# Original Paper

# A Review of Research on the Chinese EFL Learners' Production of Linguistic Prosody in Turn Organization

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#### Abstract

Prosody features play crucial roles in the management and organization of conversations, among which turn-taking plays crucial roles in conversation organization. The appropriate use of prosodic features is an indispensable part of conversation strategies or skills, but the interaction between linguistic prosody and turn-taking is difficult to be acquired for EFL learners. This paper reviews the theoretical and empirical studies of interrelation between prosody and turn-taking, and the EFL learners' acquisition of prosody in conversation organization in order to supply references for future studies in the similar fields.

# Keywords

prosody, turn organization, Chinese EFL learners

# 1. Introduction

The ultimate goal of learning English is to communicate. In English teaching or learning, Chinese EFL learners usually put more emphasis on the standardized English pronunciation rather than the communication ability in real interaction. Prosody plays crucial roles in the organization of conversations. However, Chinese EFL learners' acquisition of this prosodic function is far from satisfaction. Turn-taking plays crucial roles in conversation organization, and the interaction between linguistic prosody and turn-taking is difficult to be acquired for EFL learners. Therefore, this paper reviews the theories and empirical research on the interrelation between prosody and turn-taking, and the EFL learners' acquisition of prosody in conversation organization in order to supply references for future studies of prosody and turn organization.

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#### 2. Review of the Theoretical Base

This section supplies the review of the theoretical base from three aspects for the research on interrelation between prosody and turn organization.

#### 2.1 Interactive Function of Intonation Features

Intonation features have various functions. Researchers such as Halliday (1970), Crystal (1975), Gumperz (1982), Couper-Kuhlen (1986) etc., have studied one or several functions of intonation features. Chun (2002, p. 77) summarized these functions (see Table 1).

**Table 1. Functions of Intonation Features** 

Grammatical	Attitudinal	Discourse				Socioliguistic
C	A 664:	If 4:	T114:	T1	Interactive	
Grammatical	Affective,	mormanon	Illocutionary,	Textual	Contextualizing	Socioliguistic
structure	attitudinal	structure	Speech act	discourse	function	-

Among the four main categories of intonation functions in Table 1, Couper-Kuhlen (1986, p. 200) and Chun (2002, p. 57) point out, the discourse intonation is more updated in the study of intonation function. As one subcategory of this updated discourse intonation, the interactive function of intonation is distinguished from other subcategories, and is used "...to constrain a hearer to reply; to discourage a hearer from replying; and additionally, to express a speaker's expectations about the hearer's reply; to show cooperation and/or compliance with the discourse partner; and to facilitate repair in cases of breakdown or misunderstandings" (Chun, 2002, p. 64).

This interactive function of intonation sets the theoretical base for the present study by illuminating the correlation of intonation features and turn-taking. This relation has been noted as significant for the study of speech by many scholars.

For example, Botinis *et al.* (2001, p. 269) point out: at discourse and dialogue levels, intonation features contribute to the development of spoken discourse by structuring turn units between speakers such as turn-taking, turn-keeping and turn-leaving interplay etc.

As another example, Couper-Kuhlen and Selting (1996a) also highlight this relation between interactive function of intonation and turn taking from the social perspective:

Prosody can be seen as one of the orderly "details" of interaction, a resource which interlocutors rely on to accomplish social action and as a means of steering inferential process...prosodic features...can be reconstructed as members' devices, designed for the organization and management of talk in social interaction. They can be used...together with syntax, lexico-semantics, kinesics, and other contextualization cues to construct and interpret turn-constructional units and turns-at-talk (p. 25).

The significance of the relationship between intonation features and turn taking is also proved by eleven empirical studies in the monograph of Couper-Kuhlen and Selting (1996b), which collects the researches mainly on the following questions: how the turn continuations are predicted by prosodic cues; how the interlocutors make use of prosodic means to react to each other; how prosody is used by speakers to repair their words; how the prosody of quoting and mimicry is used in conversations etc.

In summary, the interactive function of prosody is of critical importance because it contributes to better understanding of the relation between intonation features and turn taking in conversational organization.

# 2.2 Signal-based Approach in Turn-taking

Another theory used in this research is the signal-based approach in turn-taking. The correlation of prosodic features and turn-taking is interpreted above from the perspective of interactive function. In this section, this relation is illuminated again from the perspective of signal-based approach in turn-taking.

Speakers take speaking turns regularly and smoothly in conversations without the decision in advance on who speaks and when to speak. How are these smooth interactions possible? A lot of researchers attempt to answer this question, and they have carried out studies on the underlying mechanisms of turn-taking from various perspectives, among which two theories have been influential: one is the rule-based approach proposed by Sacks, Schegloff, and Jefferson (1974), and the other is the signal-based approach presented by Duncan, and Fiske (1977).

Sacks *et al.* (1974) propose the rule-based approach in turn-taking, according to which turns are regulated by a set of rules, and turn transitions between interlocutors are not casual because there are underlying rules of "governing turn construction providing the allocation of a next turn to one part and coordination transfer so as to minimize gap and overlap" (p. 704). They presented fourteen patterns concerned with turn-taking in English conversations, including turn transitions, turn size, turn order, length of conversation, turn distribution, turn allocation, and repair mechanism (pp. 700-701). These rules are applied at Transition-Relevance Place (TRP), which is a completion point at which it would be possible, but not necessary, to change speakers. Turn-constructional Unit (TCU) is each turn at talk or basic units of turns, which could be sentential, clausal, phrasal, and lexical constructions.

Duncan and Fiske (1977) present the signal-based approach, according to which interlocutors regulate their turns by exchanging various cues. The proposal of this approach is based on the series of papers (Duncan, 1972, 1973, 1974, 1975), in which he has reported a major study of two 20-minute two-personal interactions. In this study, Duncan identified six turn yielding signals which are assumed to occur immediately before turn changes. Among these cues which include intonation features, body language, paralanguage, and syntax, three kinds of cues are related to prosody. Since the proposal of this signal-based approach, there has been increasing interest in researching prosodic cues for turn

taking. Many scholars have confirmed, developed and enriched this approach, such as Couper-Kuhlen (1996b), Wennerstrom (2001) etc. Thus, more prosodic features are found able to signal speakers' intention of turn-taking, such as boundary tones, rhythm, lengthening, and so on. Therefore, the signal-based approach has been recognized as one of the effective mechanisms the speakers follow when organizing conversations according to what people think polite, cooperative and efficient.

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In summary, the signal-based approach provides the theoretical base for the research on prosody and turn organization. The primary reason is that the signal-based approach gives prominence to the functions of the prosodic cues in turn-taking. Of six signals for turn yielding first proposed by Duncan, three are related to intonation.

# 2.3 Communicative Pronunciation Teaching Model

Since the 1980s, there has been an exploration trend of teaching English pronunciation in a way consistent with the principles of Communicative Language Teaching (CLT). The earliest applications of CLT to English pronunciation teaching were conducted by some distinguished experts in phonetics (Celce Murcia, 1983, 1987; Gilbert, 1984; Morley, 1991; Grant, 1993).

Celce Murcia (1983) first proposed the application of CLT in pronunciation teaching and proposed four teaching steps. There are identifying sounds which are problematic for the class, looking for contexts which naturally offer an abundance of lexical items with these target sounds, developing communication-driven tasks requiring the use of these words, and developing several exercises for each problem area to reinforce learning.

And then, Celce Murcia (1994) and his group (Celce *et al.*, 1996) proposed a communicative pronunciation teaching model for the absence of the application of CLT to stress and intonation teaching in 1983. He took intonation as an example to give a model teaching design. The communicative pronunciation teaching model includes five stages. There are description and analysis, listening discrimination, controlled practice and feedback, guided practice and feedback and communicative practice and feedback.

Subsequently, Celce Murcia *et al.* (2010) proposed a formal communicative pronunciation teaching model, which is shown in Table 2.

Table 2. Communicative Pronunciation Teaching Model (Celce Murcia et al., 2010)

Stage	Activity
Description and	Oral and written illustrations of how the feature is produced and when it
analysis	occurs within spoken discourse.
Listening and	Focused listening practice with feedback on learners' ability to correctly
discrimination	discriminate the feature.
Controlled practice	Oral reading of minimal-pair sentences, short dialogues et al., with special

	attention paid to the highlighted feature.
Cuided muestice	Structured communication exercises, such as information gap activities or
Guided practice	cued dialogues, that enable the learner to monitor the targeted feature.
Communicative	Less structured, fluency-building activities that require the learners to attend to
practice	both form and meaning of their exchanges.

At stage one, teachers should provide oral, visual and tactile illustrations of how the feature is produced and where it occurs in order to raise learner consciousness. At stage two, it uses focused listening activities with feedback on the accuracy of learner perceptions. This is a necessary step in communicative teaching of any important pronunciation feature since accurate listening comprehension is essential for ultimately achieving intelligible oral communication. At stage four, it includes structured but communicative exercises that still enable the learner to monitor for the target feature. Some studies have found those information gap activities and cued dialogues of various sorts work well at this stage of practice. At stage five, learners engage in less structured activities that require them to attend primarily to the content of their utterances and only secondarily to the form. This step also constitutes an informal test and enables the teacher to assess learners' progress and determine how much more practice will be needed.

The communicative pronunciation teaching mode follows four principles of Communicative Language Teaching (Celce Murcia *et al.*, 2010; Richards & Rodgers, 2001). Firstly, the ultimate goal of language teaching is to communicate effectively with the target language. Secondly, the teaching tasks should arouse the learner's desire to communicate in the target language. Thirdly, the class should adopt pair cooperation or group cooperation for meaningful negotiation. Fourthly, the goal of the language syllabus is to allow learners to express ideas in a variety of social interactions.

Based on the communicative pronunciation teaching model, the emphasis on pronunciation practice has gradually shifted from the accuracy of pronunciation to the comprehensibility of communication. It is notable that this teaching framework is excellent for gradually pushing its pronunciation practice beyond controlled repetition and imitation to creative and communicative exchanges. After the learners are up on the targeted intonation features in awareness-raising practice and controlled practice, teachers need to provide semi-structured or guided exercises for learners to produce the targeted intonation features by adding personal information or ideas into the oral practice. With the help of this transitory stage, the students are more easily to produce the targeted intonation features naturally and comfortably in the last stage.

In summary, the Communicative Pronunciation Teaching Model provides the theoretical base for the research on prosody and turn organization. The main reason is that this model emphasizes the communicative functions of the prosody in conversation.

# 3. Review of the Empirical Studies

This section is the retrospect of the previous studies on turn-taking and prosodic features in turn-taking.

3.1 Previous Studies of Turn Taking

The previous researches of turn taking have been mainly carried out from three perspectives: structural, functional, and prosodic.

In the structural tradition, the studies mainly focus on two aspects. One is the relationship between syntactic completion and turn finality. Ford and Thompson (1996), Carspers (2003), Wennerstrom and Siegel (2003) studied the relation between syntactic completion and turn finality. Their findings are rather consistent: although the syntactic completion and turn finality have possible correspondence, it is not a reliable cue for turn taking, because not all the syntactic completions signal the turn transition, and not all the turns have grammatical completion. For example, one word, and one phrase could be a turn.

The other is the "non-canonical" conversation forms happening with turn-taking. These studies focus on overlapping (Jakob, 2001; Ardila, 2004), backchannel (Geoffery, 2004), repair (Weeks, 1985; Juliane & Andrea, 2003; Jiang & Li, 2003; Qiu, 2005), and interruptions (Dina, Slattery, & Lynn, 2002; Liu, 2003; Li & Shen, 2003). They find that these conversational forms are different from those "canonical turn swatches" (Bosh *et al.*, 2005, p. 80), which means one speaker takes over the turn after the previous speaker relinquished the floor, but they also have crucial functions in successful conversations.

In the functional tradition, the studies of turn taking were carried out mainly in three aspects (despite some overlap): semantic, and pragmatic and sociolinguistic.

The studies in terms of semantic aspect focus on the semantic relationship between turns in conversations. These studies researched the adjacency pairs in conversations such as question and answer, greeting and greeting etc. (Zhang, 2003). They find that turn transitions in questions and answers, greetings, apologies, requests, etc. obey strictly the principle of semantic consistence.

The studies in terms of pragmatic aspect focus on the situation constraints of turn taking. These studies researched the patterns of turn taking constrained by interviews (Pernille, 2004; Qian, 2004; Zuraidah & Knowles, 2006), argument debate (Augusto & Clotilde, 2004; Jeanne, & Duska, 2005), classrooms (Duffy, 1983; Leander, 2002; Wei, 2004), telephones (Fergus, & David, 2004). They find that these special situations constrain the patterns of turn taking; the speakers involved in these situations should obey the constrained patterns of turn taking required by different situations for effective communication.

The studies in terms of sociolinguistic aspect focus on the social factors in turn taking. These studies researched the influences of gender (Kogure, 2003; Chen, 2005), and age (Mary, & Priscilla, 1996; Reissland & Stephenson, 1999) on turn taking. They have got the similar findings that the social factors,

such as gender and age, have an effect on the patterns of turn taking. As Sacks *et al.* (1974) claimed, "the disciplinary motivation" for the researches of turn taking is "sociological" (p. 698).

Finally, the studies from prosodic perspective mainly focus on the functions of prosodic features as turn taking cues in conversations. These studies are reviewed in detail in the next section, because they have a closer relationship with the present research than the studies in the other two perspectives.

The present research is related to the studies in the structural and functional perspectives, because the function of prosodic features in turn taking is also semantic, pragmatic and sociological. However, it is quite different from them: it focuses on the prosodic features instead of syntactic relation with turn taking; it analyzes the prosodic features in "canonical turn swatches" instead of in other conversational forms such as backchannel, overlapping, repair, and so on; it focuses on the use of prosodic features in conversation organization rather than in the social influences.

In summary, the previous researches have explored the nature of turn taking in conversations from structural, functional, and prosodic perspectives. Moreover, these explorations never stop. Some studies of turn taking have touched upon the new fields such as the medical (Pincus & Guastello, 2005; Alison, 1998), and psychological fields (Hiroyuki & Takashi, 2004). These studies of turn taking are helpful to the present study in theoretical foundation and methodology. Nevertheless, different from the previous studies, the present one is concerned with prosodic functions in turn taking. The following section reviews the previous studies in this field.

# 3.2 Previous Studies on Intonation in Turn Taking

This section begins with several statements on the importance of intonation features in turn taking, and then describes the previous empirical studies on intonation features in turn taking.

Conventionally, speakers and listeners identify the time and place to yield, keep or take the floor by the predictable cues including "syntax, semantics, pragmatics, prosodic factors such as intonation, tempo, loudness, duration, pauses, and voice quality, and visual cues such as gaze, head motions, gestures etc." (Caspers, 2003, p. 251). Prosodic features which are part of the spoken utterance can signal effectively the appropriate moment and place of turn-taking. Prosodic means are considered as the crucial and prominent cues for turn-taking, especially in the "utterances that are syntactically incomplete or ill formed under any generally accepted grammar abound in spontaneous conversations" (Bosch *et al.*, 2005, p. 80).

Sacks *et al.* (1974) point out the crucial roles of intonation in the determination of Transition Relevance Places (TRP):

Clearly, some understanding of "sound production" (i.e., phonology, intonation etc.) is very important to turn-taking organization. For example, discriminations between what as a one-word question and as the start of a sentential (clausal or phrasal) construction are made not syntactically, but intonationally (pp. 721-722).

Couper-Kuhlen *et al.* (1996) highlight the function of prosodic features in turn taking. They say, "Some of the cues in everyday live speech events are prosodic in nature, involving auditory parameters such as pitch, loudness and duration and the categories they jointly constitute" (p. 1).

In addition to these statements, the previous empirical studies supply strong evidence from various angles to prove the importance of intonation features in turn taking.

# 3.2.1 The Studies of Intonation in Turn Taking in L1

The studies of intonation in turn taking in native language are undertaken mainly from four perspectives.

First of all, some studies focus on the prosodic features of "noncanonical" conversational forms happening with turn-taking, such as backchannels, overlapping, repair, repetition, etc. in order to investigate their contributions to the conversations. French and Local (1986) studied the prosodic features and the management of interruption. They find that the changes in the form of prosodic features contribute to the interruption in conversations. Couper-Kuhlen (1992) analyzed the rhythm of repair in conversations. It is found that repairs are always associated with accelerated tempo. Local (1996) worked on "oh" tokens in various phonetic and forms. The finding is that different phonetic forms of "oh" tokens could have quite different communicational meanings. Muller (1996) analyzed the rhythmical modification by backchannels. It is found that backchannels are always modified in rhythm to fit the regular tempo of conversations.

Secondly, some studies focus on the interlocutors' attitudes indicated by using intonation means during turn taking. Their findings are consistent that different choices of prosodic means, such as boundary tones and pitch range etc., indicate the speakers' attitudes of competitive or non-competitive, polite or non-polite, complaint, mocking, and so on. Wichmann (2000, p. 139) analyzed the effects of different prosodic means, which includes "cooperation, affiliation, disaffiliation" in conversations. Muller (1996) compared two extracts from Italian radio talk. From this study, it is found that affiliating and disaffiliating are concerned with the prosodic features of tokens in recipiency.

Thirdly, some studies focus on the relation of intonational cues and syntactic signals for turn-taking. The following five empirical researches (Auer, 1996; Ford & Thompson, 1996; Carspers, 2003; Wennerstrom & Siegel, 2003; Xiong, 2003), have obtained similar results: intonation and syntax play their own roles respectively in turn taking, and the reaction and mutual complementarities of them organize the turn transitions in conversation.

Auer (1996) studied the relation of prosodic and syntactic cues for the contextualization of turn-constructional units, and their function in projection of turn completion has been examined in German conversations. It is found that prosody and syntax play independent roles in a "division of labor" for turn taking, while both are used to signal turns (p. 75).

Ford and Thompson (1996) examined the interaction of syntactic completion points and pith

boundaries. They find that 99% of the low boundaries are consistent with syntactic completions, but only 54% of the syntactic completions are consistent with the final intonation boundaries (pp. 155-156). It is obvious that speakers can keep the floor with non-final intonation despite the syntactic completion occurs.

Caspers (2003) accomplished the research on the features of speech melody in the turn taking system in Dutch. The mutual relationship between intonation features and syntax have been examined. The result is when pause and syntactic completion point do not coincide, melody signals the incompleteness of a turn; specific melodic configuration can bridge a syntactic completion point and continue with a further turn (p. 251).

Wennerstrom and Siegel (2003) studied the correlation of pause, syntax, and boundary tones in turn-taking. They find that certain combinations of intonation and syntax virtually assured a speaker's right to keep or yield the floor, and sometimes the intonation signaled turn continuation despite a syntactic boundary (p. 77).

Xiong (2003) investigated prosodic features of sentence boundary in a corpus of 973 Chinese telephone conversations from the point of view of conversation analysis, and compared prosodic behaviors of sentence boundaries which have different communicative functions. This study indicates that prosodic features of sentence boundaries and their communicative functions correlate with each other closely. Prosodic features play important roles in determining the position and the type of sentence boundary, but they are not the only factor. Some other factors such as syntactic, semantic and contextual one must be put together.

As these five studies show, syntax and intonation features operate separately according to their division of labor, but cooperate together in the organization of turn taking. Due to the complexity in the relationship between syntax and intonation in turn taking, the relationship has been object of study.

Fourthly, other studies focus on the prosodic features functioning in turn taking. The following six researchers depict the use of prosodic features during the process of turn-taking.

Duncan investigated turn signals in the study of two 20-minute two-personal interactions, and reported the results in a series of papers (Duncan, 1972, 1973, 1974, 1975). In this study, Duncan identified six turn yielding signals, three of which are prosodic. These three intonation features used for turn-yielding are as follows (Duncan *et al.*, 1985, p. 54):

- (1) Intonation-marked phonemic clause, that is, the use of any pitch level/terminal juncture combination other than a sustained mid-pith level.
- (2) Decrease of paralinguistic pitch or loudness on a sociocentric sequence, that is, a drop in paralinguistic pitch and/or loudness in conjunction with one of several stereotyped expressions such as "but uh", "or something" or "you know".

(3) Paralinguistic drawl are some of the turn signals, that is, drawl on the final syllable or on the stressed syllable of a phonemic clause

Culter and Person (1986) studied the fundamental frequency of pitch and the duration of segments in turn-taking from perceptional perspective. They find that any terminal contour other than a sustained mid-level pitch functions as a turn-yielding signal; a down-step in pitch is found as a good turn-yielding cue but a pitch up-step a good turn holding cue. (p. 152); additionally, they also find the slight tendency of longer utterances to be judged as turn final cue.

John-Lewis (1986), in the analysis of the intonation features and turn transition, points out segmental lengthening, pitch phenomena (range of pitch and pitch movement), and the height of tone units, for example, the down stepping contour, are all associated with the turn finality.

Koiso *et al.* (1998), in the analysis of intonation features and turn-taking in Japanese, categorized those intonation features involved in turn-taking into three kinds—duration, F0 contour (patterns of F0 final contour, peak F0 final values), and energy (pattern of energy final trajectories, peak energy final values).

Wennerstrom (2001, p. 169) studied the intonation features related to turn transitions. It is found that the intonation features concerned with turn yielding include pitch resetting, the directional movement of pitch boundaries, final lengthening of the syllables before the boundary, and rhythm.

Liang (2001) studied the law of time interval between turns in Chinese conversations. This research summarizes the law of time interval in Chinese conversation and the factors that influence time interval.

According to these studies, prosodic features involved in turn-taking can be classified in two main categories—the features related to pitch (pitch boundary, pitch peak, pitch range, key, amplitude etc.) and duration features (pause, tempo, rhythm, final lengthening). Other intonation features such as loudness, intensity, energy, voice quality etc., also play their roles in turn-taking but the researches on these features are much fewer than those on these two main categories. One of the possible reasons is that some of the features are relatively less important in turn-taking. For example, voice quality is categorized into the non-linguistic features according to Crystal's (1975, p. 131) opinion. Despite of the importance in hierarchy, it is the combination of these intonation features that works together in turn taking.

In recent studies, prosodic features are proved to play crucial roles in turn taking, including boundary tones, rhythm, pitch peak, key shift, pause, lengthening etc. (Truckenbrodt, 2015; Féry, 2016; Ludusn & Schuppler, 2022; Xia *et al.*, 2014, 2023; Xia, 2013; Xia & Ma, 2016a, 2016b, 2019).

In summary, the studies of intonation features in turn taking have been carried out mainly in four areas, which include prosodic features of non-canonical conversation forms, the interlocutors' attitudes, the relationship between intonational and syntactic cues in turn taking, and the use of intonation features in

turn taking.

3.2.2 The Studies of Intonation in Turn Taking in L2

Apart from the studies mentioned above on intonation in turn-taking in native languages, such as English (Duncan, 1975; Culter & Person., 1986; Wennerstrom, 2001), Dutch (Carspers, 2003), Malay (Zuraidah *et al.*, 2006); Japanese (Koiso *et al.*, 1998), Chinese (Xiong, 2003; Liang, 2001) etc., there are also some comparative analysis of intonation features and turn taking in English and other languages, such as, the comparative study of English and Japanese (Hiroko, 2001), Spanish and American English (Berry, 1994) etc. Nevertheless, the studies which focus on the intonation features and turn-taking in SLA field are scarce.

The following three studies are concerned with the failure in using suitable prosodic means during the process of turn taking between native and non-native English speakers.

Gumperz (1992) studied the conversations between an English academic advisor and an Indian student. He analyzed the misinterpretations and confusion caused by inappropriate use of prosodic cues. One of the findings of this study is that there is the tendency to end phrases with low pitch boundaries in Indian English in continuous speeches, which makes the English native speakers confused because the low pitch boundaries indicate yielding floor in English.

Davies and Tyler (1994, p. 211) analyzed the frequent overlapping or interruption happening in the English dialogues between one Chinese teaching assistant and the American students. They find that overlapping occurring during the non-native speaker's words is caused by the mismatch between lexicogrammatical and prosodic cues.

Pickering (1999) also studied the interaction between a Chinese teaching assistant and the American students about the mismatch of key. It is found that the conventionalized but subtle uses of pitch level in English could easily cause problems for nonnative speakers. This leads to miscommunication because key shifts used inappropriately by the Chinese teaching assistant conveyed the attitudes against native speakers' expectation and sounded harsh to native speakers.

In summary, all of the research studied the misuse of intonation features during the process of turn taking in non-natives' conversations. The corpora used in these studies are relatively small. Furthermore, the intonation features related to turn taking are not studied thoroughly or systematically. For example, in Gumperz's (1992) study, the low pitch boundary has been researched. In fact, it is only one of the boundary tones, and the overall description of using boundary tones in SLA is to be carried out further.

#### 4. Conclusion

This study supplies a comprehensive review of research on the Chinese EFL learners' production of linguistic prosody in turn organization. It is found that the theories of Interactive Function of Intonation

Features, Signal-based Approach in Turn-taking and Communicative Pronunciation Teaching Model set main theoretical bases for the research of prosody and turn organization, and the empirical studies in L1 and L2 provide references in research design, methodologies, data analyses etc., to the studies of EFL learners' acquisition of prosody in turn organization. Therefore, this review is expected to supply references to the future researches on the prosodic features and EFL learners' spontaneous conversations.

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# References

- Alison, F. (1998). Conversational turn-taking and repair in fluent aphasia. *Aphasiology*, 12(11), 1007-1032.
- Ardila, J. A. G. (2004). Transition relevance places and overlapping in conversational etiquette. *Modern Language Review*, 99(3), 635-650.
- Auer, P. (1996). On the prosody and syntax of turn continuation. In E. Couper-Kuhlen, & M. Selting (Eds.), *Prosody in conversation* (pp. 57-100). Cambridge: Cambridge University Press.
- Augusto, G., & Clotilde, P. (2004). The organization of questions and answers in the thematic. phases of hostile examination: Turn-by-turn manipulation of meaning. *Journal of Pragmatics*, *36*(5), 965-996.
- Berry A. (1994). Spanish and American turn-taking styles: A comparative study. *Pragmatic and Language Learning Monograph Series*, 5, 191-201.
- Bosch, L., Oostdijk, N., & Boves, L. (2005). On temporal aspects of turn taking in conversational. dialogues. Speech Communication, 47, 80-86.
- Botinis, A., Granstrom, B., & Mobius, B. (2001). Developments and paradigms in intonation research. *Speech Communication*, *33*, 263-296.
- Carspers, J. (2003). Local speech melody as a limiting factor in the turn-taking system in Dutch. *Journal of Phonetics*, 31, 251-276.
- Celce-Murcia, M. (1983). Teaching Pronunciation Communicatively. MEXTESOL Journal, 7(1), 10-25.
- Celce-Murcia, M. (1987). Teaching Pronunciation as Communication. In J. Morley (Ed.), *Current perspectives on pronunciation* (pp.1-12). Washington, DC: TESOL.

- Celce-Murcia, M. (1994). Teaching Pronunciation for Communication: The second time around. *MEXTESOL Journal*, 18(2), 25-34.
- Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (1996). *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages*. Cambridge University Press.
- Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). *Teaching Pronunciation Hardback with Audio CDs* (2): A Course Book and Reference Guide. Cambridge University Press.
- Chen, Y. J. (2005). Gender and conversational interaction in Non-native English speakers: A corpus-based study of TV talk shows. Unpublished master's thesis. Fu Zhou University, China.
- Chun, D. M. (2002). *Discourse intonation in L2 from theory and research to practice*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Couper-Kuhlen, E. (1986). An introduction to English prosody. London: Edward Arnold Ltd.
- Couper-Kuhlen. E. (1992). Contextualizing discourse: The prosody of interactive repair. In P. Auer, & A. Di Luzio (Eds.), *The contextualization of language* (pp. 337-364). Amsterdam: John Benjamins.
- Couper-Kulhen, E. (1996). The prosody of repetition: On quoting and mimicry. In E. Couper-Kulhen, & M. Selting (Eds.), *Prosody in conversation* (pp. 336-405). Cambridge: Cambridge University Press.
- Couper-Kuhlen, E., & Selting, M. (1996a). Towards an interactional perspective on prosody and a prosodic perspective on interaction. In *Prosody in conversation* (pp. 11-56). Cambridge: Cambridge University Press.
- Couper-Kuhlen, E., & Selting, M. (Eds.) (1996b). *Prosody in conversation*. Cambridge: Cambridge University Press.
- Crystal, D. (1975). *Prosody systems and intonation in English* (2nd ed.). Cambridge: Cambridge. University Press.
- Culter, A., & Person, M. (1986). On the analysis of prosodic turn-taking cues. In Catherine Johns-Lewis (Eds.), *Intonation in discourse* (pp. 139-156). College-Hill Press, Inc.
- Davis, C., & Tyler, A. (1994). Demystifying cross-cultural (mis) communication: Improving. performance through balance feedback in a situated context. In C. Madden, & C. Myers (Eds.), *Discourse and performance of international teaching assistant* (pp. 201-220). Alexandria, VA: TESOL.
- Dina, O., Slattery, R., & Lynn, S. (2002). Measuring interruption: Syntactic and contextual methods of coding conversation. *Social Psychology Quarterly*, 65(1), 38-55.
- Duncan Jr., S. (1972). Some signals and rules for taking speaking turns in conversations. *Journal of Personality and Social Psychology*, 23, 283-292.
- Duncan Jr., S. (1973). Towards a grammar for dyadic conversation. Semiotica, 9(1), 29-46.

- Duncan Jr., S. (1974). On the structure of speak-auditor interaction during speaking turns. *Language in Society*, *3*(2), 161-180.
- Duncan Jr., S. (1975). Interaction units during speaking turns in dyadic, face-to-face conversations. In R. M. Kendon, & M. R. Key (Eds.), *Organization of behavior in face-to-face interaction* (pp. 199-213). The Gague: Mouton.
- Duncan Jr., S., & Fiske, D. W. (1977). Face-to-face interaction: Research, methods, and theory. Hillsale, NJ: Lawrence Erlbaum.
- Duncan Jr., S., Fiske, D. W., Denny, R., Barbara, G., K., & Hartmut, B., M. (1985). *Interaction structure and strategy*. Maison des sciences de l'Homme and Cambridge University Press.
- Duffy, G. G. (1983). From turn taking to sense making: Broadening the concept of reading teacher. effectiveness. *Journal of Educational Research*, 76(3), 134-139.
- Fergus, M., & David, A. (2004). Turn taking and grounding in spoken telephone number transfer. *Speech Communication*, 43(3), 205-223.
- Ford, C., & Thompson, S. (1996). Interactional units in conversation: Syntactic, intonational, and pragmatic resources for the management of turns. In E. Ochs, E. Schegloff, & S. Thompson (Eds.), *Interaction and grammar* (pp. 134-184). Cambridge: Cambridge University Press.
- French, P., & Local, J. (1986). Prosodic features and the management of interruption. In C. Johns-Lewis (Ed.), *Intonation in discourse* (pp. 157-180). San Diego: College Hill.
- Féry, C. (2016). Intonation and prosodic structure. Cambridge: Cambridge University Press.
- Geoffrey, R. (2004). Prompting action: The stand-along "so" in ordinary conversation. *Research on Language & Social Interaction*, 37(2), 185-218.
- Gilbert, J. B. (1984). Clear Speech: Teacher's Resource and Assessment Book: Pronunciation and Listening Comprehension in North American English. Cambridge: Cambridge University Press.
- Grant, L. (1993). Well Said: Pronunciation for Clear Communication. Boston, MA: Heinle & Heinle.
- Gumperz, J. (1982). Discourse Strategies. Cambridge: Cambridge University Press.
- Gumperz, J. (1992). Contextualization and understanding. In A. Duranti, & C. Goodwin (Eds.), *Rethinking context* (pp. 229-252). New York: Cambridge University Press.
- Halliday, M. A. K. (1970). A course in spoken English: Intonation. London: Oxford University Press.
- Hiroko, F. (2001). Turn taking in English and Japanese: Projectability in grammar, intonation, and semantics. New York: Routledge Press.
- Hiroyuki, L., & Takashi, I. (2004). Adaptability and diversity in simulated turn-taking behavior. *Artificial life*, 10(4), 361-378.
- Jakob, C. (2001). Overplap in bilingual play: Some implications of code-switching for overlap. resolution. *Research on Language & Social Interaction*, 34(4), 421-451.

- Jeanne, C., & Duska, R. (2005). Dialogue organization in argumentative debates. *AI & Society*, 19(1), 48-64.
- Jiang, W. Q., & Li, M. (2003). The Organization of Repair in Conversation. *Journal of Foreign Languages*, 146, 39-45.
- John-Lewis, C. (Ed.). (1986). Intonation in discourse. College-Hill Press, INC.
- Juliane, S., & Andrea, G. (2003). Repair in chats: A conversation analytic approach. *Research on Language & Social Interaction*, 36(3), 241-285.
- Kogure, M. (2003). Gender differences in the use of backchannels: Do Japanese men and women accommodate to each other? Unpublished doctoral dissertation. The University of Arizona.
- Koiso, H., Horiuchi, Y., Tutiya, S., Ichikawa, A., & Den, Y. (1998). An analysis of turn-taking and backchannels based on prosodic and syntactic features in Japanese Map Task dialogs. *Language* and speech, 41, 295-321.
- Leander, K. M. (2002). Silence in Classroom interaction: Producing and relating social spaces. *Discourse Processes*, 34(2), 193-235.
- Li, Y. E., & Shen, Z. Q. (2003). A Study of Interruption in Natural conversations. *Contemporary Linguistics*, 5(1), 25-32.
- Liang, Y. (2001). The Analysis of Time Interval between Turns in Chinese Conversation. A Master Dissertation in Hunan Normal University, Changsha, China.
- Liu, L. X. (2003). The analysis of interruption in natural conversations. *Tsinghua Journal of education*, 24(1) 68-72.
- Local, J. (1996). Conversational phonetics: Some aspects of news receipts in everyday talk. In E. Couper-Kuhlen, & M. Selting (Eds.), *Prosody in conversation* (pp. 177-230). Cambridge: Cambridge University Press.
- Ludusn, B., & Schuppler B. (2022). An analysis of prosodic boundaries across speaking styles in two varieties of German. *Speech Communication*, *141*, 93-106.
- Mary, M., & Priscilla, D. (1996). Conversations between older men and women: Turn-taking and topics. *Perceptual & Motor Skills*, 83(3), 1330.
- Morley, J. (1991). The Pronunciation Component in Teaching English to Speakers of Other Languages. *TESOL Quarterly*, 25(3), 481-520.
- Muller. F. (1996). Affiliating and disaffiliating with continuers: Prosodic aspects of recipiency. In E. Couper-Kuhlen, & Selting (Eds), *Prosody in conversation* (pp. 131-176). Cambridge: Cambridge University Press.
- Pernille, S. H. (2004). Paths to precision: Probing turn format and turn-taking problems in standardized interviews. *Discourse Studies*, 6(1), 77-94.

- Pickering, L. (1999). *The analysis of prosodic systems in the classroom discourse of NS and NNS teaching assistants*. Unpublished doctoral dissertation. University of Florida, Gainesville, FL.
- Pincus, D., & Guastello, S. (2005). Nonlinear dynamics and interpersonal correlates of verbal turn-taking patterns in a group therapy session. *Small Group Research*, 36(6), 635-677.
- Qian, F. (2004). *Turn-taking organization in English news interview in China*. Unpublished. A master's dissertation. Northwest University, China.
- Qiu, T. H. (2005). Organization System and "Patterning" of Self-repair. *Journal of PLA University of Foreign Languages*, 28(1), 45-50.
- Reissland, N., & Stephenson, T. (1999). Turn- taking in early vocal interaction: A comparison of premature and term infants' vocal interaction with their mothers. *Child: Care, Health & Development*, 25(6), 447-456.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and Methods in Language Teaching*. Cambridge University, Cambridge.
- Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of. turn taking for conversation. Language, *50*(4), 696-735.
- Truckenbrodt, H. (2015). Intonation phrases and speech acts. In M. Kluck, D. Ott, & M. de Vrieds (Eds.), *Parenthesis and ellipsis Cross-linguistic and theoretical perspectives* (pp. 301-349). Berlin: Walter de Gruyter.
- Weeks, P. D. (1985). Error-correction techniques and sequences in instructional settings: Toward a comparative framework. *Human Studies*, 8(3), 195-233.
- Wei, N. X. (2004). A preliminary study of the characteristics of Chinese learners' spoken English. Modern Foreign Languages, 27(2), 140-149.
- Wennerstrom, A. (2001). The music of everyday speech. Oxford: Oxford University Press.
- Wennerstrom, A., & Siegel, A. (2003). Keeping the floor in multiparty conversations: intonation, syntax, and pause. *Discourse processes*, 36(2), 77-107.
- Wichmann, A. (2000). *Intonation in text and discourse: Beginnings, middles and ends*. England: Pearson Education Limited.
- Xia, Z. H. (2013). Prosodic realization of topic structure in Chinese EFL learners' speaking—An empirical research based on spontaneous speeches. *Foreign Language Teaching and Research*, 45(3), 398-410.
- Xia, Z. H., Hirschberg, J., & Levitan, R. (2023). Investigating prosodic entrainment from global conversations to local turns and tones in Mandarin conversations. *Speech Communication*, 153.
- Xia, Z. H., Levitan, R., & Hirschberg, J. (2014). Prosodic entrainment in Mandarin and English: A cross-linguistic comparison. In *Proceedings of Speech Prosody*, (pp. 65-69). Dublin, Ireland.

- Xia, Z. H., & Ma, Q. W. (2019). Prosodic Entrainment in Mandarin Chinese Conversations: An Experimental Study. Tongji University Press, Shanghai, China.
- Xia, Z. H., & Ma, Q. W. (2016a). The influence of gender on prosodic entrainment in Mandarin conversations. *Journal of Phonetics in China*, 118-128.
- Xia, Z. H., & Ma, Q. W. (2016b). Gender and prosodic entrainment in Mandarin conversations. In Proceedings of 2016 10th International Symposium on Chinese Spoken Language Processing (ISCSLP 2016), Tianjin, China.
- Xiong, Z. Y. (2003). Prosodic features and their conversational functions of sentence boundary in spontaneous speech. A PhD Dissertation in Chinese Academy of Social Sciences. Beijing, China.
- Zhang, T. G. (2003). The rules of turn-taking in conversation. *Foreign Language Education*, 24(4), 23-26.
- Zuraidah, M. D., & Knowles, G. (2006). Prosody and turn-taking in Malay broadcast interview. *Journal of Pragmatics*, 38, 490-51.