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### Articles

- X. WEN, Acquisition of Chinese Aspect : An Analysis of the Interlanguage of Learners of Chinese as a Foreign Language 1-26
- T. OMONIYI, My Blood, my Nation : Ethnicity and Nationality as alternative and hierarchical Identities in African Borderlands 27-50
- P. VANDEN BULCKE, De specificiteit van het juridisch discours en de dilemma's van de juridische vertaler : een inleiding 51-78
- S. KRASHEN, Can Extensive Reading help Unmotivated Students of EFL Improve ? 79-84
- E. VAN HEST, N. POULISSE & T. BONGAERTS, Self-repair in L1 and L2 production : an overview 85-115
- J.L. BLAS ARROYO, Dimensiones sociolingüísticas del cambio de código. A propósito de un corpus radiofónico 117-150
- S. DOĞANÇAY-AKTUNA & S. KAMIŞLI, Pragmatic transfer in interlanguage development 151-176

# Acquisition of Chinese Aspect : An Analysis of the Interlanguage of Learners of Chinese as a Foreign Language (1)

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## **Abstract**

This study investigates the acquisition of Chinese aspect markers of *-le*, *-guo*, and *-zhe* by English-speaking learners at the university level. The speech and written data produced by students at two different levels of proficiency were collected, compared and analyzed. The results show that English-speaking learners of Chinese acquire the perfective aspect marker *-le* and the past experience marker *-guo* before the durative aspect marker *-zhe*. The process by which learners acquire the aspect markers appears to be meaning-based and can be summarized into: 1) looking for logical temporal sequences; 2) using time adverbials and conjunction for the time references; 3) using lexical aspects and word meanings; and 4) using pragmatic cues with the aspect markers of *-le* and *-guo*. Learners, especially at the lower level of proficiency, rely more on the time adverbial expressions and lexical aspects than learners at the more advanced level.

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## Introduction

In research, on second language acquisition (SLA), the interaction of both form and function is called into consideration. The literature on the subject draws not only upon the perspectives of formal grammar, but also on semantics and communicative function. Under this framework, a functional approach has been proposed. MEISEL (1987) suggests that researchers first define the concepts and functions that have to be encoded, and then analyze the devices used by different learners to convey these concepts and functions at different stages in SLA. The purpose of such an approach is to capture the interaction of both form and function, to discover underlying mechanisms used by learners, and to broaden the framework of research on SLA. The present paper will take this approach to investigate the acquisition of Mandarin Chinese aspect markers by English-speaking learners of Chinese.

Studies devoted to the development of temporal reference in English interlanguage have found that emergence of correct forms of tense and aspects does not necessarily equate with appropriate use of these forms. Conceptual acquisition precedes practical consistency as measured by the use of correct forms. BARDOVI-HARLIG (1992) studied the acquisition of English tense and aspect by 135 English as a second language (ESL) learners at six levels of proficiency. The results of her study show that the interlanguage tense and aspect systems are characterized by high formal accuracy and relatively lower appropriate use across all levels. During the period when appropriate use lags behind formal accuracy, learners seem to associate form and meaning through lexical aspect and discourse function.

Furthermore, the previous studies reveal that SL learners at earlier stages appear to look consciously for lexical aspect and inherent word meanings in the process of acquiring temporal distinctions. ROBISON (1990) studied the interlanguage of an ESL learner and analyzed 550 verbal morphemes produced by the learner. He discovered that verbal morphemes initially mark lexical aspect. The temporal features inherent in the semantics of a predicate is closely correl-

ated with verb morphology, e.g. the close correlation of the past marking to the punctual aspect *-ing* with the durative. BARDOVI-HARLIG (1992) also reports that some learners attempt to associate meaning with form, as in the use of the past progressive to indicate durativity and habitual past.

Learners' use of verb morphology is influenced by pragmatic functions. KUMPF (1984) studied the interlanguage of an adult ESL learner and reported that verbal morphology in oral narratives produced by the learner is closely related to the background/foreground distinction. Foreground refers to the sentences which present the event line forward. Background refers to the sentences which set the scene and background in the discourse. This discourse function of foreground and background seems to play a role in determining how verbs are used by learners.

The previous studies provide valuable insights into the acquisition of temporal reference within the interlanguage of SL learners. Few studies, however, have investigated the interlanguage of learners of Chinese. It is important to investigate the interlanguage of learners of Chinese whose first language is English for two reasons. First, Chinese differs from modern Indo-European languages in that Chinese does not have tense markers. Hence, Anglophone learners of Chinese must acquire what is to them a novel grammatical device for expressing temporal distinctions in the target language. From the psycholinguistic perspective, it is important to observe how learners move from an atmosphere of full tense markings to one characterized by the absence of tense marking. Second, the temporal distinctions in Chinese are frequently conveyed through various pragmatic functions. For example, the particle *le* may signal either the completion of an action or a change of a situation. Its meaning is determined by the pragmatic context. Thus, second language learners of Mandarin Chinese must learn not only the grammatical, but also the pragmatic functions of the aspect marker *le* in different communicative situations.

WEN (1995) investigated the acquisition of the particle *le* by English-speaking learners of Chinese at a college in the United States. The results of her study demonstrate that learners acquire the perfective aspect marker *-le* before the sentence-final modal particle *le*. The two identical forms appear to be acquired at different rates for reasons of structural markedness, and functional and pragmatic complexity. ERBAUGH (1985) conducted a study on the acquisition of *le* by Mandarin-speaking children. The results of her study show that between 80% and 90% of the instances of *le* produced by her subjects refer to an event in the immediate past, and thus pertain to the action-completing function of *-le*.

This study investigates the acquisition of Chinese aspect markers by English-speaking learners at the college level in the United States. It investigates the learning strategies of the students and the roles that semantic, syntactic, and pragmatic factors play in the process of acquiring Chinese aspect markers.

### Mandarin Chinese Aspect Markers

Mandarin Chinese does not possess overt tense markers. Instead, it has three aspect markers of the verb suffixes: *-guo*, *-le*, and *-zhe*. The aspect marker *-guo* conveys the meaning of experience, *-le* signals the completion of an action, and *-zhe*, corresponds to the durative.

The aspect marker *-guo* expresses the notion of past experience (Sentence 1). It is frequently used in conjunction with past time expressions. When it is used in a sentence without a specified reference time, *-guo* signals that the event has been experienced at an unspecified time in the past. The combination of a *verb* + *guo* indicates that the action took place prior to the time of speech.

1. Women tanguo nage wenti, zhishi mei dedao daan.  
We talk Exp that M problem, only not obtain answer  
We talked about the problem, but did not reach a resolution.

The perfective aspect *-le* signals a completed action. The completion of an action has no relationship to the time of speaking, so it is possible to use *-le* in sentences where actions will occur in the future. But since most references to end-points are found in descriptions of past actions, *-le* is usually translated into English in the past or perfect tenses. For example, the verb in Sentence 2 may be translated both as "learned" or "have learned".

2. Wo xuele sannian zhongwen.  
I learn PFV three M Chinese  
I learned/have learned Chinese for three years.

When *-le* functions as a perfective-aspect marker, it expresses the semantic notion of boundedness (LI and THOMPSON, 1981). It is used for events that are viewed as a whole in the sense that they are quantified (Sentence 2), specified (Sentence 3), or followed by an event (Sentence 4):

3. Zuotian wo gen wode tongwu yiqi canguanle yige zhanlan.  
Yesterday I with my roommate together visit PFV one M exhibition  
My roommate and I visited an exhibition together yesterday.
4. Ta chile fan jiu qu kan qiusai.  
He/She eat PFV meal then go see game.  
He/She will go to see the game after finishing his/her meal.

The same form of *le* has two different functions, depending on its position in a sentence. In addition to being a perfective verb suffix, it can also be used at the end of the sentence to express the meaning of "current relevancy" (LI and THOMPSON, 1981). When *le* is attached to a sentence-ending verb, it is not always clear whether it is the perfective verb suffix *-le* or the sentence final particle *le*, or both. This can usually be resolved from the speech context. The intended meaning may be inferred from the context. For example, in sentence 5b, *-le* has the function of sentence closing to indicate the currently relevant state corresponding to "I know it already and I share your sorrow." It could

also be used in a reply to 5a as a perfective verb suffix, where it would signal the acquisition of information, i.e. "I know" in the sense of "I have learned." Lastly, *le* could be both a verb suffix and a sentence-final particle, serving polysemantically to signal both the completion of an action and a currently relevant event in a discourse. Therefore, the function of *le* is very contextualized and depends on the pragmatic emphasis.

- 5a. Ni zhidao bu zhidao Lao Zhang chule shi le?  
 You know not know Old Zhang have PFV accident Particle.  
 Do you know that Old Zhang had an accident?
- b. Wo zhidaole.  
 I know PFV.  
 I knew.

The difference between *-guo* and *-le* is that the former emphasizes the experience. When an event or an action is experienced, it usually has already occurred. The perfective *-le*, on the other hand, stresses the completed action. And it is possible that the action can be completed in future (Sentence 6).

6. Bie zou, chile fan zai zou.  
 Not leave, eat PFV meal then leave  
 Do not leave until you have had the meal.

The durative aspect marker *-zhe* indicates the continuing state of a durative action. LI and THOMPSON (1981) state that "an activity verb that signals a state associated with its activity meaning takes *-zhe* as the durative aspect marker" (p. 221). The verb phrase with *-zhe* does not emphasize the activity itself but its status. Sentences 7-9 illustrate such a usage. The emphasis on status is conveyed as posture (Sentence 7), the state associated with the activity (Sentence 8), and the manner or the durative background (Sentence 9).

7. Bingren zai chuangshang tangzhe.  
 Patient on bed lie Dur  
 The patient is lying on the bed.
8. Ta chuanzhe yitiao bai qunzi.

- She wear Dur one M white skirt.  
 She is wearing a white skirt.
9. Wo xihuan tingzhe yinyue kanshu.  
 I like listen Dur music read book  
 I like to read while listening to the music.

The adverb *zhengzai* also indicates that an action is in progress. When the adverb *zhengzai* and the durative aspect *-zhe* are used in the same sentence, *zhengzai* emphasizes the continuity of the action. A linguistic constraint on the use of *zhengzai* and *-zhe* is that both can be used only with action verbs to emphasize the continuing activity and the state associated with its activity (Sentence 10). The major difference between *zhengzai* and *-zhe* is that semantically the former emphasizes a durative action while the latter emphasizes the status of a durative action.

10. Wo lai de shihou, zhengzai xiazhe xiaoyu.  
 I come Nom time, in progress fall Dur. light rain  
 It was raining lightly when I came.

The present study extends the scale of the investigation to all the aspect markers of Mandarin Chinese by examining three questions. The first question concerns the sequence of acquiring aspect markers. Is one aspect marker acquired before the other? The hypothesis to be tested is whether students at the beginning and more advanced levels differ significantly in the frequency of their correct use of the verb aspect markers. Second, if one form is acquired before the other, what accounts for the order of acquisition? Third, what are the mechanisms that learners employ in acquiring the aspect markers?

## Method

### Subjects

Nineteen students participated in this study. They were in two groups. The lower level group consisted of 10 students who had been studying Chinese for 15 months. The more advanced group consisted of 9 stu-

dents who had been studying Chinese for 27 months. All the participants were native speakers of English, taking Mandarin Chinese in regular college courses.

#### Procedure

The data were collected twice. At the first collection, all subjects were interviewed individually by the researcher. The interview lasted approximately 30 minutes and took the form of informal conversation. Elicitation techniques were used, whereby each subject was asked to perform three identical tasks.

The first task was to answer questions in a conversational fashion. The researcher started with questions which required answers by using the aspect markers of *-le* and *-guo*, e.g. *Ni yiqian zuoguo shenme gongzuo? Zuole duochang shijian?* "What kind of job did you do before? How long did you work?" Correctly formulated answers required the use of either *-le* or *-guo*, or both.

The second and third tasks were picture-based. In the second task, the researcher asked carefully constructed questions based on the given pictures. The questions elicited the use of the aspect markers, especially the durative *-zhe* in answers, e.g. *Gubo xiaozhe shuo shenme? Ta shouli nazhe shenme?* "What did Gubo say with a smile? What was he holding in his hand?" The third task was to describe the pictures which required narratives and elicited the use of all three aspect markers.

Two weeks after the initial interview, data were collected for a second time. After analyzing the oral production data collected from the first interview, the researcher found that the durative aspect marker *-zhe* was used rarely, the reason for the infrequent use of *-zhe* was not immediately clear. It was conceivable that the context and the verbs used in the picture did not necessitate the use of *-zhe*. But it was equally conceivable that the subjects had not yet added *-zhe* to their functional interlanguage. In order to ascertain whether the subjects were able to use *-zhe* in contexts requiring it, a task necessitating the use of specific data-sensitive verbs was devised. Subjects were asked

to use the given verbs to write a paragraph based on the given pictures. The given verbs include sit "*zuo*", stand "*zhan*", hold "*na*", lay "*fang*", hang "*gua*", open "*kai*", smile "*xiao*", wait "*deng*", listen "*ting*" and talk "*tanhua*". These are action verbs and likely to appear with *-zhe* or *zhengzai* to express a durative action or the continuing state of a durative action.

#### Analysis

All interviews were recorded, and all speech data were subsequently transcribed. An error was recorded for a response in which the aspect marker was missing or misused based on the speech context. Thus, one criteria for judging the correct use of the markers in tasks one and two was the syntactic and pragmatic consistency between the question and answer. For example, the target response for Sentence 11 was Sentence 12, Sentences 13 and 14 were scored as having one error each because the responses were not consistent with the question and thus, were unacceptable.

11. Ni xueguo shenme waiyu?  
You learn Exp what foreign language  
What foreign language have you learned?
12. Wo xueguo X wen.  
I learn Exp X language.  
I have learned / learned X language.
- 13\* Wo xuele Fawen.  
I learned PFV French  
I learned French.
- 14\* Wo xue Fawen.  
I learn French.  
I learn French.

Similarly, for sentence 15, the target response was sentence 16. Sentence 17 was scored as containing one error because it was inconsistent with the question, i.e., the durative aspect marker *-zhe* was missing.

15. Zhuozi shang fangzhe jiben shu?  
Table on lay Dur how many M book  
How many books are lying on the table?
16. Zhuozi shang fangzhe sanben shu.  
Table on lay Dur three M book  
There are three books lying on the table.
17. \*Zhuozi shang fang sanben shu.  
Table on lay three M book  
There are three books lying on the table.

### Results

The numbers of sentences which contained the aspect markers produced by subjects varied from 88 to 120. The correct use of each form of the aspect marker was calculated for each subject. Tables One and Two present the scores for correct use of the aspect markers for the subjects at the lower and more advanced levels respectively.

Table 1 : Correct use of Aspect Markers by Lower-level Subjects

N	<i>-guo</i>			<i>-le</i>			<i>-zhe</i>		
	Total	Correct	%	Total	Correct	%	Total	Correct	%
1.	36	28	77.8%	50	34	68%	27	13	48.1%
2.	39	23	59%	57	40	70.2%	22	9	40.9%
3.	39	26	66.7%	45	27	60%	20	8	40%
4.	45	30	66.7%	41	35	85.4%	24	12	50%
5.	39	28	71.8%	49	29	59.2%	24	10	41.7%
6.	30	18	60%	40	31	77.5%	21	9	42.9%
7.	36	27	75%	39	32	82.1%	28	14	50%
8.	24	18	75%	39	28	71.8%	25	12	48%
9.	27	18	66.7%	41	28	62.2%	23	10	43.5%
10.	31	22	71%	43	30	66.7%	23	9	39.1%
Mean	34.6	24	68.97%	44.4	31.4	70.31%	23.7	15.6	45.3%

Table 2 : Correct use of Aspect Markers by More Advanced Subjects

N	<i>-guo</i>			<i>-le</i>			<i>-zhe</i>		
	Total	Correct	%	Total	Correct	%	Total	Correct	%
1.	40	31	77.5%	49	39	79.6%	27	14	51.9%
2.	31	26	83.9%	46	37	80.4%	29	18	62%
3.	45	32	71%	45	33	73.3%	30	17	56.7%
4.	36	24	66.67%	50	36	72%	29	16	55.2%
5.	46	35	76.1%	45	35	77.8%	28	20	71.4%
6.	45	30	66.7%	48	36	75%	26	11	42.3%
7.	37	30	81.1%	44	36	81.8%	31	19	61.3%
8.	34	27	79.4%	40	31	77.5%	27	16	59.3%
9.	38	28	73.7%	43	32	74.4%	32	17	53.1%
Mean:	38.4	30.2	75.12%	45.5	36	76.9%	28.78	18.8	57.43%

The means of total production of the aspect markers of *-guo*, *-le*, *-zhe* between the two levels of proficiency did not vary greatly (34.6, 44.4, 23.7 versus 38.4, 45.5, 28.78 respectively). The percentages of the correct use of the markers varied more than the total production of the aspect markers between the two groups (68.97%, 70.31%, 45.3% versus 75.12%, 76.9%, 57.43% respectively). This indicates that the students at the lower level of proficiency are aware of the grammatical form of the aspect markers in general. They try to use them, and the form emerges earlier than the correct function in the interlanguage of the students at the lower level.

The first hypothesis tested was that students at the lower and at the more advanced levels differ significantly in the frequency of correct usage of verb aspect markers. One-way ANOVA was used to check whether there were significant differences between the two levels of proficiency. The results of one way ANOVA are presented in Table 3. The results show that there is a significant difference in the correct production of the aspect marker *-zhe* between the two groups,  $F = 18.91$ ,  $P = .0004$  (Table 3). Differences in the correct production of *-guo* and *-le* between the two groups are, however, not significant at



the .05 level (Table 3). The results of F ratio show that the difference in the production of *-zhe* between the two different levels is the biggest and *-le* is the smallest. The results suggest that the Chinese aspect markers are acquired at different rates, with the aspect markers *-le* and *-guo* learned earlier than the durative *-zhe*.

**Table 3 : Analysis of Variance of the lower and more advanced Levels**

Aspect Markers	df	F ratio	F prob.
<i>-guo</i>	1/17	4.6325	.0460
<i>-le</i>	1/17	4.1908	.0564
<i>-zhe</i>	1/17	18.9131	.0004

#### Acquisition of *-le*

The correct usage of the perfective *-le* by the subjects at both levels can be summarized into three patterns as presented in Table 4. The first pattern contains two actions, one occurring immediately following the other. The perfective *-le* is used immediately after the first verb to indicate that the first action is completed: V + *le* + (NP) + VP. The rates of accuracy of using *-le* in this pattern were 73% and 85% for students at the lower and more advanced levels respectively. What should be noted is that *-le* sometimes could be omitted. However, 5 subjects at the lower level and 3 subjects at the higher level continued to produce it (Sentence 18). The finding suggests that when a series of actions are in linear sequence and the occurrence of the second is based on the completion of the first, it is easier for learners to use *-le* to express the notion of "completion of the action".

18. Wo huile jia yihou, jiu chifan.  
 I return PFV. home after, then eat meal.  
 I eat as soon as I get home.

The second pattern contains sentences that have certain time expressions such as adverbs *yijing* (already) and time duration, e.g. *liuge yue* (six months) as shown in Sentence 19. These time phrases provide a

semantic frame of the time reference to the verb. The rates of correct use of *-le* in this pattern were quite high: 67.1% and 73.1% for the students at the lower and more advanced levels respectively. What should be noted is that the adverbs such as *yijing* seem to play an important role. When the students at the lower level of proficiency used *yijing*, they consistently included *-le* in their sentences (e.g. Sentence 20b). However, they frequently failed to use *-le* when *yijing* was not used (e.g. Sentence 20d), even though the meaning is similar to the sentences which contain *yijing*.

In addition to using adverbials as a semantic frame of the time reference to the verb, students at the lower level also seemed to be sensitive to the consistency of aspect context and used *le* to make the discourse consistent. For example, they frequently used *le* when the interviewer's question contained it. Thus, the fact that *-le* in Sentence 20d is missing, may be attributed to the fact that the question (Sentence 20c) does not have *-le*.

19. Wo zai Zhongguo zhule liuge yue.  
 I in China live PFV. six M month.  
 I lived in China for six months.
- 20a. Hanyu cidian ni yijing maile ma?  
 Chinese dictionary you already buy PFV. question mark.  
 Have you bought the Chinese dictionary yet?
- b. Wo yijing maile.  
 I already buy PFV.  
 I bought (it) already.
- c. Zhongwen keben ne?  
 Chinese textbook particle.  
 What about Chinese text book?
- d. \*Wo ye mai Zhongwen keben.  
 I also buy Chinese textbook.  
 I also bought the Chinese textbook.

The time expressions used in conjunction with *-le* by subjects at the lower level of proficiency included the adverbial and conjunction of *yiqian* (formerly, before) and *yihou* (after) in addition to *yijing* (al-

ready). The co-currence of certain time expressions with *-le* is not always acceptable. For example, four students at the lower level produced Sentence 21b in answering the question Sentence 21a.

- 21a. Yiqian ta zai nar xuexi?  
Formerly he at where study  
Where did he study before?
- b. \* Yiqian ta zai Middlebury xuexi le.  
Formerly he at Middlebury study PFV.  
He studied at Middlebury before.

The third pattern includes the verbs which have an inherent end-point built into the meaning. These verbs can be classified into two categories; stative and punctual verbs. In Chinese, adjectives may function as stative verbs, serving as a predicative of the sentence (sentence 22). The most frequently used stative and punctual verbs collected in this study included *wan* (late), *qing* (clear), *ting* (stop), *ying* (win), *shu* (lose), and *wang* (forget). The rates of the correct use of *-le* with all these verbs were 77.1% and 82.3% among subjects at the lower and more advanced level respectively. This finding suggests that students at early stages of Chinese language acquisition look for lexical aspects and inherent word meanings. Table 4 summarizes the correct use of *-le* in the three sentence patterns.

21. Ta wanle, laoshi shengqi le.  
He late PFV, teacher angry PFV.  
He was late, and the teacher was angry.

Table 4 : Sentence patterns with *-le*

Sentence pattern	% correct	
	Lower	More advanced
1. Subj. V. le (NP) VP: -le on first verb	73%	85%
2. Using of time expressions:	77.1%	73.1%
3. Verb with end-point:		
Stative	73.3%	76%
Punctual	80.9%	87.89%

#### Acquisition of *-guo*

The verb most often used in conjunction with *-guo* is *qu* "go" (72.41% and 75% with students at the lower and more advanced levels of proficiency respectively). Furthermore, the data from both levels show that 92% of sentences in which *quguo* occurs are found at the beginning of a discourse context. It seems that subjects at both levels switched the aspect markers from *-guo* to *-le* in a discourse (Sentence 23). This switch is also observed with other verbs in discourse. The data, e.g. Sentences 23 and 24, suggest that in a narrative, a discourse starts with the past experience *-guo*. Once the past experience is defined, the focus switches to the completion of the action and events. In Sentence 24d, *-guo* is missing in the first part of the sentence. (Question: *Qing shuoshuo ni qunian qu shenme difang luxing le, war de zenme yang?* Please talk about your travel last year. How was your trip?)

23. Wo quguo Jiazhou, ye quguo Jianada. Wo zai Jiazhou zhule yige yue.  
I go Exp. California, also go Exp. Canada. I in CA live PFV one M month.  
Wo kanle henduo pengyou.  
I visit PFV many friend.

I have been to California and Canada. I lived in California for one month. I visited lots of friends there.

24a Ni xueguo shenme waiyu? (What foreign language have you learned?)

b. Wo xueguo Fayu.

I learn Exp French  
I learned French.

c. Deyu ne? (what about German?)

d. \*Wo meixue Deyu. I xuele Ladingyu zai zhongxue.

I not learn German. I learn PFV Latin at middle school  
Wo ye xuele yidianer Riyu.

I also learn PFV. little Japanese.

I did not learn German. I learned Latin at a middle school. I also learned a little Japanese.

Another linguistic device used by students in association with *-guo* is that of adverbial phrases and conjunctions referring to past time. Students at both levels used several time expressions with *-guo*, such as adverbials, e.g. formerly; time clauses, e.g. before...; when...; and past time expressions, e.g. last year. The frequencies of using *-guo* with these time expressions were quite high; 82% and 76% with the subjects at the lower and more advanced levels respectively. The subjects, especially at the lower level of proficiency, seemed to employ the linguistic device of the time expressions as the cue for the use of *-guo*.

#### Acquisition of *-zhe*

Subjects at both levels used the durative aspect marker *-zhe* in certain sentence constructions. These sentences can be categorized into 3 major patterns:

- 1) V. *zhe* VP;
- 2) V. *zhe* (NP);
- 3) Locative V. *zhe* NP.

The first pattern contains two verbs, and *-zhe* follows the first verb to indicate the manner of the second verb. The most frequently used

verbs collected in this study include *zuo* (sit), *zhan* (stand), and *xiao* (smile). Sentence 25 is an example of this pattern. The frequency of correct use of the durative aspect *-zhe* in this pattern with the subjects at the more advanced level is 54%, and with the subjects at the lower proficiency level is 39%.

25. Dingyun de Baba zuozhe tanhua, dajia dou xiaozhe tingzhe.

Dingyun Nom father sit Dur. talk, everyone all smile Dur.  
listen Dur.

Dingyun's father was sitting and talking. People all were listening to him with a smile on their faces.

The second sentence pattern expresses the status of durative action. The subjects at both lower and more advanced levels used *-zhe* in this pattern with comparatively higher rates of accuracy: 50% and 61% respectively. The verbs that were used most frequently include *kai* (open), *ting* (listen), *zhan* (stand) and *zuo* (sit).

The third pattern illustrates the positions of the objects of given verbs in existential sentences. It starts with a locative word which functions as the topic (Sentence 26). The correct rates of *-zhe* in this pattern are low: 37% with the subjects at the lower level and 52% for the more advanced level. The most frequently used verbs in this pattern include *fang* (lay) and *gua* (hang). Table 5 presents the frequency of *-zhe* used in these three patterns.

26. Zhuozi shang fangzhe beizi he huar.

Table on lay Dur. cup and flower.

There are cups and flowers laid on the table.

Table 5 Percentage of Correct Use of *-zhe*

Pattern	Lower Level	Higher Level
V. <i>-zhe</i> VP.	39%	54%
V. <i>-zhe</i> (NP)	50%	61%
Loc. V. <i>-zhe</i> NP.	37%	52%

The students' errors involving *-zhe* can be summarized into three categories. In the first category, subjects at both levels used the perfective *-le* instead of *-zhe*. For example, Sentence 27 was produced when students were asked to describe a given picture. The use of *-le* in place of the called-for *-zhe* in Sentence 27a is an error. Another error occurs in Sentence 27c, where *-zhe* should be used after the verb "talk," or else the adverb *zhengzai* should be used before the verb. Sentences 27a and 27c could, however, be acceptable if they were examined as sentences outside of the connected discourse. In other words, Sentences 27a and c are syntactically acceptable and pragmatically inappropriate in the context.

27 \*a. Dianshi kai le.

TV on PFV.

b. Dajia dou zuozhe.

Everyone all sit Dur.

\*c. Dingyun de Baba he dajia tantan.

Dingyun Nom Father with everyone talk.

The TV is on. Everyone was sitting, and Dingyun's father is talking to others.

The second type occurred when subjects at the lower level frequently used the adverb *zhengzai* instead of *-zhe*. Although *zhengzai* and *-zhe* can be frequently used in the same sentence, they are generally not interchangeable because of the different semantic and syntactic functions. For example, verbs that signal postures need to take *-zhe* to in-

dicate the status of the durative action. Sentence 28 suggests that subjects were not aware of the differences between *zhengzai* and *-zhe*, or, even if aware of them, were not able to use them appropriately. The conflation of *zhengzai* for *-zhe* occurred consistently with four subjects at the lower proficiency level.

28. \*Palanka zhengzai zhan mai youpiao. Gubo zhengzai zuo zai zhuozi pangbian.

Palanka in progress stand buy stamps. Gubo in progress sit at table side.

Palanka is standing and buying stamps, and Gubo is sitting beside the table.

The third error occurred at both levels when students frequently missed *-zhe* as indicated in Sentences 28 and 29.

29. \*Qiangshang gua yizhang huar.

Wall hang one M picture.

A picture is hang on the wall.

30. \*Gubo chuan bai chenshan he hei kuzi.

Gubo wear white shirt and black pants.

Gubo is wearing a white shirt and black pants.

## Discussion

### Learning strategies

The results of this study suggest that, when students at the lower level acquire the aspect markers, their strategies seem to be largely meaning-based. The linguistic devices such as time expressions that they use with *-le* and *-guo* indicate that they conceptualize the meaning of completion of an action and the past experience. Furthermore, certain verbs that they use with all three aspect markers also show that they use the lexical meaning and aspect as the cues.

This hypothesis is supported by three factors. First, the subjects at both levels in the study consistently use the verb suffix *-le* in the pattern of *verb (NP) le verb*. In this pattern, because the two actions are linear, the sequence of completion of the first action before the

start of the second one is logical and easily understood, and thus, the rate of correct use of the verb suffix *-le* is high.

Second, subjects at the lower level employ the linguistic device which indicates the meaning of completion of an action and past time reference with *-le* and *-guo* respectively. For example, students, especially at the lower proficiency level, consistently use *-le* with the verb complement *wan* (finish) and *yihou* (after) to signal the completion of the action even though *-le* is frequently optional (Sentences 18, 21b). Students at the lower level also use *-guo* with the past time adverbials and conjunctions at the high rate of frequency. The data suggest that students use semantic cues which indicate the action is at the stage of completion or be experienced in the past.

Third, students at the lower level use the lexical aspect and word meanings with the aspect markers. For example, they consistently use the perfective *-le* with the verbs that have a clear-cut end point, such as *ying* (win) and *wang* (forget); *-guo* with the verbs that frequently convey the experience such as the places they have been to (*quguo*), and the sickness they have experienced (*deguobing*); and *-zhe* with the verbs whose inherent meaning include a kind of durative state such as *zhan* (stand) and *zuo* (sit). Students seem to take the lexical meaning as a cue and use the aspect markers accordingly. The similar strategies are found with the subjects of ROBISON (1990) and BARDOVI-HARLIG (1992). The interlanguage of an ESL learner in Robison's study show that the temporal features inherent in the semantics of a predicate is closely correlated with verb morphology. Verbal morphemes initially mark the lexical aspect.

#### The Sequence of Acquisition of the Aspect Markers.

The results of this study show that students acquire the perfective aspect marker *-le* at about same time as acquiring the past experience *-guo* and earlier than the durative *-zhe*. The results of the previous studies of WEN (1995) and ERBOUGH (1985) also showed that the perfective *-le* is acquired at the comparatively early stage of Chinese lan-

guage development. In comparing the three Chinese aspect markers of *-le*, *-guo*, and *-zhe*, we find that the first two markers contain certain semantic salience, syntactic simplicity, and pragmatic consistency not present with the latter.

The concepts of the completion of the action (*-le*) and past experience (*-guo*) are general, and are mastered by learners when they acquire their first language. What English-speaking learners of Chinese need to learn is specific ways of expressing these meanings. In comparison, the concept of the status of continuing action (*-zhe*) is less general and more language specific. It conveys the meanings of "a state associated with its activity" and the durative action. English-speaking learners of Chinese have to acquire the concept first. They must learn that the state and the progressive action of a verb can possibly be conveyed by the same aspect marker of *-zhe* as indicated in Sentences 31 and 32.

31. Men kai-zhe.

Door openDur.

The door is open.

32. Jingli kai-zhe men rang dajia jinlai.

Manager openDur door let everyone enter.

The manager is keeping the door open to let everyone in.

As VON STUTTERHEIM and KLEIN (1987) point out, the linguistic means that learners make use of at a given time greatly depends on the concepts that the learners already have. In the course of the acquisition of Chinese aspect markers, the English-speaking learners have to develop the concept of "the status of continuing action" first, whereas the concepts of completion of action and experience are quite familiar to them. The results of this study seem to support the concept-oriented assumption made by Von Stutterheim and Klein.

The complexity of semantic functions and syntactic structures also plays a role in the acquisition of Chinese aspect markers. The durative *-zhe* manifests a variety of functions in different situations. It may signal the manner of the action (Pattern 1, V.-*zhe* VP), the status of a continuous action (Pattern 2, V.-*zhe* Np.), and the physical dis-

position in existential sentences (Pattern 3, Locative V.-*zhe* NP). Each function is conveyed by different syntactic structures. The results of this study show that students acquire the second pattern more easily than the first and third patterns. The second pattern (the status of continuous action) is a typical subject + VP sentence and is syntactically less complex than the first and third patterns. Semantically, this pattern emphasizes the progressiveness of the verb, and the adverb *zhengzai* can be added or interchanged in the structure. In contrast, the first and third patterns emphasize the status of the action, and thus, the adverb *zhengzai* cannot be used. The multifunctions of *-zhe* inject difficulties for English-speaking learners of Chinese.

The durative *-zhe* has strict pragmatic constraints. It is frequently used in narratives and descriptions for background information in a discourse. It seems that the subjects are not sensitive to this pragmatic constraint. A number of sentences that students at both levels produced are syntactically acceptable, but pragmatically inappropriate (e.g. Sentence 27). What is interesting is that the subjects seem to be sensitive to the position of *-le* and *-guo* in a discourse. For example, they use *-guo* at the beginning of the discourse and switch to *-le* later (Sentences 23 and 24).

Furthermore, as opposed to *-le* and *-guo* which are frequently used together with time references, *-zhe* is rarely used with any time expressions. Therefore, if students take the different time expressions as the clue for the use of aspect markers (the data suggest that they do), this contextual clue is missing with *-zhe*.

ANDERSEN (1990) proposed the one-to-one principle that "an interlanguage system should be constructed in such a way that an intended underlying meaning is expressed with one clear invariant surface form (or construction)." The errors that the students made with *-zhe* support the one-to-one principle. Several learners at the lower level use the adverb *zhengzai* instead of *-zhe* to express the status of a durative action. The interchangeability of the durative *-zhe* with the adverb *zhengzai*, however, is very conditional and semantically constrained. The conflation of the two forms into *zhengzai* in the interlan-

guage of the students at the lower level indicates that learners often choose to use the word which has more concrete meaning, such as adverb *zhengzai* than the grammatical aspect marker *-zhe*.

### Discourse Function

From the study, it is evident that the discourse plays a role in the use of aspect markers of *-le* and *-guo*. The learners at both levels use *-guo* at the beginning of narratives. They make a switch and use *-le* later in the paragraph. The sentence with the past experience marker *-guo* functions as an introducer. Once the past experience is identified, sentences with *le* appear to indicate what kind of event and action are completed, as illustrated in sentences 23 and 24. Thus, in a discourse, the use of Chinese aspect markers is influenced by pragmatic functions. When taking the terms of the background/foreground proposed by KUMF (1984), we find that the students correlate the background information to the past experience of the speaker and the foreground information to the completed events and actions. The durative marker *-zhe* is usually used in the background to describe a scene in a discourse. Students, however, have more difficulties in correlating *-zhe* to its discourse functions.

GIVON (1983) noted that topics should be viewed not as a discrete entity, but as a continuity at macro organizational levels of a language. He perceived an initial division of main topics into three major types according to their position within the paragraph: chain initial topic, chain medial topic, and chain final topic. The narratives which involve *-guo* and *-le* made by the students seem to match such equi-topic chains nicely. A speaker starts narratives with the past experience which is a chain initial topic. Then, the speaker uses *-le* to add new information on the topic as indicated in Sentences 23 and 24.

## Conclusion

The results of this study show that English-speaking learners of Chinese acquire the perfective aspect marker *-le* and the past experience *-guo* earlier than the durative aspect marker *-zhe*. The process by which they acquire the aspect markers seems to be largely meaning-based, and could be summarized into four categories: 1. looking for logical temporal sequences; 2. using time adverbials and conjunction for the time references; 3. using lexical aspects and word meanings; and 4. using pragmatic cues with the aspect markers of *-le* and *-guo*. Learners, especially at the lower level, rely more on time adverbials and lexical aspects than the students at the more advanced level.

The explanation for the variation in the acquisition of aspect markers comes from cognitive, syntactic, semantic, and pragmatic sources. When students acquire the perfective *-le* and experience *-guo*, they need to learn the specific way to express these meanings in Chinese since they are already quite familiar to the concepts of completion of action and past experience. When students acquire the durative *-zhe*, however, they must first develop the concept of "state associated with its continuing activity" (*-zhe*) because this concept is new to them. The durative aspect *-zhe* manifests a variety of functions and syntactic structures. It also has pragmatic constraint that it is usually used in narratives for background information. These features of *-zhe* inject difficulty for the learners of Chinese. Thus, acquisition of Chinese aspect markers is greatly influenced by the syntactic structures and conditioned by the pragmatic functions.

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