A Study on the Acquisition of Particle "Le" of Chinese Heritage Language Learners: the Case of Donggan International Students from Central Asia

Huangai Zhao

College of International Cultural Exchange, Northwest Normal University, Lanzhou, China huangaizhao@hotmail.com

ABSTRACT. The Chinese particle "Le" is one of the most difficult words for international students to learn Chinese. By comparing the homogenous interlanguage corpus of Chinese heritage language learners and non-heritage language learners, it is found that the characteristics of particle "Le" acquired by heritage language learners include: high accuracy rate of using "Le"; "addition" and "omission" are the main types of errors; the errors of "addition" gradually decreased with the increase of learning level, while the errors of "omission" gradually increased. This is caused by the influence of their mother tongue. So it is necessary to strengthen the comparative analysis of Chinese and their mother tongue according to these characteristics and laws to strengthen the teaching guidance.

KEYWORDS: Heritage language learner, Chinese particle "le", Donggan international students

1. Introduction

The Chinese particle "Le" is one of the most difficult words for international students to learn Chinese. Existing studies lack the research of Chinese heritage language learners, especially on the comparative study of Chinese heritage language learners and non-heritage language learners. The limited research conclusions are not completely applicable to the teaching of Chinese heritage language learners. The Donggan people of Central Asia are descendants of the Northwestern Muslims who migrated to Central Asia in the late Qing Dynasty. They are the largest overseas Chinese immigrant groups, whose mother tongue "Donggan Language" is a special variant of northwestern Chinese dialects abroad. Due to its long-term living in Central Asia, most Donggans are bilingual people who speak both Russian and Donggan language. Their Chinese language acquisition belongs to the heritage language acquisition. It is particularly suitable to carry out a comparative study of Central Asian Russian students with single Russian background. This thesis targets Central Asian students by creating a corpus of 510,000 words, including a 3,400,000 words corpus of East-Canadian international students, 170,000 words from the Russian student. A comparison of the beginner, intermediate, and advanced stages of Donggan international students were studied. The similarities and differences were systematically analyzed in the use of Chinese particles "Le" by Russian students, as well as the using habits and reasons of "Le" by Donggan international students.

2. Analysis on the General Characteristics of the Usage of Chinese Particle "Le" in Donggan International Students

After strict processing, the corpora are divided into five types: "correct", "omission", "substitution", "disordering" and "addition". Because the number of corpus words is different at each level, considering the feasibility of the study, we obtain the number of corpora to be examined at the intermediate stage according to the ratio of the number of corpus words at the elementary and intermediate stages, and all the corpora at the elementary and advanced stages are examined.

	Corpus words		Corpora number		Proportion of corpora(%)		"Le" Used times		Proportion used(%)	of	"Le"
Level	D	R	D	R	D	R	D	R	D	R	

Elementary	74158	46498	891	390	1.2%	0.8%	843	363	1.1%	0.7%
Intermediate	74158	46498	836	440	1.1%	0.9%	795	420	1.1%	0.9%
Advanced	51561	25006	587	230	1.1%	0.9%	565	224	1.1%	0.9%

Note:D represents Donggan international students, R represents Russian international students.

It can be clearly seen from Table 1 that the frequency of "Le" used by Donggan international students is higher than that of Russian international students in each stage. Moreover, the frequency of Chinese "Le" used by Donggan international students did not change significantly in the elementary, intermediate and advanced stages, while the frequency of "Le" used by Russian international students changed significantly in each stage.

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	"Le" use correct rate(%)					
	Donggan students	Russian students				
Elementary	76.3%	76.0%				
Intermediate	85.9%	79.3%				
Advanced	88.8%	83.2%				
Average	83.67%	79.5%				

It can be seen from Table 2 that the correct rates of using Chinese particle "Le" of Donggan international students are higher than that of Russian international students in the elementary, intermediate and advanced level. But at the same time, it can be seen that the difference between the two is not big in the elementary stage, and the difference is obvious in the intermediate and advanced stage. This shows that Donggan international students, as the heritage language learner, are better than Russian students in the intermediate and advanced stages in the process of acquiring Chinese particle "Le".

At the same time, through the statistics on the corpus of 47,000 characters of Donggan Language, it was found that it contains 1,409 sentences equivalent to the structure of Chinese "Le", accounting for up to 3.0%; while in the BCC corpus of Beijing Language and Culture University, the usage ratio of Chinese native speakers of "Le" is only 0.96%. Therefore, the corpus corresponding to the Chinese word "Le" in the corpus of Donggan Language is much more frequently used than Mandarin Chinese. Therefore, the frequency of use of the Chinese particle "Le" by Donggan students is higher than that of Russian students, and the main reason for the use of the Chinese particle "Le" in different stages is relatively related to their mother tongue background.

3. Analysis on the Usage of Sentence Pattern of "Le" in Donggan International Students

In order to meticulously describe the use of "Le" in the acquisition process and understand the use tendency of foreign students in the form, based on previous studies, we integrated the result of the investigation of Chinese native speakers' corpus and Chinese interlanguage corpus. We finally divided the sentence pattern of "Le" into 21 categories[4]. Then, it analyzes the differences in the use of 21 types of sentence patterns between Donggan international students and Russian international students.

sentence pattern	native Chinese	Dongan stud	ents		Russian students			
_		elementary	intermediate	advanced	elementary	intermediate	advanced	
S1	30.4	28.4	30	30.1	37.7	34.1	35	
S2	4.2	0	0	0.2	0	0	0	
S3	21.1	14.7	11.9	12.9	12.3	11.7	17.8	
S4	0.4	1.2	0.7	1	1.4	1.2	2.5	
S5	0.6	1.1	2.4	1.6	1.8	0.9	0.6	
S6	3.3	2.2	3.6	2.9	2.9	3.9	3.7	
S7	1.6	0.2	1.2	1.6	0.4	1.2	0.6	
S8	0.7	0	0.3	0.4	0.36	0.3	0	
S9	4.5	3.6	7	5.5	4	6.6	6.7	
S10	0.4	0	0.3	0.2	0	0	0	
S11	0.3	0	0	1.2	0	0	0	
S12	4.8	7.2	8.3	2.9	5.8	5.1	3.1	
S13	0.8	1.7	2.4	3.9	1.8	0.9	0.6	
S14	0.1	3.1	0.1	1.6	2.5	1.2	0.6	

Table 3 Usage Frequency Of "Le" Sentence Patterns in Each Stage

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S15	0.3	0.2	0.1	0.8	0.72	0	0
S16	13.0	18.6	20.4	18.9	14.9	22.8	22.7
S17	7.7	0.5	1.3	1.4	0.4	0.6	0
S18	0.7	0.3	0.1	0.2	0.4	1.8	0
S19	4.5	8	4	4.9	4	2.4	1.8
S20	0.4	4.8	3.4	6.1	5.8	2.7	4.3
S21	1.2	4.4	2.4	2	2.9	2.7	0

Analysis of variance showed that [4], there was no significant difference in the frequency of use of 21 kinds of "Le" sentence patterns between Chinese native speakers and Donggan international students and Russian international students (P > 0.05). This indicates that there is no significant difference between Chinese native speakers and Donggan international students and Russian international students in the usage distribution of the 21 sentence patterns of "Le" in Chinese.

In addition, through statistics on the frequency of use of 21 sentence patterns (Table 3), it is found that the sentence patterns that are used by the background of the two languages students in the top 10 are exactly the same, but there is a difference in the order of arrangement, and two kinds of language background students use the highest in the top 10 of the sentence patterns more than 90% of the total usage (Donggan 92.4%, Russian 93.1%), and sentences with lower usage rates are also easily affected by extreme values. This shows that the selected top 10 sentence patterns can well represent and reflect the overall situation, and are more suitable for the comparative analysis of errors in the sentence pattern of "Le".

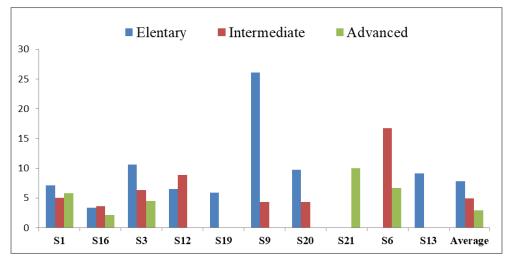


Fig.1 Changes in the Error Rate of the "Le" Sentence Pattern of Donggan Students

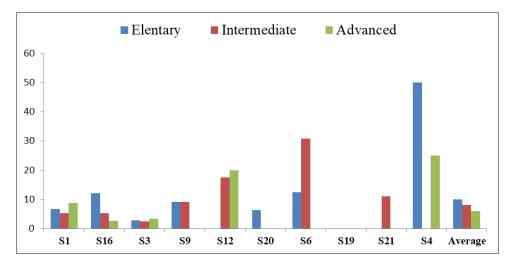


Fig.2 Changes in the Error Rate of the "Le" Sentence Pattern of Russian Students

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It can be seen from Figure 1 and Figure 2 that the error rate of students from both backgrounds decreases with the increase of learning time, but the decreasing trend range of students from Donggan is significantly higher than that of Russian students, and the error rate of students from Donggan in each stage is significantly lower than that of Russian students. This indicates that Donggan international students, as Chinese heritage language learners, have better Chinese acquisition than non-heritage language learners, and it also proves that heritage language learners "are more likely to reach a higher language level close to that of native speakers than ordinary foreign language learners" [2].

4. Analysis on the Development Trends and Causes of Errors Made by Central Asian International Students

According to the statistics of the types of errors used by international students from two different language backgrounds, it was found that there were four errors: omission, addition, substitution, and disordering.

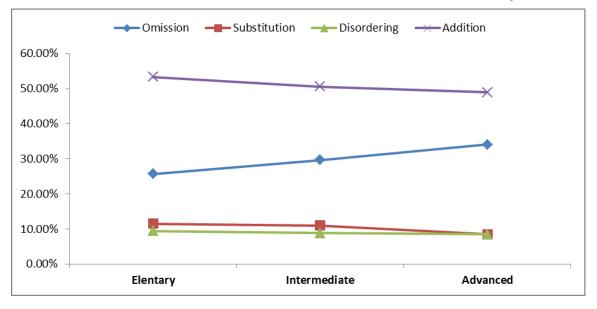


Fig.3 The Trend Chart of Donggan International Students' Errors

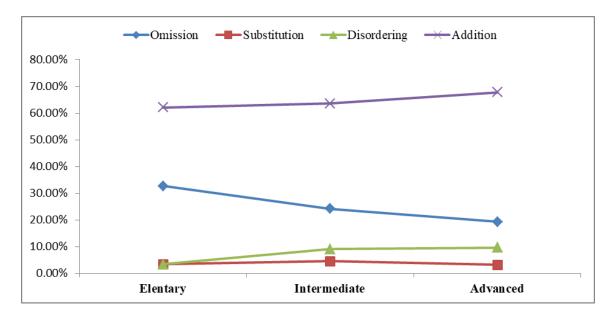


Fig.4 The Trend Chart of Russian International Students' Errors

It can be seen from Figures 3 and 4 that students from two language backgrounds have the highest proportion of errors in the order of "addition" and "omission", and the lowest proportion in the order of "substitution" and

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"disordering". At the same time, there is a significant difference in the trend of "addition" and "omission" of the students with the highest percentage of errors. With the improvement of Chinese level, Donggan students show a downward trend in "addition" errors, and an upward trend in "omission" errors; students with Russian background are opposite to Donggan students. This shows that in the elementary stage, Donggan international students were affected by their mother tongue and Russian language, and used a lot "Le", but with the continuous improvement of their Chinese level, Donggan international students gradually realized that the use of Chinese "Le" is much less than their mother tongue. Therefore, the intermediate and advanced stages are more cautious in the use of "Le" and are prone to "omission" type errors; while Russian international students are influenced by their mother tongue, Russian, at the beginning of the study, and their use of "Le" was not much different from that of Donggan students. However, since there was no foundation for Donggan language at the intermediate and advanced levels, they began to use "Le" a lot. They are prone to "addition" type of errors.

In addition, in terms of "substitution" errors, the proportion of this type of errors by Donggan students at all stages is about 10%, while that of Russian students is about 4%. The reason for this difference is mainly because Donggan students are affected by their mother tongue. And use the word "Le" where other elements should be used, while Russian students do not use it too much because they do not have this background. For example, Donggan students have a special type of use case in the "substitution" errors, that is, "Le" is misused as "ni", such as:* Zao qu hao.Wan le xue jiu bei youren cai de bu haokan ni;Go early, the snow was trampled by the other visitors when they went late,This is mainly because they have such sentences in their mother tongue:Wo zou ni, dazhang qu ni, ni haohaoer tanxin niansu. [3]Wo zou le ,dazhang qu le,ni haohaoer yongxin dushu.I left for the war. You study hard.The usage of "ni" in Dongan Language is equivalent to "Le" [3] in Mandarin.

5. Conclusion

To sum up, Donggan international students, as Chinese heritage language learners, are better than Russian international students in the acquisition of Chinese particle "Le" due to the influence of their mother tongue. Specifically, their use accuracy is higher than that of Russian international students in the elementary, intermediate and advanced stages. At the same time, the acquisition of Chinese "Le" by Donggan students also showed that the "addition" errors gradually decreased with the improvement of the learning level, and the "omission" errors gradually increased, which was affected by their mother tongue Donggan Language. Therefore, if we can give full play to the language advantages of Donggan students and adopt different teaching methods based on their acquisition characteristics, we will be able to improve teaching efficiency. Specifically, at the elementary stage, it should be clear that "Le" in Chinese is used less than in Donggan, and it is not the same as the past tense in Russian. It is necessary to use "Le" carefully and correctly; while at the intermediate and advanced stages, strengthen the teaching of comparative analysis of Donggan and Chinese through specific examples, and encourage students to use "Le" positively and correctly.

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