THE INFLUENCE OF ENGLISH LANGUAGE PRONUNCIATION ON KOREAN PRONUNCIATION AMONG NATIVE CHINESE SPEAKERS: AN EMPIRICAL STUDY

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Abstract: This study explores the influence of English pronunciation on Chinese native speakers' Korean pronunciation. Previous studies indicate that syllable - final consonants are challenging for Chinese speakers in both English and Korean. Among Korean, English, and Chinese, only Korean and English have many syllable - final consonants and consecutive consonants between syllables, while Chinese lacks this feature. Considering the acquisition sequence, English is acquired earlier than Korean in the context of this study. Data was collected through an experimental study and questionnaires. The data was analyzed using SPSS. The results show that Mandarin-speaking Korean learners who are more proficient in English pronunciation are more accurate in identifying syllable-final and consecutive consonants in both English and Korean. On the other hand, students who are less proficient in English are more impacted by their native phonological knowledge, frequently losing final consonants or adding vowels in both Korean and English. The statistics show a statistically significant difference between the perception of syllable-final consonants in Korean and English, as determined by a one-way ANOVA study in SPSS. This study implicates that applying English pronunciation knowledge in Korean pronunciation teaching for positive transfer can enhance the language acquisition.

Keywords: coda, English pronunciation, Korean pronunciation, Native Chinese, second language acquisition

INTRODUCTION

This article explores two consonant pronunciation situations: consonants at the syllable coda and the "consonant + consonant" phenomenon occurring between syllables. Consonants at the syllable coda include all final sounds in Korean that carry a closing sound, as well as single-syllable or multi-syllable words in English that end with a consonant. While there are differences in the syllable structure of these words, there is essentially no significant distinction between them. The "consonant + consonant" phenomenon occurs when the preceding syllable ends with a consonant and is adjacent to the initial consonant of the following syllable. This phenomenon is a common difficulty for Chinese learners when

acquiring foreign language pronunciation (이화진, 2019:184). In Mandarin, almost no consonants appear in the syllable final position, except for /n/ and /ŋ/, whereas this is more common in English and Korean, which provides a research direction for this article.

According to Wrembel (2010:75), as Polish students' proficiency in a third language (English) improves, the phonetic influence of their second language (German) gradually diminishes. This indicates that although learners are influenced by German phonetics while learning English, the impact of German decreases as their proficiency in English increases. This phenomenon highlights how, in multilingual learning, the subsequently acquired language may be influenced by previously learned languages.

LITERATURE REVIEW

In the current field of language research, the focus often lies on contrastive analysis between Chinese (Mandarin) and Korean for Chinese students. These studies aim to predict potential errors that native Mandarin speakers might encounter during the process of acquiring Korean and to analyze the underlying reasons. It is generally believed that due to the differences between Mandarin and Korean, native Mandarin speakers are prone to making errors when learning Korean. Additionally, these studies discuss effective methods to correct these errors.

With the advancement of globalization, society has gradually established a multi-language learning environment. For native Mandarin speakers, they typically start learning English as a compulsory subject from primary school. Therefore, when they begin learning Korean, they usually have accumulated at least ten years of English learning experience and have a continuous desire to learn. Consequently, native Mandarin speakers who learn Korean are actually multi-language learners acquiring three languages: Mandarin, English, and Korean. Merely comparing them with their native language, Mandarin, is clearly insufficient.

Chen Shuwen (2024) reviewed various second language (L2) phonetic acquisition theories, including the Speech Learning Model (SLM) and the Perceptual Assimilation Model (PAM), and discussed the relationship between L2 phonetic perception and production, providing a solid theoretical foundation for positive transfer education. Yang Sun-im (2006) conducted an acoustic analysis of Chinese students' pronunciation data and found that learners faced numerous challenges in the identification and pronunciation of Korean final consonants. For example, they might omit the final consonant in "수업시간" or mispronounce "직접", and even exhibit individually unique pronunciation errors, with different types of errors having various underlying causes. Zeng Mao (2013) investigated the issues related to final consonants and inter-syllabic consonant clusters in the Korean pronunciation of Chinese students and analyzed the reasons for these errors while proposing a teaching plan. However, the study overlooked similar pronunciation types in English.

In summary, research indicates that in multi-language learning, previously acquired languages influence the learning of subsequently acquired languages. Therefore, when learning multiple foreign languages, transfer phenomena are not limited to the native language but involve both the native language and previously learned foreign languages. For instance, if a Korean learner can correctly pronounce the English word "doctor," they are less likely to omit the final consonant in the Korean word "닥터". This paper will test the participants' English pronunciation proficiency through surveys and questionnaires to understand their perception and transcription of final consonants and inter-syllabic consonant clusters in both English and Korean, leading to relevant conclusions.

METHODOLOGY

Contrastive Analysis of Syllable Structure

Pike (1945) and Abercrombie (1967) classified the world's languages based on rhythmic characteristics into stress-timed languages and syllable-timed languages. English is regarded as a typical stress-timed language, while Mandarin and Korean are categorized as syllable-timed languages. From a perceptual perspective, in stress-timed languages, the duration between two stressed syllables is approximately equal, characterized by complex syllable structures and a higher number of consonants. In contrast, each syllable in syllable-timed languages tends to have a more consistent duration, with relatively simple syllable structures (Ding Hongwei, 2014: 176).

This study follows the comparative research conducted by Zhang Yanan (2020: 23-68), focusing on the final consonants of Mandarin, English, and Korean. It analyzes the syllable structures of the three languages and organizes their similarities and differences in syllable composition. The comparison reveals that although some syllable types do not exist in Mandarin, they are indeed present in both English and Korean, including final consonants and consonant clusters between syllables. Due to the flexible combination of vowels and consonants in English, its syllable structure is notably richer than that of Mandarin and Korean. For instance, monosyllabic words can contain multiple consonant combinations, such as CCVC (e.g., "plug"), CCCVCC (e.g., "strengths"), and VCCCV (e.g., "empty").

This study primarily investigates syllable-final single consonants, and therefore does not consider the syllable-internal different types of consonant clusters, focusing solely on syllable-final single consonants as representatives. Table 1 presents the similarities and differences in syllable structure between Chinese, English, and Korean. It is important to note that due to the limitations of the CVC structure with the nasal finals /n, ŋ/ in Chinese, this study excludes them. For specific reasons, please refer to footnote 2, which will not be elaborated on here.

Table 1: Comparative Analysis of Syllable Structures in Three Languages

language environment		Chinese	English	Korean
Within a syllable	V	啊[a]	I[aɪ]	아[a]
	CV	卡[k^ha]	Key[k^hi]	가[ka]
	VC		At[æt]	악[ak˥]
	CVC	无	Top [tɑːp]	각[kak˥] 값[kap˥]
Between syllables	V-V	啊哦[ao]	Oh[o]	우애[uɛ]
	V-C	阿迪[adi]	I promise [aɪ ˈp^hrɑːmɪs]	어미[əmi]
	C-V		Add it[æd it]	각오[kago]
	C-C	无	Stop talking [stɑːp ˈtɔːkɪŋ] Ten minutes [ten 'mɪnɪts] Illegal（In+legal）[ɪn + ˈliːgl]	국도[kuk˥t'o] 산만[sanman] 한류[hallju]

Based on their combination patterns, the syllable structures of English and Korean can be categorized into V (Vowel), CV (Consonant + Vowel), VC (Vowel + Consonant), and CVC (Consonant + Vowel + Consonant) types. In Chinese, apart from the extremely limited VC and CVC types, primarily V and CV types exist. This limitation is due to the restrictions on final consonants in Chinese syllables, resulting in the absence of C-V and C-C structures. In contrast, English and Korean generally possess both structures. Overall, the syllable structures of English and Korean are more diverse, reflecting significant differences between these languages.

Similarities and Differences in Syllable Structure between English and Korean

The syllable structures of English and Korean exhibit distinct differences from those of Chinese. In English and Korean, the types of consonants that appear between syllables differ significantly from those in Chinese. In English monosyllables, the pronunciation of final consonants can vary, with complete, partial, or no pronunciation. For example, the word "map" can be pronounced as [mæp] or [mæpˀ], whereas the similar Korean word "갑" is pronounced as [kapˀ] with no final consonant sound, highlighting the differences in pronunciation characteristics between the two languages.

In the C-C structure between syllables, there are three scenarios when the final sound of one syllable meets the initial sound of the next. Firstly, when a voiceless consonant meets a voiced consonant, such as in English "black-board" [blækˇbɔːrd] and Korean "악보" [akˇp'o], the /k/ sound in the first syllable often loses its pronunciation feature. Secondly, when a voiceless consonant meets a fricative consonant, such as in English "function" and Korean "식사", the /k/ sound and the /s/ sound interact, and if the /k/ sound is not weakened, the /s/ sound will be affected, so the /k/ sound is usually weakened.

The third scenario involves consonants that can undergo phonological changes in certain environments. Assimilation is a widely recognized phenomenon, although research perspectives differ (e.g., 구희산 1998 and 전상범 2002). For example, in the phrases "ten minutes" and "good news", assimilation environments exist; similar phenomena are also common in Korean. These characteristics reflect the complexity of syllable structure in English and Korean.

The analysis above suggests that the syllable features of Korean and English are the fundamental reasons why Chinese learners experience cognitive and production errors when acquiring the C-V and C-C type pronunciations of foreign languages. The following [Table 2] presents the same phonological types in English and Korean compiled in this study.

Table 2: Phonological Types Common to English and Korean

language environment		English	Korean
Monosyllabic syllable-final consonants		Mack[mæk ˥] Map[mæp ˥]	국[kuk ˥], 잡[ʧap ˥]
intersyllabic clusters	consonant	Black-board[blæk ˥bɔːrd] Ink stain[ɪŋk ˥steɪn] Add it[ædit] Pancake[ˈpæŋkeɪk] Ten minutes[tem ˈmɪnɪts]	악보[ak ˥ p'o] 식사[sik ˥s'a] 각오[kago] 신고[sink'o/siŋk'o] 산만[sanman/samman]

continued

Good news[gʊd/n nuːz]	밭만[panman]
Illegal（In+legal）[ɪn + ˈliːgl]	한류[hallju]

Experimental Method

Kwon, Harim (2017) studied the processing of English syllable-final consonants by Korean scholars with varying levels of English proficiency, exploring the impact of English acquisition level on the adaptation of Korean loanwords. The results indicated that differences in participants' English proficiency led to variations in the perception of loanword forms. This study employs a similar experimental method to Kwon (2017: 5), focusing on intersyllabic consonants that are present in both English and Korean as target phonetic materials. A questionnaire was also utilized to observe participants' perception of the target sounds and to understand the cognition of these sounds among Korean learners whose native language is Chinese. All collected data will be statistically analyzed using SPSS.

Experimental Subjects

This study involves two groups of participants: Chinese students studying in Korea and Chinese university students learning Korean in China, reflecting the broad scope of Korean language learning. The pronunciation of the participants is influenced by various factors, including language environment, learning stage, gender, and age. This study limits the participants' age to between 17 and 23 years old, and all participants are native Mandarin speakers.

The questionnaire design includes demographic characteristics such as age and gender, as well as an examination of Korean language proficiency, English pronunciation levels, and whether English is referenced during Korean language learning. This survey collected 300 valid responses, excluding 65 advanced learners (TOPIK levels 4-6), and ultimately used 235 intermediate to beginner learners (TOPIK levels 1-3) as the experimental subjects.

Questionnaire Survey

This questionnaire aims to study the pronunciation of syllable-final consonants and inter-syllabic consonants in English and Korean, with a focus on observing whether the participants' English pronunciation proficiency affects their perception of different types of consonants. The experimental method consists of two steps:

The first step is a pronunciation proficiency test. Participants are required to read a short passage and record their reading, then submit the audio files for evaluation by three native English-speaking teachers.

The second step involves distributing a questionnaire to participants who have passed the English pronunciation proficiency test, requiring them to complete it carefully. The questionnaire includes English words containing syllable-final or inter-syllabic consonants, along with their corresponding Korean transcriptions. Participants must select the closest Korean pronunciation based on their understanding of how the phonetic materials are pronounced. This approach allows us to observe the impact of English pronunciation proficiency on the recognition of syllable-final consonants, inter-syllabic consonants, and consonant clusters. The design principles of this study are outlined in Table 3.

Table 3: Design Principles of Questionnaire Survey

Consonant type	Example	Consideration of sound change type	Options
Single Syllable	Good	Syllable-final consonant d →ㄷ	[굳]

continued

consonant			Re-syllabification of syllable-final consonant d	[구드]
			Conforming to loanword orthography	[굿]
		Stops	t→unaspirated ㄷ	[스돕스]
			p→syllable final ㅂ	[스토푸스]
			Conforming to loanword or thography	[스톱스]
Inter-syllable consonant+consonant		background	k→syllable-final consonant ㄱ	[백그라운드]
			Re-syllabification of k	[배크그라운드]
			k deletion	[배그라운드]
Sound and rhythm changes	velarization	Pancake	n→n	[ˈpænkeɪk]
			n→ŋ	[ˈpæŋkeɪk]
		신고	ㄴ→ㄴ	[신꼬]
			ㄴ→ㅇ	[싱꼬]
	liquidization	In+legal	n→n	[ɪnˈliːgl]
			n→l	[ɪlˈliːgl]
		한류	ㄴ→ㄹ	[할류]
			ㄴ→ㄴ	[한류]
	nasalization	Good news	d→n	[gʊn nuːz]
			d→d	[gʊd nuːz]
			D deletion	[gʊ nuːz]
		걷는	ㄷ→ㄴ	[건는]
			ㄷ→ㄷ	[걷는]
			ㄷ deletion	[거는]

The design of Table 3 is based on several considerations. When transcribing the English word "good" which contains a syllable-final consonant, it is necessary to consider how the subjects perceive the syllable-final consonant "d". If they are influenced by their native language Chinese, they may recognize the target language as a consonant + vowel form based on the CV syllable structure of Chinese, and choose "구드 (gudue)". On the other hand, when influenced by English, due to the shorter duration of the short vowel [ʊ] in "good", the syllable-final consonant /d/ may not be fully pronounced, resulting in a pronunciation closer to the Korean pronunciation, leading to the choice of "굳". Additionally, an option "굿 (gus)" that conforms to the Korean foreign word notation system was designed.

When transcribing the English word "stops," the aim is to observe how subjects recognize the consecutive consonants /st/ and /ps/. Subjects influenced by the Chinese CV syllable structure may insert a vowel between these two consecutive consonants, resulting in four syllables and producing the corresponding four-syllable Korean form "스토푸스 (stopuseu)." In contrast, if influenced by English, the aspirated /t/ in the fricative /s/ environment may become the unaspirated /d/. In Korean, the lenis consonants /ㄱ, ㄷ, ㅂ, ㅈ/ tend to be pronounced as aspirated sounds /k, t, p, ts/ at the beginning of a word, while they tend to be pronounced as unaspirated sounds /g, d, b, z/ in non-initial positions. Therefore, a Korean option "스돕스 (stopsue)" was designed in the questionnaire for subjects to choose from. This design effectively observes the influence of different native language backgrounds on pronunciation recognition.

For the word "background," when pronouncing the consonant cluster /kgr/, two situations may arise influenced by the Chinese CV syllable structure: first, a vowel may be added after /k/ and /g/, resulting in "배크그라운드 (baekeugeuraunde)"; second, the final consonant of the syllable "back" may be dropped, and a vowel inserted between the double consonants /gr/, creating a CV structure and resulting in "배그라운드 (baegeuraunde)." If influenced by English, when "back" meets "ground," the velar consonant /k/ does not drop but retains its place of articulation without being released, thus allowing for a final consonant treatment in Korean, ultimately forming "백그라운드 (baeggeuraunde)." This design helps observe the influence of different language backgrounds on the pronunciation of consonant clusters.

Analysis of Experimental Results

A total of 235 participants were recruited for this experiment, including 100 males and 135 females. The Korean proficiency levels of the participants were as follows: beginner level (136 participants, 57.9%) and intermediate level (99 participants, 42.1%). In the English pronunciation scoring, 25.1% scored below 50 points, 45.1% scored above 70 points, and 29.8% scored between 50 and 70 points. Only 3.8% of the participants had no experience with English, while the proportion of those with experience was as high as 96.2%. This indicates that English has a significant impact on the Korean language learning of Chinese learners.

The statistical analysis method for the questionnaire survey results was one-way ANOVA, suitable for various question types (single-syllable consonants, continuous consonants, inter-syllable consonants, and consonant clusters). Subsequently, we conducted a correlational analysis using SPSS software, focusing on the participants' recognition of single-syllable consonants, particularly the relationship between English pronunciation levels and the processing of the syllable-final consonant /d/. The results are detailed in the table below.

Table 4： Analysis of the Relationship Between English Pronunciation Proficiency and Perception and Processing of Final Consonants.

English Pronunciation Level Questionnaire Responses	≤50points[1] （59）	51-70points （70）	≥71points （106 名）	Total （235 名）
굳	8 (13.6%)	24 (34.3%)	56 (52.8%)	88
구드	40 (67.8%)	31 (44.3%)	35 (33.0%)	106
굿	11 (18.6%)	15 (14.1)	15(14.1%)	41
Pearson Chi square	X^2=22.275, P=0.00***			
스돕스	24(40.7%)	35 （50%）	56 （52.8%）	110
스토푸스	29 (49.2%)	16（22.9%）	20 （18.9%）	58
스톱스	6 (10.2%)	19 （27.1%）	23 （28.3%）	67
Pearson Chi square	X^2=7.916, P=0.03***			

P*<0.05, P**<0.01, P***<0.001

The results of the English test were derived by calculating the average scores from evaluations by three American English teachers, with the overall score distribution ranging from 30 to 90 points. Considering that the classification results are influenced by the selection method, the number and standards of the levels are determined by the results of each exam and the actual situation. This article temporarily divides the scores into three levels based on approximately equal intervals: 30-50 points (inclusive of 50), 51-70 points, and 71-90 points (inclusive of 71), but it lacks a certain degree of reliability analysis.

According to the results, among the 59 subjects with an English pronunciation score below 50, 67.8% (40 people) recognized the monosyllabic word "good" as a disyllabic word "구드" (gu-deu); 18.6% chose the monosyllabic word "굿" (gut) that conforms to the Korean loanword marking rules, while the proportion of treating the final consonant /d/ as a Korean syllable final was the lowest, at 13.6%. Among the 70 subjects with scores between 50 and 70, the proportion of choosing monosyllabic "굳" (gut) and "굿" (gut) increased, while the proportion of choosing disyllabic "구드" (gu-deu) decreased. Among the 106 subjects with scores above 70, the proportion of choosing options that conform to the Korean loanword marking rules did not change from the 50-70 range, but the proportion of choosing monosyllabic "굳" (gut) increased significantly, while the proportion of disyllabic "구드" (gu-deu) decreased gradually. Statistical analysis results showed $X^2=22.275$, $P<0.05$, indicating that English pronunciation level has a significant impact on the perception and processing of syllable-final consonants. The data showed that as English pronunciation level improved, the proportion of experimental subjects converting the syllable-final consonant /d/ in "good" to a Korean syllable-final consonant increased; conversely, as English pronunciation level decreased, there was a tendency to insert a vowel after the syllable-final /d/, making it a disyllabic word, indicating that the influence of the native language increased and the influence of English decreased.[2]

Among the 59 subjects with an English pronunciation level below 50, 49.2% (29 subjects) inserted a vowel after the consonant, transforming 'stops' into the four-syllable '스토푸스'; 40.7% (24 subjects) chose '스돕스', while only 10.2% (6 subjects) selected 'stops', which is consistent with the Korean spelling. Among the subjects with scores between 50 and 70, 50% chose '스돕스', 27.1% chose '스톱스', and only 22.9% (16 subjects) chose '스토푸스'. Among subjects with scores above 70, 56 individuals (52.8%) chose '스돕스', 28.3% chose '스톱스', and the fewest chose '스토푸스', at 18.9%. The results of the cross-analysis indicated $X^2=17.916$, $P<0.05$, demonstrating significant differences in the perception and processing of syllable-final consonants based on English pronunciation levels.

Finally, using the same method, the analysis of the English pronunciation level and the perception and processing of consonant sequences between syllables was conducted, resulting in Table 5.

Table 5: Analysis results of English pronunciation level and perception of inter-syllable consonant clusters

English Pronunciation Level questionnaire	≤50points （59）	51-70points （70）	≥71points （106）	total （235）
백그라운드	14 (23.7%)	31 (44.3%)	57 (52.3%)	102
배크그라운드	36 (61.0%)	26 (37.1%)	32 (29.4%)	94
배그라운드	9 (15.3%)	13 (18.6%)	17 (15.6%)	39
Pearson Chi square	X^2=22.075, P=0.00***			
[gʊnnuːz]	37(62.7%)	35（50%）	56 （18.9%）	58
[gʊdnuːz]	6 (10.2%)	19 （27.1%）	23 （28.3%）	67
[gʊnuːz]	1 (1.70%)	17 (24.3%)	12 (11.3%)	30
Pearson Chi square	X^2=15.695, P=0.005**			
건는	18 (30.5%)	23 (32.9%)	47 (44.3%)	88
걷는	30 (50.8%)	29 (41.4%)	39 (36.8%)	98
거는	11 (18.6%)	18 (25.7%)	20 (18.9%)	49
Pearson Chi square	X^2=15.695, P=0.005**			
[ˈpæŋkeɪk]	14 (23.8%)	36 (51.4%)	71 (67.0%)	121
[ˈpænkeɪk]	45 (76.2%)	34 (48.6%)	35 (33.0%)	114
Pearson Chi square	X^2=13.628, P=0.000***			
신꼬	37 (62.7%)	39 (55.7%)	89 (84.0%)	165
싱꼬	22 (37.3%)	31 (44.3%)	17 (16.0%)	70
Pearson Chi square	X^2=4.903, P=0.068			
[ɪnˈliːgl]	10 (16.9%)	13 (18.6%)	11 (10.4%)	34
[ɪlˈliːgl]	49 (83.1%)	57 (81.4%)	95 (89.6%)	201
Pearson Chi square	X^2=11.163, P=0.02*			
할류	9 (15.2%)	27 (38.6%)	26 (24.5%)	62
한류	50 (84.7%)	43 (61.4%)	80 (75.5%)	170
Pearson Chi square	X^2=9.478, P=0.03*			

Li Minyi (2015) found that there is a positive correlation between English proficiency and the quality of final consonant articulation, which echoes the results of this experiment, both emphasizing the impact of learners' language proficiency on pronunciation performance.

In the case of "background," among the 59 participants with English pronunciation scores below 50, 61% chose the six-syllable version “배크그라운드,” where a vowel was inserted between consonants without consonant elision. Meanwhile, 23.7% of participants chose “백그라운드,” and only 9 participants opted to drop the consonant entirely, resulting in “배그라운드.”

For participants with pronunciation scores between 50 and 69, 44.3% chose to retain the initial consonant as a coda in Korean with "백그라운드," 37.1% inserted a vowel between consonants, and only 18.6% directly dropped the consonant. Among those scoring above 70, 52.3% chose "백그라운드," with neither consonant elision nor additional vowel insertion, while 29.4% inserted a vowel after the consonant, making the word six syllables. The proportion of participants opting for direct consonant elision was the lowest, at just 15.6%. SPSS analysis revealed that $\chi^2 = 22.075$, with a p-value of 0.00 (<0.05), indicating a significant difference between English pronunciation proficiency and perception/handling of consecutive consonants.

The analysis results indicate a significant difference between English pronunciation levels and cognition of English phonological changes. For the nasalization rule in "good news," the cross-tabulation analysis showed $\chi^2 = 15.695$ with a p-value of 0.00, indicating a significant difference. Similarly, for the perception of nasalization in the Korean word "걷는," the analysis yielded $\chi^2 = 12.921$ with a p-value of 0.01, also less than 0.05, showing a significant difference.

Additionally, for the lateralization rule in "in+legal," $\chi^2 = 9.478$ with a p-value of 0.03 (>0.05), indicating a significant relationship with English pronunciation levels. For the velarization in "pancake" under assimilation rules, the cross-tabulation analysis yielded $\chi^2 = 13.628$ with a p-value of 0, showing a significant difference. However, for the velarization of the Korean word "신고," $\chi^2 = 4.903$ with a p-value greater than 0.05, indicating no significant difference between perception of this phenomenon and English proficiency. These findings highlight the impact of various phonological phenomena on pronunciation proficiency across different languages.

CONCLUSION

This study reaches the following conclusions through experimental data analysis. The findings indicate that Mandarin-speaking learners of Korean with higher levels of English pronunciation proficiency have greater accuracy in perceiving syllable-final consonants and consecutive consonants in both English and Korean, which can be attributed to their knowledge of English phonetics. Conversely, learners with lower English proficiency are more influenced by their native phonological knowledge, often inserting vowels or dropping final consonants in both English and Korean. According to one-way ANOVA analysis in SPSS, the data reveal a statistically significant difference between English pronunciation proficiency and perception of syllable-final consonants in English and Korean.

However, the experimental results showed no significant difference in the perception of the Korean word "신고" based on English proficiency, which was unexpected. This may be due to the existence of two pronunciations for "신고" in Korean: "신꼬" and "싱꼬." Although the latter is not a standard pronunciation, it is accepted as a particular standard pronunciation in communication. This finding suggests that "신고" may not be an ideal material for experimentation, and further studies should refine and improve the experimental design.

Language expression is dynamic, and individuals may display different pronunciation characteristics within the same time frame due to environmental and emotional factors. Specifically in phonological observations, Korean has 18 initial consonants but only 7

syllable-final consonant sounds, while Mandarin has a relatively limited number of final consonants. Given this background, early exposure to English, which has a rich set of syllable-final consonants, positively impacts Mandarin speakers' Korean learning. This study shows that for Mandarin-speaking learners of Korean, English as a first foreign language plays a supportive role in subsequent Korean acquisition.

Therefore, it is essential to conduct detailed analyses in future studies of Korean pronunciation for Mandarin-speaking learners. Additionally, using English-like pronunciation explanations in Korean pronunciation education for Chinese students could yield more effective teaching results.

REFERENCES

Chen, S. W. (2023). Theories and new development of second language speech production. *Contemporary Linguistics*, *04*, 541-561.

Wu, Z., & Lin, M. (2014). Shiyan Yuyinxue Gaiyao. Beijing: Gaodeng jiaoyu chubanshe.

Ding, H. (2014). An experimental study on the pronunciation of German syllable-final consonants by Chinese university students. *Journal of the School of Liberal Arts, 03*, 176-185.

Shi, H. (2009). Positive transfer of English phonetics. *Journal of Anyang Normal University, 1*, 101-103.

Zhang, Y. N. (2020). A study on the influence of Chinese learners' English pronunciation on Korean pronunciation. Chungbuk National University, Cheongju.

Li, M. (2015). On the development and characteristics of the interlanguage phonological system—A case study of final plosive pronunciation of Hong Kong English learners. *Science, Education, and Culture Journal, 10*, 165-168.

Kwon, H. (2017). Language experience, speech perception, and loanword adaptation: Variable adaptation of English word-final plosives into Korean. *Journal of Phonetics, 60*, 1-19.

Wrembel, M. (2010). L2-accented Speech in L3 Production. *International Journal of Multilingualism*, *7*(1): 75-90.

Lee, H. (2019). Analysis of consonant pronunciation types in Korean by beginner Chinese learners—Focused on syllable-boundary consonants. *Grammar Education, 36*, 183-202.

Yang, S. (2005). An acoustic and auditory phonetic study of Korean syllable-final stop consonants. *Hangul*, *269*, 77-100.

Yang, S. (2006). An acoustic and auditory phonetic error analysis of Korean syllable-final consonants in Chinese learner language. Korean Language Education, 17(3), 163-183.

Lee, S. (2017). The cognitive effects of second language proficiency on early third language acquisition. *German Literature*, *58*(2), 385-406.