

Original Paper

A Research on the Use of Pause and Lengthening for Turn Organization in Chinese EFL Students' Conversations

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Received: November 1, 2023 Accepted: November 12, 2023 Online Published: November 19, 2023

doi:10.22158/eshs.v4n3p39

URL: <http://dx.doi.org/10.22158/eshs.v4n3p39>

Abstract

Pause and lengthening are used frequently for turn organization in English interactions. But, for Chinese EFL learners, these two prosodic mechanisms are not used efficiently. This study analyzed the use of pause and lengthening for turn organization in Chinese EFL learners' English conversations. The results show the excessive dependence on the pause to show the turn yielding intentions in Chinese learners' conversations, and Chinese learners probably cannot distinguish the uses of final lengthening within turns and the lengthening before turn changes.

Keywords

pause, lengthening, turn organization, Chinese EFL learners

1. Introduction

Successful communications involve comprehensive uses of language, which include not only the proper use of words, but also the contributions of prosody, the non-verbal factors, such as body language, paralinguistic means etc. The organization and management of interactions depend greatly on the prosodic features. For instance, in terms of turn taking in conversations, interlocutors make use of prosodic features to signal their intentions of turn yielding or holding; on the other side, the listeners recognize these intentions and gain or await the floor by the use of prosodic features. Therefore, the proper usage of prosodic features, as the conversational strategies or skills, plays essential roles in human interactions.

In second language acquisition, it is necessary to investigate the language learners' use of prosodic features in turn-taking, because it can help to reveal not only the language learners' competence but also their acquisition mechanisms of conversational skills. This study aims to assess Chinese EFL

learners' use of pause and lengthening for turn organization, and attempts to answer the following questions:

- 1) What are the characteristics of pause and lengthening used by Chinese EFL learners during the process of turn taking?
- 2) What are the differences in the use of pause and lengthening in turn taking between Chinese EFL learners and English native speakers?

2. The Two Variables

Two prosodic features are set as the key variables of the present research: pauses and lengthening of the final syllable. As is known, there are numerous prosodic factors functioning in turn taking: boundary tones, rhythm, pitch peak, key shift, pause, lengthening etc. (Truckenbrodt, 2015; Féry, 2016; Ludusn & Schuppler, 2022; Xia et al., 2004, 2023; Xia, 2013; Xia & Ma, 2016a, 2016b, 2019). The present work focuses on two of them, which are related to the rhythm of speech, because these two variables play crucial roles in turn-taking, and they are well studied in L1 spontaneous speech, which offer a reliable reference to the study of L2 learners' language, for example, Petrone et al. (2017) analyzed the three acoustic prosodic features: pauses, phrase-final lengthening and f0 in German speech production and how these cues affect boundary perception. They found that pauses are often used to signal intonation phrase boundaries, while final lengthening and f0 are employed across different levels of the prosodic hierarchy.

2.1 Pause

The pause usually occurs at the position of TRP (Transition-Relevance Place, Sacks et al., 1974), where the speaker relinquishes the floor, and the listener takes the floor, although there is a "smooth transition in which transition pauses are perceptually absent" (Walker, 1982). Moreover, the internal pauses within a turn play the crucial roles for showing speakers' intention of turn-holding.

The studies on the manner of pause in turn-taking are concerned with the categorization of pauses. Local and Kelly (1986) distinguished two types of pauses: "trail-off silence" and "holding silence" (pp. 185-204). The former one indicates the end of a turn; the latter one indicates the speakers' intention to keep the turns. In Bosh et al.'s (2005) study of temporal aspects of turn taking, pauses involved in turn taking are classified into three categories: the utterance internal pause (Uip), the pause between utterances in one turn (Put), and pauses at turn changes (Ptc). They find that "pauses between utterances in one turn appear significantly are longer than utterance internal pauses and pauses at the turn changes" (p. 82). This finding is in agreement with earlier findings of Jefferson (1989); Campione and Verones (2002) (as cited in Bosh et al., 2005, p. 82). Ludusn and Schuppler (2022) analyzed four acoustic cues, representing durational and fundamental frequency (f0) measures, and observed that pause duration was the strongest cue to prosodic boundaries.

The studies on duration of pause in turn-taking are traditional, yet important. They are carried out mainly in two fields.

One field focuses on the length of pause in turn transition. The following four studies have obtained similar findings: the length of pause in turn transition is not less than 200ms. Welford (1968) divided the interval between speaker A and B into three parts: the viewing time V, decision time D, and a movement time M. He finds that the simple decision of the speakers in turn taking requires a reaction time $V+D+M$, which is not less than 200ms (as cited in Walker, 1982, p. 33). Bosh et al. (2005) studied the temporal aspects of turn taking in conversational dialogues. They find that the mean length of pause between speakers is 380 ms by examining the 6790 transitions in telephone dialogues (p. 83). Liang's (2001) study focused on the temporal characteristics of turn taking in Chinese. He finds that the length of pause interval in Chinese as the normal turn transition is between 250ms and 1000ms (p. 43). Therefore, although these studies are undertaken from different perspectives, the length of pause in turn-taking is proved to be not less 200ms. Krivokapic (2007) tested the Prosodic planning, and found the effects of phrasal length and complexity on pause duration.

The other field focuses on the relationship between pause duration and the probability of turn shift. Wennerstrom and Siegel (2003) researched on it. They find that although pause duration is positively related to the probability of turn shift, "it appears that the probability of turn shift declines slightly within the first 500ms of pause duration, and then increases for longer pauses (p. 93)". Wennerstrom (2001, p. 171) points out that pauses are not the reliable cues for turn finality, although they are positively correlated with the probability of turn shift. Speakers may pause in the middle of turn for breath, brief thinking, listeners' better reception, or strategic reasons such as to catch an interlocutor's gaze and, hence, attention (Goodwin, 1981), or to "generate the impression of thoughtfulness" (Good & Buter-worth, 1980, p. 51).

To sum up, pauses related to turn-taking exhibit special characteristics in the placement, manner and duration. In the studies on pause in turn taking, two characteristics are worthy of attention for Chinese EFL learners. One is the difference in three kinds of pauses: utterance internal pause (Uip), the pause between utterances in one turn (Put) and the pause at turn changes (Ptc), which have a close relation to turn-holding or turn-yielding; the other is that the different length of pause has a different relation to the probability of turn shift. It is necessary to investigate whether they EFL learners can master these subtle yet crucial features of pause in turn taking.

Therefore, in the present study, two questions are examined regarding the second variable: What are the relationships between the length of pauses and the probability of turn shift in Chinese learners' conversations? What are the differences or similarities of using pauses in turn taking between Chinese EFL learners and English natives? In order to answer these two questions, two measurements on pause are undertaken. One is the comparison of three types of pauses in the Chinese EFL learners' corpus. Then this result is compared with the use of English native speakers. The other is the comparison of the

relationship between the length of pauses and their probability of turn shift in Chinese learners' conversations with that in English natives'. Through these comparisons, the similarities or differences of using pauses in turn taking between Chinese learners and English natives are described.

Additionally, in order to simplify the operation, filled pauses like ehm, eh, um etc., are considered as words in this study. The reasons are as follows: the speaker use filled pauses, this is most likely a signal that the current turn is not yet over and they indicate the expectation of upcoming delays; even if the filled pause appears to be the first word of a turn, this can be considered to be the start of the turn. So, in this research, only silent pauses will be taken into consideration as pauses, which is in agreement with choices in previous researches, such as Bosch et al. (2005), Camione and Veronis, (2002), Weilhammer and Rabold (2003) (as cited in Bosch et al., 2005, p. 81).

2.2 Lengthening of the Final Syllable

Lengthening of the syllable belongs to rhythmic features of intonation (Buxo-Lugo et al., 2020; Paschen et al., 2022), and play critical roles in turn transitions. The previous studies are carried out mainly from two perspectives.

From the perspective of the acoustic descriptions of lengthening, the studies mainly focus on the accentual lengthening (Turk, 1997; Turk & White, 1999), and boundary-adjacent lengthening. The studies of boundary-adjacent lengthening are classified into three subcategories: prosodic boundary lengthening (Byrd & Saltzman, 1998), word boundary lengthening (Turk & Shattuck-Hufngel, 2000) and phrase boundary lengthening (Byrd & Saltzman, 2003). The findings of these studies are consistent that the differences in lengthening in conversations are related to the positions where lengthening happens.

From the perspective of lengthening at discourse level, the researches emphasize the functions of lengthening in communication. These studies focus on two aspects. One is the lengthening in topic transitions in conversations, and the other is the lengthening in turn taking.

The studies of lengthening in topic transition focus on the relationship of topic transitions and prosodic duration. For example, in Smith Caroline's (2004) research, the measurement of two American speakers' recorded reading on 10 separate occasions indicates that the type of transition in topic between two successive sentences have a significant effect on the amount of sentence-final lengthening, the duration of the pause between sentences, and the speech rate at the end of a sentence and the beginning of the following sentences.

Studies on the aspect of lengthening in turn taking focus on two points: the position where lengthening in turn taking happens, and the relationship between turn final lengthening and turn internal lengthening.

In terms of the position where lengthening in turn taking happens, several researchers find that lengthening on the final syllable before the turn change is recognized as one of the important projectability cues of turn taking. For example, according to Duncan *et al.*'s opinion (1985, p. 54),

lengthening on the final syllable is one of the important prosodic turns yielding cues; Beckman and Edwards (1990) found the function of lengthening in the nature of prosodic constituency; Wennerstrom (2001, p. 169) points out final lengthening of the syllables before the boundary of TCU is considered as an important cue for turn transition; John-Lewis (1986, pp. xxi-xxii) points out segmental lengthening is associated with the turn finality.

In terms of the relationship between turn final lengthening and turn internal lengthening, studies investigate the differences and similarities between these two lengthening.

In English, at the turn-transition, the utterance final segments are lengthened in order to signal the turn-finality, while within the speaker's turns, at the end of any intonation group, segmental lengthening also would be expected. Just as Cruttenden (2002, p. 2) points out, "the last syllable before a pause is often lengthened". What are the differences between these two kinds of lengthening? How can the turn final lengthening be differentiated from the turn internal lengthening? Culter et al. (1986, p. 140) point out: prosodic turn-yielding cues would have to be overlaid upon the utterance-final prosodic pattern within the turn. It can be deduced from this statement that the turn-yielding lengthening should be more prominent or longer in duration than internal final lengthening in the turns so as to indicate or identify effectively the turn-yielding intention of the conversants.

Culter et al. (1986) investigated the lengthening in turn taking in a perception study on the prosodic turn-taking cues. They find the slight tendency for longer utterances to be judged as a turn-final cue, although this result failed to reach the criterion of statistical significance.

Although the studies on the relationship of these two lengthening are limited, the importance and value of this issue cannot be denied, and the further investigations into this matter are of great necessity. The investigations into the relationship between turn final lengthening and turn internal lengthening in language learners' conversations are necessary. It is because the difference between these two kinds of lengthening in English natives' conversations is easy to be neglected by second language learners.

In summary, the studies of lengthening have been carried out from two perspectives—acoustic description of lengthening in turn taking and the studies of lengthening at discourse level. From these two perspectives, the contexts in which the lengthening occurs are different. The context from the first perspective is intonation groups, words or phrases, while the context from the latter perspective is topics or turns in conversations. As for the studies of lengthening in turn taking, the difference between turn final lengthening and turn internal lengthening is proved to be significant in English. Hence, for EFL learners, it is necessary to investigate whether they can make appropriate use of these two kinds of lengthening in turn taking.

This question is investigated in the present research. As the measurement of the second variable: segmental lengthening at the turn transition is compared with those final segmental lengthening within a turn in Chinese learners' conversations. And then this result is compared with that of English natives. Through the comparison, the similarities or differences of using lengthening in turn taking between

Chinese learners and English natives are illuminated.

3. Methods

3.1 Corpus

The conversations in the corpus are elicited by the discussions of 16 groups (4 subjects/group), and the discussions are made on a given topic: “Should we promote the use of private cars in China? If you can afford it, will you buy one? Why or why not?” All of the subjects consist of 64 sophomores, majoring in English, which were randomly chosen from the School of Foreign Studies in Jiangsu Normal University, Jiangsu Province, China, and they did not know the research purposes.

Each student in the group wore one head-mounted microphone, which was connected to a computer for recording their voices (four computers and four microphones for each group). All the computers were put behind the subjects in order to avoid disturbance. The software Cool Edit Pro 2.0 have been used for recording (The parameters in Cool Edit have been set as 44100HZ, 16, single track). All of the recording process was carried out in a phonetic lab in the School of Foreign Studies in Jiangsu Normal University. Before recording, each group was given 2 minutes for preparation. Four trained recorders (the author and three assistants) were in charge of four computers respectively. The data recording was accomplished on two weekends in the last week of April and the beginning week of May in 2020.

During the course of discussions, nobody interrupted the subjects. They discussed the given topic freely. The discussions ended whenever subjects wanted to stop. The recording time for each group was less than 10 minutes. When the discussions were longer than 10 minutes, they were stopped by the recorder. After data checking, 70 minutes’ recording of 10 groups was chosen as the corpus for further annotation.

3.2 Data Annotation

The entire corpus was transcribed on the software Praat 4.2. Three important aspects in data annotation are mentioned in this section: the choice of minimal analysis units, the identification of turns in spontaneous conversations, and the tiers in Praat.

3.2.1 Minimal Analysis Units: IPU

Inter-Pausal Units (IPUs) are used as the minimal analysis units in this study. Koiso et al. (1998) utilized Inter-Pausal Units (IPUs) as the minimal analysis units in the research of intonation roles in the turn taking in Japanese. Inter-Pausal Unit is the stretch of a single speaker’s speech bounded by pauses longer than 100 ms and it is used as an approximation of the notion of TCU. Caspers (2003) also employed this unit in studying local speech melody in turn taking system in Dutch.

In previous studies, some researchers choose the turn units or complete grammatical units as the minimal analysis units. But they are not suitable for this study. The reasons are: 1) turn units are too general. If the minimal analysis unit is chosen as one turn in the present research, the relationship between turn units will become prominent while the features within one turn cannot be described. Thus,

the use of intonation features will not be depicted thoroughly; 2) the present research focuses on the relationship between prosodic features and turn-taking instead of the grammatical factors in turn-taking. Choosing grammatical unit as the minimal analysis unit will make the investigation more complicated and will divert the researching focus.

The IPUs are adopted in present study for four reasons: 1) these units can be determined objectively; 2) one IPU is not larger than one turn. IPUs may occur within turns or at turn transitions. Thus, the prosodic features can be described in detail by cutting the corpus into small IPUs; 3) these units eliminate syntactic disturbances, and make the role of intonation prominent; 4) there is evidence for the decision on intervals of 100 milliseconds. Hieke et al. (1983) point out that a pause which is not shorter than .13 sec has psychological relevance. Wennerstrom and Siegel (2003) point out: “pauses were considered any length of time of .1 sec and up where there was no speech-related amplitude (p. 86)”.

3.2.2 Identification of Turns in Spontaneous Conversations

Spontaneous speech is dynamic yet complex. The complexity mainly exist in the occurrence of conversation features such as repair, back-channel, overlapping, interruptions, which happen frequently in spontaneous conversations. It is necessary to identify these conversational features as one turn or more than one turn. The present research adopted the principles of Caspers (2003) and Liu (2004) for judgment.

Figure 1 shows Caspers’ (2003, p. 261) methods, in which “hold” means that the same speaker continues after a pause of 100 ms or more, while “change” means that a turn change has happened, with or without an intervening pause.

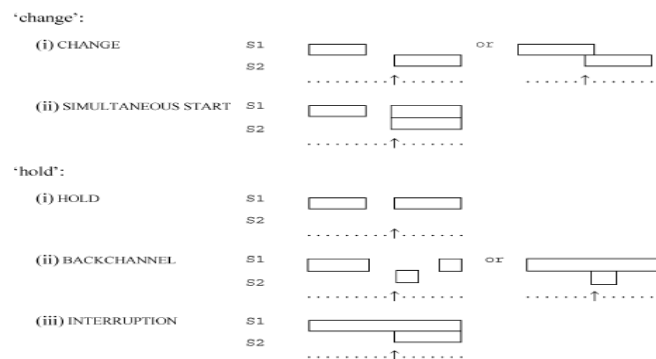


Figure 1. Schematic Representation of the Five Turn Transition Types

Figure 1 The boxes following S1 depict stretches of speech uttered by speaker 1, S2 indicates the speech by speaker 2, the dotted line marks the time course, and the arrow indicates the relevant IPU boundary.

3.2.3 Tiers on Praat

The data was cut into 2404 IPUs, and presented by 532 interfaces in Praat, each of which was not

longer than 20 seconds. Every interface of Praat was labeled by five tiers. Figure 2 is an example of the annotation on Praat.

Pause tier: Pauses longer than 100ms were labeled in this tier, and the IPUs bounded by the pauses were identified.

Orthographic tier: What the subjects talked was transcribed word by word in this tier.

Boundary tone tier: Boundary tone of the last intonation group at the end of every IPU was labeled in this tier.

Lengthening tier: Duration of final syllable of every IPU was labeled at the end of every IPU in this tier.

Transition type tier: the transition type was labeled at the end of every IPU in this tier for turn changing and holding (“C” for change, and “H” for hold).

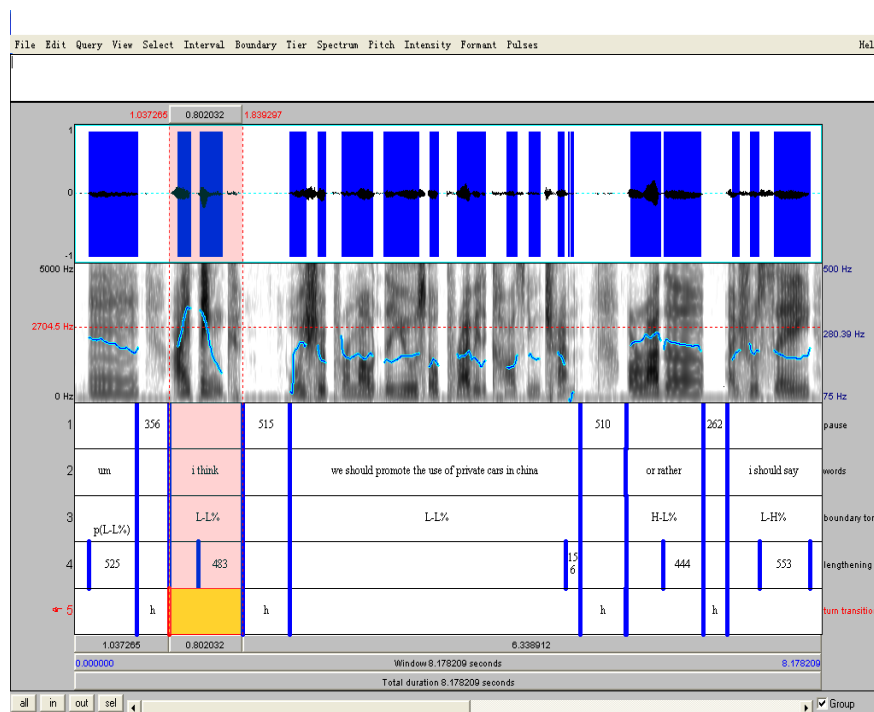


Figure 2. One Example of Annotation

3.3 Data Analyses

Two key variables (pauses and lengthening) were measured in the recorded corpus. The detailed measurements presented are summarized:

The measurement of pause was also undertaken in two aspects. One was the comparison in the duration of three pauses: utterance internal pause (Uip), pause between utterances in one turn (Pbu), and pauses at turn changes (Ptc) in the recorded Chinese EFL learners' corpus. The other was the measurement on

the relationship between the length of pause and probability of turn shift in Chinese learners' conversations. These results were compared with the use of English natives. Through these comparisons, the similarities or differences of using pause in turn taking between Chinese learners and English natives were illustrated.

The measurement of the lengthening was undertaken in the comparison of segmental lengthening at the turn transition with those final segmental lengthening within a turn in Chinese learners' conversations. This result was compared with the use of English natives. Through the comparison, the similarities or differences of using lengthening in turn taking between Chinese learners and English natives were described.

4. Results and Discussion

4.1 The Results of Pauses

4.1.1 Pause Duration and the Probability of Turn Shift

Figure 3 shows the relationship of pause duration and the probability of turn shift. Although there are slight reductions in the probabilities of turn shift happening on the pauses between 200-299 milliseconds, 500-599 milliseconds, and 800-899, there is a tendency that the longer the pause durations are, the higher probabilities of turn shift. This relationship of pause duration and probability of turn shift is statistically significant ($\chi^2=162.079$, $P<0.05$).

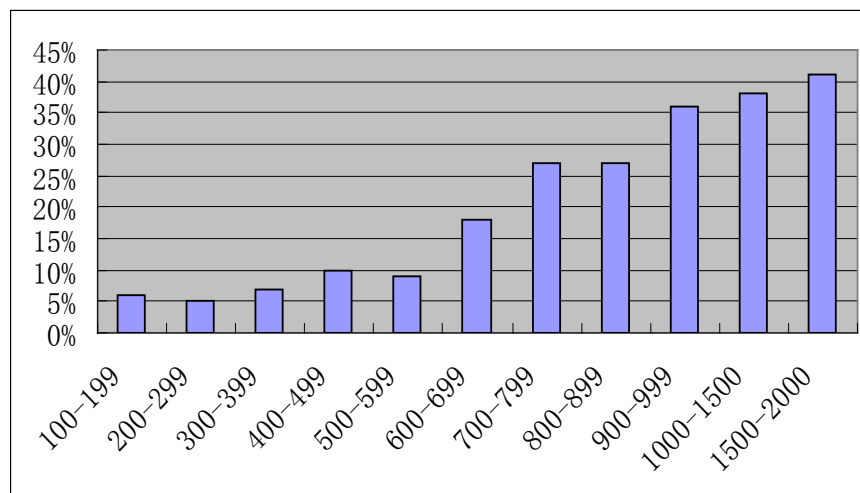


Figure 3. Pause Duration and the Probability of Turn Shift

*All the pause durations are in milliseconds

It is necessary to compare this use of pause in Chinese learners' conversations with the use in English native's conversations. The comparison between this research and the study of Wennerstrom and Siegel (2003) is valid. In addition to the variable of boundary tones, pause in turn taking has been investigated

as another variable in the research of Wennerstrom and Siegel (2003). The validity of the comparison of two researches is also attributed to two facts: both researches use spontaneous conversations, and the conversational form is chat instead of formal discussions.

Through the comparison, it is found that the relationship of pause duration and the probability of turn shift in English native speakers' conversations is different from that in Chinese learners: in English natives' conversations, "it appears that the probability of turn shift declines slightly within the first .5 sec of pause duration, and then increases for longer pauses" (Wennerstrom & Siegel, 2003, p. 93). That is to say, there is a critical point—500 milliseconds, where the probability of turn shift is the lowest. Before this point, the likelihood of turn shift reduces as the pause become longer. After this point, the probability of turn shift rises again with the increase of the pause duration.

In Figure 3, the similar critical point cannot be found at all. In Chinese learners' conversations, the probability in turn shift increases as the pause duration becomes longer. This indicates that Chinese learners connect directly and simply the probability of turn shift with the length of pause. Then they would use longer and frequent pauses in their conversations to show the intentions of turn yielding. Actually, speakers' intentions of turn-keeping or turn-yielding can be implied by other intonational cues instead of excessive pauses in English natives' conversations. Excessive pauses easily cause disfluency and breaks in communication, which would bring disturbances in information transmission.

4.1.2 The Relationship among Three Kinds of Pauses

Table 1 shows the relationship of utterance internal pauses (Uip), pause between utterances in one turn (Pbu), and pauses at the turn changes (Ptc).

Table 1. The Duration of Three Kinds of Pauses in Turn-taking

Pause	Number	Mean	Median	Mode	Std. dev.
Uip	1241	370.8815	312	274	265.0209
Pbu	1161	466.528	378	320	337.8922
Ptc	317	713.4795	585	353	511.9673

*Means, median, mode, and standard deviations (Std. dev.) are in milliseconds

It is easy to see from Table 1 that the mean duration of Ptc is the longest, that of Uip is the shortest, and that of Pbu is in the middle. In other words, during the process of turn taking in Chinese conversations, pauses at the turn changes are longer than utterance internal pauses and pause between utterances in one turn. This relationship in duration of the three kinds of pauses is statistically significant by the ANOVA test ($F=135.121$, $P<0.05$).

The comparison in terms of the relationship among three kinds of pauses between Chinese EFL learners' use and the English native's use is of necessity. Bosh et al. (2005) studied the use of pauses involved in turn-taking in English natives' conversations by using the 93 spontaneous telephone

dialogues about 15.1hours. They found that “pauses between utterances in one turn (Put) appear significantly are longer than utterance internal pauses (Uip) and pauses at the turn changes (Ptc)” (Bosch et al. 2005; Jefferson, 1989; Campione & Veronis, 2002 as cited in Bosch et al., 2005, p. 83).

Comparing Chinese EFL learners’ use and the English native’s use in terms of the relationship among three kinds of pauses, it is easy to find out that the use of Chinese EFL learners is quite different from that of English native speakers.

The comparison between this research and Bosh et al.’s (2005) study is also valid. The reasons for the validity are similar to those for feasible comparisons between the present research and Wennerstrom and Siegel (2003) study in terms of the use of boundary tones and pauses. One of the reasons is that both researches use the spontaneous conversations, and the other is that both researches use the conversational form of chat.

However, the difference between face-to-face conversations in the present research and telephone dialogues in Bosh et al.’s (2005) study has to be mentioned. Speakers in telephone dialogues make greater use of prosodic means to manage turn-taking than they do in face-to-face conversations. This difference might be one of the possible reasons for the distinct relationship of three kinds of pauses between Chinese EFL learners and English natives.

There are other factors which could cause such difference, for example, the cooperation between the interlocutors, the psychological state of the speakers, etc. It is suggested that all of these factors would be further researched in the future studies.

The two results of investigations on pauses in turn taking above indicate that Chinese learners depend mostly on the increase in duration of pauses to imply the intention of turn yielding. Actually, for English native speakers, pause is only one of the cues. However, it is not a reliable cue of turn changing. English native speakers may pause in the middle of one turn for strategic reasons such as to secure the interlocutors’ attention or to show the impression of thoughtfulness (Wennerstrom, 2001, p. 171). Local and Kelly (1986) point out that it is phonetic cues directly before a pause, rather than the presence of the pause itself, that can show the speaker’s turn-taking intentions. Chinese learners probably have no idea about the difference among these three types of pauses and their functions in turn-taking. Besides, they are not able to make abundant use of various intonation cues but only employ too many pauses to show the intentions of turn yielding. It is also the problem of shortage in prosodic knowledge and the deficiency of Chinese learners in using turn-taking strategies.

4.1.3 Summary of the Results in Pauses

Through the description of pause duration used in the process of turn-taking in Chinese EFL learners’ conversations, it is found that there is a tendency that the longer the pause durations are, the higher probabilities of turn shift. Pauses at the turn changes are longer than utterance internal pauses and pause between utterances in one turn. These results indicate the excessive dependence on the pause to show the turn yielding intentions in Chinese learners’ conversations.

4.2 Lengthening of the Final Syllable

Table 2 shows the relationship of final lengthening before turn changes and within turns. It is easy to see that in Chinese learners' conversations, final lengthening within turns is longer than that before turn changes. The difference between these two kinds of lengthening is statistically significant ($t=2.217$, $P<0.05$).

Table 2. Final Lengthening before Turn Changes and Within Turns

Final Lengthening	Number	Mean	Std. Deviation
Within turns	2186	345.0366	140.460213
Before turn changes	349	329.8138	115.3547862

*Mean and Std. Deviation are in milliseconds

This pattern is different from that of English native speakers. According to the findings of Culter et al. (1986, p. 140), in English conversations, the turn-yielding lengthening should be more prominent or greater in duration than utterance final lengthening within turns so as to effectively signal or identify the turn-yielding intention of the speakers. The longer final lengthening within turns in Chinese learners' conversations will easily cause the wrong implication of giving up the turn to the listeners. This indicates that Chinese learners probably cannot distinguish the uses of final lengthening within turns and the lengthening before turn changes. Additionally, the deficiency in using final lengthening before turn changes also indicates the weakness in Chinese learners' ability of using conversational strategies.

In summary, through the investigation of three variables—boundary tones, pause, and lengthening of the final syllable, the present research described and assessed Chinese learners' use of intonation features during the process of turn-taking in their English conversations. The results of the investigation have been reported in this chapter with some tentative interpretation and discussion followed.

5. Conclusions

5.1 Major Findings

This research aims to accomplish two tasks in answering the two research questions. One is describing Chinese EFL learners' use of pause and lengthening in turn taking. The other one is comparing Chinese learners' characteristics with that of English natives. The major findings are presented as follows:

In terms of pause, there is a tendency in Chinese learners' conversations that the longer the pause durations are, the higher probabilities of turn shift; during the process of turn taking in Chinese learners' conversations, pauses at the turn changes are longer than utterance internal pauses and pause between utterances in one turn. These results indicate the excessive dependence on the pause to show the turn yielding intentions in Chinese learners' conversations.

In terms of lengthening of the final syllable, in Chinese learners' conversations, final lengthening within turns is significantly longer than that before turn changes. This indicates that Chinese learners probably cannot distinguish the uses of final lengthening within turns and the lengthening before turn changes.

5.2 Implications

This research is expected to have implications in three areas.

Theoretically, the results of this study are expected to assist second language learners to understand the use of English intonation features as communicative strategies and to avoid the misuse in the prosodic aspect of their interlanguage. Because these results depict Chinese EFL learners' use of intonation features in conversation organization rather than in their individual use, the description of the use of intonation features are prompted at the discourse level. With the assistance of these results, the second language learners' understanding of the prosodic function would be promoted at discourse level. Besides, the results of this research have provided a rough description of the prosodic aspect of Chinese EFL learners' interlanguage. These results can be used as references to correct the inappropriate use of prosodic means in Chinese learners' interlanguage.

Methodologically, the combined and scientific methods would provide references to future researches on the prosodic features used in second EFL learners' spontaneous conversations. Because these results are obtained by using the combined methods from Phonology, Conversation Analysis, and Second Language Acquisition, the complex analysis of the prosodic features in second EFL learners' spontaneous conversations proves to be feasible by the employment of the approaches from these linguistic fields. In addition, the advanced software such as Cool Edit and Praat, and the transcription system of ToBI have been used in order to make the present research precise and scientific.

Practically, the results would be expected to bring benefits to intonation acquisition and teaching. Practical implications drawn from the findings of this study are in two areas.

First of all, in terms of second language acquisition, it is suggested to strengthen the acquisition of the supra-segmental features' differences between Chinese and English. According to the tentative discussion in Chapter 4, negative L1 transfer may have caused insufficiency and misuse of intonation features. Intonation features play different roles in conversations under different language backgrounds. The English intonation features, which imply subtle and crucial meanings in conversations, might cause difficulties for Chinese learners. Therefore, it is necessary to strengthen the learning of differences and similarities in supra-segmental features between Chinese and English.

It is also necessary to increase the knowledge of intonation features, especially those features used as communicative strategies or skills. If Chinese learners have not abundant knowledge of intonation features, they won't have foundations to use them sufficiently and appropriately. Attention should be given not only to the learning of individual super-segments but also to the acquisition of their functions in discourse. Just as Chun (1988) points out, "Intonation is fundamental to genuine communication

because communicative competence is the ability not only to formulate grammatically correct utterance, but also to signal interactive strategies, such as interrupting, asking for clarification, taking the floor, changing the subject, concluding an argument, or constraining a hearer to reply” (pp. 295-303). Accordingly, it is of necessity for Chinese EFL learners to learn intonation features as communicative strategies or skills in language acquisition.

Secondly, the results of this study would bring some insight to the teaching of English intonation in conversation organization.

First of all, it is suggested that the awareness of using prosodic features in conversations need to be strengthened despite the increasing recognition of the importance in teaching prosodic functions. As Le and Han (2006, pp. 20-21) point out, teaching in English pronunciations has developed from the style focusing on teaching segmental elements or phonemes, to the style focusing on teaching the combination of supra-segmental features and segmental ones. Nevertheless, the teaching in English intonation still needs to be improved. Instead of the superficial replication of English natives’ use in intonation features, the aim of teaching intonation should be rational. Chinese learners need to master not only the separated forms of prosodic features but also their functions in discourse.

Besides, this study suggests that those methods which emphasize the connections with the training of language and communication competence should be increased in English intonation teaching. Some practical methods of this kind do exist in current teaching, but they are not systematic or abundant. More effective approaches are expected to be found in practical teaching activities and future pedagogic researches.

5.3 Limitations of this Study and Suggestions for Further Research

This study focuses on two rhythmic features (pauses and lengthening) over the corpus elicited by spontaneous interactions of 64 EFL learners. It is suggested that other intonation features such as rhythm, key shift, etc., will be researched, and the number of subjects would be enlarged in the future studies.

Moreover, although some similarities and differences between Chinese learners and English natives are found out in the use of pauses and lengthening for turn organization, the reasons causing the differences are not analyzed systematically. The reasons for the differences and similarities are worthy to be explored from cognitive, physiological and other perspectives.

Additionally, this study puts emphasis on the speakers’ production activity in turn taking. Future studies would turn to the perceptual side and see profoundly how the listeners perceive and identify the prosodic cues in turn taking.

In summary, thorough and systematical investigations into Chinese EFL learners’ use of prosodic features in conversation organization are suggested for the future research in order to obtain detailed descriptions of the supra-segmental aspect of Chinese learners’ interlanguage. Thus, more references to language acquisition and teaching could be made for improving the Chinese EFL learners’

communicative proficiency.

Acknowledgments

This work was supported by the National Social Science Fund of China (NSSF Grant No. 20BYY099), the Fund for English Teaching from Jiangsu Higher Education Association (2022WJZD006), and the Fund for English Lesson Construction from the School of Foreign Studies in Jiangsu Normal University (2022YYKC3, 2022YYKC6).

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