Interpretation of Secondary Predicates by L1 and L2 Acquisition of Japanese

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This study reports the experimental data dealing with differences of the acquisition sequence of Japanese secondary depictive predicates and affectedness of Japanese verbs between Japanese speaking young children (L1 acquisition) and Mandarin Chinese speaking adults learning Japanese (L2 acquisition). The results support Schwartz and Sprouse’s (1996) and Eubank’s (1996) hypothesis that L2 grammar is derived from learners’ L1 grammar at an early stage of L2 acquisition.

1 Introduction

Affected-theme transitives, such as warau (laugh) in (1b), but not non-affected-theme transitives, such as naraberu (display) in (2b), appear in an “Intransitive resultative” construction in Japanese as (1b) and (2b) show.

(1) non-affected-theme transitive

a. Taro-ga Jiro-o waratta.
   Taro-Nom Jiro-Acc laughed
   ‘Taro laughed at Jiro.’

b. *Jiro-ga warat-te aru.
   Jiro-Nom laughed be
   ‘Jiro is laughed.’

(2) affected-theme transitive

a. Taro-ga ningyo-o narabeta.
   Taro-Nom dolls-Acc displayed
   ‘Taro displayed dolls.’

b. Ningyo-ga narabe-te aru.
   dolls-Nom displayed be
   ‘Dolls are displayed.’

Another unique feature of affectedness of verbs can be seen with a secondary depictive predicate (henceforth SDP). Japanese SDPs have the form ‘NP+de’. (3) is a typical Japanese SDP example.

(3) Taro-ga Jiro-o hadasi-de waratta.
   Taro-Nom Jiro-Acc barefoot-state laughed
   ‘Taro laughed at Jiro barefoot.’
In (3), the verb *waratta* (laughed) is a non-affected-theme transitive, and *hadasi-de* (barefoot) is only predicated of the subject. This phrase, however, can be predicated of the direct object as well when it appears with an affected-theme transitive as in (4) the verb *narabeta* (displayed) which is an affected-theme transitive.

(4) *Hanako-ga ningyo-o hadasi-de narabeta.*

Hanako-Nom doll-Acc barefoot-state displayed
‘Hanako displayed dolls barefoot.’

Assuming different syntactic positions for affected-theme and non-affected-theme objects in a VP structure, Koizumi (1994), which will be introduced in the next section, explains the contrast between (3) and (4) with his Principle of Predication. Assuming the existence of this principle, this study will investigate the following questions.

(5) Research Questions
1) Do L1 acquisition (Japanese speaking young children) and L2 acquisition (Mandarin Chinese speaking adults) have the same acquisition sequence with respect to Japanese SDPs and affectedness of Japanese verbs?
2) If they have a different sequence, does ‘L1 transfer’ exist in L2 acquisition?

2 Japanese and Chinese secondary depictive predicates

2.1 Secondary depictive predicates in Japanese

Koizumi (1994) suggests that an SDP must be m-commanded by its antecedent.

(6) a. *Taro-ga hadasi-de hon-o yonda.*

Taro-nom barefoot-state book-Acc read
‘Taro read the book barefoot.’

b. *[^NP1][NP2*Taro] no kuruma] ga hadasi-de kowareta.*

Taro – Gen car – Nom barefoot-state broke
‘Taro’s car broke barefoot.’

In (6a), there is no intervening category between the SDP and the antecedent *Taro*. Thus the antecedent can m-command the SDP, and it is grammatical. On the other hand, in (6b), the antecedent of the SDP, *Taro*, is embedded in NP$_1$ which prevents the antecedent from m-commanding the SDP, thus it is ungrammatical. Therefore, an SDP must be at least m-commanded by its antecedent. (7), however, seems not to satisfy the m-command requirement, yet it is grammatical.
In (7), the SDP is not m-commanded by its antecedent in S-structure. The grammaticality of this sentence, therefore, indicates that SDPs are scrambled to the sentence-initial position, leaving a trace in their original position. Thereby, *katsu**o* and the trace of *nana-de* hold the m-command relation, and the sentence is grammatical. The m-command condition, however, cannot explain the ungrammaticality of (8b).

    Taro-Nom Jiro-Nom barefoot-state bonito-Acc ate that said
    ‘Taro said that Jiro ate the bonito barefoot.’

    barefoot-state Taro-Nom Jiro-Nom bonito-Acc ate restaurant-Acc know
    ‘Taro knows the restaurant where Jiro ate the bonito barefoot.’

In (8a), the m-command condition is satisfied within the CP. In (8b), the SDP is predicated of the NP *Jiro* in the complex NP. It is m-commanding the trace. However, there are two barriers between the moved SDP and its antecedent, so it violates the Subjacency condition, and the sentence is ungrammatical. Hence, the ungrammaticality of (8b) is due to a syntactic reason independent of the m-command condition.

On the basis of this condition and others, Koizumi proposes the Principle of Predication, which is a UG principle which governs predication relations in natural languages.

**2.2 Principle of predication**

The Principle of Predication (henceforth POP) consists of the antecedent government requirement and the head government requirement.

(9) Principle of Predication

a. the NP or its trace is an ANTECEDENT POSITION of the XP at LF, and
b. the XP is c-governed by a zero-level category at D-structure

(10) A syntactic position (such as Spec or Complement position) is qualified as an antecedent position of an XP iff it c-governs the XP at D-structure.

(Koizumi 1994:48)
Under this definition, condition (9a) meets the antecedent government requirement and condition (9b) meets the head government requirement. Koizumi claims that these two requirements define the syntactic relation between a predicate and its antecedent.

The next subsection will explain the detail of the observation in Section 1 with the framework of Koizumi’s POP.

2.3 Secondary depictive predicates and theme-transitives and non-theme transitives

As we have seen in (3) and (4), which are repeated below, there is a contrast between affected themes and non-affected-themes regarding their interpretation of SDPs.

(11 = (3)) \textit{Taro-ga} Jiro-o \textit{hadasi-de} warat-ta.
Taro-Nom Jiro-Acc barefoot-state laughed
‘Taro laughed at Jiro barefoot.’

(12=(4)) \textit{Hanako-ga ningyo-o hadasi-de} narabe-ta.
Hanako-Nom doll-Acc barefoot-state displayed
‘Hanako displayed dolls barefoot.’

As (11) indicates, \textit{hadasi-de} cannot be predicated of the direct object, while (12) can. To account for this contrast, Koizumi (1994) suggests that a non-affected-theme object is generated in a position where it cannot satisfy the POP, and gives the following VP structure (13) below.

(13) \begin{verbatim}
  VP
    |
  NP-ni     V'  
    |
  VP  
    |
  NP-o     V'  
    |
  V_1     e

 indirect object → NP-ni
 non-affected-theme → NP-o
 affected-theme → NP-o SDP V_1 e

(V’ is a minimality barrier)
\end{verbatim}

In this VP structure, the SDP is a sister of the \( V_1 \) and the affected-theme object can c-govern it. Thus the SDP satisfies the POP requirement. On the other hand, the non-affected-theme object cannot c-govern the SDP because of the minimality barrier \( V' \). This explains why the object of a non-affected-theme transitive cannot be the antecedent of an SDP.
2.4 Secondary depictive predicates in Mandarin Chinese

In contrast to Japanese SDPs, however, so-called SDPs in Mandarin Chinese, cannot be predicated of direct objects even if they are affected-theme objects. Let us consider (14) and (15).

(14) Akiu hulihutu de mai-leyi bao shipin.
Akiu muddled de buy-PRF one package food
‘Akiu bought a package of food muddled.’

(15) *Akiu rere de he-leyi wan tang.
Akiu hot de drink-PRF one bowl soup
‘Akiu drank a bowl of soup hot.’

Example (14) has a subject-oriented reading.(15), however, cannot have an object-oriented reading according to my informants. Therefore, in this study, SDPs in Mandarin Chinese are treated as follows.

(16) SDPs are only predicated of subjects in Mandarin Chinese.

That is, SDPs in Mandarin Chinese are adverbial. This property is quite crucial when we consider whether L1 transfer plays any role in acquiring Japanese as a foreign language because Japanese SDPs can be predicated of direct objects when the verb is an affected-theme transitive.

3 Acquisition of SDPs

We now turn to previous studies about acquisition of SDPs by young children and adult L2 learners.

3.1 Acquisition of secondary depictive predicates by English speaking children and Japanese speaking children

For the comparison with L2 acquisition later, let us consider the observation that both Japanese and English speaking children do not acquire properties of SDPs by the age of four.

3.1.1 Acquisition of secondary depictive predicates by English speaking children

Koizumi (1996) checked utterances by an English speaking child in the CHILDES database (Adam 2;3 – 4;10). However, there were not any usages of SDPs.

This finding leads to the prediction that it is not unnatural that properties of SDPs are acquired after the age of four in English.
3.1.2 Acquisition of secondary depictive predicates by Japanese speaking children

Suzuki (2000) examined acquisition of SDPs and floating quantifiers (on the assumption that floating quantifiers are also SDPs) by twenty-nine Japanese speaking children (age range 3;4 – 6;2) with a particular attention to the POP (Koizumi 1994). Table 1 presents the results of the experiment. The results show that only the antecedent-government requirement was active in the age of six (Both the antecedent government requirement and the head government requirement were active regarding floating quantifiers). However, the three, four and five year olds had not acquired both of the requirements of the POP yet. This is consistent with Koizumi’s (1996) finding.

Table 1: Acquisition of POP in SDPs (results from Suzuki, 2000) : no displays that the children have not acquired the condition yet. yes displays that the children have already acquired the condition.

<table>
<thead>
<tr>
<th>mean age</th>
<th>3;4</th>
<th>4;4</th>
<th>5;6</th>
<th>6;2</th>
</tr>
</thead>
<tbody>
<tr>
<td>head-government</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>antecedent-government</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

3.2 Acquisition of English secondary depictive predicates by Mandarin Chinese speaking L2-learners

As to SDPs in L2 acquisition, Shi (2001) examined acquisition of English depictive and resultative constructions by Mandarin Chinese speaking L2 learners and commented as follows:

This study intends to show that CCH (= L1 transfer) is a unique L2 learning mechanism, not a strategy, nor a process (cf. Odlin, 1994). ...It impedes adult L2 speakers from attending to the minute semantic properties and subsequently syntactically relevant argument structures associated with L2 predicates. (p. 11)

The results led to the conclusion that L1 grammar had effects on adult L2 learners. Therefore, our finding in this study will also present the same results on the acquisition of Japanese SDPs by L2 learners.

4 Experiment

Based on previous studies that were mentioned above, I will set up hypotheses about acquisition of Japanese SDPs by Mandarin Chinese speaking adults learning Japanese.
4.1 Hypotheses

L2 learners use their L1 grammar in an early stage of L2 acquisition (Schwartz and Sprouse (1996), Eubank (1996)), and SDPs in Mandarin Chinese are always predicated of subjects according to my informants. Then, the following can be expected as the results of this experiment.

(17) Hypotheses
1) Mandarin Chinese students attending a Japanese preparatory course and first year undergraduate course prefer subject-oriented readings because they have not acquired Japanese SDPs yet.
2) Accordingly, they cannot distinguish the affectedness of Japanese verbs when they appear with SDPs.
3) On the other hand, Mandarin Chinese students attending graduate school have already acquired properties of Japanese SDPs.
4) Consequently, they can distinguish the affectedness of Japanese verbs.

4.2 Methodology

4.2.1 Subjects (native speakers of Mandarin Chinese studying in Japan)

The subjects were all native speakers of Mandarin Chinese studying in Japan. They were divided into two groups depending on their Japanese level. Six native speakers of Japanese were included as a control group.

(18) The groups of subjects are as follows:

Group A: Five preparatory course students and two first year undergraduate students were tested as elementary learners.

Group B: Ten graduate school students were tested as advanced learners.

Group C: Six native speakers of Japanese, who are graduate school students, were also tested as a control group.

4.2.2 Procedures

A Truth Value Judgment Task was used to test the subjects. A written questionnaire with target sentences and pictures was provided to each of the subjects.

4.2.3 Materials (the sentence types and the actual examples)

Two sentences for determining if the subjects know the meaning of hadaka-de (naked) and hadasi-de (barefoot), and ten target sentences were provided. Table 2 shows the sentence types and the number of Target Sentences.
Table 2: The Sentence Types and the Number of Target Sentences

<table>
<thead>
<tr>
<th>Target Sentence Types</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-affected-theme</td>
<td>3</td>
</tr>
<tr>
<td>affected-theme</td>
<td>3</td>
</tr>
<tr>
<td>POP: antecedent government</td>
<td>2</td>
</tr>
<tr>
<td>POP: head government</td>
<td>2</td>
</tr>
</tbody>
</table>

(18) to (21) are examples of the actual test sentences and the pictures.

(18) non-affected-theme
Otosan-ga kodomo-o hadaka-de okotteimasuka.
father-Nom children-Acc naked-state is scolding
‘Is the father scolding his children naked?’

Figure 1: A Picture for Non-affected-theme Transitive Test

okoru (scold) is a non-affected-theme transitive. Therefore, the subject otosan should be naked.
In this picture, however, the children are naked. Thus, the expected answer is ‘no’.

(19) affected-theme
Sensei-wa kodomo-o hadasi-de narabeteimasuka.
teacher-Nom children-Acc barefoot-state is lining up
‘Is the teacher lining up her students barefoot?’
Since naraberu (line up) is an affected-theme transitive, it can be predicated of the direct object kodomo. The direct object in this picture is barefooted. Thus this sentence should be accepted.

(20) the antecedent government requirement

Otokonoko-no-otosan-wa hadasi-de hasitteimasuka.

boy - Gen father- Nom barefoot-state is running

‘Is the father of the boy running barefoot?’

In the sentence above, otosan (the father), not otokonoko (the boy), is the possible antecedent of hadasi-de (barefoot). This is because otokonoko is embedded in otokonoko-no-otosan-wa (the father of the boy) that prevents otokonoko from m-commanding hadasi-de. Therefore, this test sentence has to be answered in the negative.

(21) the head government requirement

Otokonoko-wa onnanoko-ni hadasi-de hana-o ageteimasuka.

boy –Nom girl - Dat barefoot-state flower –Acc is giving

‘Is the boy giving flowers to the girls barefoot?’
As we have seen in the VP structure (13), an indirect object cannot be the antecedent of an SDP, because it is in the VP Spec and a minimality barrier V’ exists between the zero-level category and an indirect object and it cannot satisfy POP. In this picture, the indirect object onnanoko (the girls) is barefoot, thus the answer should be ‘no’.

4.2.4 Results

Table 3 and 4 summarize the results of this experiment. For the analysis, a two tailed t-test analysis was utilized (a significance level; p < .05).

**Table 3: The Percentage of Correct Responses by L2 learners about Japanese SDPs**

<table>
<thead>
<tr>
<th>Group</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>7</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td><strong>affected-theme transitive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dasu (let them out)</td>
<td>43</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>ireru (let them in)</td>
<td>100</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>naraberu (line up)</td>
<td>43</td>
<td>50</td>
<td>83</td>
</tr>
<tr>
<td><strong>non-affected-theme transitive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sawaru (touch)</td>
<td>71.4</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>warau (laugh)</td>
<td>43</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>okoru (scold)</td>
<td>71.4</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td><strong>head-government</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ageru (give)</td>
<td>86</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>miseru (show)</td>
<td>71.4</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td><strong>antecedent-government</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hasiru (run)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>neru (sleep)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 3 shows the percentage of correct responses. Before discussing the results, let us consider one question, which is related to the response pattern in Group A. The percentage of ireru (let them in) is 100% while the percentage of the other two verbs is 43%. The cause that led to 100% may be in the picture. (22) is the actual test sentence and the picture of this problematic target sentence.

(22) Okasan-wa kodomo -o hadasi-de ireteimasuka.
mother- Nom children -Acc barefoot-state let them in
‘Is the mother making the children enter the house barefoot?’

Figure 5: The Picture that Showed a Problematic Result

As indicated in this picture, the lower part of the mother’s body is behind the wall and only the boys are barefoot. Consequently, the subjects might have been induced to answer ‘yes’ to this target sentence.

Table 4 summarizes the words which showed significant differences among the groups with respect to affectedness of verbs. These results revealed that Group A significantly had an inclination to reject object-oriented readings

<table>
<thead>
<tr>
<th>Group</th>
<th>words</th>
</tr>
</thead>
<tbody>
<tr>
<td>A X B</td>
<td>warau</td>
</tr>
<tr>
<td>A X C</td>
<td>dasu, naraberu, warau</td>
</tr>
<tr>
<td>B X C</td>
<td>dasu, ageru</td>
</tr>
</tbody>
</table>

5 Discussion
Given the results in the previous section, I will discuss four crucial points that are related to the POP.
5.1 L2 acquisition by Group A

The results by Group A provided unique patterns of answers regarding affectedness of verbs and the POP requirement.

1) **affected-theme transitive**: Group A subjects tended to reject object-oriented readings and preferred subject-oriented readings as we have found out in the results. This is a typical property of Mandarin Chinese SDPs; namely they are predicated only of subjects. Therefore, it is very likely that L1 transfer has led to this result.

2) **non-affected-theme transitive**: The subjects were more successful in answering on the non-affected-theme transitives than the affected-theme transitives. However, considering that non-affected-theme transitives in Japanese allow only subject-oriented readings and SDPs in Mandarin Chinese also allow only subject-oriented readings, it is not surprising that they could give correct answers, but for the wrong reason.

3) **the head government requirement**: Since they prefer subject-oriented readings as discussed in 1) above, it is possible to give a correct answer only if they check whether the subject is ‘barefoot’ or not in the picture. Therefore, we can understand why they could give a correct answer to this question although they failed to answer the questions for affectedness of verbs.

4) **the antecedent government requirement**: It is possible for the subjects to give a correct answer if they have already acquired the c-command requirement because their SDPs in Japanese are adverbial and adverbs also need to c-command their antecedent. Moreover, the affectedness of verbs does not influence this type of target sentence. Thereby, they could give correct answers to these questions although they had not acquired affectedness of verbs.

To sum up, these results are naturally and also correctly predicted by L1 transfer, which gives a clue to understanding the patterns of answers given by the Group A subjects. This amounts to saying that Japanese SDPs in the L2 learners have an adverbial property.

If the results are due to L1 transfer as we have suggested above, the acquisition sequences between L1 and L2 are predicted to be different. In the rest of this study, I will show that this prediction is borne out.
5.2 Difference between L1 and L2 acquisition

In 5.2.1, first, I will explain the detail of Suzuki (2000), which was introduced in 3.1.2, to discuss the contrast between L1 and L2 acquisition. Then in 5.2.2, I will argue that L1 and L2 acquisition have different acquisition sequences.

5.2.1 Acquisition of the POP by the Japanese young children

Table 5 shows the results of the young Japanese children in Suzuki (2000). The data for twenty-nine children was collected using a Truth Value Judgment Task. Suzuki (2000) found out that from three to five years old, the children failed to obey both the antecedent government requirement and the head government requirement, and the six-year-old children obeyed only the antecedent government requirement. These findings suggest that all properties of SDPs are acquired after six years of age because even the six years olds could give adult-like interpretations only on the antecedent government requirement. However, they had already acquired the POP requirement in floating quantifiers as mentioned in Section 3. Then, what makes them differ from adults’ interpretations? Considering the fact that they had already acquired the POP, their VP structure itself is the same as adults. Therefore, the problem may be the position of where a non-affected-theme object appears. There is a possibility that a non-affected-theme object satisfies the POP requirement somewhere in a VP structure. Under my theoretical assumptions, then, the suggestion that a non-affected-theme object may appear in the same position with an affected-theme object provides a reasonable answer to this question. That is, both an affected-theme object and a non-affected-theme object are sisters of a verb. An affected-theme object and a non-affected-theme object might be in the same position in their VP structure and satisfy the POP requirement in six year olds.
Table 5: The Percentage of Correct Responses by Japanese Young Children about SDPs
(two-tailed t-test for the analysis, p<.05)

<table>
<thead>
<tr>
<th>mean age</th>
<th>3;4</th>
<th>4;4</th>
<th>5;6</th>
<th>6;2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>affected-theme transitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kaku(draw)</td>
<td>66.6</td>
<td>80</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>katazukeru(put away)</td>
<td>100</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>arau(wash)</td>
<td>83.3</td>
<td>80</td>
<td>70</td>
<td>66.6</td>
</tr>
<tr>
<td>kaku(draw)</td>
<td>100</td>
<td>80</td>
<td>80</td>
<td>66.6</td>
</tr>
<tr>
<td>non-affected-theme transitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>oikakeru(chase)</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>oikakeru(chase)</td>
<td>33.3</td>
<td>10</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>kaburu(wear)</td>
<td>83.3</td>
<td>50</td>
<td>20</td>
<td>33.3</td>
</tr>
<tr>
<td>dakkosuru(carry)</td>
<td>100</td>
<td>100</td>
<td>70</td>
<td>33.3</td>
</tr>
<tr>
<td>head-government</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>miseru(show)</td>
<td>16.6</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>ageru(give)</td>
<td>16.6</td>
<td>20</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>antecedent-government</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>warau(laugh)</td>
<td>16.6</td>
<td>30</td>
<td>60</td>
<td>66.6</td>
</tr>
<tr>
<td>warau(laugh)</td>
<td>50</td>
<td>20</td>
<td>40</td>
<td>33.3</td>
</tr>
</tbody>
</table>

5.2.2 Comparison between L2 acquisition and L1 acquisition

Let us, in turn, make a comparison between L2 acquisition and L1 acquisition based on the discussion in 5.1 and 5.2.1.

The young children failed to answer the POP questions. And they tended to admit the subject-oriented reading regardless of the affectedness of verbs. On the other hand, the L2 learners seemingly succeeded in answering the POP questions. They, however, failed to identify affectedness of Japanese verbs, and they preferred object-oriented readings. This contrast indicates that L2 does not develop in the same way as L1. This is an expected result and indirectly supports the analysis by L1 transfer.

6 Conclusion

In this study, the experiments regarding the difference of acquisition sequences of Japanese SDPs in L1 and L2 were conducted based on Koizumi (1994). The results of the experiments revealed that there was a distinct difference between L1 and L2 acquisition.
sequences. It supports Schwartz and Sprouse’s (1996) and Eubank’s (1996) hypothesis that L2 learners use their L1 grammar at an early stage of L2 acquisition.

References


