



# An Analysis of /l/ and /n/ in the Speech of Chinese L1 speakers Learning English: The Influence of Mandarin

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**Abstract.** This research intends to investigate the production of /l/ and /n/ in the speech of Chinese L1 speakers learning English, comparing this result with the situation before the standardization of Mandarin. Previous studies found that Chinese L1 speakers of different dialects, especially in the South of China, tended to pronounce /l/ as [n]. However, due to the standardization of Mandarin, this might change. In this study, the author conducted a qualitative research. It is confirmed that Chinese L1 speakers, both in the North or South of China, even in the dialects, can differentiate /l/ and /n/ in their English production.

**Keywords:** /l/, /n/, Chinese L1, English L2, influence of Mandarin

## 1 Introduction

Many domestic scholars have investigated the influence of Mandarin on English speech acquisition. Liu (2016) argued that Mandarin affects diphthongs and juncture in the English speech theoretically [1]. Zhou (2017) once investigated the English vowels of high school students in Ningde area [2], Wu (2021) investigated the alveolar fricatives speech in Shaoxing region [3], and Li (2020) compared the speech of 11 vowels in English and 7 vowels in Chinese pronounced by Chinese native speakers [4], finding that the standard of Mandarin would affect the English speech to some extent. Lai (2020) found that students have difficulty distinguishing /l/ and /n/ in their English production before the standardization of Mandarin, this is especially true for students in Southern China [5]. Almost a century has passed since the initiative of the standardization of Mandarin, it is worth exploring whether such problem still exists.

Therefore, based on data collected with 20 non-native speakers of English, this paper will investigate the production of /l/ and /n/ by English learners from the North and South of China, and discuss whether Mandarin has a positive impact on their production. The author tries to know whether the standardization of Mandarin has any impact on second language acquisition.

The structure of this article will be laid out as follows: first, the previous studies will be reviewed. Second, the methodology of the current study, including information on

the corpus used, tokens and speakers will be presented. Third, the results will be discussed. Lastly, the article will be ended with a conclusion of the current study as well as the future implications.

## 2 Previous studies

Previous studies have demonstrated that English learners in some dialect areas have difficulty in distinguishing /l/ and /n/ in their English production. For example, Lai (2020) noticed that some students wrote “Mount Lao” as “Mount Nao” in their English essays about the travel notes of Mt. Laoshan in Qingdao. Meanwhile, in their use of Mandarin, these students also confused the Chinese /l/ with /n/. For example, /lai/ was realized as [nai], /nan/ was pronounced as [lan], and /laʊ/ was pronounced as [naʊ].

The same phenomenon was also attested in Japan. Brown (1998) proposed that the structure of a speech segment has a certain influence on the second language perception of second language learners. Taking Chinese and Japanese English learners as examples. Japanese English learners found it more difficult to distinguish /l/ and /n/, compared to Chinese English learners due to the lack of coronals in Japanese [6]. Therefore, it can be inferred that Mandarin as a first language may have an impact on English speech /l/ and /n/.

Xu (2016) mainly adopted listening and discriminating speech methods when investigating the influence of Mandarin on English speech, and analyzed the subjects' speech data [7]. Zheng (2013) studied speech in English teaching by asking students to pronounce English speech and analyzed it[8]. The author also uses qualitative research inspired by previous research methods.

## 3 Methodology

### 3.1 Corpus and data

The corpus the author used in this study was collected with 20 English learners from the South and North of China. They are aged from 18 to 23 years old. They were recruited via the personal network of the interviewer and the interviewees by the snowball technique. Therefore, they are either the friend of the interviewer or the friend of the interviewees. Their participation in the study was entirely voluntary.

### 3.2 Speakers

The speakers in our corpus are all L1 speakers of Chinese and L2 speakers of English. They consist of 10 males and 10 females. 10 of them are from the North, and the other 10 of them are from the South. The detailed information on each speaker is presented in Table 1. The abbreviation is NM (male from the North) for Northern males and NF (female from the North) for females.

**Table 1.** Detailed information of the 20 speakers in our corpus

Speakers	Gender	Age	Region
NM1	Male	22	North
NM2	Male	23	North
NM3	Male	23	North
NM4	Male	22	North
NM5	Male	22	North
NF1	Female	22	North
NF2	Female	22	North
NF3	Female	23	North
NF4	Female	22	North
NF5	Female	23	North
SM1	Male	22	South
SM2	Male	21	South
SM3	Male	21	South
SM4	Male	23	South
SM5	Male	22	South
SF1	Female	23	South
SF2	Female	18	South
SF3	Female	22	South
SF4	Female	23	South
SF5	Female	22	South

### 3.3 Tokens

The tokens consist of two parts: words and sentences. Each speaker reads a set of 20 words and 20 sentences. Therefore, the author have 800 tokens in total. The 20 words contain five words starting with /l/, five words starting with /n/, and ten words as interference items mixed in the word list. The sentence setup is the same. The individual words are shown in Table 2. For the sentence part, the author used the carrier sentence: Mary said \_\_\_\_. The tokens shown in Table 2 were filled in the blank. All the subjects read tokens and sentences in a natural state, with audios recorded. For the final analysis, only the target tokens are analyzed. The interference items are, therefore, excluded from the analysis.

**Table 2.** Tokens in this research on a word level

Words	
bite	self-centered
dump	not
no	nark
village	nook
light	impossible
lark	lot





<b>nark</b>	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]
<b>nook</b>	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]
<b>knight</b>	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]	[n]
/l/										
<b>light</b>	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]
<b>lark</b>	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]
<b>low</b>	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]
<b>lot</b>	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]
<b>look</b>	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]	[l]

As shown in Table 6, the Southern subjects are able to differentiate /l/ and /n/ on a sentence level.

It is found that on both word and sentence levels, Chinese L1 speakers in the North and the South of China can distinguish /l/ and /n/. Our results did not confirm previous findings that 10 years ago Southern speakers could not distinguish /l/ and /n/. This might be related to the standardization of Mandarin in the past 80 years. Because Chinese L1 speakers might gradually grasp the speech /l/ and /n/ when they are immersed in /l/ and /n/ in Mandarin.

It is found that Chinese L1 speakers, both in the North or South of China, even in the dialects, can differentiate the speech /l/ and /n/. Through the analysis of the speech data of the subjects, they could clearly distinguish the differences between /l/ and /n/. Therefore, compared with the situation in which English language learners in dialect areas confused /l/ and /n/ in the past ten years, the differentiation between /l/ and /n/ is clearly made after ten years by speakers from both North and South regions. This may be related to the further standardization of Mandarin since 1935. This suggests that the good grasp of /l/ and /n/ in Mandarin can positively contribute to English pronunciation acquisition to some extent.

## 5 Conclusion

In this article, the author collected and used audios of Chinese L1 speaker in the North and South of China to carry on quantitative research, it is found that Chinese L1 speakers, both in the North or South of China, even in the dialects, can differentiate /l/ and /n/ in their English production. The results did not confirm previous findings that 10 years ago Southern speakers could not distinguish /l/ and /n/.

Due to the limitations of the research conditions, there are still some aspects that can be improved and can be used as a reference direction for future studies. First, in addition to the influence of Mandarin standardization, the observed improvement in differentiating /l/ and /n/ by Chinese L1 speakers learning English in the current study may also be influenced by the development of the second language teaching in China over the past years. Accordingly, a rich second language experience may help learners overcome

the influence of mother tongue and make their pronunciation more accurate. Second, limited by the research conditions, the experimental subjects of this study are not diverse enough. In particular, the speakers in our study are aged between 18-23 years old and can only represent the younger generation. Therefore, in the future study, it is ideal to include speakers from older age groups to see if the improvement in /l/ and /n/ distinguishing can be observed across different age groups.

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