

# A Literature Review on the Sichuan Dialect's Negative Transfer in English Phonological Acquisition for Senior High School Students

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## Abstract

There is a general issue that Chinese students find it hard to acquire English pronunciation. A lot of existing research papers are trying to analyze the phonological negative transfer in students' second language acquisition, especially in Mandarin, and respectively raise feasible countermeasures. Nonetheless, the standard Mandarin differs a lot from southwestern Mandarin. The consequence is that Mandarin research cannot be fully suitable for local students in Sichuan. Although Sichuan dialect has a lot of influence on the pronunciation of local students, the shortage of targeted and specialized study is still being neglected. This paper aims to systematically sort out domestic studies regarding the negative transfer of Sichuan dialect in high school students who need to acquire English phonology, pinpoint the limitations of the existing phonological errors induced by Sichuan dialect spoken by senior high school students and put forward relevant solutions. Although existing studies have sorted out the types of negative transfer and do find some phonological errors among Chinese students, little research has concentrated on high school students in southwestern China. Meanwhile, the suggestions and pedagogical strategies proposed by the previous scholars lack localization. This paper details and supplements the current condition of phonological negative transfer of Sichuan dialect and provides some specific pedagogical solutions as a reference for English phonology teaching in southwestern China and creates some ideas for further study

## Keywords

Sichuan dialect, phonological negative transfer, L2 acquisition, senior high school students, English phonological acquisition

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## 1. Introduction

The lack of English phonetic acquisition capacity of senior high school students has become a critical issue in the Chinese English teaching system. And the majority of studies mainly focus on the origin of the interference and the phenomenon of negative phonetic transfer, which are both based on standard Mandarin. However, there are plenty of obvious differences between standard Mandarin and the Sichuan dialect. Sichuan dialect will also have a significant influence on pronunciation and trigger more phonetic errors. And we all know that mastering pronunciation constitutes the foundation of language learning. Vocabulary memorization deeply relies on phonetics, and listening and speaking need pronunciation to pass on. Pronunciation can be considered the carrier or the external manifestation of language capacity [1]. But unfortunately, senior high

school students in Sichuan greatly suffer from the negative phonetic transfer, which can be the hardest obstacle to overcome, and it is also for the majority of people who crave L2 acquisition. The phonetic transfer of the mother tongue falls into two genres: positive phonetic transfer and negative phonetic transfer. Positive transfer refers to the similar pronunciation or the places of articulation between the mother language and the second language. Otherwise, it is the negative phonetic transfer [2]. In Sichuan, L2 learners tend to use dialectal sounds to replace English phonemes, which can easily induce phonetic errors. Current studies are mostly in the field of verifying the interference of L1 with L2 acquisition and the categories of different types of negative phonetic transfer. However, most home and abroad scholars are mainly focusing on Mandarin, Wu dialect, and Cantonese. A few of them conducted some research on the southwestern Mandarin, such as the Sichuan dialect. Sichuan dialect possesses some unique phones that can easily interfere with phonetic acquisition. Current studies related to phonetic negative transfer are mostly extended by phonetic interference caused by standard Mandarin, covering many types of phonetic negative transfer. Home and overseas scholars mainly focus on Mandarin, Wu dialect, and Cantonese. A rare research paper is targeted at Southwestern Mandarin. On top of that, Sichuan dialect is highly distinct from standard Mandarin, which may be more prone to trigger phonetic fossilization. However, existing studies only propose that Sichuan dialect may induce phonetic fossilization, with nearly no research on the specific influence on L2 learners. In addition, the majority of studies choose college students as their subjects and lack Sichuan high school students as their research sample. Aiming to address this research gap, this paper sorts out some typical phonetic errors of local high school students caused by the Sichuan dialect and further explores some feasible measures to alleviate phonetic fossilization and provide theoretical pedagogical reference for high school English pronunciation teaching in Sichuan. This paper is organized as follows. The first part is the theoretical foundation to support the paper's core theory. The second part is a literature review, sorting out existing research subjects and methodologies, and prevailing actions that prevent phonetic errors. The third part is to analyse the limitations of current studies and pedagogy. The fourth part is based on the conclusions to propose tailored teaching optimization strategies. The final part is to conclude this whole paper and anticipate the future of the development direction of high school English pronunciation teaching in Sichuan.

## **2. Theoretical Background**

### **2.1 Language Transfer Theory**

Lado first pointed out that individuals tend to transfer the forms and the meanings, and the distribution of forms and meanings of their native language and culture to foreign language and culture, both productively when attempting to speak the language and receptively when attempting to grasp and understand the language and the culture as practiced by natives [3]. This paper mainly focuses on negative phonetic transfer to explain how the tone value of the unique initials and finals in the Sichuan dialect causes the phonetic errors.

### **2.2 Contrastive Analysis Hypothesis**

Lado also pointed out that the student who comes into contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to his native language will be simple for him, and those elements that are different will be difficult [3]. This theory can give us an explanation or predict when the phonetic errors caused by the Sichuan dialect happen, and give us some theoretical backgrounds to analyze the conflict between the Sichuan dialect and English pronunciation.

### **2.3 Interlanguage Theory and Phonetic Fossilization**

Selinker mentioned that the utterances used by the L2 learners often share the same meaning as those of native speakers, but they do not use a similar framework of sentences [4]. Consequently, there is a hypothesis that when learners are attempting to produce a sentence following linguistic rules, they will establish a set of separate systems, which is called interlanguage. Interlanguage theory was extended by later scholars to the phonetic interlanguage, which can lay a foundation to analyze how the stable phonetic errors derived from the initials and finals and the tone values of the Sichuan dialect are formed. Phonetic fossilization refers to the stubborn phonetic errors caused by the persistent absorption of learners' native language, and it can not be thoroughly corrected even if they receive long-term formal L2 training. Phonetic fossilization details why

senior high school students in Sichuan still cannot master standard English pronunciation even if they know the correct pronunciation.

## **2.4 Developmental Sequence Theory**

Rod Ellis sorted out that each L2 learner will experience a phrase which is fixed and predictable and not constrained by their first language background, and they cannot skip such developmental phrases [5]. Formal training cannot let them master the corresponding linguistic system before their linguistic condition is psychologically and cognitively mature. This theory internally explains why senior high school students in Sichuan find it hard to correct their pronunciation and provides theoretical evidence for English pronunciation pedagogy. These four theories constitute a complete logical chain that respectively explain what language transfer is, the reason they exist, how the phonetic errors were caused by interlanguage, and why students find it hard to alter their pronunciation under the phonetic fossilization and the Developmental Sequence Theory. These theories collectively underpin the whole analysis and the pedagogical support for future English pronunciation education.

## **3. Literature Review**

### **3.1 Research Perspective**

#### **3.1.1 Overseas Theoretical Perspective**

Overseas L2 phonetic transfer underwent three obvious evolutions. In the early stage, Lado pinpointed the CAH, and scholars tended to predict the phonetic errors by the difference between the speaker's first language and English phonology from the perspective of contrasting the phonetic structure [3], which is the earliest mainstream approach to explain the pronunciation errors caused by dialectal factors. Nevertheless, this hypothesis cannot exclude considerable learner's initiative errors due to interference. Therefore, Selinker put forward the perspective from interlanguage and phonetic fossilization, moving the research core from phonology-centered to learner-centered [4], which means that L2 learners may internally build a system of transforming pronunciation. These two theories give the inner reason for the deeply ingrained phonetic habits. Later, Ellis drew on the developmental sequence, pointing out that the essence of phonetic error is that learners persistently stagnate at a fixed acquisition stage [5]. Overall, the overseas research forms a complete theoretical chain from the external phonetics structure to the inner mechanism of L2 learners.

#### **3.1.2 Domestic Research Perspective**

Domestic paper that aims to Southwestern Mandarin or Sichuan dialect mainly uses case-verifying description, and only relies on CAH. Li sorted out the interference forms of the consonants and vowels with English pronunciation [6]. Ban et al. targeted Sichuan students who mistook the pronunciation of /n/ and /l/, using quantitative analysis to detail the phonetic errors [7]. The majority of domestic research only relies on CAH, with little of it incorporating the concept of phonetic fossilization, interlanguage, and developmental theory to have a comprehensive analysis. Few of them incorporate it with the concept of phonetic fossilization, interlanguage, and developmental theory to have a comprehensive analysis.

### **3.2 The Distribution of Research Subjects**

Throughout the existing domestic research related to the negative phonetic transfer of the Sichuan dialect, the main target subjects are university students. Wang et. al [8] focused on the undergraduates majoring in English to analyze the influence of the Sichuan dialect on English pronunciation. The case study by Ban et. al chose college students as their target participants as well [7]. On the contrary, the papers that target senior high school students are awfully limited. However, according to the discipline of L2 acquisition, the stage of senior high school is crucial. The long-term lack of systematic pronunciation remediation may easily trigger phonetic fossilization, but scholars tend to choose college students as their subjects, which induces a transparent gap in research aiming to specify the phonetic issues existing among Sichuan local senior high school students. From the perspective of second language acquisition, senior high school is a key stage for students to form their pronunciation systems. If teachers do not correct dialect-based wrong pronunciation habits in this period, learners will develop permanent pronunciation fossilization. Nowadays, Sichuan high school students seldom

get long-term professional pronunciation training, leaving an obvious research gap. Therefore, studying pronunciation problems of Sichuan high school students is meaningful in both theory and practice.

### **3.3 Conclusion of Current Research Methodologies**

So far, the domestic research method of negative phonetic transfer has roughly been divided into two categories. The first one is IL Corpus Analysis used by Yang, which relies on the IL theory proposed by Selinker [9]. She systematically compared the phonetic system of consonants and vowels in the western Sichuan dialect with that of standard English and distinguished the differences between the western Sichuan dialect and standard English by analyzing the phonetic errors the subjects made in the IL recordings. Nonetheless, this type of research method focuses more on theoretical illustration, while lacking real L2 learners' oral data to provide further evidence. This method has obvious static one-off bias: it captured the learners' pronunciation performance at a single time point. This method fails to incorporate long-term samples, which means that it cannot reflect and record the continuous and dynamic evolution of L2 learners' phonetic acquisition process. Also, it cannot track the subtle alteration of phonetic errors caused by fossilization as time elapses. The second one is Compound empirical research combining perception experiment and production experiment, which is also based on CAH. Li designed two sets of empirical materials of auditory perception and oral speaking and conducted speech perception experiments by the native tutors' standard recording [10]. In addition, he also recorded the subjects' recordings, which will be blindly evaluated by two raters without the phonetic problems of confusing the pronunciation of /n/ and /l/. Eventually, he gained the traits of the negative phonetic transfer of confusing /n/ and /l/ in Sichuan dialect with the help of Excel and SPSS to finish the statistics, independent samples t-test, and Pearson correlation analysis. He also handed out questionnaires as supplementary qualitative materials at the same time. However, this method only collects one-time cross-sectional data and designs no long-term and longitudinal strategies to constantly collect subjects' audio data, which means that it cannot reflect the fluctuation of the L2 learners' phonetic level and observe the whole process of the gradual improvement or constant aggravation of phonetic errors throughout L2 learning.

### **3.4 Established Teaching Modes**

Aiming to reduce dialectal interference with pronunciation, the pedagogy can be divided into three parts. External class mechanical operation, 2) Intermediate teacher-led phonetic input guarantee, 3) Internal reflective cognition of students

#### **3.4.1 External Class Mechanical Operation**

The teaching pronunciation: A Course Book and Reference Guide(2nd ed.) >by Celce-Murica, Briton&Goodwin pinpoints that shadowing, choral repetition, intensive minimal-pair drills, and systematic tongue twister practice belong to classic mechanical intensive drilling regimes [11]. As Wang. et al. They played the standard textbook recordings to allow students to imitate the original pronunciation, intonation, tones, and speech rate, and finally, they needed to recite it [12]. Also, Wang et al. promoted the use of Chinese official Mandarin to minimize the dialectal influence while reducing the impact of negative phonetic transfer [12]. Nonetheless, the fossilized training only relies on mechanical imitation, and it cannot adapt to all types of Sichuan dialects in different regions.

#### **3.4.2 Intermediate Teacher-led Phonetic Input Guarantee**

The second category is about teachers themselves. Students' phonetic input is mainly from their teachers, so Wang advocated that teachers should improve their own phonetic and pronunciation competence to be a phonetic role model for their students. However, the majority of current teaching strategies mainly focus on single and separate phonetic transcription. Consequently, there is an urgent need to establish a set of coherent and long-term systems to phonetically fit with senior high school students in Sichuan that can help them correct their pronunciation. The third one is students' inner reflective capacity. Yang mentioned students needed to know about the place of articulation, keep practicing, and keep correcting themselves. Nevertheless, the absence of longitudinal and hierarchical pedagogy to prevent phonetic fossilization still needs to be fixed. Nevertheless, the current teaching system lacks a hierarchical and long-term pedagogical framework to guide them to have sustainable self-reflection, and it is hard to curb the origin of phonetic fossilization.

#### 4. Discussion & Synthesis

The majority of current studies just directly apply the classic and general theories to explain the issues of negative phonetic transfer of the Sichuan dialect and roughly regard the whole Sichuan dialect as a single system to analyze. Nonetheless, the deficiencies are obvious. To begin with, they ignore the unique traits of different types of Sichuan dialects in different areas, such as the western Sichuan dialect and the southern Sichuan dialects. Their explanations are too vague and generalized. An academic blank is that there is no exclusive analysis framework that is specified for senior high school students and localized according to the differences among the various Sichuan dialects. Second, the IL analysis method over-relied on the fixed description and comparison between different recordings, and the outcomes from Compound empirical research combining perception experiment and production experiment are always one-time, and it is like a set of cross-sectional data at a single time point. Therefore, there is naturally a lack of longitudinal studies, which means that we cannot observe how the phonetic habits are fossilized and the whole process of forming phonetic fossilization. They are only focusing on objective phonetic data without combining it with learners' ability to reflect on and be subjective about their pronunciation cognition.

What we can find from the existing paper is that the methods adopted for English pronunciation training for middle school students in Sichuan are highly homogenized and limited to a fixed zone where students can only repeat the reading materials mechanically. Teachers only target a single phonetic transcription with the solidified methods. There are no hierarchical and normalized corrective plans aimed at the unique error-prone transcriptions in Sichuan dialect, and combining them with real daily scenarios such as high school morning self-study and some class routine. Besides, there is a short-term corrective pronunciation system with stable and sustainable operation. Nonetheless, the current domestic phonetic teaching strategy revolution is strongly generalized without specific, practical, and feasible plans for senior high school students in Sichuan, which may be arduous to minimize the phonetic fossilization caused by negative phonetic transfer of the Sichuan dialect. There are three corresponding solutions to tackle the mentioned issues. 1) We should give up the research modes that generalize all types of Sichuan dialect, turning into specific and localized research according to the different districts in Sichuan to improve the accuracy of theoretical explanation. 2) Meanwhile, we should abandon the one-time cross-sectional experiments and conduct a survey through a long-term longitudinal investigation, incorporating it with objective recording quantification and self-reflective questionnaires. 3) In addition, we should tightly adhere to the error-prone phonetic points and jump out of the mono-repetition and rote memorization and design localized phonetic pedagogy.

#### 5. Conclusion

Throughout the current research on the condition of L2 acquisition for senior high school students in Sichuan, the scholarly community has widely formed consistent conclusions. Based on the theories of CAH and interlanguage fossilization, domestic scholars verified that the origin of persistent phonetic errors is mainly caused by the phonetic negative transfer induced by the Sichuan dialect itself. Considerable recording comparison further details the corresponding bias of vowels and consonants between typical Sichuan dialect and Mandarin and clarifies how L1 habits re-shape the students' formation of phonetic perception and production. These theories and verified outcomes underpin the phonetic contrastive analysis between Sichuan dialect and English, and provide the references for the future English phonetic teaching pedagogy. Nonetheless, generally speaking, there are still a lot of research drawbacks and blanks that need to be fixed. The majority of research generalized the different categories of Sichuan dialects instead of conducting specific and localized research. Besides, the method of conducting research needs to move from one-time and cross-sectional to longitudinal and sustainable. On top of that, many scholars ignored that the low productivity of mechanical repetition would promote phonetic fossilization and the gap between theoretical analysis and practical corrective strategies for in-class implementation. Despite the limitation, there are still lots of developmental areas. Researchers can depend on the longitudinal format to conduct research, persistently investigating L2 learners' dynamic phonetic alteration route under the negative transfer of Sichuan dialect to deepen the understanding of phonetic fossilization and its reduction mechanism related to classroom practice. Then, based on the research results, we can individualize the corrective plans to boost the efficiency of L2 acquisition for senior high students in Sichuan and finally enforce these plans to narrow the gap in the regional disparities of L2 acquisition. Only by doing this can the phonetic pedagogy towards senior high school students in Sichuan become both theoretically and practically promising.

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