動詞語意在英語學習者時態詞素發展上之影響調查

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摘　要

1970 年代以來，外語學習者在時態(貌)詞素上的發展與習得一直是從事語言教學者的研究重點。語言學習者實際使用時態(貌)的狀況，無論正確與否，對於教學方法的設置，有其舉足輕重的地位。因此本研究的目的在於調查動詞字尾詞素*-ed* 與*-ing* 的分佈是否符合時貌假設的預測，以此可作為發展中時態系統的參照與指標。參與本研究的受測者共有 105 位主修英語的大學生。學生必須完成一項寫作任務，所得資料藉由時貌組內及跨組統計方式加以分析。分析結果指出受試者在使用動詞字尾詞素*-ed* 與*-ing* 時，的確符合時貌假設的預測。根據上述的發現研究者提出教學建議。

關鍵詞: 時貌假設、時態(貌)詞素

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AN INVESTIGATION INTO THE INFLUENCE OF LEXICAL ASPECT ON EFL LEARNERS' USE OF TEMPORAL MORPHOLOGY

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Abstract

Since the 1970s, the investigation into how L2 learners acquire the tense and aspect morphology has been the focus of many descriptive and pedagogical accounts of languages. It is suggested that knowledge of how learners actually use the tense-aspect forms could contribute to the implementation and effectiveness of pedagogical implementations. Hence, the purpose of the study is to investigate whether the distributions of verbal inflections *–ed* and *–ing* were in accord with the predictions of Aspect Hypothesis since they are an indicator of the developing temporal system.

Participants were 105 English majors from two universities and one institute of technology in northern Taiwan. They were asked to carry out a narrative writing task. Data were analyzed by means of across and within category analyses. The results indicate that learners' use of verbal inflections *–ed* and *–ing* were in general in line with the predictions of aspect hypothesis. On the basis of the findings, pedagogical implications are provided.

Keywords: morpheme study, aspect hypothesis, temporal expressions

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1. Introduction

Since the 1970s, the investigation into how learners acquire the tense and aspect inflections has been the focus of many descriptive and pedagogical accounts of language learning (Bardovi-Harlig, 2000). Specifically, early research on children's development of temporal expressions (Bronckart and Sinclair, 1973; Antinucci and Miller, 1976; Bloom *et al*., 1980) suggests that children use lexical aspect to learn tense while Olsen (1997) and Olsen and Weinberg (1999) maintain that the initial learning of lexical aspect leads to the acquisition of grammatical aspect. Since it is not always easy to pull tense and grammatical aspect apart (Slabakova, 2002), recent research seems to bind tense and grammatical aspect together and to talk about their relationships with lexical aspect as a whole.

As knowledge of how L2 learners acquire temporal inflections could contribute to the effectiveness of pedagogical implementations, the purpose of the research is to study how learners use the tense and aspect inflections, particularly from the perspective of lexical aspect.

2. Review of The Literature

2.1 Tense and Aspect

The notion of temporality is divided into two grammatical categories: tense and aspect. Tense, according to Comrie (1976), aims at showing the relative chronological ordering between events. Aspect, on the other hand, is non-deictic since the major concern is to characterize "different ways of viewing the internal temporal constituency of a situation" (Comrie, 1976, p. 3). Two types of aspect, lexical and grammatical, have been identified in the literature. Grammatical aspect, also called "viewpoint aspect" (Smith, 1983), entails the explicit use of linguistic devices such as auxiliaries or inflections, as illustrated in the English progressive aspect (i.e., be + Ving).

By contrast, inherent lexical aspect known as "semantic aspect" (Comrie, 1976) or "Aktionsart" of verbs refers to semantic characteristics inherent in the lexical items. Vendler (1967) proposed a four-way classification of verbs in terms of the following semantic notions: punctual, telic and dynamic (please see Table 1). Punctual denotes there is no duration, telic signifies the predicate has an inherent endpoint, and dynamic

implies that energy is required for the situation to exist or continue.

Accordingly, states such as *like* and *see* depict a situation that is assumed to continue without additional effort or energy being applied; they last indefinitely and have no dynamics or end points. Thus, they are characterized as (- punctual, - telic, - dynamic). Activity verbs like *run*, *sing*, *play*, or *dance* have duration (- punctual) but require additional energy for them to take place (+ dynamic) and have an arbitrary endpoint (- telic). These verbs are homogeneous in structure because if the action of "run" is cut into different phases, each phase is said to have the same temporal quality. Likewise, accomplishments such as *run a mile* and *build a house* like activities also are durative (- punctual) and dynamic (+ dynamic). Different from activity verbs they have a single inherent endpoint (+ telic).

Achievement verbs share with accomplishment verbs in having endpoints but differ in duration. Achievements, for example, *recognize* and *find*, take place instantaneously (+ punctual) and are reducible to a single point in time (+ telic); that is, the endpoint is also the beginning point. The realization of these verbs also requires additional input of energy (+ dynamic). Moreover, accomplishments and achievements are usually subsumed under an overarching category called events (Mourelatos, 1981).

Table 1 Vendlerean classification of inherent lexical aspect in verbs

Verb types / Semantic features	States	Activities	Accomplishment	Achievement
Punctual	−	−	−	+
Telic	−	−	+	+
Dynamic	−	+	+	+

Note. From "Developmental Sequences: The Emergence of Aspect Marking in Second Language Acquisition," by R. W. Anderson, 1991, in T. Huebner and C. A. Ferguson (Eds.), *Crosscurrents in Second Language Acquisition and Linguistic Theories* (p. 311). Amsterdam: John Benjamins.

Studies on first language acquisition suggest that learners' verbal morphology at the outset is used to encode inherent lexical aspect rather than grammatical aspect or tense. For instance, Andersen (1989a) found that in the earliest stage of L1 acquisition, children would confine their use of certain verbal inflections to distinct and particular semantic classes of verbs. The phenomenon that children's uses of tense-

aspect inflections are under the influence of the inherent lexical semantics of verbs is known as the aspect hypothesis or the primacy of aspect hypothesis (POA). The major claims of the aspect hypothesis are summarized as follows.

1. Past and perfective inflections are restricted primarily to accomplishments and achievements.
2. Progressive inflections are restricted primarily to activities and rarely overextended to states.
3. Past imperfective inflections are slower to emerge and when they do appear, they are initially restricted to activities and states. (Andersen & Shirai, 1995)

To sum up, the aspect hypothesis suggests that states are seldom inflected at early stages, and activities mostly receive progressive and/or imperfective inflections while achievements and accomplishment typically receive past and/or perfective inflections.

2.2 Research on Aspect Hypothesis in L2 Acquisition

On the whole, studies on the aspect hypothesis in second language learning also indicate more restricted or less flexible use of tense-aspect inflections from learners of diverse language backgrounds, from learners in different learning contexts, and from the data elicited by different tasks. Ramsay (1990), for instance, found that in an oral narrative task, the Spanish learners' development of verbal inflections paralleled the developmental pattern cited above. Salaberry (1998) found that in the cloze tests and written narratives, L2 learners of French with formal instruction preferred to use perfective past with achievement verbs and imperfective past with state verbs. Giacalone (cf., Li, and Shirai, 2000) reported that the untutored L2 learners of Italian from various L1 backgrounds associated past perfective with achievement verbs, past imperfective with state verbs, and progressive with activity verbs.

Also, Huang (1999) found that in the speech data, subjects (five Chinese-speaking learners of English and three native speakers) demonstrated a similar distributional bias in the use of verbal morphology. Furthermore, in Lee's (2001) longitudinal study of two Korean speakers' acquisition of temporality in English, the predictions of aspect hypothesis was generally supported, except that progressive marking was attached to states and its extension across aspectual categories was not observed. In general, the results supported the claim that learners' interlanguage is sensitive to the lexical

semantics of the verbs.

The aspect hypothesis, however, is by no means unproblematic since there are some exceptions to the predictions of the aspect hypothesis. For instance, Andersen and Shirai (1996) found that the overt extensive use of progressive on state verbs was not trivial in their subjects. Kumpf (1984b) reported that the subject--a Japanese speaker--tended to use base forms for completed actions in the foreground, to mark states with past tense inflections and to attach progressive marker -ing to activities in the background. Rohde (2002) found that although telic predicates are used a lot more in past context than atelic ones, which is quite consistent with the predictions of POA, the reverse conclusion that atelic verbs largely remained uninflected in past context was not sustained.

It appears that the scope and nature of the aspect hypothesis is still open to discussion since the emergence of verbal inflections does not necessarily entail the exclusion of non-target-like use or the absence of inflections. Therefore, though a trend parallel to that identified in L1 acquisition is also found in second language acquisition, the hypothesis per se is not without question.

Generally speaking, the most current formulation concerning the effect of aspect hypothesis on learners' developing temporal system has been relatively conservative (Slabakova, 2002). On one hand, the importance of the initial influence of lexical aspect has been maintained and on the other hand, how lexical aspect influences the encoding of tense or grammatical aspect is left implicit (Andersen and Shirai, 1994).

Up to now, research on the aspect hypothesis in L2 acquisition informed researchers that "cognitive deficit" couldn't be the only determinant for learners' restrictive use of verbal inflections because adult ESL learners exhibited the same tendency in the use of verbal inflections (Andersen, 1989a). Moreover, according to Andersen and Shirai (1996), the overt extensive use of progressive inflections on states in L2 learners' interlanguage but not in research of first language acquisition could imply that "universal capacity" may no longer exist or at least is affected by L1 tense-aspect system. To understand how learners' development of temporal morphology is affected by the lexical aspect of verbs, the study addressed the following question: Does the interlanguage of Chinese-speaking learners of English accord with the predictions of the aspect hypothesis?

3. Methodology

3.1 Participants

A total of 105 English majors from two universities and one institute of technology in northern Taiwan participated in the study. Provided with a word list, they were told to finish writing a narrative paragraph in 25 minutes.

3.2 Data Collection

Participants were provided with two topics(i.e., the most dangerous situation I encountered or the most unforgettable experience I had) and a wordlist containing approximately equal number of four types of verbs mentioned above. They were asked to choose one topic and to use at least once each word or phrase from the wordlist to write down a true experience or a made-up story that happened in the past context. Chinese equivalents of the words on the list were given to the participants if requested.

3.3 Data Analysis

To study the claims of aspect hypothesis, the aspectual classes of verbs were determined prior to the statistical procedure by the following set of operational tests (c.f., Lee, 2001, p.607). First, it appears that states do not occur in the progressive (e.g., *he is liking a book) and in pseudo-cleft constructions (e.g., *what he did was like the book). Moreover, in simple present tense, states do not have habitual interpretation. For example, *he dances* could imply a habitual routine but *he knows the answer* does not.

Secondly, to distinguish activity verbs from accomplishments, adverbial phrases *for two months* (*hours*, *days*, *etc*.) and in two months were rather useful tools since it turns out that activity verbs allow only the phrase *for two months* while accomplishments are compatible with both phrases (Lee, 2001). In addition, accomplishments are ambiguous when they are used with the adverb “almost”. For example, the sentence *he almost painted a picture* has two readings: he painted the picture but didn’t finish it or he intended to paint a picture but in fact he did nothing. However, such ambiguity doesn’t occur in activity verbs. Moreover, if the verb phrase is V-*ing* entails has V-*ed*, then the verb phrase is an activity verb (e.g., he is running

entails he has run). Conversely, if the verb phrase is V-*ing* entails has not yet V-*ed*, then the verb phrase is an accomplishment verb since he is painting a picture implies that he hasn't painted a picture.

To discriminate achievement verbs from accomplishment verbs, again the adverbial phrase *for two months* is used. Generally, achievement verbs cannot co-occur with for two months (e.g., *he died for two month). Also, as Lee (2001) suggested, achievements generally do not appear as the compliments of *finish* and *stop* (e.g., *he finished finding or *he stopped finding). In order to observe participants' use and development of temporal morphology, the narratives were scored and assigned to different groups. The scoring was based on the appropriateness (both in meaning and in form) of tense and aspectual use. That is, for each narrative, the sum of those cases where tense and aspect was used appropriately was divided by the sum of all the predicates and this yielded a percentage score (ranging from 100 to 0) of appropriate tense and aspectual use.

After assigning the verb phrases into appropriate aspectual classes, the predicates in the narrative tasks were first analyzed in terms of an across-category perspective. An across-category analysis (Bradovi-Harlig, 2000) reports the frequency and the distribution of a morpheme across all aspectual categories[1]. For instance, the percentages of the occurrence of suffix -*ed* were calculated, no matter they were attached to achievements, accomplishments, activities, or states. This will tell researchers where the morphemes occur.

Subsequent to the across category analysis, within category analyses were performed. The within category analysis would tell the researcher within each aspectual class, for example, activity verbs, how the verbal inflections -*ed* and -*ing* are distributed and to what extent they are left unmarked.

4. Results And Discussion

Table 2 presents an overview on the distribution of verbal morphology across verb types. Nine hundred predicates were analyzed. As Table 2 shows, the number of past

[1] Since the verb *be* might be used more often than other state verbs and carries tense morphology usually earlier than other state verbs (Bradovi-Harlig, 2000), it is eliminated from the analysis. This might reduce the inflation of the number of states and could provide a more precise analysis about how verbal inflections -*ed* and -*ing* were distributed across different aspectual classes.

tense predicates is six times more than the number of verbs marked by progressive -*ing* (773:127). In general, the progressive marker -*ing* was most frequently associated with activities (82%), and was also attached to states (8%), accomplishments (5%) and achievements (5%), though the number of instances is small. Regarding the distribution of past tense marker -*ed*, it was used more often with event verbs (i.e., achievement and accomplishment), with a total of 56%, followed by states (28%) and activities (16%).

Table 3 further compares the distributions of verbal inflections -*ing* and -*ed* across the verb types on the basis of participants' appropriate use of temporal morphology. Participants in the present study were grouped according to the percentages of appropriate use of temporal morphology in divisions of 10% (0-9%, 10-19%, 20-29%, etc.). Accordingly, there are ten groups (i.e., from group I to group X). Moreover, owing to the fact that the number of participants that scored lower than 40% was relatively small and for the purpose of comparison, they were arranged into an additional group e.g., group XI (0-39%).

Table 2 An overview of the across category analysis of the predicates in narratives

Verb types	state		activity		accomplishment		achievement		total	
morpheme	raw	%	raw	%	raw	%	raw	%	raw	%
-ing	9	8%	106	82%	6	5%	6	5%	127	100%
-ed	222	28%	122	16%	205	27%	224	29%	773	100%

Note. n= 105; Number of verbs marked by -*ing*: 127; Number of verbs marked by -*ed*: 773; Number of verbs that were left unmarked: 324 (not listed in this table); Total number of verbs analyzed: 1224; Number of verbs used per person: 11.6; Average number of verbs used per person by type: 4 states; 2.6 activities; 2.4 accomplishments; 2.6 achievements

4.1 The Distribution of -*ing*

With respect to the distributions of verbal inflection -*ing*, as Table 3 illustrates, it was most frequently attached to activity verbs, with the percentages ranging from 73% to 100%. Although activities in groups VII, VIII, IX and X had the largest percentages of -*ing* (i.e., 100%), they should be interpreted with caution because the number of activities produced in these groups was relatively small. Conceivably, they might not be very representative. In addition, as a trend (with the exception of group V), the association of -*ing* with activities seems to strengthen in accord with the correct use of temporal morphology.

Table 3 The across category analysis of the predicates in participants' narratives

Group	verb type	State		Activity		accomplishment		achievement		total	
I: n=33	**morpheme**	raw	%	raw	%	raw	%	raw	%	raw	%
90~99	**-ing**	3	6%	42	86%	3	6%	1	2%	49	100
	-ed	119	31%	58	15%	95	24%	118	30%	390	100
II: n=19	**-ing**	3	9%	28	83%	0	0%	3	9%	34	101
80~89	**-ed**	37	23%	36	22%	45	28%	45	28%	163	101
III: n=7	**-ing**	1	17%	5	83%	0	0%	0	0%	6	100
70~79	**-ed**	11	26%	6	14%	11	26%	14	33%	42	99
IV: n=8	**-ing**	1	11%	7	78%	0	0%	1	11%	9	100
60~69	**-ed**	13	32%	6	15%	10	24%	12	29%	41	100
V: n=14	**-ing**	0	0%	8	73%	3	27%	0	0%	11	101
50~59	**-ed**	23	32%	7	10%	22	31%	19	27%	71	100
VI: n=9	**-ing**	1	13%	6	75%	0	0%	1	13%	8	101
40~49	**-ed**	10	28%	5	14%	10	28%	11	30%	36	100
VII: n=5	**-ing**	0	0%	3	100%	0	0%	0	100%	3	100
30~39	**-ed**	6	40%	1	7%	6	40%	2	13%	15	99
VIII: n=4	**-ing**	0	0%	4	100%	0	0%	0	0%	4	100
20~29	**-ed**	3	33%	1	11%	2	22%	3	33%	9	99
IX: n=3	**-ing**	0	0%	3	100%	0	0%	0	0%	3	100
10~19	**-ed**	0	0%	2	50%	2	50%	0	0%	4	100
X: n=3	**-ing**	0	0%	0	0%	0	0%	0	0%	0	0
0~9	**-ed**	0	0%	0	0%	2	100%	0	0%	2	100
XI: n=15	**-ing**	0	0%	10	100%	0	0%	0	0%	10	100
0~39	**-ed**	9	30%	4	13%	12	40%	5	17%	30	100

"b/p" means simple verb form.

4.2 The Distribution of *-ed*

Except in groups IX and X, the morpheme *-ed* was attached to verbs of every type. Group I has the largest number of states marked by past tense *-ed* (i.e., 119), followed by achievements, accomplishments, and activities (please see Table 3). This pattern is parallel to that observed in group IV, though in group IV the number of verbs is a lot smaller. In addition, with the exception of group V, VII, IX and X, there is a clear progression of past tense use from achievements to accomplishments to activities.

Moreover, in groups I to VI, in terms of the use of simple past inflection, it appears that states were competing with achievements or accomplishments because the difference in the rate of use is less than 8%.

Additionally, Table 3 indicates that the percentages of states followed by *-ed* in group I to group VI range from 23% to 32%. Even though group VII shows the greatest simple past inflection on the states (40%), they should be treated carefully since the number of tokens is small. The same rationale applies to group VIII as well. Moreover, it appears that the simple past inflection was used the least often with activities (0%~22%), except for group IX.

Overall, the percentages of past tense achievements were higher than those of accomplishments, e.g., groups I, III, IV, VI and VIII. However, an eleven percent difference across different groups is not very prominent. In addition, within each of these groups, the differences in the percentages of past tense achievements and past tense accomplishments are quite trivial (e.g., group I, 6%; group III, 7%; group VI, 5%; group VI, 2%; group VIII, 11%).

Table 4 An overview of the within category analysis of the predicates in narratives

n=105 Num. of verbs 1224	**morpheme** \ **verb type**		**State**	**activity**	**accomplishment**	**achievement**
	-ing	raw	9	106	6	6
		%	2%	38%	2%	2%
	-ed	raw	222	122	205	224
		%	53%	44%	80%	82%
	bare / present	raw	189	48	45	42
		%	45%	17%	18%	15%
	total	raw	420	276	256	272
		%	100	99	100	99

Note. n= 105; Number of verbs used per person: 11.6; Average number of verbs used per person by type: 4 states (420/105); 2.6 activities (276/105); 2.4 accomplishments (256/105); 2.6 achievements (272/105)

Table 4 presents how each aspectual category was marked temporally. Since the bare form of a verb could signify a use of present tense (or simply a deviant from target form), they should be included in the analysis if the aim is to know how the verbs are temporal marked. Hence, in addition to the verbs that were marked with progressive

marker -*ing* or past tense inflection -*ed*, a total of three hundred and twenty-four unmarked predicates were also analyzed in terms of aspectual categories.

Consequently, a total of 1224 predicates were analyzed. Four hundred and twenty are state verbs (420/1224; 35%), two hundred and seventy-six are activity verbs (276/1224; 23%), two hundred and fifty-six are accomplishment verbs (256/1224; 21%) and two hundred and seventy-two are achievement verbs (272/1224; 22%). Participants used an average of 11.6 verbs in their written narratives. Of the 11.6 verbs used, the number of state verbs was the largest (i.e., 4) even though the occurrence of be verbs (i.e., am/is/are/were/was) was excluded from the analysis. By and large, the number of activities is roughly equivalent to that of accomplishments or that of achievements (i.e., 2.6:2.4:2.6).

4.3 How Aspectual Categories Are Marked With Verbal Inflections

Generally, as Table 4 illustrates, states were more frequently marked by past inflection -ed (53%) while 45% of the states were left unmarked. About two percent of the states were marked with progressive marker -*ing*, which is quite trivial. As to the activities, the percentages for their use with past inflection -*ed* and with progressive marker -*ing* did not differ greatly (44:38). However, the difference is more obvious when past tense activities were compared with unmarked activities (44:17) or when activities with progressive marking were compared to unmarked activities (38:17).

Different from the states and the activities, most of the time the accomplishments either received simple past inflection (80%) or were bare verb form (18%). Additionally, there are relatively fewer instances of progressive accomplishments (2%). Meanwhile, the distribution of verbal morphology in achievements is in principal parallel to that observed in accomplishments.

Table 5 The within category analysis of the predicates in participants' narratives

Group	morpheme		state	activity	accomplishment	achievement
I 90~99 n=33	**-ing**	raw	3	42	3	1
		%	2%	41%	3%	1%
	-ed	raw	119	58	95	118
		%	82%	57%	93%	97%
	b/p	raw	23	2	4	3
		%	16%	2%	4%	2%
	total	raw	145	102	102	122
		%	100%	100%	100%	100%

II 80~89 N=19	**-ing**	raw	3	28	0	3
		%	5%	39%	0%	6%
	-ed	raw	37	36	45	45
		%	62%	51%	88%	90%
	b/p	raw	20	7	6	2
		%	33%	10%	12%	4%
	total	raw	60	71	51	50
		%	100%	100%	100%	100%
III 70~79 N=7	**-ing**	raw	1	5	0	0
		%	5%	36%	0%	0%
	-ed	raw	11	6	11	14
		%	58%	43%	85%	88%
	b/p	raw	7	3	2	2
		%	37%	21%	15%	13%
	total	raw	19	14	13	16
		%	100%	100%	100%	101%
IV 60~69 n=8	**-ing**	raw	1	7	0	1
		%	4%	41%	0%	7%
	-ed	raw	13	6	10	12
		%	48%	35%	71%	86%
	b/p	raw	13	4	4	1
		%	48%	24%	29%	7%
	total	raw	27	17	14	14
		%	100%	100%	100%	100%
V 50~59 n=14	**-ing**	raw	0	8	3	0
		%	0%	36%	10%	0%
	-ed	raw	23	7	22	19
		%	36%	32%	73%	86%
	b/p	raw	40	7	5	3
		%	63%	32%	17%	14%
	total	raw	63	22	30	22
		%	99%	100%	100%	100%
VI 40~49 n=4	**-ing**	raw	1	6	0	1
		%	3%	33%	0%	5%
	-ed	raw	10	5	10	11
		%	27%	28%	71%	58%
	b/p	raw	26	7	4	7
		%	70%	39%	29%	37%
	total	raw	37	18	14	19
		%	100%	100%	100%	100%
VII 30~39 n=5	**-ing**	raw	0	3	0	0
		%	0%	27%	0%	0%
	-ed	raw	6	1	43	2
		%	32%	9%	38%	33%
	b/p	raw	13	7	8	4
		%	68%	64%	57%	67%
	total	raw	19	11	14	6
		%	100%	100%	100%	100%
VIII 20~29 n=4	**-ing**	raw	0	4	0	0
		%	0%	44%	0%	0%
	-ed	raw	3	1	2	3

		%	25%	11%	25%	50%
	b/p	raw	9	4	6	3
		%	75%	44%	75%	50%
	total	raw	12	9	8	6
		%	100%	99%	100%	100%
IX 10~19 n=3	**-ing**	raw	0	3	0	0
		%	0%	50%	0%	0%
	-ed	raw	0	2	2	0
		%	0%	33%	40%	0%
	b/p	raw	18	1	3	6
		%	100%	17%	60%	100%
	total	raw	18	6	5	6
		%	100%	100%	100%	100%
X 0~9 n=3	**-ing**	raw	0	0	0	0
		%	0%	0%	0%	0%
	-ed	raw	0	0	2	0
		%	0%	0%	40%	0%
	b/p	raw	20	6	3	11
		%	100%	100%	60%	100%
	total	raw	20	6	5	11
		%	100%	100%	101%	100%
XI 0~39 n=15	**-ing**	raw	0	10	0	0
		%	0%	31%	0%	0%
	-ed	raw	9	4	12	5
		%	13%	13%	38%	17%
	b/p	raw	60	18	20	24
		%	87%	56%	63%	83%
	total	raw	69	32	32	29
		%	100%	100%	101%	100%

4.3.1 States

The results of within category analysis were further divided into ten groups according to participants' scores of appropriate use of temporal morphology. With respect to states, the percentage of past marking decreased from 82% in group I to 0% in groups IX and X. Note that the tokens of states in group VII to X are not as many as those in the other groups, and they should be interpreted with caution. Regarding the cases of progressive states, the percentage is between 2% to 5%, which is still trivial while comparing with the use of other inflections.

4.3.2 Activities

As to activities, there seems to be a competition between simple past inflection and progressive marking. In groups of higher scores (i.e., I, II and III) activities were mostly marked with past tense inflections *-ed* than with progressive marking *-ing*, and the differences in the rate of use between *-ed* and *-ing* increase from group III (7%) to group I (16%). On the other hand, in group IV and V, activities received more

progressive marking rather than past tense marker, with a less than 5% difference in the rate of use. Moreover, beginning from group VI to VII, the unmarked activities outnumber those of past or progressive markings.

4.3.3 Accomplishments

From group I to group VI, there is a positive correlation between the percentages of accomplishments marked by inflection -*ed* and learners' scores of appropriate use of temporal morphology. In other words, learners of higher grades generally produced more past tensed accomplishments, ranging from 93% in group I to 71% in group VI. In addition, in these groups, the number of unmarked accomplishments is, on the whole, larger than that marked by progressive -*ing*. The differences between the use of -*ed* and -*ing* or the use of past -*ed* and bare verb forms are rather prominent.

However, the distribution of temporal morphology of accomplishments in the above mentioned groups is rather different from that observed in groups from VII to X. It appears that in these groups (from VII to X) accomplishments for most of the time were left unmarked, with a percentage ranging from 57% to 75%. While accomplishments didn't seem to receive any progressive marking in these groups, there is some association between accomplishments and simple past inflection, though the percentages are always lower than those unmarked.

4.3.4 Achievements

Achievements, like accomplishments, were predominantly marked by past -*ed* in groups of higher scores (i.e., I, II, III, VI, V, and VI), with the percentages ranging from 58%~85%. The association strengthens as the scores of appropriate use of temporal morphology increase. Also, from group I to V, the ratio of progressive or unmarked achievements was relative low comparing to that of achievements marked by -*ed*. In particular, starting from group VI (and thereafter), there seems to be an obvious increment in the use of bare achievements. Moreover, from group VII, there seems to be an increasing trend in the use of unmarked achievements.

As the results indicate, the answer to the research question is somewhat positive since in some aspects the inherent semantics of verbs did exert an influence on the distributions of verbal inflections. Particularly, with respect to the distribution of the inflection -ing, the results of across category analysis (please see Table 2 and 3) seemed to suggest that the hypothesis that activity verbs mostly receive progressive marker was

to some extent sustained. The finding is parallel to that in the research on aspect hypothesis (Cushing, 1987; Economides, 1985; Kumpf, 1982; Rothstein, 1985; Taylor, 1987; Li, and Shirai, 2000).

The distributions of morpheme *-ing* across verb types also indicate some trivial variations. First, the inflection *-ing* did not always spread from activity to accomplishment and then to achievement. This phenomenon could be attributed to the fact that learners did not produce an equal number of accomplishments and achievements in each group. Presumably, the smaller the number of verbs is in each aspectual category, the chances for them to receive inflection *-ing* or *-ed* are also smaller. In other words, since the numbers of accomplishments and achievements are not equal, it is fairly difficult to find or assert a developmental pattern of *-ing* use across verb types.

Secondly, in the study some states were marked by *–ing*, which is a violation to the claim of the aspect hypothesis. At first glance, the results seemed to be in line with Andersen and Shirai (1996) who reported that the overt extensive use of progressive on state verbs was not trivial. However, further analyses of these non-standard usages reveal that they are not as prominent as they appear to be. In addition, some of the progressive states are in fact target-like in English. For example, in English when a speaker intends to refer to the activity as a whole, it is grammatical to attach inflection *-ing* to state verbs, for example, *don't call! I'm having my dinner*, and a*re you having a good time* (Blackwell, 1999, p. 4). Consequently, the number of true violations is reduced. Since the percentages of progressive states are rather low, they could be treated as idiosyncratic variations among learners.

Apart from the non-standard use of *-ing* on states, there are also some cases of progressive achievements in the narratives. As mentioned above, achievements are generally incompatible with the progressive sense in that they are punctual. When they are used in a progressive sense, they usually denote an iterative event; for example, in *he is jumping up and down*, the action of jump is repeated again and again during the time of speech. However, some of the progressive achievements found in the narratives were not used to denote this meaning (e.g., they were breaking the windows). Hence, they should be considered as a violation to the aspect hypothesis.

The distribution of the past inflection *-ed* is rather intriguing. It appears that the

state verbs received a lot of past markings, even when the inflation of be verbs were excluded from the analysis. Obviously, the past tensed states are not compatible with the claims of the aspect hypothesis, which predicts that states are generally left unmarked. The violation of the aspect hypothesis could be ascribed to the interaction of some contributing factors. Since the research method involved the tally of every occurrence of a predicate (i.e., a token count) besides *be* verbs, the number of other state verbs could also be inflated to certain degrees. Additionally, given that the topics of the narratives are associated with danger of death (i.e., the most dangerous situation I encountered or the most unforgettable experience I had), there might be an increment in the use of verbs that express emotional or mental status, for example, *think* or *believe*. Predicates of this kind are indeed frequently observed in the narratives.

Moreover, the states in the narratives are very common words such as *have*, *seem*, *like* and *hate*. Probably, under the conditions that the learners were aware of the temporal frame, the use of high frequency states might reduce the constraints of limited capacity and make it easier for the learners to use the past *-ed*. In addition, since states were also the most frequently used verb type, the chances for them to receive the past inflection *-ed* were 1.5 times higher than those of other types. Plausibly, it is the interaction of these contributing factors that caused the state verbs to receive so many past inflections in the study.

Leaving aside the past tense states in the narratives, the distribution of the morpheme *-ed* is generally in line with the findings in most studies; that is, there is a strong affiliation of the past inflection *-ed* with achievements and accomplishments and the inflection is not used as often on activities.

5. Conclusions

The current research suggests that generally Chinese EFL learners' use of temporal morphology in the past time context is under the influence of lexical aspect of the verbs in that distributional bias in the use of the progressive marker *-ing* and the past tense inflection *-ed* across aspectual categories is rather evident. According to the findings, teachers should provide input that is conducive to the learning of the tense and aspect system of English. For instance, providing abundant and meaningful input will allow EFL learners to induce patterns or rules regarding the use of English tense and aspect

structures. Such kind of analysis process could make learners' implicit knowledge of English tense and aspect system explicit.

In addition, since learners are biased to use certain inflections on certain kinds of verb, it is important to introduce other legitimate combinations in the input to them. In this aspect, form-focused instruction (Lightbown and Spada, 1990) will play an influential role. When the instruction is primarily meaning-based, the input containing the combinations such as past tense states or progressive accomplishments will help learners expand their knowledge and use of these verbal inflections.

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