teaching, and are still unable to meet the needs of growing foreign Chinese character teaching, the use of Chinese second language learning APP, and gradually build online self-study and teaching mode of online communication between teachers and students, to meet the demand of more learners' learning digital teaching of Chinese characters (figure 2).

![Figure 2. Digital Chinese character teaching.](image-url)
4.3. Strategies for constructing mobile learning mode in Chinese character education to foreign countries

The functions of the Chinese character mobile learning APP developed and designed for Chinese second language learners mainly focus on the retrieval of "teaching" and "exercise". In the retrieval module, pinyin retrieval, partial radical retrieval and "scan" functions are designed to facilitate learners to retrieve glyphs through Chinese pronunciation and make pronunciation clear through the structure of Chinese glyphs [4-6]. The interface design focuses on convenience, enabling learners to realize fast retrieval and basic memorizing of Chinese characters with fragmented time. In the teaching module, the teaching integration design of Chinese pronunciation, Chinese glyphs, Chinese character meanings and Chinese culture is designed. In the teaching of a Chinese character, "teaching" and "testing" are closely combined (FIG. 3 Pinyin search).

5. Conclusion

To sum up, in the process of Chinese character teaching, the mobile learning model is constructed by using computer technology and new media, which facilitates the learning of the pronunciation, shape and meaning of Chinese characters. At the same time, the mobile learning model can expand the classroom teaching resources of Chinese characters and effectively integrate the learning of Chinese pronunciation, glyphs and culture, thus improving the learning effect of Chinese characters.

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