

Understanding the influence of L1 and lexical aspect in temporal acquisition: Quantitative and qualitative studies.

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Abstract

The two presented studies aim to make a comparative investigation on L1 influence and lexical aspect effect in temporal acquisition by Chinese and Japanese EFL learners. By using a mixed methods approach, two studies were conducted in order to present a more comprehensive and in-depth analysis of learners' performance in temporal marking. While Study One was a cross-sectional using a written error recognition and correction task to look at factors at work in EFL learners' temporal performance, Study Two attempted to examine the metacognitive process of their tense-aspect interpretation by means of qualitative data obtained from retrospective interviews. As revealed in the results, L1 influence was found to be an active

factor in Japanese learners' progressive marking performance. However, L1 influence was not found in Chinese learners. With regard to the lexical aspect effect, a strong progressive-activities association predicted by the Aspect Hypothesis was not found in the results. Through learners' verbal reports, Study Two provides qualitative evidence for the existence of L1 influence and learners' awareness of lexical aspect in tense-aspect performance. Detailed discussion is made on these findings as well as their pedagogical implications.

Keywords: temporal morphology; verbal semantics; L1 influence

Introduction

The study of tense-aspect morphology has always been the focus of language teaching and pedagogical materials. In response to the pedagogical necessity, studies on the acquisition of tense and aspect have greatly grown since 1980s. As noted by Bardovi-Harlig (2000), the development of research on the acquisition of systems of temporal expression reflects the development of research in second language acquisition in general.

In both L1 and L2 fields, the Aspect Hypothesis has long remained the major research interest in studies on tense-aspect acquisition. Focusing on the predictions of the Aspect Hypothesis, many studies have been conducted on L2 temporal acquisition in both naturalistic and instructed environments. As the most robust prediction of the Aspect Hypothesis, the attachment of perfective past with telic verbs gained extensive support in L2 studies (Bardovi-Harlig & Reynolds, 1995; Robison, 1995; Collins, 1999; Salaberry, 1998; Shirai & Kurono, 1998). However, counter evidence still exists. In his study, Rohde (1996, 1997) reported the distribution of inflected *versus* uninflected verb forms in past-time contexts. And he further argued that the use of past in his study is not determined by the verb's inherent aspect, which is clearly a challenge to the Aspect Hypothesis. Housen (2002) also provided counterexamples to the Aspect Hypothesis. His longitudinal study of a child with L1 Dutch learning English showed a lack of the early

association between achievements and simple past marking proposed by the hypothesis.

The association between progressive and activities is also well supported in L2 studies. A large number of cross-sectional studies of English confirmed this pattern (Bardovi-Harlig & Reynolds, 1995; Robison, 1995). However, while past-achievements association remains very robust in both L1 and L2 studies, more counter arguments are voiced with regard to progressive-activities association. Both Rohde (1996) and Robison (1990) reported non-targetlike overextensions of the progressive inflection –ing to state verbs, such as *liking, * loving and *smelling. Another example also comes from Rhode (1996) who found that his learners attached the progressive marker –ing more with achievements than with activities.

Besides, as Salaberry and Shirai (2002) point out, in tense-aspect acquisition studies, a simple form-meaning correlation is only part of the larger picture, as many other factors have to be considered. One of them is L1 influence, which also serves partially as a response to results that are incompatible with the Aspect Hypothesis. Much evidence has been found in support of L1 influence in tense-aspect acquisition (Robison, 1995; Andersen & Shirai ,1996; Cai, 2003), yet counter arguments can still be heard. (Bardovi-Harlig, 2000).

As mentioned above, although the hypothesis is claimed to be universal (Shirai & Kurono, 1998), research interest to test its universality has been maintained since its establishment. Besides, in the field of L2 acquisition of tense-aspect morphology, controversies still remain as to what factors influence the learner language of tense-aspect morphology, especially with regard to L1 influence. Although L1 influence has always been a research focus in SLA, the number of studies exploring this issue in tense-aspect acquisition is still few. Even those researchers who have addressed this topic

limited their studies on single language subjects (Salaberry, 1999; Collins, 2002; Cai, 2003). So it is of great importance to include two or more comparable language groups with their specific tense-aspect features taken into account. Just as Slabakova (2002) states in his review article, the effect of a learner's native language on his or her acquisition of aspectual properties in a second language has been curiously neglected so far. Much more precise research questions can be formulated if L1 transfer is taken into account and only properties that differ in the L1 and the L2 are investigated. In the present studies, by including two language groups, close examination was made on L1 influence based on more specified research questions.

Moreover, although some cross-sectional researches have obtained much solid evidence on learners' temporal acquisition, it is risky to base conclusions merely on the basis of quantitative data. This is particularly true with regard to Japanese EFL learners' acquisition and interpretation of the L2 English progressive aspect; although, both Gariele (2005) and Sun (2006) point out in their cross-sectional research that Japanese learners are subject to L1 influence in their L2 aspectual acquisition. Therefore, qualitative data reflecting learners' mental representation of the target forms are needed to provide validity to the previous arguments. Within the researcher's knowledge, very few studies have been done on the metacognitive process of learners' tense-aspect interpretation, irrespective of the one done recently by Liskin-Gasparro (2000) and Collins (2005). In her study of eight advanced learners of Spanish as a second language, Liskin-Gasparro (2000) found that they were successful at eliciting information from learners on the discourse, semantic, and instructional input factors that may have influenced their performance on two oral narrative tasks. Collin's (2005) study reports on the findings from the retrospective interview protocols which encouraged learners to reflect on their performance on the controlled tasks. Two key

factors emerged from the verbal reports: learners' awareness of semantic categories and their sensitivity to frequency effects in instructional input. Both appeared to constrain learners' access to new knowledge that would allow their interlanguage to develop to more advanced levels. Therefore, by using both a controlled written task and a retrospective interview, the present research is a relatively new attempt to explore the factors influencing the interlanguage development of tense and grammatical aspect.

Rationale

In order to get a better understanding of the present research focus, it is necessary to have some knowledge of the basic related concepts.

1. The Aspect Hypothesis

The Aspect Hypothesis is based on a theory of inherent lexical aspect. According to Vendler (1967), verbs can be classified into four types based on different semantic features in terms of inherent lexical aspect: states, activities, accomplishments and achievements, based on different semantic features, static / dynamic, durative / punctual and telic / atelic. This distinction is illustrated in Table 1. The static / dynamic distinction contrasts a static situation and a dynamic one. A dynamic situation can be either durative or punctual. A punctual situation can only persist for a very short time period. In contrast, a durative situation describes a relatively stable process. The telic / atelic distinction focuses on whether or not the situation has an end point. Thus, telic situations, once they begin, progress step by step towards their climaxes when they finally stop. In the present study, states, activities and achievements will be the target verb types.

Table 1 Distinction of Inherent Lexical Aspect

	States	Activities	Accomplishments	Achievements	
punctual	–	–	–	+	
telic	–	–	+	+	
dynamic	–		+	+	+
examples	seem; want; feel; taste	talk; sing; walk; write	build a house; paint a picture	begin; finish; break; kill	

The Aspect Hypothesis claims that the learner's selection of verbal morphology is related to the inherent lexical semantics of the verb phrase. Moreover, the hypothesis makes clear predictions about the distribution and direction of tense-aspect morphological markings (i.e. past with achievements, present with states, and progressive with activities).

2. Tense-Aspect System of English, Japanese and Chinese languages

In terms of tense, Chinese is well accepted as a tenseless language with no morphological inflections to mark time (Smith, 1991). Instead, it relies heavily on temporal adverbs and aspectual markers. In contrast, both English and Japanese are tense languages (Shirai, 1998). Thus, it is common to hear a Chinese student say such a sentence as, 'I go to school yesterday.' The following are examples of tense formation in these three languages. In both English and Japanese, the past tense is expressed by verb inflections. However, in Chinese the perfective aspect marker is used to indicate the past.

English: Yesterday Tom bought a book.

Chinese: Zuo tian Tom mai-le yibenshu.

Yesterday Tom buy-ASP a book. ('le' is a perfective aspect marker)

Japanese: Kino Tom-wa hon-o katta.

Kino Tom-TOP book-ACC buy-PAST.

Note: ASP = aspect marker; TOP = topic marker; ACC = accusative case marker; PAST = past tense marker

Since tense marking is absent in Chinese, it is interesting to observe how the absence of the target grammatical item might influence Chinese learners' performance on past tense marking.

In terms of grammatical aspect, all three languages employ an aspect system to indicate time relation. With regard to the imperfective aspect, while all three languages employ aspect markers which function in some similar ways, Japanese shows an idiosyncratic feature which is absent in both English and Chinese. As such, there will be a brief discussion of the Japanese imperfective aspect marker *-te i* in comparison to English and Chinese.

As complex an aspect marker as *te iru* is, it should be noted here that the general meaning that *te iru* conveys is 'focus on the durative phase of a situation', and also that *te iru* can be generally characterized as 'durative imperfective'. This overarching meaning is always there, and depending on the different parameters (syntactic, semantic, and pragmatic), distinct senses such as progressive and resultative are instantiated (Shirai, 2000). When we make English imperfective aspect as a reference, it is worth mentioning that Japanese imperfective aspect marker *te iru* is not equal to the corresponding English *-ing* because *te iru* semantically allows more interpretations than *-ing* including progressive, resultative, perfect and habitual (Shirai, 1998). On the other hand, in terms of English progressive aspect marker *-ing*, *te iru* is the closest corresponding grammatical item in Japanese. The present paper will not discuss the semantics of progressive aspect in detail. Instead, it is to focus on the interaction between the imperfective aspect marker and verbal

inherent aspect. In this respect, the Japanese imperfective aspect marker *-te i* behaves similarly to English and Chinese in that when combined with activity and accomplishment verbs, it mainly denotes a progressive meaning. However, Japanese differs from the other two languages in some important ways.

An important difference between Japanese and the other two languages is that Japanese can refer to a resultative state using the imperfective aspect marker *-te i* on achievement verbs, while no such meaning can be rendered in both English and Chinese. Since Japanese aspect marker *-te i* allows for more interpretations, some achievement verbs that are ungrammatical with progressive marking in both English and Chinese are compatible with *-te i*. Therefore, the achievement anomaly is missing from Japanese (Shirai, 1998). For example:

Japanese: Tom-wa kare-ni kizui-*te iru*. (Japanese: resultative state)

Tom-TOP him-ACC notice-ASP-NONPAST.

English: *Tom is notice-*ing* him.

Chinese: *Tom zhu yi dao-*zhe* him.

Tom notice-ASP him.

In Japanese, there is only a very short list of state verbs compared with English and Chinese. Most English state verbs are often expressed in Japanese by the combination of achievement verbs and *-te i*, while in English and Chinese, states are described by state verbs that do not allow for any progressive marker in most cases. For example:

Japanese: Tom-wa kare-o shitte-*iru*. (Japanese: resultative state)

Tom-TOP him-ACC know-ASP-NONPAST.

English: *Tom is knowing him.

Chinese: *Tom ren shi-zhe ta.

Tom know-ASP him.

From the above discussion, it is clear that Chinese and Japanese differ from English in some unique ways. On the one hand, Chinese shows an absence of tense inflection; on the other hand, Japanese allows for the imperfective aspect marker *-te i* to be combined with achievement verbs without the concept of achievement anomaly (as found in English and Chinese). In terms of EFL study, these special characteristics provide ground for an interesting research perspective, that is, Chinese learners have to acquire past tense marking which is new to them while Japanese learners have to narrow their L1 knowledge about combinations between the imperfective marker and verbal lexical aspect. Although we have to seriously consider the fact that, semantically speaking, progressive aspect is more complex than past tense when our focus is not on making a cross-item comparison but on comparing learners' performances on these two items separately across two nationality groups, it can still help further our understanding of how the absence of L2 grammatical knowledge in L1 and partial fit between L1 and L2 grammatical knowledge might affect learners' perceptions of the target language.

Research Design and Research Questions

Since the researcher has conducted a series of experiments to investigate EFL learners' temporal marking from a comparative perspective, the present studies include two parts: Study One and Study Two, which aim to present a more comprehensive and in-depth analysis of learners' performance in temporal marking by using a mixed methods approach. Mixed model research refers to the use of both quantitative and qualitative strategies in

several or all phases of the research study. The use of mixed methods is becoming increasingly popular, for it allows the researcher to answer both exploratory and confirmatory questions (Teddlie & Tashakkori, 2003). Study One was a cross-sectional study while Study Two tries to examine the metacognitive process of learners' tense-aspect interpretation by means of retrospective interviews. The interview was not given as a follow-up in Study One mainly because it had to be conducted immediately after the grammar test to avoid time lapse as much as possible. Therefore, individual grammar test and interview were considered more appropriate. As a replication of Study One, Study Two served as an attempt to obtain both exploratory evidence through interviews and more face validity through administering the test to another small group of subjects. As a whole, the following research questions were proposed, with the first two targeted in both studies and the last targeted in Study two.

1. Is there any L1 influence on Japanese learners' performance on progressive errors since in Japanese the imperfective aspect marker *te iru* allows wider interpretation? And is there any L1 influence on Chinese learners' performance on base form errors since tense inflection is absent in their native language? (Study one and two)
2. Is there any lexical aspect effect found in the result? (Study one and two)
3. Are EFL learners aware of verbal lexical aspect? And is there any cognitive evidence of L1 influence found in learners' verbal reports, particularly with regard to Japanese learners' performance on ungrammatical progressive states and achievements? (Study two)

Next, results of the two studies will be presented and discussion will be made with regard to the research questions.

Study One

Subjects

The participants consisted of two groups of university students, 45 Japanese learners and 45 Chinese learners. Both groups of learners are 3rd-year students majoring in English at a national university. Besides, two groups share much in common in terms of study background. They are both in an acquisition-poor learning environment. Although reforms in English education have been carried out for some years, the mainstream English pedagogy still remains teacher-centered, textbook-centered and test-centered. A language proficiency test based on the pre 1st and 2nd Grade English Language Proficiency Test of Japan was administered to both national groups, each of which was accordingly divided into two subgroups in terms of the language proficiency. An ANOVA analysis was made to ensure its validity. The results of language proficiency test showed no difference between the two national groups: $F(1,86)=0.417, p>.05$, while a significant difference was found between the two proficiency level groups: $F(1,86)=154.198, p<.001$.

Instrument and Scoring

In the present study, a 20-item error identification and correction test was designed with the test score as the dependent variable, and L1(2 levels), language proficiency (2 levels), lexical aspect(3 levels) and error category (2 levels) as the independent variables. Taking into account the above-mentioned linguistic difference, an equal number of verbs representing 3

lexical aspects (activities, achievements, and states) were included with 8 verbs for each lexical aspect which are equally distributed across two error categories: base form and progressive. Besides the 24 target verbs, 6 distractors were also included. Both the lexical aspects of the target verbs and the answers to the test were determined by a native linguist. All the target base-form verbs are ungrammatical in the test and correct answers are past tense forms. With regard to progressive errors, activity verbs in past tense are given in the test and verbs with progressive marking are the expected correct answers; while on state and achievement verbs progressive markings are ungrammatical and verbs in past tense are the correct forms. All the target verbs used are given in Appendix 1.

The learners were scored according to their performance on both identification and correction of the target error forms, each task accounting for one point. For example, if he or she could identify ‘hearing’ in ‘he was hearing loud voices’ as the erroneous item, one point would be given. In addition, if he or she succeeded in correcting ‘hearing’ as ‘heard’ which is the accurate grammatical form, another point would be attributed. Furthermore, when the attempted form was not correct, but showed knowledge of past tense – for instance, ‘writed’ or ‘written’ for wrote; ‘talking’ for ‘was talking’ – half a point was deducted. Therefore, the full score for one verb is 2 points, which also serves as the basis for the calculation of mean scores in the following analysis. Sample items of the test are shown in Appendix 2.

Results and Discussion

Two ANOVAs were conducted on the test scores of base form category and progressive category respectively. Before we go into detailed discussion, results of the two ANOVAs will be reported.

In terms of progressive category, an ANOVA was made on the progressive category score with L1 (2 levels), language proficiency (2 levels), and lexical aspect (3 levels) as the independent variables. As the results revealed, the main effects of L1 and lexical aspect were found significant (L1: $F(1,86)=40.74, p<.001$; lexical aspect: $F(2,172)=7.56, p<.001$). Besides, interaction effect between L1 and lexical aspect was also significant ($F(2,172)=5.54, p<.005$).

In terms of base form category, another ANOVA was made on the base form category score with L1 (2 levels), language proficiency (2 levels), and lexical aspect (3 levels) as the independent variables. As the results revealed, the main effects of L1 and lexical aspect were found to be significant (L1: $F(1,86)=13.58, p<.001$; lexical aspect: $F(2,172)=10.45, p<.001$).

In the following section, a more in-depth discussion will be made on lexical aspect effect and possible L1 influence.

Lexical aspect effect

In the error task, past-tense activities were given in progressive context, while progressive states and achievements were given in past tense. Therefore, it is interesting to observe whether learners could be more successful in detecting errors on activity verbs and adding progressive markings to activity verbs in line with the progressive-activities association predicted by the Aspect Hypothesis.

As revealed by the analysis on the progressive category, lexical aspect effect was confirmed by both the main effect and interaction effect. With a close look at the main effect, it is interesting to note that learners performed best on achievement verbs, recognizing most errors in this category instead of the activity verb category. According to the Aspect Hypothesis, progressive markings are predicted to emerge with activities and spread

through to achievements. It is also predicted that progressives will not be inappropriately used with statives (Andersen & Shirai, 1996; Shirai & Kurono, 1998). Following the hypothesis, the researcher expected learners to perform best on activities because of its strong tendency to be attached with progressive marking. Since in the present task errors on the activities category were given in progressive context, it should have been easier for learners to detect the unmarked errors on activities. However, contrary to the initial assumption, activities were not the most recognized in the present experiment.

Table 2 Basic statistics on progressive error category across Lexical Categories

	1 (States)	2 (Achievements)	3 (Activities)
N	90	90	90
Mean	1.43	1.60	1.44
SD	0.34	0.31	0.37

Table 3 Multiple comparison results on progressive error category across lexical categories

pair	r	nominal level	t
2 - 1	3	0.016	3.500
	0.0005		
2 - 3	2	0.033	3.303
	0.0011		
3 - 1	2	0.033	0.197
	0.8437		

MSe=0.111747, df=172, significance level=0.05

1=States; 2=Achievements; 3=Activities

One of the reasons might be that ungrammatical progressive markings on states and achievements were more conspicuous due to the sharp difference

in their semantics. However, even if this was true, it is still surprising why activities failed to have a strong association with progressive markings as the Aspect Hypothesis predicted.

As the results revealed in the error task, the lexical aspect of activities curiously blocked the grammaticalization of progressive aspect instead of facilitating it. It seems that when progressive morphology was not provided and learners did not have to allocate their attention to the form in the sentence comprehension, they displayed a weakness in grammaticalizing activities in progressive marking. This was possibly caused by the heavy semantic overlapping between activities and progressive aspect. As we know, activities are set apart from the other dynamic verbs in that they describe actions or events that have inherent duration with no specific endpoint and display the same degree of homogeneity, such as run, play, dance, sleep, talk (Smith, 1983). Progressive aspect, on the other hand, is also defined essentially by continuousness (Comrie, 1976) or “action in progress” (Shirai & Andersen, 1995). Thus in the error task, the verbal semantics of activities seemed to have satisfied learners’ in-progress interpretation of the contextual meaning which should be grammatically expressed by progressive marking. According to some studies on language input and acquisition, it has been found that language learners cannot process target language input for both meaning and form at the same time. When they are not pushed to notice the form, they process input for meaning only and do not attend to specific forms, and consequently fail to process and acquire them (Skehan, 1998). This could partially explain our present findings.

In addition, learners’ failure to add progressive markings to activities in the error task also coincided with another well-accepted finding in temporal acquisition studies. According to many researches, at the beginning stages of

acquisition, previous to the encoding of temporality with verbal morphology, temporal information is provided by lexical semantics, adverbs, calendric expressions, principles of discursive organization, and overall text structure (Von Stutterheim, 1991; Klein, 1994). Taking lexical aspect into consideration, we could argue that overlapping semantics between progressive and activities reinforced learners' common tendency in their language acquisition, such as process meaning only in the input and use of lexical devices in temporal marking. However, considering the fact that subjects in Study One were intermediate university learners, it is interesting to see that both lexical aspect effect and the other universal L2 acquisition constraints could be quite persistent.

These findings on activities remind us that caution is needed in interpreting the Aspect Hypothesis predictions, since many other factors might also be at work such as task effect, L1 influence, etc.

L1 influence

In terms of progressive errors, L1 influence was found in both the main effect and interaction effect between L1 and lexical aspect. Japanese learners accepted more error items than Chinese learners on states and achievements, while no significant difference appeared on activity verbs (states: $F(1,258)=38.53, p<.001$; achievements: $F(1, 258)=18.46, p<.001$). This indicates a strong support of L1 influence on Japanese learners.

Table 4 Basic Statistics on progressive error category across lexical categories of both national groups

		States	Achievements	Activities
Mean	1.66		1.77	1.51
China N=45	SD		0.31	0.38

Japan	Mean	1.19	1.44	1.37
N=45	SD	0.32	0.31	
		0.37		

Table 5 Simple main effects of L1-lexical aspect interaction on progressive error category

effect	SS	df	MS	
F	p			
A(c1)	4.892	1	4.892	38.533
	0.000			
A(c2)	2.344	1	2.344	18.463
	0.000			
A(c3)	0.413	1	0.413	
3.259	0.072			
error		258	0.1269	
C(a1)	1.500	2	0.750	
6.715	0.001			
C(a2)	1.426	2	0.713	
6.381	0.002			
error		172	0.1117	

A: L1; C: lexical aspect; c1: states; c2: achievements; c3: activities
significance level=0.05

In contrast, in terms of the base form error category Chinese learners did not show any sign of negative L1 influence, outperforming Japanese learners in recognizing and correcting more base form errors across three lexical aspects although tense inflection is absent in their native language. In the following section an in-depth discussion will be made on why L1 influence was found in the Japanese group while being absent in Chinese group.

Table 6 Basic Statistics on base form error category across lexical categories of both national groups

			States	Achievements	Activities
China N=45	Mean	1.72		1.83	
		1.59			
	SD	0.26		0.28	
		0.30			
Japan N=45	Mean	1.57		1.65	
		1.49			
	SD	0.30		0.24	
		0.38			

As the results showed, Japanese learners underperformed on progressive marking items, especially on progressive achievements and states. Keeping in mind the linguistic background mentioned earlier, we might argue that their performance on progressive markings on achievements and states provided direct evidence of L1 influence in accordance with our research questions.

The research finding might be accounted for as follows: with a closer look at the transfer patterns of both groups, it is clear that the two groups differ most in the relationship between their respective L1 and L2. For Japanese learners, there is a partial overlap between L1 and L2 with regard to the interaction between imperfective markers and lexical aspects while a much looser combination is allowed in L1 but not in L2; while for Chinese learners, tense inflection is completely absent in L1. White (1991) discussed the situations where a partial fit between L1 and L2 structure might pose problems to L2 learners in her research on argument structure. According to her, in the former case more efforts would be required for the learners to restrict the L1 to the L2 because the L1 permits properties not allowed in the L2. Thus it is reasonable to assume more acquisition difficulty and higher

possibility of L1 influence. This reasoning has been generally supported in L2 argument structure studies (Juffs, 1996; Inagaki, 2001). Though dealing with different structures, this argument can still shed some insight on the present study. Since the L1 Japanese permits a much looser combination between the imperfective aspect marker and achievement verbs while the L2 English only permits a much restricted one, more L1-oriented difficulty might occur because it is clearly more challenging for learners to unlearn the L1-specific feature through not only positive evidence but also negative evidence in L2 input (White, 1991; Inagaki, 2002).

However, as found in the previous analysis, L1 influence was not found in Chinese learners' performance on base form errors. So where did Chinese learners' sensitivity to base form errors derive from? As to this question, some interesting clues were provided by the study of Tokowicz and MacWhinny (2005) on implicit and explicit measures of sensitivity to grammatical violations in second language acquisition. Using event-related brain potentials (ERPs), they investigated the contributions of explicit and implicit processes during second language (L2) sentence comprehension. As shown in different brain responses to grammatical and ungrammatical sentences, a strong grammaticality effect was found in the ERP data for the construction that was unique to the L2, suggesting that the learners were highly sensitive to these violations. This finding offered a robust cognitive support to the present study. Under the past tense context, base form is the most direct grammatical violation to past tense which is absent in the L1 but unique to the L2. Similar to the finding in Tokowicz and MacWhinny's study, Chinese learners also exhibited a much higher sensitivity to this type of error.

Another question still deserves further consideration. Even though Chinese learners were equipped with explicit knowledge about past tense marking,

generally speaking they could only be exposed to positive input, that is, grammatical past tense forms instead of ungrammatical base forms. How could we explain their success in disallowing these ungrammatical forms? One of the possible explanations was provided by White (1991) who argues that since the L2 properties not allowed in the L1 exist in the input, L2 learners may be able to notice them and arrive at the L2 grammar on the basis of positive evidence. Therefore, their task to reject base forms was made easier because only positive evidence in L2 input is required for Chinese learners to become aware of the tense marking of L2 which is not allowed in the L1. In other words, with the absence of tense marking in the L1, there is no competing similar grammatical form in Chinese learners' interlanguage which might cause some learning difficulty. There is reason to believe that this might have contributed to Chinese learners' better performance on base forms.

In summary, Study One provided answers to research question 1 and 2. First, with regard to L1 influence, it was assumed that partial overlap between the L1 Japanese progressive aspect and that of the L2 English may trigger L1 interference evidenced in higher acceptance of incorrect progressive marking on achievement and state verbs on the side of Japanese learners; on the other hand, no hypothesized L1 influence was found on Chinese learners. Besides, differing from the Aspect Hypothesis, activity verbs did not display a stronger association with progressive marking, which might be attributed to the influence of lexical aspect and task effect.

Study Two

Study Two serves as a replication of Study One, while the focus is on the introspective interview conducted after the error identification and correction test was taken. Although Study One partially confirmed the influence of

lexical aspect and L1 on learners' temporal marking, two questions still remain: Are learners aware of verbal semantics? Is there any cognitive evidence of L1 influence found in learners' verbal reports, particularly with regard to Japanese learners' performance on ungrammatical progressive states and achievements? Study Two tries to provide answers to these questions.

Subjects

The participants were 12 Japanese and 12 Chinese college students. Chinese learners were included as a comparison with Japanese learners in order to highlight any possible L1 influence in terms of progressive marking and base form. Participants in Study two were from the same universities as those in Study One, and they were all in their 1st or 2nd year. A language proficiency test based on the pre1st and 2nd Grade English Language Proficiency Test of Japan was administered to the participants to ensure that both groups were of the same proficiency level. The result of the language proficiency test showed no difference between the two groups ($F(1,14)=0.036, p>.05$).

Procedure

The same error recognition and correction test was used, since metacognitive awareness is often measured through learners' grammaticality judgments; particularly those which require error correction and justification because they require learners to access and elaborate upon their linguistic knowledge, which is a reflection of metalinguistic awareness (Bialystok & Ryan, 1985).

The test was given to individual participants who were told to finish it in 30 minutes. Right after the paper test, a half-structured retrospective interview was conducted. The majority of the interview questions covered both correct and incorrect learner responses. For example, "Why do you

think this item is wrong?”, “Would you please describe your thinking process to me?”, and “If this item is correct, could you explain its meaning to me?” The learner could view both the test and his or her responses while trying to reflect on his or her own performance. Besides these basic questions, the researcher also asked some probing questions in order to clarify and confirm what the learner reported. After Japanese learners were tested and interviewed, the researcher flew to China where the data were obtained following the same procedure. The interviews were conducted in Japanese with the Japanese group, while the Chinese group was interviewed in Chinese. Both interviews were recorded with the permission of the participants. The interviews were later transcribed and analyzed in terms of 1) verbal reports related to awareness of lexical aspect; 2) verbal reports related to L1 influence; 3) verbal reports related to types of interpretations of targeted temporal markings.

Results and Discussion

A 2 (L1) × 3 (lexical aspect) ANOVA was conducted on learners’ performance on progressive errors and base form errors respectively with the test score as the dependent variable, and L1 (2 levels) & lexical aspect (3 levels) as the independent variables. The results in Study Two largely echoed those in Study One. As for the progressive aspect, achievement and state verbs were more challenging for Japanese students (on states: $F(1,66) = 16.00, p < .001$; on achievements: $F(1,66) = 5.40, p < .05$). Regarding the base form, Chinese learners outperformed their Japanese counterparts, showing a stronger awareness of it ($F(1,22) = 9.18, p < .01$). Some basic statistics are provided in Table 7 and 8. Therefore, it seems that Japanese learners have more difficulty than Chinese learners in recognizing ungrammatical interactions between achievement and state verbs and progressive marking,

which indicates a possible L1 influence. By contrast, Chinese learners successfully rejected more base forms which are default verb forms in their L1.

The following part will make a discussion of learners' verbal reports. Since it was found that Japanese learners exhibited more difficulty in this task, the following analysis will be mainly devoted to Japanese learners' verbal reports relating to verbal semantics and L1 influence in accordance with the research questions.

Table 7 Basic Statistics of the Performance on Both Error Categories by the Two Groups

L1	Error 1		Error 2	
	Mean	SD	Mean	SD
China N=12	1.28	0.38	1.63	0.24
Japan N=12	0.98	0.35	1.42	0.32

Note: error1=progressive error; error2=base form error

Table 8 Basic Statistics of the Performance on Progressive Errors by Japanese and Chinese Learners across Three Lexical Aspects

		states	achievements	activities
China	Mean	1.33	1.54	0.97
	SD	0.41	0.33	0.41
Japan	Mean	0.68	1.16	1.12
	SD	0.45	0.32	0.29

Learners' Awareness of Verbal Semantics

As the learners' verbal reports showed, they displayed some awareness of verbal lexical aspect and some were even found to possess a certain degree of explicit knowledge of lexical aspect. As observed in their verbal reports, some learners were capable of interpreting temporal morphology by referring to the type of lexical aspect. The following table shows some typical samples of learners' awareness of verbal semantics. In the following tables, Japanese and Chinese learners were abbreviated as JL and CL, respectively.

Table 9 Sample Verbal Reports on Verbal Semantics of State and Achievement Verbs

Test Items	Learners' Reports (Translated)
<p>They met a Spanish sailor standing at the top of the stairs. He <u>had</u> no time to shout to the others. Tom took the man's knife and <u>kill</u> him. Next, they were breaking open a door. Inside the room, they <u>found</u> a large number of knives.</p>	<p>I think progressive aspect should refer to some action which can last for a while. But 'breaking open', this action is so fast, and can take place just in a blink. So I think here -ing is strange. (JL3)</p>
<p>The young man <u>lie</u> in darkness in the bottom of the ship. The ship <u>was moving</u> up and down in the winds. Above him he was hearing loud voices—the men who <u>were trying</u> to sail the ship through the seas.</p>	<p>Well, it is just my guess. I feel that here 'heard' is more appropriate than 'hearing'. I feel that hear, this verb is instant. But 'hearing', the progressive use requires a certain time span. Well, this is my guess.(CL5)</p>
<p>Mom <u>told</u> me that in the past the stores over there <u>were usually opened</u> till 10 p.m. On her way home from work she often <u>went</u> shopping there. She thought the food there was tasting wonderful.</p>	<p>This verb is the same as what I met just now such as want and know. This verb, 'taste', as I remember, is a state verb. So it can not go with -ing. (JL11)</p>
<p>Next morning I talked with my secretary when Holmes came into my room...</p>	<p>I think 'talked' is strange here because there is 'when' in the sentence. Besides, when you talk with someone, you often talk for some time. So I think... -ing is better.</p>

	(CL7)
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Although learners tend to be affected by the lexical aspect in temporal processing, it is far from a major strategy in their interpretation repertoire. As shown in this study, learners mostly refer to the local context such as time adverbs, tense consistency, translation as well as rules of thumb to facilitate their comprehension. Taking all these factors into account, it could be rightly argued that lexical aspect is not the decisive factor in learners' temporal marking. What's more, it is worth noting that learners do not possess a systematic awareness of verbal semantics in their interlanguage and they tend to rely on simplified grammar rules as their main resource. This kind of item learning, in contrast with holistic learning, might be able to explain the learners' unstable performance with tense-aspect tasks.

As we know, learners' verbal reports reveal the interpretation/comprehension process when they deal with temporal expression. Thus, it is interesting to note that the devices they used for temporal comprehension largely overlapped with those for temporal production. For example, Dittmar (1981) mentioned that learners tended to use calendar expressions or adverbs such as "yesterday" with an infinitive to mark past or future time. Sato (1984) also indicates that second language learners rely on context and implicit inferences to mark temporality. According to her, devices used by L2 learners to express temporality include temporal adverbials, locative adverbials, clause sequencing, calendar expression, interlocutor scaffolding, and implicit references. This overlapping is akin to the interactive nature of learners' comprehension and production. Some samples that relate to the above discussion are given in

Table 10. In Table 11, the raw number of learners' verbal reports on major interpretation types across both groups is provided, which shows the frequency of a certain interpretation type appearing in the reports.

Table 10 Samples of Learners' Reports on their Temporal Interpretation (translated)

Contextual meaning	From the previous part, I know that it is about the past time. Then I translated it into Japanese. And I think 'he was hearing a loud voice' is very strange. Yes, I judged it according to the context. (CL9)
Time adverb	Well, since there is the adverb 'while', I think it is better to use past progressive. (JL6)
Tense consistency	Because the latter parts were all in past tense, it must be wrong for this part to be written in past tense.(JL2)
Grammar rules	We learned this rule in our high school days, that is, progressive marking can not be used on the verbs such as want, know, etc.
Translation	I translated this part '...was looking handsome...' into Japanese, and I found no problem with it. (JL4)
Guess	I also felt confused about this part. So I just made a guess and chose it for my luck. (CL10)
Frequency effect	Well, because I have never seen this kind of usage before. (JL7)
Classroom training effect (by Chinese learners only)	This is very easy to me. When I saw the word 'write', I knew it must be wrong. Any word without s or ed is strongly suspicious. We did a lot of exercises on it in class. So I didn't give it any thinking when I wrote the answer. (CL2)
Verbal semantics	I think if you break something, it can be finished in an instant. (JL5)

Table 11 Number of Verbal Reports on Major Interpretation Types by both Groups across Two Error Categories

	Japan		China	
	Prog error	Base error	Prog error	Base error
Contextual meaning	45	15	37	4
Time adverb	29	19	31	3
Time consistency	26	28	20	6
Grammar rules	15	1	32	15
Translation	43	0	27	0
Guess	24	4	5	0
Frequency effect	12	0	19	0
Classroom training effect	0	0	0	25
Verbal semantics	8	0	9	0

In addition, learners' verbal reports also show that their sensitivity to the lexical aspect varies with verb types. It is clear that learners gave more reports on achievement verbs such as break and drop, while very few were made on state and activity verbs, especially on activity verbs. One of the reasons for this, in the researcher's assumption, is that because the task is given in a past context, ungrammatical progressive achievements are easier to identify due to the sharp difference between the action-ing-progressive marker and punctual/completed verbal semantics. In contrast, a progressive marker on state and activity verbs will not be as noticeable because of the proximity between the verbal semantics and aspect marker. This is especially true for activity verbs. On the other hand, there is also a possibility that different verbal classes carry different degrees of saliency for EFL learners. From our results, it seems that activities are far less salient than

achievements (See Table 12). Is the semantic saliency cognitively universal or is it bound within contextual factors? This seems to be an interesting new finding from the interview task and one which deserves further investigation in future studies.

Table 12 Awareness Frequency of Verbal Semantics across Three Verb Types

		Verb Types		
		States	Activities	Achievements
Verbal Semantics Mentioned	Verbs	2/8	1/8	4/8
	Learners	5/24	1/24	9/24

Note: Verbs: number of verbs with semantics mentioned/total number of verbs

Learners: number of learners mentioning semantics/total number of learners

L1 Influence

In this error correction task, Chinese learners were found to be more sensitive to the base form errors, while Japanese learners accepted more ungrammatical progressive marking on state and achievement verbs (especially state verbs). Since Japanese learners' higher acceptance of progressive states and achievements presents evidence for possible L1 influence, it is interesting to observe the distribution of temporal markings in the progressive error category in the grammar test within each national group. Table 13 provides the distribution of temporal markings in the progressive error category on the three lexical aspects across both national groups. And the raw number of verbs which carried the morpheme in question was given for each learner.

Table 13 Distribution of temporal markings in progressive error category on three lexical aspects across two groups

Learners	states						achievements						activities					
	a	b	c	d	e	f	a	b	c	d	e	f	a	b	c	d	e	f
1 C	3	1	0	0	0	0	1	1	0	2	0	0	3	0	0	0	1	0
J	1	2	0	1	0	0	0	3	0	1	0	0	2	2	0	0	0	0
2 C	1	1	1	1	0	0	4	0	0	0	0	0	2	2	0	0	0	0
J	0	4	0	0	0	0	0	3	0	0	0	1	4	0	0	0	0	0
3 C	1	1	0	2	0	0	4	0	0	0	0	0	4	0	0	0	0	0
J	1	1	1	0	0	1	2	2	0	0	0	0	1	1	1	0	0	1
4 C	1	1	2	0	0	0	3	0	0	1	0	0	2	2	0	0	0	0
J	0	3	1	0	0	0	0	4	0	0	0	0	1	1	2	0	0	0
5 C	3	1	0	0	0	0	3	0	0	1	0	0	0	4	0	0	0	0
J	0	3	0	1	0	0	3	1	0	0	0	0	2	2	0	0	0	0
6 C	2	0	1	0	1	0	4	0	0	0	0	0	3	1	0	0	0	0
J	0	4	0	0	0	0	2	2	0	0	0	0	1	3	0	0	0	0
7 C	1	1	1	1	0	0	1	1	0	2	0	0	0	4	0	0	0	0
J	2	2	0	0	0	0	2	0	0	1	0	1	4	0	0	0	0	0
8 C	4	0	0	0	0	0	3	0	0	0	0	1	3	0	0	0	1	0
J	0	4	0	0	0	0	2	2	0	0	0	0	0	4	0	0	0	0
9 C	2	2	0	0	0	0	3	0	0	0	1	0	2	0	1	0	0	1
J	3	1	0	0	0	0	4	0	0	0	0	0	1	1	2	0	0	0
10 C	4	0	0	0	0	0	4	0	0	0	0	0	2	2	0	0	0	0
J	0	4	0	0	0	0	1	1	1	0	0	1	1	3	0	0	0	0
11 C	4	0	0	0	0	0	3	1	0	0	0	0	0	2	1	0	1	0
J	3	1	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0
12 C	1	1	1	1	0	0	4	0	0	0	0	0	0	2	2	0	0	0
J	1	1	1	0	0	1	4	0	0	0	0	0	0	2	1	0	0	1
total C	27	9	6	5	1	0	37	3	0	6	1	1	21	19	4	0	3	1
J	11	30	3	2	0	2	24	18	1	2	0	3	17	23	6	0	0	2

Note: C: Chinese learners; J: Japanese learners;
a: past tense marking; b: progressive marking; c: present marking;
d: perfect marking; e: future marking; f: base form

Our interest is to observe the distribution of non-targetlike forms in both groups. In terms of Japanese learners, progressive markings on states and achievements occupy the major proportion of all the non-targetlike forms followed by present marking, base forms and perfect marking. In contrast, this was not found in the Chinese group, with present forms being the

leading non-targetlike forms. Therefore, the distribution of temporal markings across the two national groups echoes the findings on L1 influence in the previous discussion. Next, discussion will be made with some more evidence from the learners' verbal reports.

First, since Japanese learners were found to accept more ungrammatical progressive markings on achievement and state verbs, we were interested in how Japanese learners interpreted these progressive markings. In the interviews, students were asked to make verbal reports on both recognized and unrecognized error items. It was found that Japanese learners were able to recognize some error items by noticing the mismatch between progressive marking and achievement & state verbs, showing a target-like understanding of L2 progressive aspect. Sample reports are given in Table 14.

However, Japanese learners' understanding of English progressive aspect was not consistent, which can be seen from their weaker performance on their recognition of ungrammatical progressive achievement and stative verbs. In the interview, learners were asked to explain the meaning of the sentence containing the target item if that error item was not identified. And the learners usually produced a translation which they took as natural and semantically correct. In contrast, Chinese EFL learners could identify the ungrammaticality of state and achievement progressives more easily with the help of translation. For example, one learner just told the researcher that, 'It sounds very strange if I translate it into Chinese. So I think it is wrong.' Therefore, with regard to Japanese learners, the translations provide some clues to the semantic motivation for their L2 progressive interpretation. In the verbal reports, two patterns were representative of Japanese learners' translations of erroneous progressive markings on achievements and states. One of them is that learners tended to render English *-ing* into Japanese *-te i*, showing that they took *te i* as the equivalent of *-ing*. Meanwhile, learners

also provided translations without resorting to *te i* structure, seemingly transferring the L1 resultative state meaning onto the L2 states and achievements progressives. Some examples are given in Table 15.

Table 14 Sample Reports on Ungrammatical Progressive Markings on States & Achievements

Test Items	Learners' Report
I <u>was walking</u> with my friend on the street, and we <u>saw</u> some money lying on the ground. But nobody was around. Then my friend <u>said</u> to me, "somebody <u>was dropping</u> money on the street."	Well, I feel it is very strange because if you say dropping it means that the action is continuous and the thing you drop is still on the way. (JL12)
Something <u>went</u> wrong with my friend's computer. After he <u>checked</u> it he <u>said</u> to me in a loud voice, ' <u>are you noticing</u> the problem?'	I think it is strange to say that someone continues the action of noticing something. When you notice something, you just notice it. (JL6)

Table 15 Sample Translations on Semantic Interpretation of Progressive States & Achievements by Japanese Learners

Test items	Translations
... Tom turned to the others. 'The two men who think that we <u>are belonging</u> to them,' he said, 'find them'.	Kore wa watashi tachi wa karera ni <u>shozoku shiteiru</u> . (<u>shozoku shiteiru</u> = belonging) Note: here 'belonging' was translated into the corresponding Japanese achievement verb plus <i>teiru</i> which indicates the resultative state. (JL1)
After he checked it he said to me in a loud voice, ' <u>are you noticing</u> the problem?'	Nani ka mondai ni <u>kizuyitemasuka?</u> Note: here the Japanese imperfective marker <i>teiru</i> was used to go with the English counterpart <i>be noticing</i> . The Japanese translation sounds perfectly natural although it denotes the meaning 'have you noticed the problem'. (JL8)

The evidence of L1 influence is not straightforward, but the learners' reflective reports did help us gain more insights into this complex issue. With both statistical data and interview data from Study one and two, a more

convincing argument could be made on L1 influence in EFL temporal acquisition.

Learners' verbal reports also reminded us of another issue in SLA studies: optionality. "Optionality" is a characteristic of developing L2 grammars, as discussed in White (1991). From the verbal reports, it can be seen that Japanese learners were entertaining two concepts of the lexical aspect-progressive interaction: on the one hand, they followed the basic target-like concept and could interpret the L2 progressive as action-in-progress; on the other hand, they also held onto their L1 concept of interpreting the states & achievements as resultative state meaning. Although some of their translations only indicated a possible resultative meaning due to the semantic complexity of *te i*, some other examples offer us much stronger evidence of the L1 semantic influence. For example, since in Japanese 'shozoku shiteiru' can only indicate a resultative state meaning, when Japanese learners interpreted '...we are belonging to them...' as 'kore wa, watashitachi wa karera ni shozoku shiteiru', it is reasonable to assume that they transferred the L1 semantics into the L2. Among the studies on L2 tense and aspect acquisition, very few have been done on L1 influence on Japanese EFL learners' progressive interpretation. Within the researcher's knowledge, only Gabriele (2005) investigated this issue in her study on the role of transfer in the L2 acquisition of aspect. With a focus on the acquisition of the semantics of the English progressive marker, she employed an interpretation task to examine whether Japanese learners have more difficulty preempting the resultative state interpretation that is not available in the L2, but is an option in the L1. According to the results, learners showed a great deal of difficulty with past progressive on achievements in the interpretation task. Therefore, it was argued that Japanese learners did hold on to their L1 aspectual semantics of *te i* and tend to transfer it into the L2 semantic interpretation. Gabriele's

research provides support to the results of the present research although more efforts are needed to explore the complicated issue of L2 aspectual semantic interpretation.

As to the base form errors, which are not as semantically complex, it is no surprise that learners made much less report. What is interesting to the researcher is the different ways Japanese and Chinese learners describe this error item. In the interview, Japanese learners always called the base error ‘ganzaikai’, meaning present tense, and it seems that they mainly employed grammatical knowledge for the interpretation. But Chinese learners always referred to it as ‘yuanxing’, meaning uninflected verb form. Moreover, Chinese learners mostly referred to the classroom training which made this type of error detection easy to them. It seems that Chinese learners used the base form itself as a reminder in their interpretation, especially when they might be able to notice the pattern of the test along with their verbal reports.

To sum up, Study two supported the statistical results in Study one which partially answered research question 1 & 2. Moreover, it provided qualitative evidence in answer to research question 3, confirming the existence of L1 influence and learners’ awareness of lexical aspect in tense-aspect performance.

Pedagogical Implications

In terms of tense-aspect pedagogy, the most important task is to help learners construct a target-like form-form and form-function mapping. As the present studies showed, learner’s temporal acquisition is subject to a number of factors such as influence of lexical aspect and L1. On the basis of the current findings, the present studies highlighted the important role of input in tense-aspect acquisition as well as classroom instruction.

First, as discussed before, although progressive-activities association

predicted by the Aspect Hypothesis was not found in the present studies, it could still be argued that learners' tense-aspect interlanguage is not fully grammaticalized and their temporal marking tend to be affected by verbal semantics. According to the distribution bias hypothesis, properties of the input promote the incorporation of an inappropriate form-meaning relationship in the interlanguage and learners may misperceive the meaning and distribution of a particular form that they discover in the input (Andersen, 1990). And in the researcher's assumption, insufficient input might also contribute to learners' difficulty in temporal acquisition as observed in learners' failure to add target-like progressive markings to activities in the present study. Therefore, richer and less biased language input is very important for learners to acquire non-prototypical temporal markings.

A number of instruction methods have been proposed as a way to help learners overcome the misleading effect of lexical aspect. One of them is so-called input flood, that is, providing students with positive evidence of the target structure through meaning-focused activities. In her study, Bardovi-Harlig (1995) reports on the effect of an ESL instructional unit in which she provided an input flood of contextualized activity verbs in the past perfective to EFL learners. The results show that the input flood technique did benefit learners in their temporal markings. However, as Sharwood-Smith (1981) argued, it might not lead to acquisition if learners just process the input for meaning. Therefore, in our teaching practice, input can be enhanced to make it more salient to the learners by using such techniques as underlining, italicizing, bolding, coloring, etc. But as J. White (1991) pointed out, even though input enhancement could be a valuable technique to draw learners' attention to the target form in the input, it may not be effective when the target structure involves L1-L2 contrasts. Thus more negative evidence is

needed to make the target structure more salient in the input.

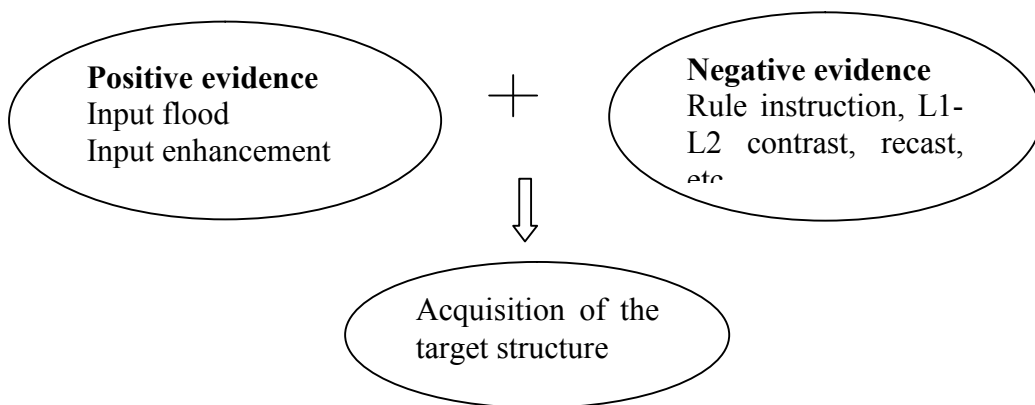
The importance of negative evidence was also noted in the present studies. When confronted with unmarked activity verbs in progressive context, learners tended to ignore the grammatical marker due to heavy overlapping between verb semantics of activities and progressive aspect. And this kind of ungrammatical usage implying what is not possible cannot be found in positive evidence. Therefore negative evidence is highly necessary for a more target-like temporal marking.

The necessity of negative evidence is further accentuated by the finding of L1 influence in the present studies. As White (1990, 1991) argued, learners may require negative evidence when their interlanguage contains rules more general than those of the TL because negative evidence allows the L2 learners to know what the TL disallows. Her argument found new support in the present studies. When dealing with ungrammatical progressive markings on states and achievements, Japanese participants gave a much weaker performance, which indicated a possible L1 influence, that is, they have to learn to restrict their L1 concept and know what is not possible in L2.

While many teachers are eager to embrace the current pedagogical view that communicative-based, meaning-driven instruction is the most beneficial to L2 learners, they are also frustrated to see the unsatisfactory level of accuracy in learners. The reason seems quite evident: learners are often left unaware of their errors since their non-target-like production tends to be overlooked by teachers as long as there is no communication breakdown. In order to solve this problem, the present researcher hopes to remind language instructors of the importance of negative evidence, especially explicit negative evidence which often appears in the forms of metalinguistic rule instruction, evaluative judgements and L1-L2 contrast with overt reference to a target form. Take the progressive marking for example. According to

Tomioka (1994), many Japanese textbooks just briefly explain the use of “be V-ing” under a section of “progressive aspect” and simply provide a list of verbs which do not take the progressive aspect. When teachers teach progressive aspect in this way, students are easily misled to have the impression that English “V-ing” is the equivalent of Japanese “V-te i” and that there are only a limited number of exceptions. Therefore, when teachers provide little explicit rule instruction and negative evidence, progressive marking would be more challenging for Japanese learners who tend to turn to their L1 concept because this kind of instruction can not guarantee a well internalized L2 concept. In this case, it is highly necessary for teachers to provide explicit negative evidence by pointing out the source of error and offering further explanation in order to raise learners’ awareness of it.

In summary, based on the current findings and above discussions, the researcher attempts to suggest the following approach to the practical tense-aspect instruction:



Conclusion

In summary, the present studies provide answers to the three research questions. First of all, with statistical results from Study One and Two, L1 influence was found to be an active factor in Japanese learners’ progressive

marking performance. And it was assumed that partial overlap between the L1 Japanese progressive aspect and that of the L2 English may trigger L1 interference evidenced in higher acceptance of incorrect progressive marking on achievement and state verbs on the side of Japanese learners. In contrast, the absence of tense markers in L1 Chinese seems to have facilitated Chinese learners' detection of base form errors in the present studies, and no hypothesized L1 influence was found on Chinese learners. Besides, differing from the Aspect Hypothesis, a strong progressive-activities association was not found in the results, which might be attributed to the heavy semantic overlapping between activities and progressive aspect. In addition to the statistical results, Study Two provides qualitative evidence for the existence of L1 influence and learners' awareness of lexical aspect in tense-aspect performance. Moreover, findings in the present studies highlight the importance of negative evidence in classroom teaching, especially with regard to the challenge Japanese learners face in learning to disallow what is not possible in TL.

The present studies are limited in the following aspects: first, although with a mixed research design more knowledge has been obtained in terms of learners' interpretation of temporal marking, there is still much room for more in-depth investigation. In the future research, longitudinal data will be included. Secondly, caution should be taken in interpreting the results from Study Two. Due to the small sample size, it can only be viewed as a tentative attempt to tap into learners' thinking process in their temporal performance. What is more, as Ellis (2004) argued, there is always a distinction between possessing the knowledge itself and the ability to verbalize it, regardless of whether the learner possesses the metalanguage. In the future, a larger sample will be used for more qualitative evidence.

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Appendix 1

Table 1 List of all the Target Verbs across Two Error Categories

	State Verbs		Activity Verbs		Achievement Verbs	
	Error	Correct	Error	Correct	Error	Correct
Base Form	feel →	felt	write →	wrote	kill →	killed
	appear →	appeared	lie →	lay	miss →	missed
	belong →	belonged	sail →	sailed	find →	found
	belonged		live →	lived		
	hate →	hated				

			jump → jumped
Progressive Form	was looking → looked was wanting → wanted were belonging → belonged was tasting → tasted	looked at → was looking at played → were playing talked → was talking worked → was working	was hearing → heard was dropping → dropped were you noticing → did you notice/have you noticed were breaking → broke