

Chapter 7. FL Learners' Multimodal Representation of the English Progressive Construction in Event Construal

7.1 Introduction

According to the Linguistic Relativity Hypothesis, the language we speak shapes the way we perceive the world and construe the reality around us, so language and thought/worldview are closely intertwined (Whorf 1956). Consequently, it is widely acknowledged that language provides a window onto how people construe the world, and that learning a new language is acquiring a new thinking pattern. As thought or worldview were labels that he found too static, Slobin (1987, 1996) proposed the dynamic categories “thinking and speaking” in place of the static entities “language and thought”. He put forward the “thinking for speaking” hypothesis, which states that the obligatory grammatical options provided by a language affect the speaker’s thinking in the moment-by-moment processes of speaking. It was further extended as the “thinking for speaking and gesturing” hypothesis (Cienki & Müller 2008b; McNeill & Duncan 2000). In recent years, studies on language and thought in SLA have gained increasing popularity. This research has investigated the cognitive restructuring, and the conceptual representations in particular, in the bilingual or L2 learner’s mind¹ (e.g., Athansopoulos et al. 2015; Athansopoulos & Albright 2016; Bylund & Jarvis 2011;

¹In the SLA literature, the term second language (L2) learners was originally used to refer to those learning a second language other than their mother tongue in the context of the target language, such as Chinese speakers learning English in the U.S. Now, it has been extended to anyone who learns another language rather than their native language in any context. Foreign language (FL) learners refers to those who learn another language other than their mother tongue via classroom instruction in the foreign language context, such as Chinese speakers learning English in China.

Stam 2010, 2015). Researchers focused on the cross-linguistic differences in the endpoint salience as a function of the presence or absence of progressive aspect, and in packaging the manner and path information of motion events across languages. The results showed that the extent of changes in bilingual or L2 learners' thinking for speaking patterns depended on their language proficiency in, and exposure to, the L2 language. Generally speaking, the more proficient the bilingual or L2 learners are, and the longer exposure they have to the L2, the more likely the L2 learners will adopt the L2 thinking for speaking patterns to construe events. Thus, contrary to Slobin's proposal that language-specific thinking patterns developed in L1 acquisition are "exceptionally resistant to restructuring in adult second language acquisition" (Slobin 1996: 89), these studies have preliminarily revealed that L2 learners are able to restructure their conceptual representation. However, it is unclear whether and to what extent FL learners, who have fewer opportunities for L2 exposure, can also restructure their thinking for speaking patterns. In rethinking for speaking in L2 (Robinson & Ellis 2008), the cross-linguistic influence, the influence of a speaker's knowledge of one language on his/her knowledge or use of another language (Jarvis & Pavlenko 2008; Kellerman & Sharwood-Smith 1986; Odlin 2005), may originate from the conceptual transfer, i.e., the transfer of mental concepts and patterns of conceptualization in one language to another (Jarvis 2007, 2011, 2016).

Conceptual representation is multimodal by nature, which is realized not only in verbal (e.g., speech) but also in nonverbal experiential elements (e.g., co-speech gestures) (Pavlenko 1999; Pulvermüller 2003; Langacker 2008a). Gestures are argued to act as windows into the speaker's "thinking for speaking" in their L2 (Gullberg 2008a, 2008b; Kellerman & van Hoof 2003; Gullberg 2013; Stam 2015). Like language, gestures can be transferred in the process of L2 learning. For instance, gesture rates, iconic gesture rates in particular, can be transferred from a high frequency gesture language/culture to a low frequency gesture language/culture² (Efron 1941; Pika et al.

² The classification of high or low gesture frequency culture is relative. English belongs to the high-gesture languages, as opposed to Chinese as a low-gesture language; it is also a low-gesture

2006; Scheflen 1972; So 2010). Bilingual learners were found to make more gestures than monolingual speakers, particularly more iconic gestures than speakers from a low-gesture language. The present study pursues a multimodal approach to investigate the FL learners' changes in thinking for not only speaking but also gesturing patterns in event construal.

As the previous studies focused on a completely different cross-linguistic phenomenon, it is unclear what the situation is like when there are cross-language similarities and differences in certain aspects, for instance, progressive aspect in English and Chinese. Although the progressive aspect markers in both English and Chinese have similar spatial source for their development, they have evolved into different grammatical structures (Ruan & Wang 2015: 75). As noted in Chapter 2, Both Chinese and English provide aspectual means to encode ongoingness of events, but Chinese progressive aspect differs from English progressive aspect in at least three respects. First, Chinese has two progressive aspect markers, *zài* and *zhe*. The former focuses on the progressivity of an event, whereas the latter concentrates on the durativity of an event. However, English only uses the verb suffix *-ing* to mark the event as ongoing and specific. Second, the conceptual meanings are different between them. Chinese progressive aspect marker *zài* only represents ongoingness and *zhe* encodes either ongoingness or temporary/resultative states. But English progressive aspect not only has such temporal-aspectual uses as the ongoingness, habituality, temporary state and repetition, but has also extended into the epistemic domain, including categories such as futurity and emotivity. Third, English progressive aspect integrates with tense, which is absent in Chinese. Such structural differences may have been caused by the characterized ways of thinking, that is, the particularity of spatiality in Chinese, and the predominant traits of temporality in English (Ruan & Wang 2015; Wang 2013). Given these cross-linguistic similarities and differences, this study intends to investigate whether and to what extent Mandarin speakers of L2 English change their thinking for speaking and gesturing patterns while taking the progressive aspect to construe events.

language when compared with Italian, Spanish and French as high-gesture languages.

7.2 Background

7.2.1 Thinking for speaking and gesturing in SLA

With the increasing awareness of the multimodal nature of language learning and teaching, more and more studies have been done on whether L2 learners can acquire the thinking for speaking and gesturing patterns of the target language. These studies mainly focused on the motion event domain. Talmy (1991, 2000) categorized the languages that lexicalize path of motion in a satellite or verb particle, and that encode manner of motion in the main verb, as satellite-framed languages (such as English, Dutch), and those that encode paths in a main verb and manner in a subordinate verb or adverbial as verb-framed languages (such as Spanish, Japanese). Slobin (2004) added a certain category of equipollently framed languages (such as Chinese), which package manner and path of motion in equipollent elements, that is, “both manner and path of the motion receive equal weight in serial verbs” (Wu 2011: 419). Based on Talmy’s semantic framework, a lot of cross-linguistic research has shown that the typologically different patterns in motion conceptualization in speech are also mapped onto their gestural depiction of motion events. In satellite-framed languages like English, the co-speech gestures usually encode other components of the event, path in particular, or conflate manner and path to highlight manner (e.g., Brown 2015; Brown & Gullberg 2008; Choi & Lantolf 2008; Duncan 2002; Negueruela et al. 2004). In verb-framed languages such as Japanese and Spanish, the co-speech gestures tend to encode manner and path in two gestures, or add manner information which is lacking in speech (Brown 2015; Brown & Gullberg 2008). The research results in equipollently-framed Chinese are rather inconsistent. Some found that the co-speech gestures frequently represent path but seldom manner or manner and path (Brown & Chen 2013; Chui 2011, 2012), whereas others found that manner of motion was frequently encoded in both speech and co-speech gestures (Duncan 2006). In fact, the gestural encoding of motion events is also affected by other grammatical categories, such as grammatical aspect. The co-speech gestures accompanying progressive aspect-marked utterances tend to

more frequently conflate manner and path, whereas those with perfective aspect-marked utterances are more likely to only express path, in both English and Chinese (Duncan 2002; Parrill et al. 2013).

Correspondingly, previous studies in SLA mainly focused on what changes have taken place in L2 learners' thinking for speaking and gesturing patterns about the path or manner of events while learning typologically different languages (e.g., Brown 2015; Brown & Gullberg 2008, 2013; Kellerman & van Hoof 2003; Lewis 2012; Negueruela et al. 2004; Stam 2008, 2010, 2015). Three main findings could be concluded from such speech and co-speech gesture studies. First, the L2 (e.g. English) speakers still maintained their L1 (e.g. Spanish) thinking patterns for gesturing while talking about path in L2 (e.g., Kellerman & van Hoof 2003; Negueruela et al. 2004). Second, the L2 speakers adopted L2 thinking for speaking and gesturing patterns for path or manner in their L2, particularly when their L2 proficiency increased enough (e.g., Lewis 2012; Stam 2015). Third, the L2 speakers developed mixed thinking for gesturing patterns for path or manner, resulting from the bidirectional interaction between L1 and L2 (e.g., Brown 2015; Brown & Gullberg 2008, 2013; Stam 2008, 2010). Generally speaking, it is easier for L2 speakers to adapt their thinking for speaking patterns to those of L1 speakers, whereas the gestural patterns, in particular for manner, are relatively more resistant to change.

7.2.2 The influence of grammatical aspect on event construal in L2

Cross-linguistic studies found that grammatical aspect has a great influence on motion event cognition. Speakers of languages without marked grammatical aspect (e.g., German, Swedish, Afrikaans) prefer to take a holistic view, mentioning and paying attention to endpoints when describing motion events. However, speakers of aspect languages (e.g., English, Chinese, Russian) tend to express the ongoingness and direct attention to the intermediate part of motion events (Athanasopoulos & Bylund 2013; Bylund et al. 2013; Flecken 2011a, 2011b; Flecken et al. 2015; Slobin 1987; von Stutterheim & Nüse 2003; von Stutterheim et al. 2012). Therefore, the way that a

language is configured in terms of grammatical aspect equips its native speakers with certain preferred patterns of event construal. However, there is still debate about whether such differences in aspect languages and non-aspect languages influence the bilinguals' or L2 learners' event conceptualization.

Bylund & Jarvis (2011) found that there was L2 influence (Swedish, non-aspect language) on L1 (Spanish, aspect language) conceptualization of motion events. They asked L1 Spanish-L2 Swedish bilinguals to provide oral descriptions in Spanish of the video clips involving motion events with different degrees of endpoint orientation. A grammaticality judgment test concerning aspectual contrasts was also carried out. The results showed that the bilinguals mentioned the endpoints of motion events more frequently than the monolingual Spanish speakers did, and that there were negative correlations between the bilinguals' discrimination of aspectual errors in the grammaticality judgment test and the possibility of encoding the endpoints in motion events. The study reveals that these bilinguals tend to adapt their thinking for speaking about motion events from L1 to L2.

Flecken (2011b) found that there were mixed effects of Dutch-German on event construal, leading to a bilingual-specific event conceptualization pattern. She employed a verbal description task and non-verbal data via eye-tracking to study the effects of grammatical aspect on motion event cognition in early bilingual speakers of Dutch (an aspect language, according to her criteria) and German (a non-aspect language). The results revealed that the early bilinguals not only frequently applied the progressive aspect, but they also tended to combine the progressive aspect with endpoints, which is not prototypical for native Dutch. The eye-tracking data showed that like the monolingual Dutch speakers, the bilingual Dutch speakers allocated more attention to the ongoing action rather than to the agents performing the action, which positively correlates with the high frequency of use of the progressive aspect.

Hilberink-Schulpen, Nederstigt & Starren (2014) investigated the grammatical preferences in aspect marking in L1s and L2s which differed in the availability of progressive form to encode ongoing events. They asked native Dutch, English and German speakers, on the one hand, and L1 Dutch L2 English and L2 German speakers,

on the other hand, to rate the likelihood of using a particular utterance (utterances in the simple form, progressive form, simple form+object, or progressive form+object) on a 7-point Likert scale. The results showed that the grammatical repertoires of languages (having a grammatical marker for the progressive or not) influenced their speakers' event perception. Whereas the native Dutch speakers had no overall preference for any kind of sentence, the native English speakers preferred to use progressive utterances to describe the non-locomotion events, regardless of the presence or absence of objects in view. However, the native German speakers preferred a simple form with an object utterance. Moreover, both the L1 Dutch L2 English speakers and the L1 Dutch L2 German speakers demonstrated similar patterns as the respective target native speakers did in event descriptions. Dutch learners of English preferred a progressive sentence, just as the native speaker of English did, while Dutch learners of German preferred a simple sentence, like the native speaker of German did, to describe motion events with a clearly visible object, but preferred none of the sentences to describe those without a visible object. Thus, the bilingual learners were more likely to adopt the L2 thinking for speaking patterns.

In contrast, von Stutterheim (2003) found that the patterns of event conceptualization developed through L1 were not easily susceptible to change. She investigated how the English and German natives who were also advanced L2 learners of German or English construe motion events with clear, reachable endpoints or without any endpoints. The participants orally described the events immediately when they recognized what was happening in the film clip in both the L1 and the L2 respectively. The results showed that the English speakers preferred not to mention endpoints in either English or German, whereas the German speakers tended to refer to endpoints in both German and English. Thus, the L2 learners maintained their patterns of event construal in L1, rather than changing to those of the target languages.

The cross-linguistic influences of grammatical aspect on L2 learners' event construal documented by the above studies reflect that there was reverse transfer i.e., the effects of the L2 on the L1 (Bylund & Jarvis 2011; Hilberink-Schulpen et al. 2014), forward transfer, i.e., the effects of L1 on the L2 (von Stutterheim 2003), and mixed

effects of both L1 and L2 (Flecken 2011b).

7.2.3 The functions of gesture in grammar teaching and learning in SLA

There has been a serious written language bias in SLA, overlooking the multimodality and embodied nature of human communication (Block 2014). Fortunately, many studies have shown that gestures could improve language comprehension (Sueyosmohi & Hardison 2005), enhance L2 vocabulary memorization (Kelly et al. 2009; Tellier, 2008), organize spatial thoughts (Kita 2000), and reveal L2 learners' thinking pattern (e.g., Stam 2010, 2015). Whether it is also of great help to teach and learn grammatical categories awaits further and systematic research. As grammatical concepts are rather abstract, the speakers and learners cannot directly perceive and experience them in daily life. Thus, it also poses great difficulties for teachers to teach and learners to learn. In recent years, there has been more and more research into teaching a variety of grammatical categories in a multimodal way, such as locative prepositions (Nakatsukasa 2016), tense and aspect (Kimura & Kazik 2017; Matsumoto & Dobs 2016). These studies showed that the teacher's gestures could facilitate students' learning of grammar, enhance their interaction in the classroom, and help learners organize their thinking to finish linguistic encoding online in the activity of speaking. In addition, the students appropriate the teachers' gestures to externalize their developing understanding of a certain grammatical concept.

For example, Kimura & Kazik (2017) analyzed the microgenetic development of an English as second language learner's understanding of the progressive aspect. They found that the teacher made the cyclic gesture (rotating both hands in an alternating manner) as an "in-progress catchment" to demonstrate the characteristics of English progressive aspect (p.18). Their Arabic subject — Mada's — microgenetic development of the progressive aspect via gesture showed that she integrated her initial incomplete conceptual understanding and the gestural information provided by the teacher, making a gesture by rotating both hands outward alternately while moving them to the left and back to the right. Her gesture merged the "in progress" of progressive aspect with the

lateral representation of temporal duration. Matsumoto & Dobs (2016) carried out qualitative analyses to investigate the functions of gesture in teaching and learning tense and aspect in grammar classes of English as a second language. The teachers repeatedly and consistently employed abstract deictic gestures by pointing backward or left for the past tense, forward or right for the future tense, and downward in front of body for the present tense. The metaphoric gestures (for time as space) were used to teach and learn grammatical aspect in class. While explaining one of the characteristics of present progressive — extended period, the teacher used a metaphoric container gesture, i.e., holding both hands in parallel apart in front of their body at chest height with palms facing each other. Moreover, the metaphoric circular-motion gestures (i.e. repeatedly moving the hand(s) in a circular manner) were used to teach the habitual aspect. Students also effectively employed such gestures to demonstrate their understanding of the English tense and aspect system and interact with the teachers in classroom. The above two case studies reported two different instructional uses of gesture for the English progressive aspect in the SLA classroom: rotating (both) hands alternately (i.e., the cyclic gesture) and holding hands in parallel apart. What they have in common is that gesture has been shown to be one of the critical pedagogical means to teach and learn such abstract temporal concepts in the second language classroom. However, it is unclear whether L2 learners represent their conceptual understanding of English progressive aspect via the cyclic gesture, the gesture of holding hands in parallel apart, or something else, in natural conversational contexts.

Based on the findings reviewed in this section, I investigated what FL learners actually speak and gesture in semi-spontaneous conversations when using progressive aspect to construe events. The speech and gesture produced by the native Chinese speakers and native English speakers in this respect were used as baselines to see whether and to what extent FL learners change their thinking for speaking and gesturing, as evidenced by their verbal and co-verbal behavior. The present study addressed two primary questions.

- 1) Given the similarities and differences between the ways that Chinese and English speakers adopt to construe events with progressive aspect, what are the

potential problems for FL learners in using the English progressive aspect?

Specifically: (a) What formal errors do FL learners make in using the progressive aspect? (b) In light of the multi-functions of the progressive aspect in the target language, English, can the FL learners expand the semantic scope of the English progressive?

2) In what ways are FL learners' gestural patterns with progressive utterances similar or different from those of L1 English speakers or L1 Chinese speakers?

Specifically: (a) Do FL learners gesture more frequently than monolingual speakers, the low-gesture L1 Chinese speakers in particular? (b) Are the ways in which FL learners use iconic gestures for reference similar to, or different from, the patterns used by L1 English speakers?

7.3 Methods

7.3.1 Participants

There were three groups of participants in this study: FL learners, native Chinese speakers, and native English speakers. The FL learners were 20 L1 Chinese L2 English speakers. They all had experience of attending the national speech or interpretation contests in China and won the first or second class prize. Their self-rated reading and writing proficiency was more than 8 on average, but the average spoken English was about 7 in a 10-point scale in the Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al. 2007). It revealed that they are advanced FL learners in terms of reading and writing, but high-intermediate FL learners in terms of speaking. According to the results of a handedness questionnaire, all of the participants are right-handed people. As the present study focused on the progressive aspect, three learners who made no use of progressive aspect from three different pairs were excluded. Thus, data produced by 17 participants were analyzed (mean age: 22.65, SD = 2.344; age ranges 19-25years; 11 females and 6 males). They have the experience of learning English on average for 14 years. Seven of them had been abroad as a traveler or

exchange student from 1 week to 1 year.

There were 17 native Chinese speakers in this study (average age: 47.41, SD = 10.666; age ranges 29-68 years; 5 females, 12 males), as well as seventeen native English speakers (mean age: 43.18, SD = 12.386; age ranges 24-69; 8 females, 9 males). All of them are celebrities from the entertainment, sports, economic or political fields in China, in the U.S. or internationally.

7.3.2 Data collection

Data of the FL learners were collected using the research design from Becker et al. (2011). The semi-spontaneous data were elicited via a semi-structured, semi-spontaneous format in which participants talked about personal experiences with their friends. This is in part to overcome the limitation of previous work investigating the role of grammatical aspect in event conceptualization which used video clips or written narratives as prompts, resulting in a bias towards physical motion events (Duncan 2002; Parrill et al. 2013). The conversation prompts used in the present study are appropriate to obtain real usage data from the speaker's own experience without a bias towards any event type. The data consist of three topics of telling about: 1) your favorite place in the world (city, region, or place you have visited), as a warm-up question; 2) a difficult situation you have experienced, to elicit talk on events of a longer duration; and 3) an unusual situation you have witnessed, to focus more on quick or sudden events. A list of relatively everyday situations was available to choose from under items 2) and 3). The details about the conversation prompts can be found in Appendix 1. Each pair of participants as friends or classmates was asked to interview each other about the three topics. They could choose the same item or different item under 2) and 3) to tell the stories they had experienced in detail rather than briefly comment on them. They were told that the aim of the study was to investigate their communicative competence and I mentioned nothing about gestures in the experimental instructions. Before the recording, the participants were asked to read and sign the consent forms (see Appendix 2) if they agreed to take part in the experiment. Each pair of participants sat on chairs without

arms next to each other at about 45 degrees in a classroom or in an office. The video camera was positioned in front of them, with a wide-angle view from the torso up. After the recording, they were asked to sign another consent form, where they could choose how their data would be used, and possibly published, for research purposes, and to fill in the LEAP-Q and a handedness questionnaire, adapted from the Edinburgh handedness inventory (see Appendix 3).

Ten pairs of participants were recorded. Each pair of participants discussed the three topics for as long as they liked. Their conversation ranges from 17 to 32 minutes with an average of 22.94 minutes, and the whole FL corpus consists of approximately 3.8 hours. 136 progressive utterances in total were produced for further analysis in the present study.

The data of the native Chinese and English speakers were randomly sampled from the popular TV talk shows – “Yang Lan One on One” in China, and *The Ellen DeGeneres Show* in the U.S. They could be used as the baseline data for the FL learners for the following reasons. First, they were also semi-structured spontaneous interactions. Second, the interviews also centered on the difficulties or unusual/unforgettable events the interviewees were involved in or witnessed in their personal life. As the hostesses have a special role in the interviews, their data were not taken into consideration in both Chinese and English. Consequently, 17 native Chinese speakers produced 146 progressive utterances in 13 videos, each of which lasted for approximately 20 minutes, so approximately 4.3 hours in total. 17 native English speakers produced 96 progressive utterances in 18 videos, each of which lasted for approximately 10 minutes, so approximately 3 hours in total.

7.3.3 Data treatment

Each pair of FL participants was asked to help transcribe their dialogue without any revision of errors. I checked all of the data for the use of progressive utterances. Then all of the data in this study were annotated in ELAN and coded, as described below.

7.3.3.1 Speech coding

All of the narratives from the three groups were divided into clauses. Following Berman & Slobin (1994), a clause refers to any unit involving a finite or nonfinite verb that encodes a single activity, event, or state. Those with aspectual and modal verbs counted with main verbs as one clause, for instance, clauses with *begin (to sleep)*, *go (shopping)*, and *try (to surprise her)*. The self-referential and paranarrative clauses, such as, *I think*, *you know*, were not counted as a clause. However, in this study, only the clauses with progressive aspect, in the form of *be V-ing* or present participle in English or *zài V* or *V zhe* in Chinese, were counted in data analyses.

For the FL learners' data, I sampled out all the clauses with the progressive aspect or potential progressive use. Then grammatical errors related to progressive constructions were coded. They were categorized into the following error types, as illustrated in the examples numbered below: common tense error (1a), absence of copula verb in a main clause (1b), no aspectual inflection (1c), combination of tense and aspect (TA) errors (1d), and incorrect use of the progressive construction (i.e., using the progressive construction to construe a completed event) in (1e). However, when there were such self-corrections as in (1f), it was considered grammatical-error free. Two coders judged all of the sampled progressive sentences, and the agreement between them was 98% (N = 136).

- (1) a. She's standing in the line, and people are pushing her. [Participant 11, for past events]
- b. Many sad stories taking place in dormitory on the campus. [Participant 18]
- c. They were listen to me. [Participant 12]
- d. I was so frustrated, because everyone in the dorm is sleep. [Participant 1]
- e. the phone is dropping into your bag or something. [Participant 12, a completed event]
- f. We're driving... we were driving ... around the city. [Participant 1]

The meaning expressed by each progressive clause was coded. While the English progressive utterances can encode ongoingness, temporary state, habituality, repetition, futurity, and emotivity, the Chinese progressive utterances represent either continuous ongoingness or temporary state (See section 2.1.2 in Chapter 2 for details). Thus, it is of great significance to see whether and to what extent the FL learners expanded their semantic system of the progressive aspect in English. When the progressive construction depicts that an event is in progress, it means “continuous ongoingness” as in example (2a) in English, and (2b) in Chinese. When the progressive construction is used with stative verbs or adjectives, it is construed as “temporary state” like in example (2c) in English, and (2d) in Chinese. When the same action repeatedly occurs at a regular interval, the English progressive construction is read as “habituality” as in example (2e), whereas when the same action is continually repeated in a series, it is construed as “repetition” as in example (2f). In addition, the English progressive construction is often used to depict the event happening in the future as in example (2g), and to express the speaker’s emotivity as in example (2h).

(2) a. Everybody was pushing up against me.

b. tā zài pá.

he PROG crawl

“He was crawling.”

c. So Chewbacca was sitting there.

d. tā zuò zhe.

he sit DUR

“He was sitting.”

e. Terry Norris, the former welterweight champion, has been training me.

f. They are knocking at the door.

g. So I suppose you are returning to your hometown after your graduation.

h. You must be kidding.

Two coders independently coded the meaning of each progressive utterance according to the contexts. The agreement for the Chinese, FL learners, and English progressive meanings was 98% (N = 136), 93% (N = 146) and 95% (N = 96), respectively. The cases of disagreement were further discussed with an expert, then the agreed upon interpretation was used as the final one.

7.3.3.2 Gesture coding

Only gestures whose gesture stroke was overlapping with the verb marked by the progressive aspect were considered throughout this study. We first decided whether the progressive utterances were accompanied by gesture or not. The agreement between two coders was 100% for all data corpora. When the gesture bore direct resemblance to the semantic content of the speaker's speech, the gesture was categorized as iconic (concrete and metaphoric); otherwise it was coded as non-iconic (McNeill 1992, 2005; Kendon 2004). Iconic gestures are important in this study, as they can visually depict what elements of events are profiled in the speakers' mind. We can see whether the progressive aspect in Chinese, English and L1 Chinese L2 English have similar or different influences on their speakers' thinking for speaking. The iconic gestures were further coded according to how they represented the referents (Müller 1998, 2014, see section 2.3.1 in Chapter 2 about the modes of representations for detail.). The iconic gestures can represent the entities, actions, process, path or combination of them of an event (see section 2.3.2 in Chapter 2 about this distinction for detail). When the gesture traced the outline or shape, molded the size of an entity, or represented something directly, it was coded as iconic to entity. When the gesture acted out the real or imagined action of concrete events, it was coded as iconic to action. When the gesture acted out the duration of an *abstract* event, it was coded as iconic to process. When the gesture traced the path of a motion event, it was coded as iconic to path. When a gesture simultaneously represented the elements of an event such as entity and action, it was coded as "combination". The agreement between two coders for gesture types of the three groups was 100%, while that for the elements the iconic gestures refer to of the

native Chinese speakers, FL learners, and native English speakers was 97% (N = 52), 94% (N = 64) and 93% (N = 22) respectively.

7.4 Results

The results are presented in two sections. First, the form features of the progressive construction employed by the FL learners are reported and the relative meanings of progressive construction across languages are compared. As not all FL learners made grammatical errors, only a subset was included in the analysis. Second, the gestural behaviors of FL learners, native Chinese speakers and native English speakers are compared. I used nonparametric tests, Kruskal-Wallis for preliminary multiple group analyses and Mann-Whitney for further between-group analyses. In all statistical analyses, the alpha level is set at 0.05; a p value below that is significant.

7.4.1 Speech results

7.4.1.1 Form features of the progressive construction employed by the FL learners

Of the 146 progressive constructions produced by the FL learners, 134 involved *be V-ing* (91.78%) and 12 involved *V-ing* (8.22%) to construe events. Our analysis of the errors was taken into account. The grammatical errors made by the FL learners were almost a third of the total use of progressive construction in the present study (47 out of 146). As shown in Fig. 7.1, you can see that 57.45% of the grammatical errors lay in the wrong use of tense, 29.79% resulted from the absence of copula in the main clauses, and that there were few errors in non-inflection of aspect, combination of TA error, and incorrect use of progressive aspect. The results demonstrated that there was apparent and serious L1 negative transfer to the FL learning system in speech. The L1, Chinese, as a tenseless language, is characterized by no use of a copula in progressive constructions and non-inflection of the main verb in a clause. In contrast, the L2, English, as a tense language, conflates tense and aspect. This can be taken as the reason why progressive aspect is one of the most difficult grammatical categories for L1

Chinese L2 English learners to grasp. Thus, the conceptualization transfer easily occurs; that is, the L1 Chinese L2 English learners tend to transfer their L1 thinking for speaking patterns of the ongoing events while construing them in L2. The results also imply that the L2 learners have mastered the concept of the progressive construction, that is, the progressive construction is used to encode the ongoing rather than the completed events, which is similar in both the L1 and L2 systems. Thus, the positive concept transfer of progressive construction may have existed in the L2 learners' interlanguage system.

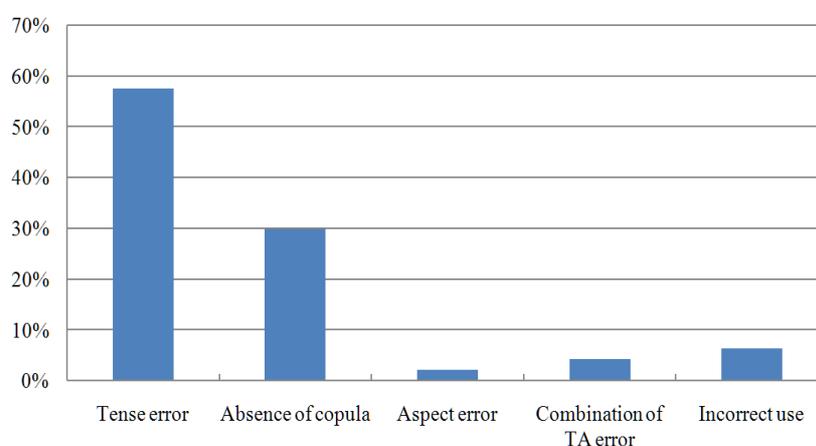


Fig. 7.1 Grammatical errors of progressive construction in L2

7.4.1.2 Frequencies of meanings of progressive constructions across groups

No matter whether it was in the native Chinese, FL learners or native English corpus, there was no progressive construction that solely encoded “repetition”. This may have resulted from the serious constraints of the verb: only punctual verbs are compatible with the progressive construction to construe a series of repetitive events.

Consequently, Table 7.1 shows the frequencies of semantic distribution of the progressive utterances made by the native Chinese speakers, FL learners, and native English speakers. From this, you can see that “continuous ongoingness” as the prototypical meaning of the progressive construction was encoded the most in all of the three groups. FL learners used far more progressive constructions to construe ongoing events than did the native English speakers (61.64% vs. 43.75%), but less than the

native Chinese speakers did (61.64% vs. 72.06%). Furthermore, temporary state was the second most mapped meaning to the progressive construction across the three groups, and among the FL learners in particular. They even overextended the use of the progressive construction to construe completed events, such as *One is missing/The sun.. the sun was already setting on the mountain*. In contrast to the native English speakers' much wider use of the progressive construction to encode "habituality" and "emotivity", the FL learners were more used to employing it to encode future events. Thus, generally speaking, while the L1 Chinese L2 English FL learners started to expand the use of the progressive construction, becoming more like native English speakers, they were still more likely to maintain the semantic pattern of the native Chinese in their interlanguage system.

Table 7.1: Frequencies of meaning distributions of progressive construction across groups

	Ongoingness		State		Habituality		Futurity		Emotivity		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Native Chinese	98	72.06	38	27.94	0	0	0	0	0	0	136	100
FL Learners	90	61.64	44	30.14	1	0.68	8	5.48	3	2.05	146	100
Native English	42	43.75	18	18.75	16	16.67	10	10.42	10	10.42	96	100

The speech results suggest that the FL learners mostly keep their L1 thinking for speaking pattern in FL conversations. They negatively transferred the formal features of the progressive aspect from L1 to L2, and also maintained the prototypical use of progressive aspect with some preliminary expansions.

7.4.2 Gesture results

In the analyses of multimodal potentials of the progressive constructions in native Chinese, FL learners, and native English, I tested not only the gesture potentials in general but also in relation to the iconic gestures in particular.

7.4.2.1 Gesture potentials of the progressive constructions across groups

Fig. 7.2a shows the mean proportion of gestures accompanying the progressive constructions out of the total number of progressive constructions in speech. There was no significant difference showing the gestures accompanying the progressive constructions between the native Chinese, FL learners, and native English speakers ($\chi^2_{(2)} = 2.116, p > 0.05$).

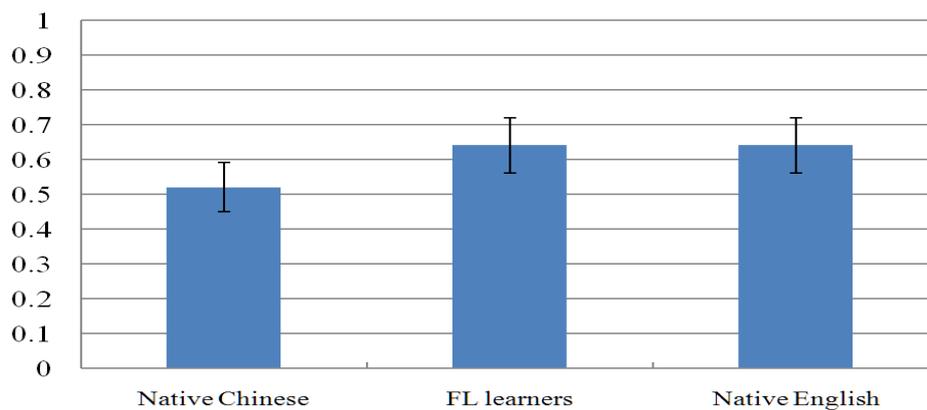


Fig. 7. 2a Mean proportion of gestures accompanying the progressive construction

7.4.2.2 Iconic gesture potentials of the progressive construction across groups

Fig. 7.2b shows the mean proportion of iconic gestures out of the total number of gestures accompanying the progressive constructions. There was a significant difference between the groups in the iconic gesture potentials of the progressive constructions ($\chi^2_{(2)} = 17.725, p < 0.05$). Specifically, the native Chinese group employed more iconic gestures accompanying the progressive constructions than both the native English group ($z = -4.009, p < 0.05$), and the FL learner group ($z = -2.556, p < 0.05$).

However, the FL learner group used significantly more iconic gestures accompanying the progressive constructions than the native English group ($z = -2.029, p < 0.05$).

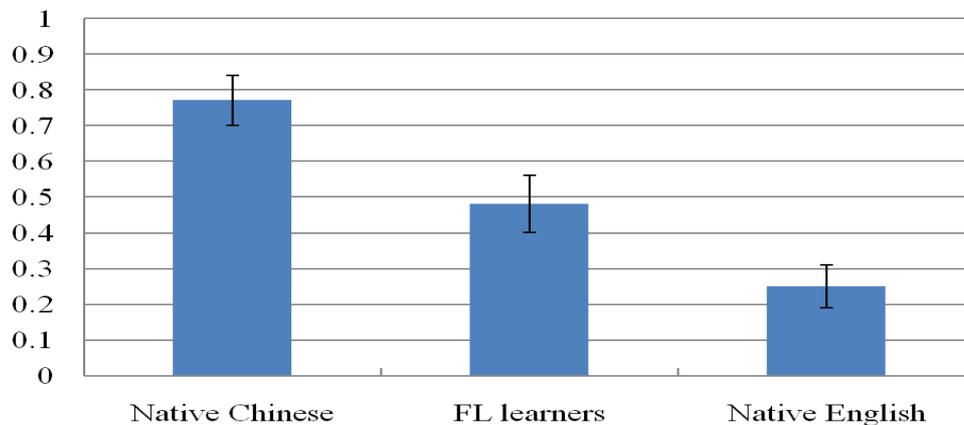


Fig. 7.2b Mean proportion of iconic gestures accompanying the progressive construction

7.4.2.3 Distribution of the referents of iconic gestures accompanying the progressive constructions across groups

As the progressive constructions employed by the native English speakers were accompanied by too few iconic gestures, I could not carry out any statistical tests here. Thus, Table 7.2 only shows the distribution of the semantic meaning indicating which referent (i.e., protagonist/object, action or schematic process etc.) was represented in the gesture. From the table, you can see that both native Chinese and FL learners encoded action the most in gestures, whereas native English speakers represented process the most. The three groups did not differ in representing more than two referents simultaneously in one gesture (i.e., the combination category). The FL learners represented action less than the native Chinese did (31.25% vs. 51.92%), both of whom did it far more often than the native English speakers did (18.19%). As the action or process constitutes the nucleus of an event, if we add them up, we see that the iconic gestures of native Chinese speakers refer to the nucleus the most (73.07%), far more than those of the FL learners (54.68%) and the native English speakers (50.01%). The FL learners' iconic gestures expressed the path of motion almost the same amount as the native English did (21.88% vs. 22.73%), which was much more than that of the

native Chinese (3.85%). The entity was less frequently represented by the FL learners' gestures than by the gestures of the native English and the native Chinese speakers. Generally speaking, L2 learners neither completely maintained the native Chinese pattern nor followed the native English pattern. It seemed that their gestural semantic pattern was influenced both by the L1, Chinese, and by the L2, English.

Table 7.2: Frequencies of the referents of iconic gestures accompanying the progressive constructions across groups

	Native Chinese		FL learners		Native English	
	N	%	N	%	N	%
Entity	5	9.62	5	7.81	3	13.63
Action	27	51.92	20	31.25	4	18.19
Process	11	21.15	15	23.43	7	31.82
Path	2	3.85	14	21.88	5	22.73
Combination	7	13.46	10	15.63	3	13.63
Total	52	100	64	100	22	100

7.5 Discussion

I investigated the FL learners' thinking for speaking and gesturing about the events framed by progressive aspects by comparing their progressive speech and the co-speech gestures with those of the native Chinese speakers and native English speakers. Our study reported two main findings. First, the FL learners maintained the native Chinese thinking for speaking pattern of employing the progressive aspect in form and meaning. Second, while the FL learners gestured as frequently as the native Chinese and native English, the number of iconic gestures accompanying the progressive utterances made by the FL learners was greater than the number made by the L1 English speakers but smaller than the number made by the L1 Chinese speakers. They displayed their own

gestural patterns of representing the referents in the progressive utterances. The results will be discussed below.

7.5.1 L1 transfer in L2 progressive aspect use

According to the grammatical error analyses of the FL learners' use of progressive aspect construction, I found that in speech, the FL learners usually tended to use the present progressive to describe what was happening in the past, and ignored the addition of the copula to form the progressive. Furthermore, they overlooked the inflection of the verb to the *-ing* form to constitute the progressive aspect, and overgeneralized the use of progressive aspect to encode the resultant state of an event on rather few occasions. Such error patterns supposedly originated from the negative L1 transfer to L2 speech and the high cognitive demand of speaking in L2. Cross-language similarities are likely to be positively transferred to L2 learning, whereas cross-language differences tend to be negatively transferred to L2 use (MacWhinney 2005; Tolentino & Tokowicz 2014). Chinese is a tenseless language, which lacks syntactic realization of tense and lacks copula use in progressive constructions. Thus, simplification of tense is very popular in the tenseless FL learners' language production, both in writing and speaking. In FL learners' interlanguage, the absence of the obligatory copula in the progressive aspect construction in finite clauses has something to do with the learner's native language. While the copula is obligatory to support the morphological realization of tense in English progressive constructions, there is no need for a copula in a progressive sentence in Chinese. As Chinese has syntactic realization of progressive aspect, like English, FL learners seldom made errors in aspectual inflection and use. However, why did FL learners focus on using the present tense to express past events? This may result from the native Chinese extended present time viewpoint of the flow of event time (Chen et al. 2013). According to Chen et al.'s study, speakers of Chinese adhered less closely to the implicit tri-phasic temporal framing in verbal descriptions of imminent, ongoing, and completed events compared with speakers of English. Furthermore, Chinese speakers produced a wider, extended time

window than English speakers did in non-linguistic tasks like marking the actual duration of imminent, ongoing and completed actions. The authors concluded that “the absence of tense in Chinese leads speakers to focus by default on temporal continuity as opposed to temporal segmentation” (Chen et al. 2013: 90). Consequently, Chinese speakers tend to adopt a temporal viewpoint of the extended present as default, so they consider an event as current related to the speech time, even though it may have happened or will happen (Alloway & Corley 2004; Chen et al. 2013). Such a linguistic difference (i.e., having tense or not) resulted in different thinking for speaking patterns in native speakers (Slobin 1996). The entrenched L1 thinking for speaking pattern is also apparently maintained even in highly proficient FL learners’ minds.

As the previous studies observed, the elements of grammar were significantly more accurate in written narrative tasks than in oral narrative tasks (e.g., Dykstra-Pruim 2003). By comparing the interaction of lexical aspect and simple past marking in spoken narratives and their corresponding written ones by L1 Chinese L2 English FL learners, Yang et al. (2012) found that the use of simple past tense was more likely to be correct in the written narratives than that in the spoken context. In addition, the L1 Chinese L2 English FL learners also provided less past tense marking in oral production than in written production for obligatory contexts (Yang & Lyster 2010). This is also reflected in the present study, though I did not compare the development of progressive aspect in oral and written language use. However, I asked the FL participants to transcribe their conversations. Interestingly, although the instruction emphasized that they were required to write down what they originally said without grammatical revision, the FL learners sometimes could not help correcting the wrong use of tense and added the aspect marker *-ing*. Such behaviors may imply that the FL learners are aware of the appropriate form of English progressive aspect, but speaking in an L2 involves intensive online processing, which is time limited and cognitively costly. Therefore, the fluency of speaking may be at the cost of the accuracy of grammatical elements like progressive aspect.

The FL learners’ patterns of encoding the meanings of the progressive construction were also more similar to those of the L1 Chinese speakers than to those of the L1

English speakers. This result can be interpreted in two ways. First, the prototypical meanings of both Chinese and English progressive aspect, that is, ongoingness and/or temporary state, have been entrenched and transferred to the FL learning of the English progressive aspect. We can note the preferred One-to-One Principle (Andersen 1984), which claims that FL learners generally tend to associate one meaning/function with one grammatical form, and they prefer to adopt one-to-one mapping as a learning strategy to eventually acquire complex form-meaning pairs. Therefore, the expansion from the prototypical meaning to the peripheral meanings of the English progressive aspect seems to be not easy even for the high-intermediate FL learners in this study. Second, the English textbooks, grammar books and classroom instructions all emphasize that the progressive aspect means that the event is ongoing at the moment or in a period of time, and that it can express future events, an emphasis which neglects the other meanings of the progressive construction. Consequently, the focus on particular meanings and scarce input of other meanings may have impeded the FL learners' semantic expansions of the progressive construction.

7.5.2 The link between learners' gestural usage and development of conceptual understanding

Gesture frequency is said to be transferred from the relatively high-gesture culture to the relatively low-gesture culture, such as from Spanish culture to (Canadian) English culture (Pika et al. 2006), and from American culture to Chinese culture (So 2010). However, the results of this study showed that the native English speakers did not gesture more frequently than the native Chinese speakers while using progressive aspect constructions in general. On the contrary, the native Chinese speakers produced iconic gestures three times as many as the native English speakers did. Even the FL learners employed iconic gestures nearly twice as often as the native English speakers. The results show that iconic gesture frequency was transferred from the so-called relatively low gesture culture, L1 Chinese, to the relatively high gesture culture, English L2. Such results that are inconsistent with previous research can be interpreted in two

ways. First, the classification of gesture frequency culture and the direction of gesture frequency transfer may be affected by the linguistic items under investigation. So's (2010) study focused on bilinguals' gestures of motion events in terms of lexicalization patterns. However, our study centered on FL learners' gestures accompanying a grammatical construction, i.e., grammatical aspect. In addition, the previous studies counted the gesture rate in terms of gestures per clause or per word, whereas our study calculated only the gestures overlapping with the grammatical aspect-marked verbs per clause. Second, Chinese and English differ in the extent of the progressive aspect facilitating mental simulation of the event details. According to the GSA framework (Hostetter & Alibali 2008), representational gestures (i.e. iconic gestures in this study) derive from simulations of the action or spatial information in the mind. Therefore, while the Chinese progressive aspect facilitated the speakers' access to the details of the event, the English progressive construction may not be available with salient mental imagery that is specific to it in the context of interviews.

The results also showed that there were bidirectional effects on the referents that the iconic gestures represent with FL learners: the iconicity to action from L1 was maintained, and iconicity to path from L2 was incorporated into the FL learners' interlanguage gesture system. The Chinese progressive aspect led the native Chinese to pay more attention to the nucleus of events, i.e., the action itself. Such an entrenched thinking for speaking and gesturing pattern may be more easily transferred in FL learning. Native English speakers "have a strong preference to encode manner in speech by default" (Brown & Gullberg 2008: 245), considering manner information secondary to path information (Talmy 1991). Thus, their gestures tend to represent the path information. While speaking in an L2, FL learners in the present study also preferred to complement the manner information in speech with path information in gestures. They even extended the potential path information in a stative event in their gestures as in example (3b) and Fig. 7.3b, presented and explained below. The downward path was added to the gesture in the description of the stative sitting position.

The qualities of FL learners' gestures can be interpreted as revealing their emerging thinking for speaking patterns, which are not detectable in fluent and correct

L2 speech, particularly in the following two respects. First, although the FL learners encoded temporary states with progressive aspect in speech, most of their gestures reflected that they conceptualized the state in the form of dynamic ongoingness, as in Fig. 7.3a and Fig. 7.3b.

- (3) a. Because others were do uhmm [**just putting some make-ups**] [**and wearing dresses**]
b. and I saw my father [**sitting on the er... couch**]



Fig. 7.3a Gesture with “were putting make-ups”



Fig. 7. 3b Gesture with “sitting on the couch”

In example (3a), the speaker (the girl in black in Fig. 7.3a) recounted that she felt embarrassed when she took part in a party without any preparation, because others prepared well. She depicted the temporary states of the other participants with the progressive constructions in speech, as Fig. 7.3a shows; meanwhile, she alternately moved her vertical hands with palms facing herself towards and away from her body as if she was acting out the other participants’ schematic action of putting some cosmetics on their face. In example (3b), the speaker described that when she opened the door, she saw her father was sitting on the couch with her mother. In her speech, she employed the progressive construction to depict her father’s sitting position rather than the process of sitting down, but she moved her open hands with palm downwards from the level of her chest to the level of her thighs, as Fig. 7.3b shows. Such gestures accompanying temporary states did not occur in the native Chinese and native English data corpora. The gestures suggest that in the FL learners’ mind, they mentally

simulated the stative events as ongoing events. Therefore, the gestures rather than the speech alone betrayed that the FL learners may have not completely mastered the “temporary state” use of English progressive aspect in conceptualization.

Second, while encoding ongoing events with abstract verbs in speech, the co-speech gestures produced by the native Chinese were mainly “back and forth” gestures, away from and towards the body, but those by the native English were more likely to be “cyclic gestures”. The “cyclic gesture” (rotating hands alternately in a clockwise or counter-clockwise way) has been reported as accompanying the progressive aspect in natural conversation (Ladewig 2011, 2014; Harrison 2009) and in the L2 instructional context (Kimura & Kazik 2017). The “back and forth” gesture with the progressive aspect seems to be particular to native Chinese speakers. However, there was convergence between source and target language in the L2 gestures in the present study. The “cyclic gestures” and “back and forth” gestures occurred almost equally in the FL learners’ gestures that were iconic to schematic processes (i.e., 6 for the former, and 5 for the latter; the total was 11).

(4) a. [It totally get my brain’s working]

b. [as we talking]



Fig. 7.4a. Gesture with “my brain’s working”



Fig. 7.4b. Gesture with “as we talking”

In example (4a), the speakers were talking about insomnia at night. The girl in yellow at the right side in Fig. 7.4a explained that talking about some exciting things with her friends before going to bed made it difficult for her to fall asleep. While

uttering the sentence *It totally get my brain's working*, her extended left index moved cyclically around the left side of her brain, as shown in Fig. 7.4a. Such a cyclic gesture acted out the invisible progressivity and duration of her brain working. However, in some cases, the FL learners maintained their L1 “back and forth” gestures to indicate the dynamicity and duration of ongoing events such as in example (4b), while uttering *as we talking*, the speaker alternately moved her open hands with palm towards center back and forth as in Fig. 7.4b. Thus, such bidirectional effects of source language and target language on the FL learners’ gestural patterns could be interpreted as illustrating that they are on the way to conceptual development of the English progressive aspect.

7.6 Conclusions

In summary, taking the multimodal approach to study the FL learners’ representation of progressive aspect in speech and gesture, I have shown that FL learners do follow the L1 Chinese thinking for speaking patterns of using the progressive aspect in form and meaning in their L2 English speech. The use of present progressive to construe what was happening, the absence of the copula necessary for progressive aspect in the main clause etc., were transferred from the tenseless L1 to the L2 in speech. The FL learners transferred their conceptualization of L1 progressive aspect encoding “ongoingness” and “temporary state”, which limited their semantic expansions to the more varied meanings of the English progressive construction.

I have provided a number of insights into the FL learners’ gestural patterns in taking an internal viewpoint of events with the use of the progressive construction, namely, they did not differ in gestural frequency from both the L1 Chinese and L1 English speakers, but the iconic gesture frequency was transferred from L1 to the FL learners’ interlanguage gesture system. The FL learners integrated the most entrenched L1 Chinese speakers’ use of iconic gestures for actions and the very salient L1 English use of iconic gestures for path accompanying the progressive utterances. Furthermore, the emergent dynamic gestures with the progressive aspect encoding a temporary state

revealed that the FL learners may not have understood the conceptual meaning of the progressive aspect in construing states.

The results have some significant implications for FL teaching and learning of grammatical aspect with Chinese learners of English. First, FL teachers or peers should improve the awareness of the appropriate English progressive aspect form in oral English training. Immediate corrective feedback should be provided to FL learners when they make grammatical mistakes on the progressive constructions, as it is important to promote the FL learners' attentional focus on critical aspects of different grammatical features between L1 and L2 (Robinson 1995; Schmidt 1990). Second, more input of the peripheral meanings, in addition to the prototypical meanings, of the English progressive aspect should be incorporated into the teaching syllabus. According to the usage-based approach to SLA, FL learners extract and build the form-meaning pairings from the exemplars with saliency they encounter. Thus, for FL learners, enough original data is the best key to jump over the hurdle of semantic expansions of the English progressive construction. Third, gestures should be integrated into FL grammar teaching and learning. This is one of the promising ways to train and cultivate students' thinking ability in FL, as the thinking-based FL education calls for (Wen 2013). Co-speech gestures make the grammatical meaning and the characteristics of the abstract grammatical categories visible. Iconic gestures, representing the action and/or path of motion in particular, could be conducive to helping FL learners understand the nature of progressive aspect, i.e., focusing on the dynamic and durative ongoingness of events. Furthermore, cyclic gestures with the progressive aspect construction can also be of great importance to help FL learners understand the schematic duration and ongoingness of the abstract events. What is more, focusing on the FL learners' gestures can help the teachers know more about the development of their conceptual understanding. For example, using dynamic gestures with the progressive aspect encoding "temporary state" revealed that the L2 learners conceptualize the stative event as a dynamic ongoing one. Under such circumstances, the teacher had better illustrate the "temporary state" use of progressive aspect immediately. They can use the stative gestures like holding the hand as if molding the

resultant position or state that the actions caused to demonstrate the meaning of “temporary state”. In addition, it may be necessary to inform FL learners that they need not use as many iconic gestures accompanying progressive utterances in dialogue as native English speakers do. Doubtlessly, when, whether and how to integrate gestures into grammar teaching and learning is an issue waiting to be systematically explored in future research.