L2 Acquisition of Grammatical Aspect in English

Noriko Yoshimura, Mineharu Nakayama, Atsushi Fujimori, and Koichi Sawasaki

1. Introduction

This paper discusses the acquisition of form-meaning relations of past tense and present perfective in English by Japanese speaking learners of English (JSE). Several recent studies in second language (L2) acquisition have indicated that L2 learners have difficulty in acquiring English tense and aspect properties due to morphosemantic discrepancies between their first language (L1) and L2 (e.g., Bardovi-Harlig, 2000; Gabriele, 2009; Montrul & Slabakova, 2002). Such difficulty was manifested in Japanese EFL learners’ misuses of the past tense for the present perfect in their L2 English composition, for example.

(1) a. The internet influenced a lot on the business. (L2 production)
   (The internet has influenced the business side a lot.)
   b. Thanks to them, our life became more comfortable. (L2 production)
   (Thanks to them, our life has become more comfortable.)

Both sentences in (1) are taken from the essay test answers by Japanese students learning English in the 6-week study abroad program (Yoshimura & Nakayama, 2009: 366-367 and Yoshimura & Nakayama, 2010: 90). They were written by different students, but both discussed what had the most impact on our lives. The student who produced (1a) was explaining the impact of the Internet while the student who produced (1b) discussed the contribution of communication technology. In both cases, they treated the situations as a past event and not an ongoing or current event. Thus, the underlined past tensed verbs were considered misused: They should be has influenced in (1a) and has become in (1b). This erroneous performance raises the question of whether the Japanese learners can understand the aspectual properties of past tense and present perfect in L2 English.

The present study explores this issue by conducting a narrative-based questionnaire on Japanese college students and Japanese near-native speakers of English with respect to their knowledge of the aspectual semantics of the past tense -ed distinct from the present perfective have V-en. We show that JSE learners experience difficulty with the form-meaning mapping for a completed, durative interpretation in the past and for an ongoing, durative interpretation in the present perfect in L2 English. In particular, we argue that L1 transfer impedes their understanding of the aspectual semantics due to the irrelevance of the aspectual [+durative] feature to the Japanese past tense –ta form and the dual aspectual function of the Japanese present progressive –te iru form in Japanese, with L1

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morphosemantic effects emerging in L2 form-mapping operation. The paper is organized as follows: In section 2 we outline background information regarding the aspeuclal semantics of past tense and present perfective forms in L1 Japanese and L2 English. In section 3 we discuss the details of our experiment. Our discussion and concluding remarks are provided in sections 4 and 5, respectively.

2. Background

Japanese is distinct from English with respect to the morphosemantics of tense and aspect. The English past tense –ed and the Japanese past tense –ta can both denote that an event took place in the past relative to the utterance time. However, Ogihara (1999) claims that unlike the past form –ed in English, the past form –ta in Japanese is a ‘relative tense’ morpheme, not an aspect morpheme (Soga, 1983). If we follow this view, the plausible assumption is that the aspeual [+durative] feature is not specified in the Japanese past –ta form. In other words, unlike English, Japanese is a language which cannot encode the durative nature of an event or a state in the grammar of past tense. Instead, such duration must lexically be manifested, as shown in (2).

(2) a. Taroo-wa eigo-o benkyoo-si-ta
   Taro-TOP English-ACC study-do-PAST
   ‘Taro studied English.’
   b. Taroo-wa eigo-o ichi jikan benkyoo-si-ta
   Taro-TOP English-ACC one hour study-do-PAST
   ‘Taro studied English for one hour.’

These sentences are on par with (3a) and (3b) in English, respectively.

(3) a. Taro studied English.
   b. Taro studied English for an hour.

(2a) is interpreted to mean simply that an event of Taro’s studying English took place in the past (3a) (e.g., in response to what did Taro study at college?). On the other hand, (2b) is interpreted to convey that the particular event occurred and lasted for an hour in the past (3b) (e.g., in response to how long did Taro study English?). Given that the verb benkyoo-suru ends with the past -ta form in both sentences, it is the adverbial phrase ichi jikan ‘for an hour’ that crucially distinguishes (2b) from (2a) in encoding the durativity of the event.2

More important for the present discussion is the well-known observation that the Japanese –ta form is also used for a perfective interpretation on par with the present perfect have+en in English (Nakau, 1976; Teramura, 1978). Thus, (2) can be translated in (4) as well.

(4) a. Taro has studied English.
   b. Taro has studied English for an hour.

As illustrated by the difference in the readings between (3) and (4), the –ta morpheme functions to locate the occurrence of an event or a state at either a definite or an indefinite interval in the past. More specifically, the –ta form for the past tense in (3) is used to signal the occurrence of Taro’s studying English at a definite past time whereas the –ta form for the present perfect in (4) is used to indicate the occurrence of the particular event at some time in the past relative to the utterance time. Thus, the mapping of the –ta morpheme onto these two English interpretations is not clear-cut, but quite subtle (Nakau, 1976; Teramura, 1978).

Furthermore, if we adopt Kindaichi’s (1950) and Ogihara’s (1999) view that the –te iru form in Japanese can yield a ‘continuous’ interpretation in the case of durative verbs, it is equivalent to the present perfect have+en in denoting an ongoing, durative event or state. For example, in the case of (4),

2 Note that an activity or accomplishment verb can yield a durative interpretation with the –te iru form.
the translation of (2), the present perfect sentence can also be translated into (5) with the –te iru form (Kindaichi, 1950; Okuda, 1978; Washio and Mihara, 1997).

(5) Taroo-wa eigo-o (ichi jikan) benkyoo-si-te-iru.
   Taro-TOP English-ACC one hour study-do-te-iru PRESENT
   ‘Taro has studied English (for an hour).’

Recall that (2) with –ta is interpreted to mean that the relevant event occurred at a definite or indefinite time in the past relative to an utterance time. In contrast, (5) with –te iru is interpreted to mean that the relevant event took place in the past and is still ongoing, continuous at the utterance time.\(^3\) Note, however, that without the interval adverbial ichi jikan ‘for an hour,’ the sentence may yield a present progressive reading such as Taro is studying English (see f.n.2).

This dual correspondence of have+en to the –ta and –te iru forms are further illustrated in (6).

(6) a. John-wa nihon ni go nen kan taizai-si-ta
   John TOP Japan in five years for stay PAST
   ‘John stayed/has stayed in Japan for five years.’

b. John-wa nihon ni go nen kan taizai-si-te-iru
   John TOP Japan in five years for stay PRESENT
   ‘John has stayed in Japan for five years.’

The two sentences in (6), the one with –ta and the other with –te iru, can be translated as in (7).

(7) John has stayed in Japan for five years.

Again, (6a) with –ta is interpreted to mean that the event of John’s staying in Japan took place at a past time relative to an utterance time, while (6b) with –te iru is interpreted to mean that the relevant event took place in the past and is imperfective, ongoing at an utterance time. More precisely speaking, (6a) yields a [+completed, -durative] interpretation as a response to how long John was in Japan in a conversation taking place outside Japan, whereas (6b) yields a [-completed, +durative] interpretation as a response to how much time has passed since John came to Japan in a conversation taking place inside Japan. It is important to emphasize that the durative nature of the event derives from the adverbial phrase go nen kan “for five years” in the case of (6a) with the past tense –ta whereas it obtains by means of the present perfective –te iru together with the given adverbial in the case of (6b).

The above mentioned aspectual morphosemantic discrepancies between English and Japanese are summarized in Table 1 below. To recap, (2a) is [+completed, -durative] for either -ed in (3a) or have+en in (4a) whereas (2b) is [+completed, +durative] for either -ed in (3b) or have+en in (4b). In addition, (7) is [+completed, -durative] for (6a) or [-completed, +durative] for (6b). Based on these form-meaning differences between the two languages, we investigate whether JSE can acquire the subtle aspectual semantics of the past tense and the present perfective in L2 English from the viewpoint of L1 Japanese effects.\(^5\) If we assume that there will be L1 morphosemantic transfer, we can predict

\(^3\) This perfective reading is available for the activity and accomplishment verbs. In contrast, the –te iru form yields a resultative state reading for achievement verbs. The acquisition of resultative interpretations for the present perfect will be discussed in a separate paper (Yoshimura et al., 2013).

\(^4\) Oghihara (1999) proposes that the morpheme –te in the te iru form bears the feature [+perfect] responsible for “experiential” interpretations, like in (i).

(i) Taro-wa itaria ni gokai it-te-iru
   Taro-TOP Italy to five time go PRESENT
   ‘Taro has been to Italy five times.’

that JSE encounter difficulty in acquiring: (I) the aspectual [+durative] feature in English past tense, (II) the perfective meaning of *have*+*en* on par with the –*ta* form, and (III) the imperfective, ongoing aspect of *have*+*en* parallel to the –*te iru* form. On the other hand, (IV) the simple past for a completed past event (i.e., a non-durative event) should not be challenging for JSE because its meaning is basically similar to that of the –*ta* form in L1 Japanese. The present study was conducted to see whether these predictions are empirically borne out for Japanese college students learning English in Japan. This study also investigated how the degree of proficiency is related to the role of L1. Finally, our analysis will leave some implications for the form before meaning hypothesis in the field of the L2 acquisition of tense and aspect (Bardovi-Harlig, 2000; Gabriele, Martohardjono, & McClure, 2003; Montrul & Slabakova, 2002).

<table>
<thead>
<tr>
<th>Morphological marking</th>
<th>Semantic features</th>
<th>English (L2)</th>
<th>Japanese (L1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAST</td>
<td>[+completed, -durative]</td>
<td>-ed</td>
<td>-ta</td>
</tr>
<tr>
<td></td>
<td>[+completed, +durative]</td>
<td>-ed</td>
<td>-ta</td>
</tr>
<tr>
<td>PRESENT PERFECT</td>
<td>[+completed, -durative]</td>
<td><em>have</em>+<em>en</em></td>
<td>-ta</td>
</tr>
<tr>
<td></td>
<td>[-completed, +durative]</td>
<td><em>have</em>+<em>en</em></td>
<td>-<em>te iru</em></td>
</tr>
</tbody>
</table>

### 3. Experiment

#### 3.1. Participants

The participants were 121 Japanese speaking learners of English, 17 Japanese near-native speakers of English, and 34 native speakers of English. The learners, who were studying at a college in Japan at the time of the experiment, were divided into three groups based on their TOEIC (Test of English for International Communication) scores: Group Low (LOW, *n* = 41, TOEIC 456.1, SD 28.63), Intermediate (INT, *n* = 38, TOEIC 537.4, SD 23.65), and Advanced (ADV, *n* = 42, TOEIC 674.3, SD 69.51). The Japanese near-native speakers of English (NN, *n* = 17) were studying at a Canadian university or teaching at an American university for more than five years.

#### 3.2. Task

The participants were given a questionnaire employing a truth value judgment task (cf. Crain and McKee, 1986). In this task the learners were asked to read short passages and judge whether the corresponding sentences correctly depicted the situations they just read.

Four sentence types were used in the task (past vs. present perfective with [+/-durative] situations). As part of the test materials, narratives were provided in L1 Japanese while the target sentences were in L2 English. There were three matched and three mismatched situations for the four morphosemantic relations. Sample test sentences are provided in (8) and (9). The questionnaire also included 16 fillers (8 True and 8 False sentences) by which the participants were to be filtered and were assumed to have no True bias in the current task.

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6 The participants who correctly answered fewer than 12 fillers out of 16 (less than 80%) were filtered out: 61 Japanese speakers of English, 2 near-native speakers of English, and 3 native speakers of English were excluded from the discussion.

7 Because they used English daily as graduate students or teaching professionals at North American universities for more than five years, they were regarded as near-native speakers of English.

8 Note in passing that the mismatched situations, i.e., the False sentences, are not relevant to tense and aspect because the duration specified by an adverbial in each case was incorrect.
(8) a. Completed, Non-durative Past Event

John is talking to Junko about the table he bought.
John: “I ordered a table from a furniture company two weeks ago. Last night they delivered it to my place.”

ジョンは自分が買ったテーブルについて順子と話しています。
ジョン: ２週間前に家具屋さんでテーブルを注文してたんだけど、やっと昨日、家まで配達してくれたよ。

John bought a table from the furniture company.  TRUE

b. Completed, Durative Past Event

James went shopping by bicycle. On his way back, he got a flat tire. He had to carry his bike back home and it took about an hour. At his house, he met Abby and explained what happened.
James: “I got a flat tire an hour ago.”

ジェームスは自転車で買い物に行った帰り道、タイヤがパンクしてしまいました。1時間かけて自転車を引いて帰宅すると、アビーと会ったので説明しています。
ジェームス: 1時間前に自転車のタイヤがパンクしてきょう。

James carried the bicycle for one hour.  TRUE

(9) a. Completed, Non-durative Present Perfect Event

It is Tuesday morning. Katy is meeting Alex at a shopping mall. Katy: “How are you doing, Alex?”
Alex: “I am OK. I quit my job last Tuesday, but found a new job yesterday.”

今日は火曜の午前。ケイティはショッピングモールでアレックスと会っています。
ケイティ: 元気、アレックス?
アレックス: うん、なんとかね。先週の火曜日に仕事を首にちょっとしていて、
でも昨日、新しい仕事を見つけたんだ。

Alex has changed his job.  TRUE

b. Incomplete, Durative Present Perfect Event

It is August 15, 2011. Jiro is talking to Mary on the phone about his life in Canada.
Jiro: “A week ago I came to Canada with a working holiday visa. I am now studying linguistics at a college in Montreal. I will be here till the end of the term.”

2011年8月15日。次郎はカナダでの生活について電話でメアリーと話しています。
次郎: 1週間前にワーキングホリデー・ビザでカナダに来たんだけど、今はモントリオールの大学で言語学を勉強しているんだ。学期が終わるまではここにいるよ。

Jiro has stayed in Canada for one week.  TRUE

Thus, with the four sentence types above, three different predictions can be made on the L1 transfer assumption: The learner groups will perform well on (8a) because there is no form-meaning mismatch between –ed and –ta; however, they may find (8b) rather difficult to accept because the –ta form, unlike –ed, cannot induce a [+durative] effect. Further, they would face great difficulty accepting (9a) and (9b) correctly because there are morphosemantic mismatches between have+en and –ta in the former and between have+en and –tei ru in the latter.
3.3. Results

Table 2 shows the experimental results regarding the correct acceptance rates of each sentence type (forms x durativity) by the participant groups. The Control group almost perfectly accepted the past tense and the present perfect sentences, regardless of durative or non-durative nature of the event. The NN group also performed well relative to the Control group; their acceptance rates for both past and present perfect forms were around 90%, regardless of the durativity of the event. In contrast, the ADV’s acceptance rate for the durative past event was below 80% although their acceptance rates for non-durative past and present perfect events were above 90%. It is also noted that the INT’s and LOW’s acceptance rates for durative present perfect events were below 80%.

Table 2. Correct Responses for TRUE conditions (n=172)

<table>
<thead>
<tr>
<th></th>
<th>LOW (41)</th>
<th>INT (38)</th>
<th>ADV (42)</th>
<th>NN (17)</th>
<th>Control (34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAST</td>
<td>[-durative]</td>
<td>91.06%</td>
<td>88.60%</td>
<td>92.86%</td>
<td>94.12%</td>
</tr>
<tr>
<td></td>
<td>[+durative]</td>
<td>80.49%</td>
<td>85.09%</td>
<td>77.78%</td>
<td>86.27%</td>
</tr>
<tr>
<td>PRESENT PERFECT</td>
<td>[-durative]</td>
<td>87.80%</td>
<td>89.47%</td>
<td>92.06%</td>
<td>92.16%</td>
</tr>
<tr>
<td></td>
<td>[+durative]</td>
<td>74.80%</td>
<td>75.44%</td>
<td>86.51%</td>
<td>88.24%</td>
</tr>
</tbody>
</table>

We further performed a 2 x 2 x 5 ANOVA to statistically compare the correct acceptance rates for the True condition between variables. Independent variables are forms (Past/Present Perfect) and durativity ([-/+durative]) as within-group variables, and participant groups (LOW/INT/ADV/NN/Control) as between-group variables. The ANOVA revealed significant main effects on durativity ($F(1,167)= 25.924, p< .001$) and on groups ($F(4,167)= 6.441, p< .001$). There was no main effect on forms ($p> .1$). Post-hoc Bonferroni test revealed the following: As for Past -ed, the INT and the Control groups show a significant difference in non-durative events ($p=.034$), but no other significant differences were found between any two groups among LOW, ADV, NN, and the Control groups. This means that overall, the participant group experienced little difficulty understanding the completed, non-durative past event, as in (8a). Our prediction in (IV) is thus supported. On the other hand, the LOW and the ADV groups show a significant difference between durative vs. non-durative events ($p= .012$ and $p< .001$, respectively). This means that the completed, durative past event (8b) was more difficult than (8a), which supports our prediction in (I) (see Figure 1 below for the durative contrast in the past tense condition). This finding is further supported by the ADV group’s deviation from the Control group on the acceptance of durative events ($p< .013$). In short, JSE had difficulty with the [+durative] feature in English past tense.

![Correct Response Rates for Past Tense Condition](image)

Figure 1. Correct Response Rates for Past Tense Condition

As for the present perfect *have*+en, the LOW and the INT groups significantly differed from the Control group in the durative event ($p=.012$ and $p=.021$, respectively). See Figure 2 below. This

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9 Note that the results exclude one test sentence the Control group did not answer uniformly.
means that LOW and INT groups had difficulty understanding the durative present perfective event as in (9b). Within each group, the LOW and the INT groups exhibited a significant difference between completed and ongoing events ($p=.002$ and $p<.001$, respectively). However, the ADV and the NN groups did not differ from the Control group in their performance. These results demonstrate that our predictions in (II) and (III) are half borne out because it seems difficult for JSE with lower English proficiency to acquire the present perfective in general, but this difficulty can be overcome as their proficiency increases.

Finally, the INT significantly differed ($p=.041$) and the ADV marginally differed ($p=.051$) in the durative between the past and the present perfective. This suggests that the past tense is easier than the present perfective for JSE to acquire in English. However, this is not a surprising result from the perspective of L1 transfer, given the existence of more complicated morphosemantic mismatches in the present perfective than in the past tense.

4. Discussion

The overall results support our predictions: The durative events, either completed or ongoing, were more difficult than the non-durative events in English past tense and present perfective sentences for JSE ($p<.001$) (cf. past vs. present perfect sentences among JSE, $p>.428$). Regarding the past tense, we argue that JSE in general transfer the semantics of the L1 form –ta. More specifically, they misunderstood that like the Japanese past form –ta, the L2 form –ed is unspecified for the durativity of the event. In other words, our prediction set forth in (I) (JSE’s difficulty with the aspectual [+durative] feature) was borne out by the results of the present study. However, the NN group’s native-like performance in the past events suggests that it is possible for JSE to acquire the aspectual [+durative] feature in English (i.e., learnable) despite the fact that it is not specified in Japanese. 10 Note that the past tense for a completed event did not pose a problem for JSE, as we predicted in (IV).

With respect to the present perfect, our prediction in (II) was to some extent borne out because the lower JSE showed their initial difficulty with the present perfective meaning of have+en similar to that of the –ta form. But the intermediate and advanced learners’ high accuracy on this use of the present perfect in English indicates that their difficulty can be overcome as their English proficiency increases. In this regard, we assume that it is possible for JSE to understand that a complete event can be manifested in both the past tense and the present perfect. 11 The JSE had even more difficulty with the

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10 Slabakova (2009) maintains that it is possible for Bulgarian ESL learners to acquire the aspectual feature [+perfective] in English, which is not manifested in their L1.

11 Some native speakers of English we consulted in the survey mentioned that they preferred the past tense rather than the present perfect to describe the completion of an event in the past relative to an utterance time.
incomplete, ongoing interpretation manifested in the present perfect, supporting our prediction in (III).

We argue that a morphosemantic mismatch between the L1 form *V-te iru* and the L2 form *have*+*en* is a factor responsible for this problem. As briefly mentioned in section 2, the form *–te iru* denotes a progressive event as well as an “experiential” state. A pair of sentences illustrate the two readings in contrast, with the *–te iru* form being affixed to the verb stem *taizai-suru* ‘stay’: (10a) is for an experiential reading whereas (10b) is for a progressive reading.

\[(10) \text{a. John-wa nihon ni go nen kan taizai-si-te-iru. (6b) John has stayed in Japan for five years.}\\
\text{b. John-wa nihon de takai hoteru ni taizai-si-te-iru. John is staying at an expensive hotel in Japan.}\]

This ambiguity between the experiential and progressive interpretations seems to make the JSE misinterpret the *–te iru* as denoting a progressive nature rather than an experiential nature of the event or the state. We assume that this interpretive confusion coupled with the aspectual [+durative] feature is responsible for the less proficient JSE’s poorer performance in the present perfect than in the past tense (74.80\% vs. 80.49\% for the LOW group, and 75.44\% vs. 85.09\% for the INT group).

Yet we have to emphasize that the above mentioned difficulties due to transfer of L1 semantics in L2 acquisition of tense and aspect can be overcome as English proficiency increases because the results show that the NN group performed similarly to the Control group in the past tense and the present perfect, both with the aspectual [+durative] feature (see also Gabriele & Martohardjono 2005, Kaku et al. 2008). This is also compatible with our preliminary experimental results (Fujimori et al., 2012): Although the JSE with lower English proficiency had difficulty in properly rejecting an ongoing, durative event and accepting a completed, non-durative event for the past form *–ed*, the advanced learners’ performance improved up to the level of the Control group.

A few remarks are in order with respect to the form-before-meaning hypothesis. Yoshimura & Nakayama (2009) reported the relatively low omission rates of *–ed* in obligatory contexts in the essay compositions by 30 Japanese college students, i.e., 2.7\% for the lower proficiency group and 8.9\% for the higher proficiency group. From this result they maintained that the morphological supplance of *–ed* does not constitute a problem for the JSE. Similarly, Gabriele & Martohardjono (2005) administered a morphology interpretation task and a morphology preference task on 19 Japanese speaking learners of English. Their analysis revealed that although the learners showed difficulty with the past tense on the interpretation task, they selected the past form as perfectly as the native speakers of English on the preference task. Gabriele & Martohardjono interpreted these results as supporting evidence for the form before meaning hypothesis. Kawasaki (in preparation) found that 32 Japanese college students performed quite well on the selection of either past tense or present perfective in a morphology task similar to the one employed in Gabriele & Martohardjono (2005). For example, they correctly selected the past form *stayed* at 90.6\% in (11) and the present perfective *have worked* at 87.5\% in (12).

\[(11) \text{A: Where did you stay during the school trip?}\\
\text{B: We \underline{stayed} in a nice hotel.}\]

\[(12) \text{Tim \underline{worked} as a doctor for 30 years. He works at Shizuoka Hospital.}\]

\[\underline{12}\text{For example, the Japanese learners incorrectly accepted (ib) as a response to (ia) on the interpretation task, but correctly selected *ate* and *was eating* as an answer to (iia).}\]

\[(\text{i) a. My father made the table for the new kitchen.}\\
\text{b. *He got tired and never finished the table.}\]

\[(\text{ii) a. Yesterday Sara \underline{ate} a pizza for lunch.}\\
\text{b. is eating, ate, eats, was eating}\]
A comparison of these morphological results with our aspectual findings thus provides further support for the form-before-meaning hypothesis that L2 learners can acquire native-like use of morphology before they have obtained sufficient knowledge of semantics.

5. Further Issues

The present study leaves some future research issues: First, Japanese EFL learners with lower proficiency (than the current LOW group) need to be examined in order to obtain a developmental picture of L2 acquisition of past tense and present perfective on the form before meaning assumption. Secondly, the test material should be adjusted. Since the situations used did not create true-false pairs based on the tense/aspect changes, different types of false conditions were employed simply to balance the number of true and false sentences. The true vs. false conditions should be testing tense and aspect, but not other factors. However, if true-false situations cannot be balanced, then a different task such as an acceptability task should be employed so that the past-present perfect pair can be compared. Furthermore, because the use of L1 to describe situations may have encouraged L1 transfer, a different way to provide clear situations may be implemented in further research. Thirdly, bidirectional studies are needed to investigate whether English speakers learning L2 Japanese are sensitive to the morphosemantic relation of past tense –ta form and present perfect -te iru form (cf. Gabriele 2009). They can advance our understanding of L1 transfer at the morphosyntactic and semantic interface. If transfer occurs from L1 English to L2 Japanese, for instance, –ta would be misused for a durative event by English speakers of L2 Japanese.13

References


13 We note, however, that the source of the overuse of –ta may not necessarily be L1 transfer alone. It could also be due to the overgeneralization (or simplification) of -ta. Unfortunately, we cannot differentiate these two possibilities.