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Interaction Between Lexical Aspect and Narrative Construction in L2 Learners' Tense-aspect Morphology

Miki Shibata
Okinawa University

The use of Japanese tense-aspect morphology by L2 learners (59 English natives) was compared in obligatory contexts and in narrative discourse within the Aspect Hypothesis which refers to the linguistic phenomenon that aspectual features inherently denoted in a verb influence L2 learners' use of tense-aspect morphology. The results show that past inflection seems to play a certain textual role in narrative discourse regardless of L2 proficiency. On the other hand, regarding the present durative morphology '~*te i-ru*,' of which the English equivalent is '*is/are* V-*ing*,' lexical aspect of verbs limits a tense-aspect morpheme to a certain type of verb at the early stage of acquisition in both obligatory and narrative contexts. This suggests that the past tense morphology is used as a discourse marker while the present durative marker does not have a salient role in the narrative.

英語を母国語とする日本語学習者59人を対象に文法性判断テストと絵を見ながら話を作っていくタスクにおいてテンス(過去、現在、未来)・アスペクト(完成相、継続相)を表わす形態素の使用に違いが見られるかを調査した。先行研究は動詞の持つアスペクト的特徴が形態素の使用に影響すると報告しており、この現象をAspect Hypothesisと呼んでいる。本研究では、過去形の形態素の使用は初級レベ

ルの学習者の文法性判断テストにおいて動詞のアスペクト
に影響され、談話では日本語能力に関係なく話の筋を前へ
進める役割を果たしていることがわかった。また、継続相
の「テイル」に関してはどちらのタスクにおいても動詞の
アスペクト的特徴に影響されることがわかった。

The purpose of my study is to investigate how lexical aspect influences the use of Japanese tense-aspect morphology by the native speakers of English learning Japanese in both obligatory contexts and in narrative discourse.

Theoretical background
Tense-aspect morphology

Both tense and aspect are linguistically marked in many languages. Tense indicates temporal relation among the events or between an event and a speech time. For example, in English the past tense is marked by means of the verbal morphology ~ed as in *walked*. Besides tense, the event can be perceived either as ongoing or as completed, independent of its relation to any reference time. This internal status of the event is referred to as *aspect*. There are two kinds of aspect. One is lexical aspect and the other is grammatical aspect.

The most widely accepted lexical aspect is Vendler's (1967). As shown in Table 1, he categorized verbs into four groups based on the temporal properties of the situation to which the predicate refers: states, activities, achievements and accomplishments.

Table 1: *Vendler's lexical aspect*

Lexical Aspect	Explanation	Examples
State verbs	They refer to a static situation in which the event has a homogeneous character	*know, understand*
Activity verbs	They imply ongoing process. Efforts must be made continually in order for the dynamic situation to remain	*work, run*
Achievement verbs	They express events that occur at given points in time	*find, arrive*
Accomplishment verbs	They refer to a situation where there is a process leading up to the end point, at which the action is completed. Note that the accomplishment is a combination of an activity verb and a noun or prepositional phrase (e.g., *a book, to the store*)	*write a book, walk to the store*

Grammatical aspect denotes a speaker's viewpoint of a certain situation. The most prominent aspectual opposition is the contrast between the perfective and imperfective. The perfective indicates the view of a situation as a single whole, while the imperfective focuses on the internal structure of the situation.

Japanese tense-aspect system

The temporal and aspectual distinctions are linguistically marked in Japanese as well. With respect to tense, the verbal morphemes *-ru* and *-ta* distinguish the non-past tense (i.e., present and future) and the past tense respectively.[1]

1a. NON-PAST (habitual or future)
John wa asa hashi-RU.
TOP morning run-NONPAST
'John runs/will run in the morning.'

1b. PAST
Mary wa san-ji ni ie ni kaet-TA.
TOP 3 o'clock at home to return-PAST
'Mary returned home at 3:00.'

Aspectually, both *-ru* and *-ta* mark the perfective (Okuda, 1977). In Japanese, the imperfective aspect is marked by *-te i-* regardless of tense.

2a. NON-PAST IMPERFECTIVE
Mary ga arui-TE I-RU.
NOM walk-IMPERFECTIVE-NONPAST
'Mary is walking.'

2b. PAST IMPERFECTIVE
Mary ga arui-TE I-TA.

NOM walk- IMPERFECTIVE -PAST
'Mary was walking.'

Unlike English, the Japanese imperfective marker *-te i-* has a unique interpretation depending on the semantics of the verb. It refers to the progressive state in cases of activity verbs and resultative state in cases of achievement verbs.

3a. Activity: PROGRESSIVE
Mary ga arui-TE I-ru.
NOM walk-PROGGRESSIVE-NONPAST
'Mary is walking.'

3b. Achievement: RESULTATIVE STATE
Denki ga tsui-TE I-ru.
light NOM turn on-RESULTATIVE-NONPAST
'The lights are on.'

In (3a), *-te i-* conveys the progressive meaning; Mary is in the middle of walking. On the other hand, the *-te i-*form in (3b) indicates resultative state, implying that the event of the light turning on has taken place and that it is still on. The Japanese imperfective marker *-te i-* will be referred as the durative marker instead of the imperfective in this study so as to capture both progressive and resultative state meanings.

Acquisition of L2 tense-aspect morphology

The use of tense-aspect markers by both first language (L1) and second language (L2) learners has been investigated. It has been consistently observed that in the early stages of acquiring verbal morphology, the inherent lexical aspect of the verb influences the selection of the tense-aspect markers. For example, in L1 acquisition of English, children initially use past marking on accomplishment and achievement verbs much more frequently than on activity and state verbs. Likewise, they attached a progressive ~ing to activity verbs more frequently than to accomplishment and achievement verbs. This phenomenon is known as the *Aspect Hypothesis*.

Studies on the acquisition of verb morphology in L2 have also consistently found that learners use tense-aspect morphology to mark inherent aspect of a verb at the early stage of L2 acquisition, as do children acquiring L1 (e.g., Andersen, 1991; Bardovi-Harlig and Reynolds, 1995; Robison, 1990; Robison, 1995). The use of Japanese tense-aspect morphology in the L2 context was also investigated (Shibata, 1998a; Shibata, 1998b; Shirai and Kurono, 1998). The dual interpretations of the Japanese durative marker *-te i-* could challenge the Aspect Hypothesis since the same form appears in two different environments; the progressive and the resultative state.

Present study

The purpose of my study was to see whether the learners would perform differently in the obligatory context (e.g., a multiple-choice task) and the narrative discourse (e.g., interview) in terms of lexical aspect. In a series of previous studies, both of these facets were investigated independently. In narrative discourse, tense-aspect morphology is responsible for the textual function of organizing the text as well as the referential function of marking temporal relationship among the events. The present study used a multiple-choice task and a story-telling task to answer the following research questions:

Does the lexical aspect influence the use of L2 tense-aspect morphology in both obligatory contexts and narrative discourse?

Does the textual function of tense-aspect morphology overcome lexical aspect in the use of tense-aspect morphology in narrative discourse at the early stage of L2 acquisition?

Study 1: multiple-choice task

Fifty-nine native speakers of English learning Japanese either in formal or informal situation in Japan participated in the study. They were categorized into three groups based on a proficiency test. Twenty participants were placed in advanced, 20 in intermediate, and 19 in novice groups. Twenty native

speakers of Japanese also participated in the study as a control group.

Participants and data collection

The participants were requested to choose the most temporally appropriate verbal inflection in order to complete a short conversation. As presented in Table 2, four verbs were chosen for each verb type, and all verb types except state verbs appeared in four different temporal contexts. State verbs do not appear with the durative marking ~te i. The participant identified the temporal context in which the verb appeared, and judged which form was the most appropriate for the context. The questionnaire consisted of randomly ordered 64 questions using four verbs from each verb type under four different temporal conditions.

Table 2: *Verbs for each lexical aspect in four temporal conditions*

	Non-past	Past	Present durative	Past durative
	-ru/-u	-ta	-te i ~ta	~te i -ru
State	*mieru* 'be able to see,' *aru* 'there is/are,' *dekiru* 'be able to do,' *iru* 'need'		NA	NA
Activity	*hanasu* 'speak,' *utau* 'sing,' *aruku* 'walk,' *benkyoo-suru* 'study'			
Achievement	*owaru* 'finish: intransitive,' *aku* 'open: intransitive,' *shinu* 'die,' *kekkon-suru* 'get married'			
Accomplish-ment	*Tempura o tsukuru* 'make *tempura*,' *shoosetsu o issatsu yomu* 'read one novel,' *repooto o kaku* 'write a report,' *kimono o kiru* 'wear kimono'			

There was no time limit for the task. The data from the multiple-choice task were statistically analyzed. For each measured category, the highest possible mean is 4.

Results

Past marking –TA: accuracy on Achievement and accomplishment verbs

Figure 1 shows that the learners from all three non-native levels most accurately marked achievement verbs with the past morpheme in the past context. Similarly, all proficiency levels scored best when matching

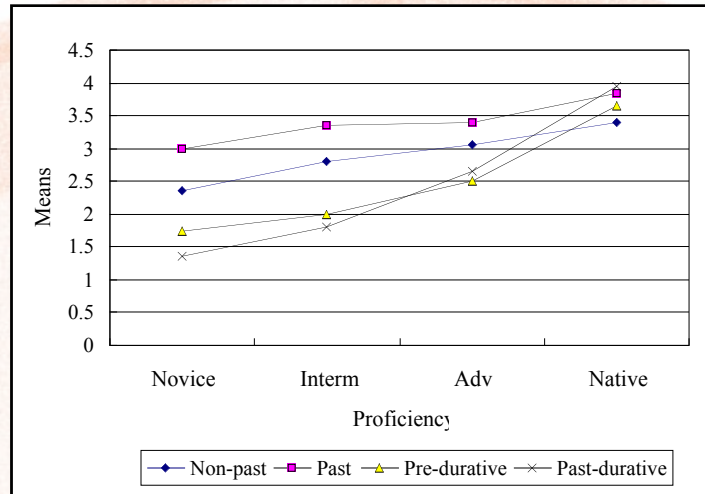accomplishment verbs and the past marker as presented in Figure 2.
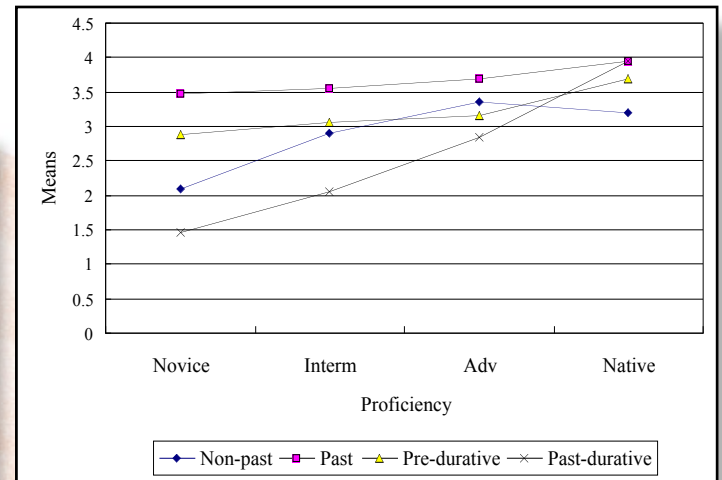

Figure 1: *Mean Frequency Scores of Achievement Verbs*

Figure 2: *Mean Frequency Scores of Accomplishment Verbs*

The beginners were less accurate on marking achievement verbs with present durative morphology. The mean of the beginners (M=1.73) was significantly lower than the advanced group (M=2.50) and the Japanese natives (M=3.65) in terms of present durative marker. This pattern, however, did not appear in the use of present durative marking with accomplishment verbs. The beginners were not reluctant to mark accomplishment verbs with present durative.

Frequency of past marking on achievement and accomplishment verbs across temporal contexts

I also investigated how frequently the participants marked achievement and accomplishment verbs with the past tense marker regardless of the temporal contexts. Figure 3 shows that the beginners tended to mark achievement verbs with the past tense morpheme under the present durative and past durative conditions more frequently than other three verb types. The means of interaction between achievement verbs and past inflection in the present durative condition were significantly different between the beginners (M = 1.26) and the Japanese natives (M = 0.15). The mean of the native speakers was also significantly lower than the intermediate and the advanced students.
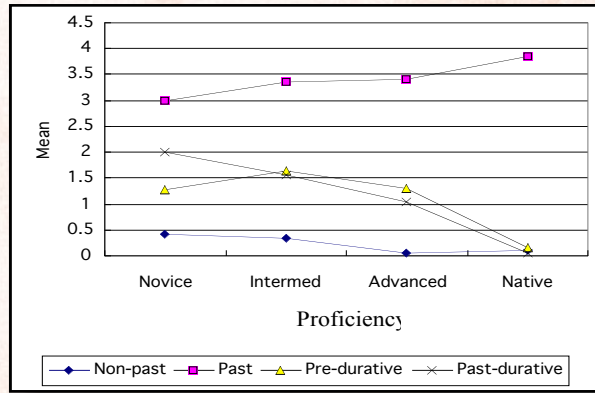
Interestingly, however, Figure 4 shows that the beginners correctly marked accomplishment verbs with present durative morphology in the present durative context. This shows that the learners start to mark process leading to the end, inherently encoded in accomplishment verbs, with present durative morphology.
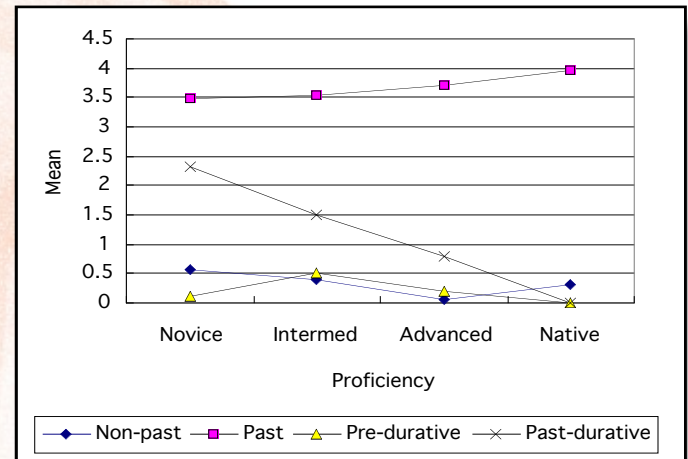

Figure 4: *Mean Frequency Scores of Accomplishment Verbs with Past in Four Temporal Contexts*

Figure 3: *Mean Frequency Scores of Achievement Verbs with Past in Four Temporal Contexts*

In the past durative context, the developmental process was found as shown in Figure 3 and Figure 4. That is, L2 learners at early stages used the past tense form as an alternative to the past durative morpheme to inflect achievement and accomplishment verbs. This

suggests that the beginners do not recognize imperfective aspect in the past.

Present durative ~TE I-RU

Figure 5 clearly demonstrates that the beginners associated the present durative morpheme with activity verbs most accurately (M=3.10) and with achievement verbs least accurately (M=1.73). The correct association of achievement verbs with present durative inflection increased along the proficiency levels. This tendency shows that learners mark action in progress prior to resultative state with present durative inflection.

The beginners inflected accomplishment verbs into present durative relatively accurately (M=2.89) as shown in Figure 5. This might be because they marked the process inherently encoded in accomplishment verbs with the present durative morphology as well as the on-going action encoded in activity verbs.
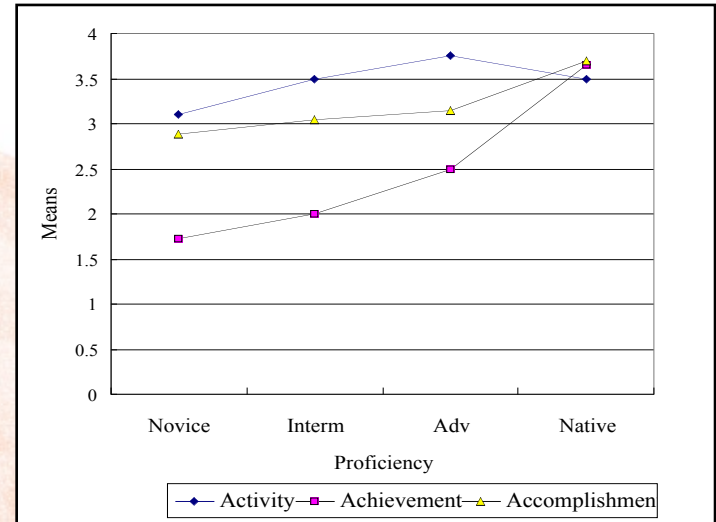

Figure 5: *Mean Frequency Scores of Present Durative ~TE I-RU*

Frequency of present durative marking on activity verbs across temporal contexts

Figure 6 shows that the low proficiency learners tended to mark activity verbs under the non-past condition with the present durative morpheme *~te i-ru* more frequently than the three other groups.
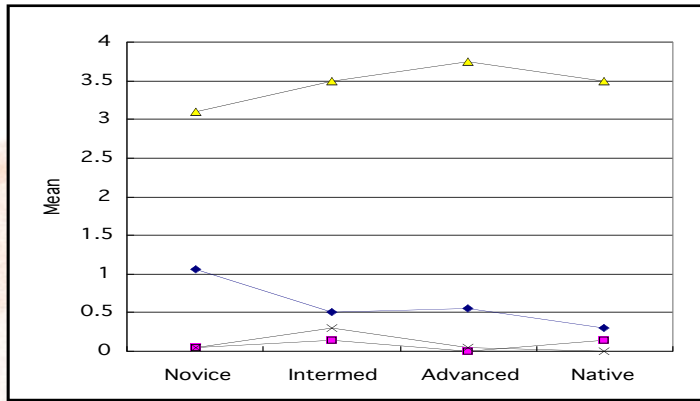
Figure 6: *Mean Frequency Scores of Activity Verbs with Present Durative in Four Temporal Contexts*

The mean of beginners was significantly higher than that of intermediate, advanced, and natives in the non-past context. However, regarding past and past durative inflections, the beginners did not show the tendency of extendedly marking activity verbs with present durative comparing with other groups. Rather they marked activities with the past tense morphology under both past and past durative conditions. Their tendency suggests that the beginners tended to recognize the notion of durativity in the non-past context while they may not identify imperfective aspect in the past.

Summary of study 1
The major findings of Study 1 were as follows:

(a) In both present and past durative contexts, the beginners started to mark achievement verbs exclusively with the past tense form.
(b) The beginners tended to mark the process inherently encoded in activity and accomplishment verbs with present durative inflection.
(c) *Pastness* was marked with the past morpheme across lexical aspects in the past durative context at the early stage of L2 acquisition.

Overall, the results confirm the *Aspect Hypothesis* as regards to using past inflection on achievement verbs and the present durative morphology on activity and accomplishment verbs at early stages of L2 acquisition.

Study 2: Aspectual marking in narrative discourse
The question to be addressed was whether the distribution characteristics in narratives show similar patterns to those observed in the multiple-choice task in which the results confirmed the *Aspect Hypothesis*. The same 59 English natives from Study 1 did the story-telling task. Another twenty native speakers of Japanese participated in this task as a control group. Participants were requested to narrate a story with a wordless picture book "*Frog, Where Are You?*" by Mercer Mayer (1969). The book consists of 24 pictures, in which their

sequential order presents a story. The story is about a boy who experiences various events in the woods while looking for his frog.

For the story-telling task, all clauses that had the present tense marking ~ru, the past tense marking -ta, the present durative form -te i-ru, and the past durative form -te i-ta were identified. Then, following Shirai's (1993, 1995) operational test (See Appendix), the verbs in individual texts were classified into four verb types.

Results
Past marking ~TA
Figure 7 demonstrates that regardless of proficiency achievement verbs appeared most frequently in narratives while accomplishment verbs least frequently.
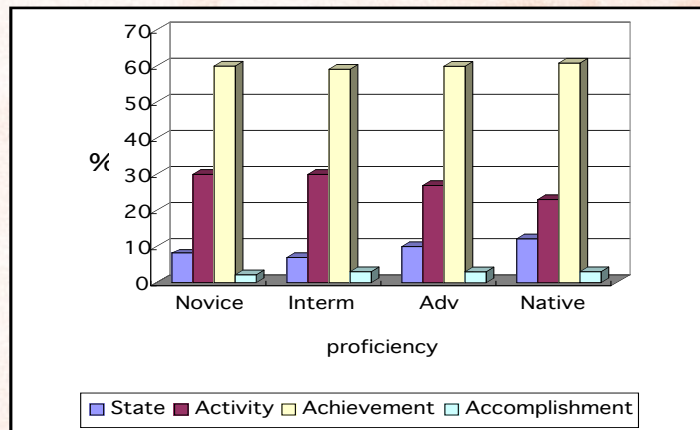

Figure 7: Percentages of Past

This uneven production is observed in some previous studies such as Bardovi-Harlig (1998), and Shirai and Kurono (1998). This tendency suggests that the dominant use of achievement verbs should be a unique feature of narrative discourse. Presumably the central meaning of past is completion of a punctual event prior to a moment of speech, and past tense inflection gives an impression of a story being told forward from the past. Given these semantic and textual functions, the association of past morpheme and achievement verbs is prototypical to forward the story line in narratives.

There is a strong association between past morpheme and achievement verbs across the groups; 60% by beginners, 59% by the intermediate group, 60% by the advanced group, and 61% by the native speakers. The percentage for the association of activity verbs and past inflection is also similar among the four groups; 30% by beginners, 30% by the intermediate group, 26% by the advanced group, and 23% by the native speakers. The distribution pattern of the past morphology -ta in narratives does not differ drastically among the groups.

Present durative ~TE I-RU
As presented in Figure 8, the beginners associated the present durative marker ~te i-ru with activity verbs more frequently than achievement verbs (67% vs. 28%). Along the proficiency levels the association between activity verbs and present durative inflection decreased

and the one between achievement verbs and present durative inflection increased. The result supports the *Aspect Hypothesis*. Also it suggests that the progressive meaning first emerges in the L2 learners' use of present durative inflection.
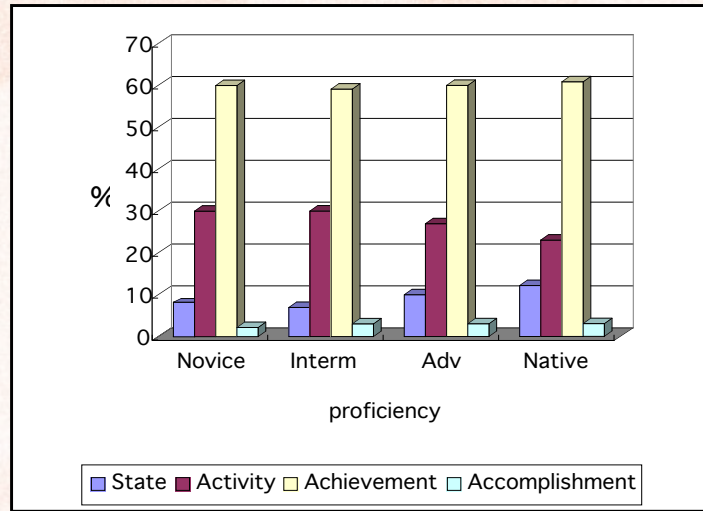

Figure 8: *Percentages of Present Durative*

Past durative ~TE I-TA

The comparison of raw frequency data of past durative presented in Table 3 shows that the beginners were not productive in the use of *~te i-ta*.

Table 3: *The Raw Frequency Data of ~TE I-TA on Activity and Achievement Verbs in Narratives*

	Activity	Achievement
Novice	17	15
Intermediate	31	30
Advanced	62	26
Native	26	25

Figure 9 shows that there is no developmental pattern along proficiency level. The distribution pattern of past durative inflection differs from the one observed in the use of present durative. The advanced learners associated the past durative form with activity verbs more frequently than with achievement verbs (68% vs. 29%). On the other hand, the beginners did not dominantly mark activity verbs with past durative inflection (50% of the activity and 44% of the achievement). The next section shows the distribution of a single lexical aspect on tense-aspect morphology.
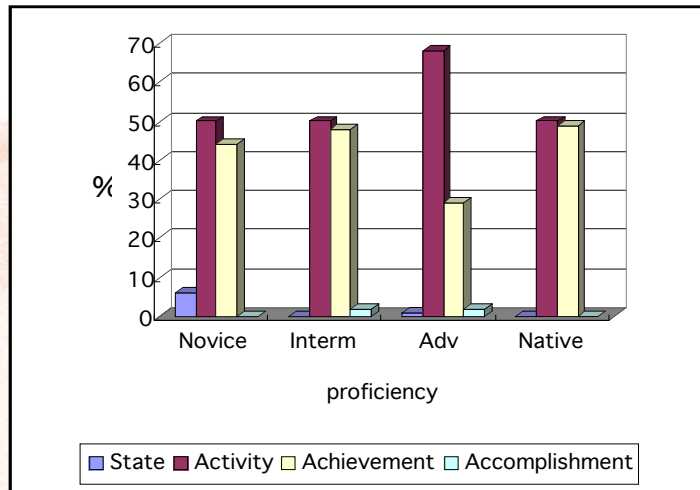
Figure 9: *Percentages of Past Durative*

Distribution of activity and achievement verbs on tense-aspect morphology

Figures 10 and 11 show the distribution of activity and achievement verbs on tense-aspect morphology. As shown in the figures, both activity and achievement verbs were most frequently marked with past than any other morphemes. The frequent use of past marking on both lexical aspects suggests that the past form is the default in a narrative. Unlike the distributional patterns of the present durative presented in Figure 8, Figure 10 does not show the frequent association of activity verbs

and the present durative in the novices' and intermediate learners' narratives. The distributional pattern of present durative and the one of activity verbs demonstrate the different picture. This merits further investigation in the future.
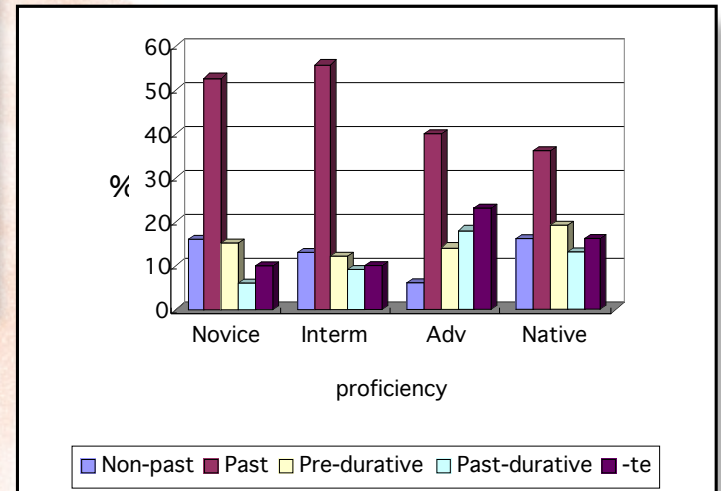

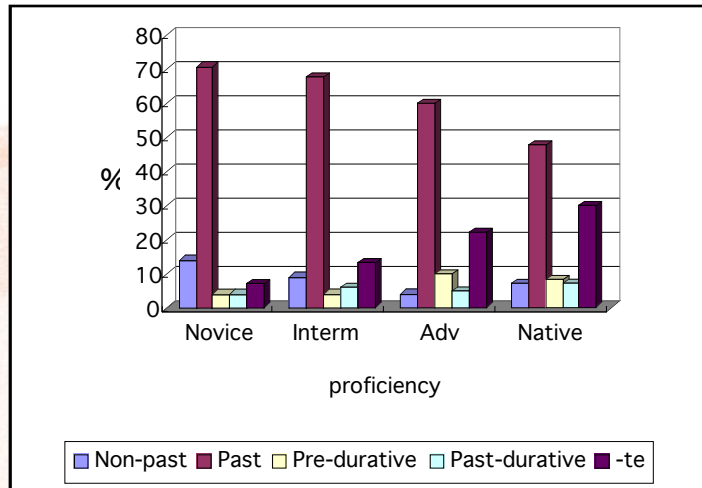Figure 10: *Percentages of Activity Verbs*

Figure 11: *Percentages of Achievement Verbs*

Summary of study 2

The major findings of Study 2 are as follows:

  a. Regardless of proficiency, past was extensively associated with achievement verbs when organizing narrative discourse.
  b. The beginners in this study attached the present durative marker *-te i-ru* to activity verbs in narratives.

Discussion
Influence of lexical aspect on the use of Japanese tense-aspect morphology

Study 1 supported the Aspect Hypothesis with respect to using past inflection on achievement verbs. In both present and past durative contexts, the beginners exclusively marked achievement verbs with the past tense form. Gradually the temporally appropriate verbal morphemes were chosen for the achievement verbs in the obligatory contexts. In Study 2, on the other hand, the results were not consistent with the Aspect Hypothesis in terms of past marking. In narratives all participants extensively associated past with achievement verbs. Activity verbs were also most frequently marked with past. The frequent use of past suggests that it should play a certain textual role in narrative discourse.

Both Study 1 and Study 2 showed that the present durative morphology *-te i-ru* occurred with activity verbs most frequently among the four verb types. In Study 1, the beginners marked accomplishment verbs with present durative inflection as well as activity verbs. This was interpreted as showing that L2 learners of Japanese started to use present durative inflection to mark the process of leading to the completion encoded in accomplishment verbs as well as the process of on-going action encoded in activity verbs. In Study 2, the present durative marked the activity verbs in the beginners' narratives. This shows that the learners start

to mark process inherently encoded in activity and accomplishment verbs with present durative. That is, lexical aspect influences the association between the present durative and activity and accomplishment verbs in narrative discourse. Perhaps, unlike past inflection, the durative marker does not have a salient role in narratives.

Based on the above observations, I propose that both lexical aspect and narrative structure account for the different developmental stages of L2 tense-aspect morphology. That is, L2 learners begin to use the L2 tense-aspect morphology to mark lexical aspect inherently encoded in a verb, and they expand its function to the textual in order to construct the narrative discourse. Yet the speed of shifting from lexical aspect to textual function differs among the morphemes. The past tense form emerges as the discourse marker at a fairly early stage of L2 acquisition, and the durative inflection lags behind the past.

Conclusion

I conclude that L2 tense-aspect morphology starts to mark inherent lexical aspect, and the aspectual marking is shifted to the textual function relatively early in the case of the past tense while the present durative lags behind the past.

Footnote:

1. These are the informal forms. Their formal/polite forms are ~*masu* and ~*mashita*.

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Appendix

(Shirai, 1995, pp. 579-580)

Tests for inherent aspect (Each test is used only on the clauses remaining after the preceding test.)

Step 1: State or non-state?

Can it refer to present state in simple present tense without having a habitual or vivid-present interpretation?

If yes---------> State (e.g., <u>Tukue no ue ni hon ga aru</u>. 'There is a book on the table.')

If no----------> Non-state (e.g., <u>Boku wa gohan o taberu</u>. 'I will eat rice.' or 'I [often/usually] eat rice.')

<div align="center">----->Go to Step 2</div>

Step 2: Activity or non-activity?

If you stop in the middle of the action, does that entail that you did the action?

If yes-------> Activity (e.g., <u>aruku</u> 'walk')

If no--------> Non-activity (e.g., <u>eki made aruku</u> 'walk to the station')

<div align="center">----> Go to Step 3</div>

*If it is difficult to distinguish between 'punctual verbs denoting resultative state' and 'activity verbs denoting action in progress,' use the following tests (a), (b) and/or (c).

Is it possible to say 'X wa Y (=place) de V-teiru,' and if so, is it more natural than to say 'X wa Y ni V-teiru'?

If yes to both questions, activity. (e.g., <u>John wa soko de neteiru</u>. 'John is sleeping there.')

If no, resultative state (and therefore the verb is achievement). (e.g., <u>John wa soko ni/*de sundeiru</u>. 'John lives there.')

(b) Is it possible to say V-hajimeru without iteration involved?

If yes, activity. (e.g., <u>hanasi-hajimeru</u> 'start talking')

If no, resultative state (and therefore the verb is achievement). (e.g., *<u>suwari-hajimeru</u> 'start sitting')

(c) Does it have 'simultaneous activity' reading in the frame 'V-nagara'?

If yes, activity. (e.g., <u>hanasi nagara</u> 'while talking')

If no, may be resultative state (e.g., <u>siri nagara</u> 'although knowing')--but not necessarily, since this test also involves 'agency.'

Step 3: Accomplishment or achievement? (Punctual or non-punctual) <u>If test (a) does not work, apply test (b), and possibly (c).</u>

If "X wa Y de V-ta" (Y=time; e.g., 10 minutes), does that entail X was involved in V-ing (i.e., V-teita) during that time?

If yes------->Accomplishment (e.g., <u>Kare wa go hun de itimai no e o kaita</u>. 'He painted a picture in five minutes.')

If no-------->Achievement (e.g., <u>Kare wa go hun de itimai no e ni kizuita</u>. 'He noticed a picture in five minutes.')

(b) Can 'V-teiru' have the sense of 'action-in-progress'?

If yes------->Accomplishment (e.g., <u>Kare wa oyu o wakashiteiru</u>. 'He is heating water until it boils.')

If no--------->Achievement (e.g., <u>Kare wa sono e ni kizuiteiru</u>. 'He has noticed the picture.')

(c) 'X wa Y de V-daroo' (Y=time; e.g., 10 minutes)='X wa Y goni V-daroo'

If no-------->Accomplishment (e.g., <u>Kare wa itijikan de e o kakudaroo</u>

'He will paint a picture after an hour' is different from <u>Kare wa itijikan go ni e o kakudaroo</u> 'He will paint a picture after an hour,' because the former can mean he will spend an hour painting a picture, whereas the latter does not.)

If yes------->Achievement (e.g., <u>Kare wa nihun de utai-hajimeru daroo</u>

'He will start singing in two minutes' can have only one reading, which is the same as in <u>Kare wa nihungo ni utai-hajimeru daroo</u> 'He will start singing after two minutes,' with no other reading possible.)