Knowledge of syntax and verbal morphology in adolescent L2 English[1]: A Feature Reassembly account

Akiko Muroya
University of Essex

Abstract

This study investigates knowledge of both syntax and verbal morphology by L2 English classroom learners with L1 Japanese in affirmative sentences with VP-adverbs (e.g., *She usually eats breakfast at nine*[2]). It proposes that the findings are consistent with the Feature Reassembly Hypothesis (Lardiere, 2008, 2009) which the Full Transfer Full Access Hypothesis underlies[3]. Results are obtained from an elicited production task: for written data with 90 junior high school students (12-15 years old[4]) and 30 university students (19-20 years old), as well as for spoken data with 12 junior high school students (12-13 years old). It is observed that the pattern of use of verb forms is different from that found in other L2 English studies. The key differences are: (1) high omission of copula *is* in copula *is*+adverb contexts; (2) two kinds of commission error where tense/aspect forms replace each other. It is argued that such variability in verbal morphology could be accounted for by the differences in the processes and conditions by which relevant morphosyntactic and semantic features are assembled between L1 and L2, which is consistent with the key claim of the Feature Reassembly Hypothesis.

1. Introduction

There has been considerable debate over what the sources of morphological variability are in L2 acquisition. A number of generative L2 studies[5] have reported that L2 learners make omission and misuse/overuse errors in the production of inflectional morphology, regardless of differences in age, L1 (first language) background, and L2 (second language) proficiency. Recently, Lardiere (2008, 2009) has proposed a new feature-based account for L2 learners'

[1] I would like to extend my heartfelt gratitude to Roger Hawkins for commenting on earlier versions of this paper. Further special thanks go to the participants in my experiments, and the headmasters of two junior high schools and the dean of a university who offered kind cooperation in my study. Also, I sincerely thank Dr. Jaensch and anonymous reviewers for precious comments that improved my paper. All remaining errors and oversights are my own.

[2] Question No.18 in this study.

[3] Lardiere (2009:191) mentions that the FRH is built on the claims of full transfer and full access.

[4] At the time of the experiment (2012), in Japan, English tuition started at the age of 12, the 1st grade of junior high schools, which is equivalent to the 7th grade in the US and UK.

[5] Haznedar, 2001; Ionin and Wexler, 2002; Lardiere, 1998 a, b; Prévost and White, 2000 a, b, among others.

difficulty in morphological representation. This study aims to explain L1 Japanese learners' variability in the production of verbal morphology, applying Lardiere's new approach which focuses on L2 speakers' failure to re-assemble morphosyntactic and semantic features into L2 lexical items in a target-like way. Participants were Japanese adolescent classroom learners of L2 English in both early stages and later development. A picture-stimulus task was designed to elicit both spoken and written production data and to allow a comparison to be made between verb morphology and syntactic properties (verb placement and subject raising with Nominative Case marking) in the same obligatory contexts (affirmative sentences with-VP-adverbs). The findings suggest that the Feature Reassembly Hypothesis could explain Japanese learners' systematic variability in: (1) the omission of copula *is* in copula *is*+adverb contexts; (2) two kinds of commission error where tense/aspect forms replace each other.

The study is composed of six sections, including this Introduction. Section 2 outlines the Feature Reassembly Hypothesis account of the morphology produced by L2 learners and the differences that exist in verbal morphology between English and Japanese. Section 3 is concerned with the methodology used. In Section 4, the results are presented, separating syntax and morphology. Section 5 is a discussion of the findings. Finally in Section 6, a conclusion is drawn, including implications for future research on variability in verbal morphology by L2 learners.

2. Theoretical background

2.1. Morphology production in the Feature Reassembly Hypothesis (Lardiere, 2008, 2009)

Lardiere argues that persistent L2 variable phenomena (e.g., omission, misuse, and overuse of inflectional morphemes) cannot be accounted for by binary parameter settings which represent "all-or-nothing phenomena" (2008:108). The Feature Reassembly Hypothesis (henceforth, the FRH), which is built on the claims of the Full Transfer Full Access (FTFA), proposes that feature re-assembly might be a source of persistent difficulty for L2 speakers, although any feature contrasts can be detected and ultimately acquired. Framed within the Minimalist Program (Chomsky 1995, 1998, 2001, 2005), the FRH attributes L2 morphological variability to different, language-specific manners and conditions in which features are selected and assembled[6], not to failure to select parameterized features causing permanent representational deficit in the L2[7]. It is argued that L2 speakers have to select

[6] Second language grammars are constrained by a uniform computational mechanism across languages: (1) features come from the universal inventory for all languages; (2) feature selection and feature assembly, the two continuous processes in language acquisition, are made in a language-specific way.

[7] This is proposed by "the *representational deficit* approach" (2008:109).

and reassemble "the right combination of features" (2009:215) from an L1 "fully developed system of assembled lexical items and functional categories" (2009: 185) "into the right lexical items" under "the appropriate conditioning environments for their expression" (2009:215).

	English	Chinese	Korean	
	-s	*-men*	*-tul*	
Obligatoriness	obligatory	optional	optional	obligatory conditions -demonstratives -discourse contexts
[definite]	[+definite] [-definite]	[+definite]	[+definite] [-definite]	
[human]	[+human] [-human]	prohibited conditions -abstract nouns -mass nouns	[+human] [-human]	prohibited conditions -abstract nouns -mass nouns
Quantifiers	O *six students*	X *liu-ge* xuesheng-~~*men*~~ 'six student'	X numeric-quantifiers /classifiers +[-human] *Twu cip-~~tul~~* 'two house'	permitted conditions -non-numeric quantifiers -[+human] + numeric-quantifiers
Extrinsic plural marking[8]	-	-	O	a required condition -null subjects interpreted as plural

Table 1: Plural marking in English, Chinese, and Korean

Lardiere illustrates how differently relevant features are realised and assembled by L2 learners. Based on analyses by Li (1999:88)[9] and various researchers[10], Lardiere considers

[8] Lardiere describes it as "unusual phenomena, not like either other language at all" (2009:210).

[9] For Chinese plural marking. Li assumes that the [+plural] feature is located in Number in both English and Chinese but raises from Number to Determiner in Chinese. The absence of qualified plural nouns in Chinese

the different conditions under which plural marking occurs in English, Chinese, and Korean, all of which are assumed to select the [+plural] feature. Table 1 summarises the differences between the three languages.

In English, plural marking is obligatory: [+plural] is combined with [±human]/[±definite] and agrees with quantifiers denoting plurality (e.g., *six* students, *several* students, and *both* students, 2008:122). By contrast, in Chinese, plural marking is optional: [+plural] is represented only by suffix-*men*, which allows only two features [+human]/[+definite] and also prohibits co-occurrence with quantifiers (e.g., **san-ge* xuesheng-*men* 'three-CL student-PL', 2009:196)[11]. Given the differences between English and Chinese, Lardiere assumes that L1 English speakers of L2 Chinese are "initially likely to overgeneralize the applicability of plural marking in Chinese" *–men* (2009:198), while L1 Chinese speakers of L2 English show "developmental undersuppliance of plural marking" due to "non-obligatoriness" (2009:196). It is argued that L1 English speakers would need to reassemble [+plural] with [+definite][12] into an L2 Chinese plural suffix *–men*, while L1 Chinese speakers of L2 English would need to learn obligatoriness and extend co-occurrence with [-human]/[-definite](2008:123), and quantifiers. In Korean, the plural suffix-*tul* has more complicated distribution than in English and Chinese. Lardiere points out that the reassembling of a Korean plural item *–tul* requires L1 English speakers to determine "possible conditioning environments" (2009:209) and to understand multiple interpretations of lexical semantic features.

2.2. Verbal morphology in English and Japanese

English and Japanese have tense/grammatical aspect markers in common, as shown in Table 2. The only difference lies in the surface form of the imperfective aspect markers: in English, progressive is marked by the discontinuous morpheme *be* + *-ing*, while in Japanese there is a continuous verb-final affix *tei-ru/-tei-ta*. Because of this difference, Japanese learners of L2 English may have difficulty in reassembling features [-past] [+progressive] from a continuous morpheme in the L1 to a discontinuous one in the L2.

---

is attributed to the intervention

[10] For Korean plural marking. Kim (2005), Kwon and Zribi-Hertz (2004), Park (in press), Park and Sohn (1993), Song (1997), Suh (1996).

[11] Such impossibility of qualified plural nouns in Chinese is attributed to the phenomenon that a Classifier head (e.g., *san-ge* 'three-CL') intervenes the raising of noun (e.g., *xuesheng* 'student') to Number for checking [+plural], and further to Determiner for checking [+definite] (Li, 1999:87).

[12] In English, the [+definite] feature is realised on the definite article *the*, not on the plural suffix-*s*.

<table>
<tr><th colspan="3"></th><th colspan="2">English</th><th>Japanese</th></tr>
<tr><td rowspan="2">Tense</td><td colspan="2">Non-past</td><td colspan="2">-Ø (-s)</td><td>-ru (-Ø)</td></tr>
<tr><td colspan="2">Past</td><td colspan="2" rowspan="2">-d /t</td><td rowspan="2">-ta/da</td></tr>
<tr><td rowspan="3">Aspect (grammatical)</td><td colspan="2">Perfective</td></tr>
<tr><td rowspan="2">Imperfective</td><td>Non-past</td><td>is/are</td><td rowspan="2">+Ving</td><td>-tei-ru</td></tr>
<tr><td>Past</td><td>Was/were</td><td>-tei-ta</td></tr>
</table>

Table 2: Similarity of tense-aspect marking in English and Japanese

In spite of the similarity in overt forms, there are crucial differences in the interpretation of tense/aspect between English and Japanese. Japanese exhibits multiple aspectual interpretations of each verbal inflection. With the non-past imperfective marker, a clear semantic asymmetry is observed between English '*is*+Ving' and Japanese 'V+*teiru*' (Slabakova, 2008:162). Table 3 summarises the differences in interpretation between English *is*+V*ing* and Japanese V+*teiru*.

<table>
<tr><th colspan="2"></th><th>Lexical aspect class of verbs</th><th>Adverb</th><th>=Aspectual interpretation</th></tr>
<tr><td rowspan="2">English</td><td>is walking</td><td>Activity</td><td rowspan="2">now</td><td rowspan="2">=Progressive</td></tr>
<tr><td>is reading a book</td><td>Accomplishment</td></tr>
<tr><td rowspan="3">Japanese</td><td rowspan="2">arui-teiru</td><td rowspan="2">Activity</td><td>ima
'now'</td><td>=Progressive</td></tr>
<tr><td>maiasa
'every morning'</td><td>=Habitual</td></tr>
<tr><td>arui-teiru
1kilo</td><td>Accomplishment</td><td>moo
'already'</td><td>=Resultative</td></tr>
</table>

Table 3: Differences in interpretation of non-past imperfective marker

In English, non-past imperfective marker '*is*+Ving' is interpreted as progressive, attaching to either *activity* or *accomplishment* verbs. Each example is given in 1(a/b): the aspectual interpretation is restricted to an action in progress, which is reflective of the related semantic features.

(1) Progressive a. He ***is***n't walk***ing*** now. (*Activity*: No.45)
b. He ***is*** **read*****ing*** a book now. (*Accomplishment*: No.50)

By contrast, the Japanese counterpart 'V+*teiru*' undergoes changes to aspectual interpretations of VPs, depending on adverb/adverbial phrases. As shown in each example 2(a-c), 'V+*teiru*' has three types of possible interpretations: (1) an adverb *ima* 'now' implies an ongoing action, which represents a progressive reading (2a); (2) an adverb *maiasa* 'every morning' denotes a habitual action, which leads to a present reading (2b); (3) an adverbial phrase "*moo* 'already' *1kilo*" encodes a state as a results of an completed action, which brings forward a resultative interpretation (2c).

(2) a. Progressive Kare-wa **ima** arui-***teiru***.
He-TOP now walk-PROGRESSIVE
'He is walking now.'
=He is walking now.

b. Habitual Kare-wa **maiasa** arui-***teiru***=aru-***ku***.
He-TOP every morning walk-HABITUAL
=walk-PRESENT
'He walks every morning.'
*He is walking every morning.

c. Resultative Kare-wa **moo** **1-kilo** arui-***teiru***
He-TOP already 1-CL walk-RESULTATIVE
'He has already walked 1 kilo and is still walking.'
*He is already walking 1 kilo.

In addition, adverb/adverbial phrases allow non-past tense marker *-ru* (examples 3 a/b) and past tense/perfective aspect marker *-ta/da* (examples 4 a/b) to have multiple readings as well.

(3) Non-past marker: Yutaro wa gakkoo-e i-***ku***.
a. [Habitual] Yutaro-wa **maiasa** gakkoo-e i-***ku***
Yutaro-TOP every morning school-to go-PRESENT
'Yutaro goes to school every morning.'

b. [Future] Yutaro-wa **ashita** gakkoo-e i-***ku***
Yutaro-TOP tomorrow school-to go-PRESENT
'Yutaro will go to school tomorrow.'
*Yutaro goes to school tomorrow.

(4) Past/perfective marker: Boku-wa kono hon-o yom-***da***.

a. [Past] Boku-wa **kinoo** kono hon-o yom-***da***.
I-TOP yesterday this book-ACC read-PAST
'I read this book yesterday.'

b. [Perfective] Boku-wa **moo** kono hon-o yom-***da***
I-TOP already this book-ACC read-PERFECT
'I have already read this book.'

Seen from a different perspective, this suggests multiple representations of each semantic feature in Japanese: adverbs/adverbial phrases enable multiple verbal morphemes to represent one aspectual property in Japanese. An adverb *maiasa* 'every morning' realises a semantic feature [+habitual], with not only non-past marker-*ru* but also imperfective marker-*teiru*, as given in example 5 (a/b) (see 2 b, 3 a).

(5) [+Habitual] =She eats breakfast every morning.

a. Non-past-***ru*** Kanojyo-wa **maiasa** chooshoku-o tabe-***ru***
She-TOP every morning breakfast-ACC eat-PRESENT
'She eats breakfast every morning.'

b. Imperfective-***teiru*** Kanojyo-wa **maiasa** chooshoku-o tabe-***teiru***
She-TOP every morning breakfast-ACC eat-PROGRESSIVE
*She is eating breakfast every morning.

Likewise, the combination of an adverb *moo* 'already' and overt numeral+classifier *3 satu* 'three books' represents a semantic feature [+telic] with imperfective -*teiru* as well as past/perfective -*ta/da*, as given in example 6 (a/b).

(6) [+Telic] =She has already read three books.

a. Past/perfective-***da*** Kanojyo-wa **moo** hon-o **3 satu** yom-***da***
She-TOP already book-ACC 3-CL read-PERFECTIVE
'She has already read three books.'

b. Imperfective-***deiru*** Kanojyo-wa **moo** hon-o **3 satu** yom-***deiru***
She-TOP already book-ACC 3-CL read-PROGRESSIVE
'She has already read three books (and is still reading).'
*She is already reading three books.

In addition, differences in derivation are found between English *state* verbs and the Japanese

counterparts, as shown in Table 4.

English		Japanese	
State	+*is* Ving =progressive	*Achievement*	+*-teiru* =resultative state
know	Ø	*si-ru*	*sit-teiru*
believe	Ø	*sinji-ru*	*sinji-teiru*
have	Ø	*mo-tu*	*mot-teiru*
love	Ø	*aisu-ru*	*aisi-teiru*

Table 4: Differences in derivation between English *state* verbs and the Japanese counterparts

In English, some *state* (e.g., *know*, *believe, have, love*[13]*)* verbs*,* as well as *achievement* (e.g., *recognise, notice, find*) verbs, never incorporate the imperfective marker because *is*+V*ing* is restricted to progressive interpretation. On the contrary, the Japanese counterparts have to take *-teiru* to denote *state* (e.g., *sit-teiru*) because the non-finite forms (e.g., *si-ru*) are interpreted as a dynamic, punctual action, like *achievement* verbs. This suggests that the Japanese corresponding verbs can take *-teiru* to denote a resultative state: a duration of state [+durative] [+stative], as a result of a completed action [+punctual] [+dynamic][14]. Furthermore, a Japanese imperfective marker-*teiru* can denote a resultative state, by attaching to verbs in other lexical aspect class than *state* (example 7): (1) *accomplishment* verbs with adverbs/adverbial phrases imply a resultative state after a completed action (example 8, repeated 2c); (2) *achievement* verbs denote a process directing to a natural endpoint (example 9 a/b).

(7) *state* Watasi-wa anata-o shit-***teiru***.
I-TOP you-ACC know- PROGRESSIVE
'I know you.'
*I am knowing you.

[13] The response '*I am loving it*' to '*How do you like this linguistics class?*' is "perfectly acceptable, although the *state* verb *love* is not allowed to be used in the form of progressive tense. This suggests aspectual ambiguity in English (Tsujimura, 2007:385).

[14] It has been argued that Japanese imperfective marker-*teiru*, attaching to *achievement* verbs, can encode a resultative state (Sugaya and Shirai, 2007, a.o.): for example, *kizui-teiru*, a combination of an *achievement* verb *kizu-ku* with *-teiru*, denotes a resultative state.

(8) *accomplishment* Kare-wa **moo** **1-kilo** arui-***teiru***.
He-TOP already 1-CL walk- PROGRESSIVE
'He has already walked 1 kilo (and is still walking).'
*He is already walking 1 kilo.

(9) *achievement* a. Booru-ga oti-***teiru*** (from Sugaya and Shirai, 2007:5)
Ball-NOM fall- PROGRESSIVE
'The ball has fallen (and it is there).'
*The ball is falling.

b. Kare-wa shin-***deiru***
He-TOP die-PROGRESSIVE
'He is dead.'
*He is dying.

In particular, the absence of overt mechanism for telicity marking allows adverbs/adverbial phrases and overt numerals to play a crucial role in Japanese. In English, telicity is encoded by a system for cardinality on nominal features [+/-definite][+/-number]: articles *a/the* and obligatory plural-*s* represent a semantic feature [+/-telic] in verbal morphology -*d/t*, as given in example 10 (a/b).

(10) a. Yutaro borrow*ed* ***a*** book_.
[+telic]=[-definite]+[+singular]

b. Yutaro borrowed _book***s***.
[-telic]= Ø + [plural]

Unlike English, Japanese has no object-marking system to encode telicity: Japanese nominals are underspecified for cardinality due to lacking articles, obligatory plural morphology[15] (example 11).

(11) Yutaro-wa _hon_-o kari-***ta***.
Ø Ø = ?
Yutaro-TOP book-ACC borrow-PAST
'Yutaro borrowed _book_.'

[15] Japanese has an optional plural marker-*tati* which is restricted to human common nouns (e.g., gakusei-*tati*, '*students*'), proper nouns (e.g., Taro-*tati*, '*Taro and his group*'), and pronouns (e.g., watashi-*tati*, '*we*') (Ueda and Haraguchi, 2008).

Instead of object-marking (English)/verb-marking (Bulgarian)[16], Japanese employs a combination of adverbs (example 12 a, see examples 6 and 8)/ adverbial phrases[17] (12 b) and overt numerals, which specifies cardinality to represent telicity.

(12) a. Yutaro-wa ***moo*** ***3-satu*** hon-o kari-***ta***.
Yutaro-TOP already 3-CL book-ACC borrow-PERFECTIVE
'Yutaro has already borrowed 3 books.'

b .Kanojyo-wa ***30*** pun-***de*** ***1-satu*** hon-o yom-***da***.
She-TOP 30 minutes-in 1-CL book-ACC read-PAST
'She read a book in 30 minutes.'

3. The study

3.1. Research questions and predictions

This study aims to test the generalizability of Lardiere's recent approach to different grammatical properties and to a new group of L2 English learners. The research question addressed in this study is whether the FRH can account for variability in verbal morphology production by Japanese adolescent classroom learners. The prediction is that L1 Japanese learners will provide positive evidence for four key claims underlying the FRH in affirmative with-VP-adverb contexts: (1) transfer will equally affect functional and lexical categories; (2) development away from the initial state grammar will be consistent with Universal Grammar(UG)-constrained restructuring; (3) there will be no correlations between the acquisition of morphology and the acquisition of syntactic properties; (4) where Japanese and English differ in the realisation of a syntactic or morphological property, Japanese learners of English will transfer the Japanese property into their L2 grammars.

3.2. Participants

All of the 132 participants in this study were adolescent Japanese classroom learners of English from national and private educational institutions in urban areas of Japan. The participants were divided into two groups. First, a total of 102 junior high school students from the 1st to 3rd grades[18] were recruited to investigate the initial state[19] and early

[16] Telicity is calculated by both verbal and nominal features (Verkuyl, 1993).
[17] Frame adverbials (e.g., 5 hun *de* '*in 5 minutes*'), durative adverbials (e.g., 5 hun *kan* '*for 5 minutes*') (Tanaka, 2007). There has been considerable debate over telicity markers in Japanese among many linguists (Tanaka, 2007; Gabriele, 2008).
[18] This is equivalent to the 7th to 9th grades in the US and UK.
[19] In representative studies on L2 initial state, the different lengths of exposure to L2 have been interpreted as

development in L2 English acquisition: 90 students from all the grades for the written task, and 12 students of the 1st grade for the spoken task. Second, a group of 30 university students in the 2nd year was selected to examine later L2 development. There are reasons why junior high school students and the 2nd year university students were tested. First, the Japanese students started receiving intensive, formal English teaching in the 1st grade of junior high schools when the experiments were carried out[20]. Second, the compulsory TOEIC course was scheduled for the 2nd year in the university which kindly participated in this study. A proficiency test was replaced by length of English exposure, grade/age[21]. In addition, for junior high school students, a linguistic background questionnaire was conducted to exclude learners who had received intensive, regular, and long-term English education in either Japan or English-speaking countries before and after entering junior high schools; the junior high schools were selected on the basis of a similar deviation value[22]. For university students, the TOEIC (Test of English for International Communication)[23] score was employed to recruit students whose latest score at the time of the experiment was between 650 and 680; the 2nd year university students[24] had the same non-English related major as well as the same number of English class hours[25] in the 1st and 2nd year. As summarised in Table 5, the participants were subdivided into four groups, based on both the length of exposure to English and grade (for junior high schools) /age (for university students). Each group shares the same number of participants for the written task (30 students). The testing for all of the four groups was carried out in late January 2011, to make the difference in length of English exposure equivalent.

---

the same initial state: Schwartz and Sprouse (1994, 1996:1 year); Vainikka and Young-Scholten (1994:1.5-24 years, 1996a: 10-25 months); Eubank (1997: 4 months-7 years); Epstein et al. (1996: 7 years).

[20] Since April 2011, English teaching has started in the 5th grade of primary schools, two years earlier than that in the previous system.

[21] Because of their tightly organised curriculum, the junior high schools who offered kind cooperation asked the task: (1) to take less than 40 minutes (including distribution of materials and instructions); (2) to be written production data collected by their teachers. As a result, the experiment constituted a task (63 questions in 30minutes) and a questionnaire (5 minutes in 12 questions) and it was impossible to recruit the equivalent number of participants for the spoken task.

[22] In Japan, it is regarded as an indicator of schools' academic ability.

[23] A test that measures L2 learners' ability to comprehend English by reading and listening.

[24] This study eliminated the 2nd university students who had received additional English teaching to prepare for entrance exams again.

[25] The proficiency level for university students was set, based on the number of class hours of German exposure (Slabakova, 2009:283).

L2 Data Mode	Number of Participants	Grade/Year		Age (years old)	Length of Exposure
	132			12-20	8months-7.8years
Written	30	Junior High School	1st grade	12-13	8 months
Spoken	12				
Written	30		2nd grade	13-14	1.8 years
	30		3rd grade	14-15	2.8 years
	30	University	2nd year	19-20	7.8 years

Table 5: Participants[26]

3.3. Materials

This study employed a picture-stimulus task, which was designed: (1) to elicit both written and spoken production data from the least proficient learner; (2) to allow a comparison to be made between syntactic and morphological properties in the same question item; (3) to elicit 3rd person singular personal pronouns as subjects[27]. Each of the 63 test items consists of: (1) a Japanese question sentence, after which each Japanese word in brackets ('Answer' or 'Question') instructed the participants which type to write or speak: either making an 'answer' or forming a 'question'; (2) a picture[28] with one to three English words to prompt participants to produce writing and speaking in English, as given in the example item below, in which English gloss is added for the purpose of illustration.

１８．　小百合は朝どうしていますか？　　（答え）

'*What does Sayuri do in the morning? (Answer)*'

nine, usually, breakfast

[26] The grade is the basis for length of English exposure because the same grade suggests the same number of English class hours in Japanese junior high schools. The grade of junior high school students is shown by the grade in the US hereafter in this paper.

[27] The only exception is No.37 which designs participants to supply 3rd person plural personal pronouns '*they*' (expected answer: *they aren't kind*).

[28] Each accompanied picture, which was chosen to match each Japanese sentence, was from a Japanese website which offers various pictures for teachers.

This study focuses on 7 properties of affirmative sentences with 4 frequency VP-adverbs (*always, often, sometimes*, *usually*). As shown in Table 6, 4 morphological properties (3ps-*s*, regular past-*d*, irregular past forms, and copula *is*) and 3 syntactic properties (verb placement over adverbs, overt subject suppliance, and Nominative Case marking in a Tense Phrase) were examined in the same 11 test items.

Morphology			Syntax	
			Verb Placement with Adverb	Subject Raising NOM Case
Verbal	Present	3ps-*s*	3 tokens	
		Cop-*is*	3 tokens	
	Past	Reg.-*d*	2 tokens	
		Irreg.	3 tokens	

Table 6: Grammatical Properties investigated in the production of verbal morphology

3.4. Procedure

This study collected elicited production data from learners who had been exposed to English via formal instruction in a classroom. To make the elicited production as spontaneous as possible, three main procedures were followed: (1) participants were informed of the time they had taken at 5-minute intervals, during which they should have answered 10 questions, to ensure that they provided answers to all of the 63 questions in 30 minutes, without returning to the previous questions; (2) no detailed oral instructions were offered before and during the task and also no revisions were allowed[29], to prevent participants from drawing on their metalinguistic knowledge. Written instructions before two sample questions made sure that they were required to write or speak whatever they first thought of, without worrying about the correctness[30]; (3) Japanese translations of 10 English prompt words (12.3 % of the total) were offered and spelling errors/Japanese *Katakana*[31] were allowed, to prevent them from

[29] The participants were not allowed to use an eraser in the written task. The revised/repeated answers were not scored.

[30] Pilot studies (2007/2010) found that Japanese L2 learners are always instructed not to make errors in their use of English formal classroom settings, which caused them to worry about grammatical correctness excessively. This resulted in them either: (1) writing or saying nothing at all; (2) revising or repeating each of their productions again and again. This excessive nervousness could obscure the real state of their competence. Therefore, this instruction was given to help them feel relaxed and speak or write naturally and spontaneously.

[31] The Japanese syllabary '*Kana*' (*Katakana*/*Hiragana*) represents 50 phonetic sounds: for example, a vowel such as '*a*' (ア/あ), a consonant-vowel combination such as '*ka*' (カ/か), and a nasal sonorant such as '*n*' (ン/ん). '*Katakana*' is used to transcribe foreign words into Japanese (e.g.,カインド=*ka-i-n-do*='kind'; バイク=*ba-i-ku*='bike') and write loan words (e.g., アルバイト=*a-ru-ba-i-to* which is derived from 'arbeit'='part-time job').

being distracted by English words' meanings and spellings. As explained in section 3.1, this study had no proficiency test, and there were only a small number of participants in the spoken production task. To make the written production data more reliable, the number and age of participants were increased (see Table 1) so as to fully observe gradual development in each of the three early stages and to compare it with later development in L2 acquisition. The written production data were collected by each teacher of all four groups in the English class. In the spoken task, the author was allowed to collect the data after school. Each of the 12 participants recorded his/her own oral answers with a portable recorder. The students sat in alternate seats, in order that they should not hear other students' utterances, or disturb each other's recordings. The recorded spoken production data were transcribed and analysed in accordance with the same scoring criteria as the written data.

3.5. Scoring criteria

In English affirmative clauses with main verbs, adverbs precede main verbs (13 a), while in those with copula *be,* they follow copula *be* (13 b).

(13) a. She *usually* **eats** breakfast at nine. (No.18)
b. He **is** *often* tired at night. (No.25)

As illustrated in Table 7, verb placement in affirmative sentences with VP-adverbs was given either 1 (for the expected orders above, regardless of missing/faulty verbal inflections), or 0 (for any other orders). The combination '*be*+adverb+bareV' was not scored under the heading of 'syntax', but under the heading of 'morphology'.

Point	Main Verbs			Copula
	Present	Past Regular	Past Irregular	Present
	3 tokens	2 tokens	3 tokens	3 tokens
1	S**A**VO			S*be***A**C
0	SVO**A**/**A**SVO/SV**A**O			**A**S*be* C/S*be*C**A**/S**A***be*C
Gap	Wrong constituents	SA*be*O		SVAC
	Missing constituents	S_VO/SA_O		S _ A C/S *be*_ C
	be+A+bareV	S *be* A bareV		

Table 7: Marking Criteria for verb placement with adverbs
(S=subjects, V=main verbs, A=adverbs, C=complements)

Table 8 shows marking criteria for overt subjects and Nominative Case. The suppliance and case marking of subjects were scored for their own grammaticality respectively, regardless of

the ungrammaticality of other properties in the same sentence.

Point	Affirmative sentences with VP-adverbs	
	Overt subjects	Nominative Case
1	He/**Taro** is *often* tired at night.	He is *often* tired at night.
0	Ø is often tired at night	His/Him is often tired at night.
Gap	-	**Taro**

Table 8: Marking Criteria for overt subject suppliance and Nominative Case marking

Based on the criteria (Table 9), verbal morphology production in affirmative sentences with VP-adverbs (3ps-*s*, regular past-*d*, irregular past forms, and copula *is*) was scored. Only sentences with correct word orders could be scored either 1 or 0, which is different from the scoring criteria for verb placement.

Point		Main Verbs			Copula
		Present 3ps-*s*	Past regular-*d*	Past irregular	Present *is*
		3 tokens	2 tokens	3 tokens	3 tokens
1		A+play***s***	A+play***ed***	A+***drank***	***is***+A
0	Omission	A+play_	A+play_	A+***drink***	_ +A
	Misuse			A+drink***ed***	***was***+A
		A+play***ed***	A+play***s***	A+drink***s***	***be***+A
		(***is***) A+play***ing***			
	be+A +bareV	***is/was***+A + ***play***			

Table 9: Marking Criteria for verbal morphology with VP-adverbs (A=adverbs)

4. Results

4.1. Syntactic operations

4.1.1. Verb placement with adverbs

Written and spoken data showed high accuracy rates in the placement of both main verbs and copular *be* in relation to adverbs, as shown in Tables 10/11. The 7th grade participants in the spoken task produced less accurately in all categories (particularly in past irregular contexts) than the same grade participants did in the written task: however, the accuracy rates in the spoken data fall beyond the 40%-60% range (which is interpreted as variability, Leung, 2006:179).

Participant Groups		Main Verbs						Copula *be*	
		SAVO						S*be*AC	
		Present		Past regular		Past irregular		Present	
Junior High School	7th	n=21	90.5	n=22	95.5	n=21	85.7	n=19	89.5
	8th	n=28	100	n=27	92.6	n=29	96.6	n=29	93.1
	9th	n=30	90	n=30	86.7	n=30	80.0	n=28	75.0
Uni	2nd	n=30	100	n=29	96.6	n=30	93.3	n=26	84.6
Total		109	95.4	108	92.6	110	89.1	102	85.3

Table 10: Accuracy rate of verb placement with adverbs in obligatory contexts (%)
(Written Data)

Participant Groups	Main Verbs			Copula *be*
	SAVO			S*be*AC
	Present	Past		Present
JH 7th	85.7 (24/28)	92.6 (13/14)	61.3 (19/31)	75 (12/16)
	n=9	n=10	n=11	n=8

Table 11: Accuracy rate of verb placement with adverbs in obligatory contexts (%)[32]
(Spoken Data)

4.1.2. Subject raising and case marking

Written data showed 100% target-like suppliance rates of overt subjects with Nominative Case in obligatory affirmative-with-VP-adverb contexts. The successful production of overt subjects is replicated in other existing studies (Lardiere, 1998 a, b; Haznedar, 2001; Inonin and Wexler, 2002; White, 2003; Goad, White and Steele, 2003), regardless of the fact that the L2 learners' L1[33] permits null subjects.

[32] The small total number of incidence is due to: (1) in present 3ps-*s*, the omission of both main verbs and adverbs; (2) in regular past-*d*, the frequent omission of adverbs and the production of different context sentences; (3) in present copula *is*, the frequent absence of copula.

[33] Turkish (Haznedar, 2001; White, 2003), Chinese (Lardiere, 1998 a, b; Goad, White and Steele, 2003), and Russian (Ionin and Wexler, 2002) are pro-drop languages.

Participant Groups		Written			Spoken		
			S A V O	Case	SAVO		Case
Junior High School	7th	n=27	100	100	n=12	99.4(179/180)	100(174/174[34])
	8th	n=30	100	100			
	9th	n=30	100	100			
University	2nd	n=30	100	100			

Table 12: Suppliance of Overt subjects with Nominative Case in affirmative sentences with-VP-adverbs (%) (Case=Nominative Case)

4.1.3.'*be*+bare V' construction

The constructions '*be*+adverb+non-finite verb' were observed in affirmative with-VP-adverb sentences (examples 14 a/b) in both written and spoken data. As shown in Table 13, the number of cases was small and showed a tendency to decrease as the length of L2 English exposure increases.

(14) a. She ***is*** usually ***eat*** breakfast at nine. [JH 7th P11, Spoken][35]
(No.2 She usually eats breakfast at nine.) [36]

b. She ***is*** sometimes ***drink*** milk last year. [JH 8th P6, Written]
(No.30 She sometimes drank milk last year.)

Participant Groups		*be*+adverb+bareV			
		Written Data		Spoken Data	
Junior High School	7th	n=27	3.0% (4/133)	n=12	2.7%(2/75)
	8th	n=30	4.7% (9/192)		
	9th	n=30	0.5%(1/222)		
University	2nd	n=30	0 %(0/233)		
Total		n=117	1.7(13/780)		

Table 13: Distribution of '*be*+adverb+bareV' in affirmative-with-VP-adverb contexts (%)

This finding is replicated in other previous L2 English early learners' studies, regardless of a difference in the rates of distribution, L1 backgrounds, ages, and obligatory contexts, as summarised in Table 14.

---

[34] There was a difference in the total number between overt subjects (180 cases) and Nominative-cased subjects (174 cases) because one participant [P12] supplied non-pronominal subjects (6 cases) which were not scored as 'unanalysed'.

[35] Junior high school student, the 7th grade, participant No.11 from spoken data.

[36] A question number and an expected answer.

L2 English Studies	L2 Data Mode / L2 Setting	'*be*+bare V'	L1 background	Age
Ionin&Wexler (2002:111)	Spoken / Spontaneous	25%	Russian	3-13
Yang and Huang (2004)[37]	Written / Classroom	23%(45/191) 9%(164/1821)	Cantonese	-
García Mayo et al. (2005 : 466)	Spoken / Spontaneous	6% (4/62)	Basque/Spanish	7-15

Table 14: '*be*+bare V' in other L2 English early learners' studies (%)

4.2. Morphological production

4.2.1. Verbal morphology in affirmative with VP-adverb sentences

All groups produced verb morphology much less accurately than verb placement. In particular, the 7th grade participants in the spoken data showed the lowest suppliance rate in present 3ps-*s* (3.6% in Table 16).

Participant Groups		Main Verbs						Copula	
		Present		Past				Present	
		3ps-*s*		Regular-*d*		Irregular		*is+adverb*	
Junior High School	7th	n=20	10.0	n=24	33.3	n=19	26.3	n=26	42.3
	8th	n=28	31.0	n=28	50.0	n=30	20.0	n=30	66.7
	9th	n=29	10.3	n=29	44.8	n=28	28.6	n=30	63.3
University	2nd	n=30	33.3	n=28	67.9	n=30	53.3	n=30	50.0
Total		107	22.2	105	49.5	107	32.7	116	56.0

Table 15: Suppliance of verbal morphology in affirmative-with-VP-adverb contexts (Written Data)

[37] Based on the descriptions from Hawkins and Casillas (2008:598) because it was impossible to obtain this paper.

Participant Groups	Main Verbs			Copula
	Present	Past		Present
	3ps-*s*	Regular-*d*	Irregular	*is+adverb*
JH 7th	3.6 (1/28)	62.5(10/16)	54.2(13/24)	45.5(15/33)
	n=11	n=11	n=11	n=12

Table 16: Suppliance of verbal morphology in affirmative-with-VP-adverb contexts (Spoken Data)

As shown in Figure 1, L1 Japanese adolescent learners showed that omission errors are higher than commission ones, which is similar to the results of L2 child speakers with various L1 backgrounds[38] in Paradis' study (2005)[39].

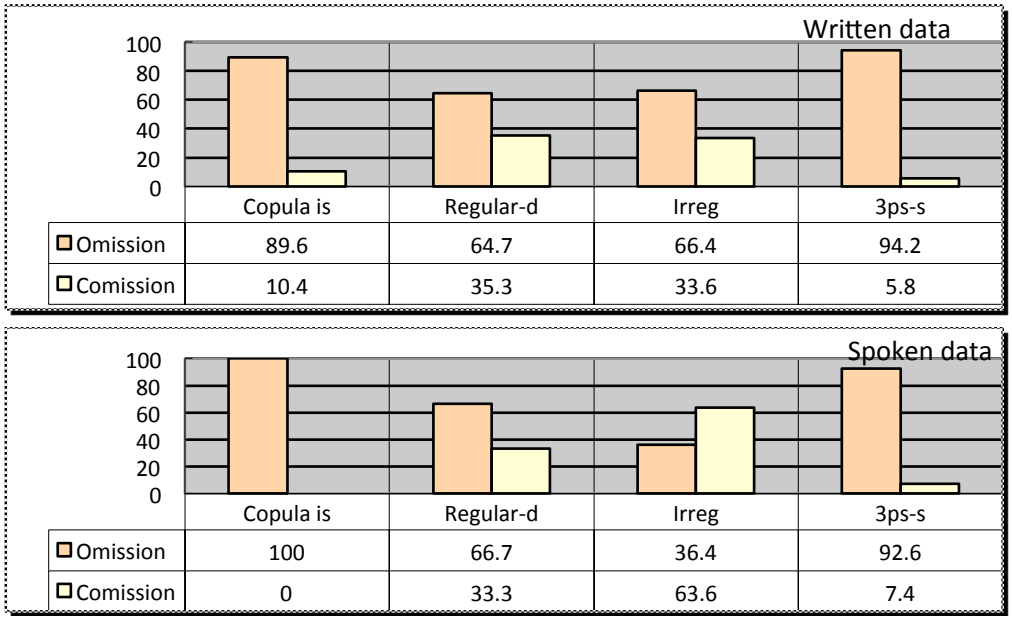

Figure 1: Distribution of error types in affirmative with VP-adverb sentences (%)

4.2.2. High omission of copula *is* in 'copula *is*+adverbs'

Copula *is* showed different behaviours, depending on the context, as shown in Table 17. On the one hand, 'copula *is*+adverb' exhibits a sharp rise in omission errors (by 34.6%: 75 cases), compared to *is*+Ø contexts. The apparent failure to supply *is* 'with VP-adverb' in this study[40] contrasts with the success in Ionin and Wexler's (2002[41]) and Lardiere's (2007[42]) studies. On the other hand, 'copula *is+not'* showed a decrease in omission (by 5.6%: 9

[38] Korean, Mandarin, Japanese, Cantonese, Romanian, Spanish, Arabic, Dari, Farsi, Ukrainian.

[39] Omission>commission (%): copula 22.18>7.60; regular-*d* 67.62>9.62; irregular 49.98>13.54; 3ps-s 64.10>17.09.

[40] The accuracy rate of copula *be* changed from 90.8% (Written)/91.7% (Spoken) in without-VP-adverb contexts to 56.0% (W)/45.5% (S) in with-VP-adverb contexts.

[41] " 100% correct *be*-Adv placement (8 token)" (Ionin, 2012).

[42] [S]he knows that *be* does raise over NEG and adverbs in English" (2007:151).

cases), compared to 'copula *is*+Ø': the high accuracy rates in '*is*+not' were observed, as in other L2 English studies[43].

Obligatory contexts	*is*+Ø	*is*+adverb	*is*+not
Copula *be*	7.2 (12/166)	41.8(87/208)	1.6 (3/185)

Table 17: Copula *is* omission in the three obligatory contexts (%: omission/total cases) (Written and spoken data)

4.2.3. Two kinds of bidirectional misuse

This study found two kinds of bidirectional misuse involving errors of commission (i.e., using a form in a non-target context). The first bidirectional misuse was observed between copula/auxiliary *be* and main verbs with VP-adverbs (Table 18): bare/non-past tense V was used in progressive contexts where *is*+Ving is the target form (15 a/b), while in past/non-past contexts, progressive *is/was*+Ving were used (16 a/b), although the number of instances was small.

		Misuse/total commission errors	
Age		12-13	12-20
L2 Data mode		Spoken	Written
Auxiliary	***is* V*ing***	92.3 (9+3s/13)	94.4(39+28s/71)
		bareV+V*s*	
Copula	***is* C**	100 (1/1)	100 (2/2)
Main verbs	**V*s***	0 (0/27)	44.4 (4/9)
	V*d*	0 (0/6)	16.7 (4/24)
	Past irregular	0 (0/11)	5.3 (2/38)
		***is/was* Ving**	

Table 18: Bidirectional misuse in affirmative copula /auxiliary *be* and main verbs with VP-adverb contexts (%)

(15) [*is*+V*ing*→V*s*]

a. He ***studies*** Japanese **now**. [JH 7th P2, Spoken]
(No.33 He is studying Japanese now.)

b. She ***eats*** breakfast **now**. [U 2nd P10, Written]
(No.8 She is eating breakfast now.)

[43] The results in this study found the high accuracy rates (76.8% in the written data; 88.6% in the spoken data), as in other existing studies: (1) Haznedar (2001) "nearly at-ceiling with correct *be*-Neg placement" (Ionin, 2012); (2) Ionin and Wexler (2002) "100% correct *be*-Neg placement (33 tokens)" (Ionin, 2013); (3) Lardiere, 2007 (see footnote 43).

(16) [V*s*→*is*+V*ing*]

a. She **_ *playing*** the piano **every day**. [JH 7th P3, Spoken]

b. She ***is playing*** _ piano ***everyday**. [JH 9th P29, Written]

(No. 40 She plays the piano every day.)

The second bidirectional misuse was found between the non-past tense marker and the past tense marker (-*s*↔-*d*) (examples 17/18), as summarised in Table 19.

		Misuse/total commission errors	
Age		12-13	12-20
L2 Data mode		Spoken	Written
3rd ps	Adv	100 (2/2)	55.5 (5/9)
	V*s*	*be*+bareV,*ing*	Past **V*d***
Past	Adv	100 (2/2)	71.0(17/24)
	V*d*	*be*+bareV,*ing*	3ps **V*s***
	irreg	28.6 (2/7)	36.9 (14/38)
		3ps **V*s***	

Table 19: Bidirectional misuse in obligatory main verb affirmative with-VP-adverbs (%)[44]

(17) [Present→Past]

a. She often ***read*[*red*]** comic books at home. [JH 7th P8, Spoken]

(No.62 She often reads comic books at home.)

b. She always ***played*** baseball after school. [JH 8th P17, Written]

(No.31 She always plays baseball after school.)

(18) [Past→Present]

She sometimes ***drinks*** milk **last year**. [JH 7th P11, Spoken/JH 8th P29, Written]

(No.30 She sometimes drank milk last year.)

As shown in Table 20, adverbs/adverbial phrases were consistently produced, although they were incompatible with misused verbal morphemes (examples 19 a/b).

[44] In the past irregular forms with-VP-adverb contexts, the overuse of regular-*d* accounted for 55.3% (21/38) in the written data, 71.4% (5/7) in the spoken data.

Participant Groups		Written Data		Spoken Data	
		VP-adverbs	Auxiliary	VP-adverbs	Auxiliary
Junior High School	7th	98.1 (102/104)	100 (66/66)	98.2 (56/57)	100 (36/36)
	8th	97.2 (140/144)	96.6(84/87)		
	9th	97.9 (141/144)	95.3 (82/86)		
University	2nd	97.3 (146/150)	97.8(88/90)		

Table 20: Suppliance of adverb/adverbial phrases (%) in the two contexts[45]

(19) a. She sometimes ***drinks*** milk **last year**. [JH 7th P11, Spoken]
(No.30 She sometimes drank milk last year.)
b. She often ***plays*** _ piano **last year**. [JH 9th P1, Written]
(No.2 She often played the piano last year.)

5. Discussion

5. 1. Full Transfer in the L2 initial state

The results showed that syntactic properties of the L1 were transferred into the L2 in the initial stages of L2 acquisition. First, both main verbs and copula *be* were correctly placed with adverbs in the written and spoken task. This suggests that the feature which determines V-to-T movement is specified [-strong] in the Tense category[46]. Second, overt subjects were almost perfectly produced in clause initial position and nominative case marking was 100 % target-like in both types of production data. This might provide potential evidence for the presence of a Tense category with related features (case, agreement, finiteness, and EPP): nominative case is assigned via "an agreement relationship between a finite T probe[47] and a nominal goal" (Radford, 2009:283); case-marked subjects surface as a result of subject raising which is triggered by an EPP feature in Tense.

5.2. UG access in L2 development

The findings suggest that L2 initial grammars develop by interaction with UG. Firstly, L2 Japanese adolescent classroom learners showed a similar trend of error distribution (omission >commission) to that of the L2 child speakers with various L1 backgrounds in the Paradis' study (2005). In addition, the commission errors exhibited no randomness: (1) no cases of

[45] Affirmative-with-VP-adverbs: Past: 2, 23, 30, 36, 58 (*last year*). 3ps-*s*: No.18, 31, 62 (no temporal adverbials). Auxiliary (present/affirmative): No. 8, 33, 50 (*now*).
[46] Consensus is yet to be reached among linguists about whether Japanese has verb raising or not.
[47] A probe is a head trying to find a nominal goal which can delete any uninterpretable features on the probe within its complement (Radford, 2009: 475).

failure in number in the use of copula *be* (e.g., *He are, She am, They is*); (2) two kinds of bidirectional misuse (V*s* ↔*is*+Ving; V*s*↔V*d*). Such similarity and regularity in results might be a possible reflection of UG constraints. Secondly, the '*be* +bareV' construction, which is found in neither L1 Japanese nor L2 English, was produced in affirmative-with-VP-adverb contexts ('*be*+adverb+bareV'), as in the other obligatory contexts in this study[48]. The overgeneration of *be* forms with non-finite verbs was also observed in other L2 English studies of early learners with different L1 backgrounds and ages (see Table 14). This suggests that universal linguistic principles guide L2 early leaners in identifying *be* forms as free all-purpose finiteness markers. This leads an assumption that the '*be*+bareV' order suggests a process guided by UG in early L2 development. The findings, indicating UG involvement in L2 developmental processes, as well as the presence of functional category Tense with specified features in the L2 initial state (see section 5.1), are consistent with the Full Transfer Full Access Hypothesis.

5. 3. A relation between syntax and morphology

A noticeable asymmetry in accuracy rates was found between verb placement and verbal morphology production. Verb placement over adverbs exhibited much more accuracy than verbal morphology suppliance (see Tables 10/11, 15/16) in the same test item. Success in verb placement, as well as subject raising with Nominative Case marking (see section 4.1.2.), could provide potential evidence for the absence of a deficit in syntactic knowledge. This suggests a dissociation between syntactic knowledge and morphological production: persistent problems in morphology production are not attributable to impaired grammar. This is an underlying assumption of the Feature Reassembly Hypothesis.

5.4. L1 effects

Verbal morphology production showed variability in affirmative with VP-adverb contexts: (1) high omission of copula *is*: (2) commission errors involving the substitution of one morphological form for another. The importance of both as evidence for L1 transfer is considered below.

5.4.1. High omission of copula *is* in 'copula *is*+adverbs'

Copula '*is'* demonstrated high omission only in with-VP-adverb contexts (see Table 17). The phenomenon is suggestive of a failure in the insertion of the Vocabulary entry /is/ into a syntactic node, not of a deficit in syntactic knowledge. This might be attributable to an extraneous syntactic node for adverbs, which both creates "'syntactic' distance"

[48] (1) '*isn't*+bareV' for *doesn't/didn't* V and *isn't*+V*ing*; (2) *'is*+bareV' for *is*+V*ing*

(Wakabayashi and Yamazaki, 2009[49]) and increases computational loads in activating the entry for /is/ with features (Hawkins and Casillas, 2008). The high omission of copula *is* with VP-adverbs provides possible evidence for a failure in reassembling features into L2 lexical items. In other words, an extraneous syntactic node for adverbs contributes to increasing computational loads, which causes L2 learners to fail to reassemble multiple features [+finite, -past, 3rd person, +singular] into a single L2 lexical item *is*. This is consistent with response times in spoken data: Japanese learners at the earliest stages of learning took more time before producing '*is*+adverb' sentences, whilst they produced '*is*+not' sentences instantly, as well as '*is*+Ø' sentences. Other findings provide further support for the argument that the omission in '*is*+adverb' is not a direct reflection of impaired syntactic knowledge: (1) target-like *is* placement (see Tables 3/4); (2) rare cases (6.7%: 14/208) of misplaced *is* cases (e.g., *He often is tired)*.

5.4.2. Two kinds of bidirectional misuse

The two kinds of commission errors could be a possible reflection of L1 effects: aspectual ambiguity in Japanese[50]. In English, verbal morphology interacts with aspectual properties inherent to verbs; nominal morphology serves to encode telicity. By contrast, in Japanese, rather than verbal or nominal morphology, adverbials play a central role in determining aspectual interpretations. The more prominent role of adverbials in Japanese allows for: (1) multiple interpretations of each verbal inflection (see examples 2-4), particularly *-teiru* (examples 7-9); (2) multiple representations of each semantic feature (see examples 5/6). In other words, English and Japanese have differences not only in aspectual interpretations of verbal morphology, but also in representations of related aspectual features. This suggests that L1 effects could be a trigger of feature-reassembly failures: Japanese adolescent learners of English failed to reassemble aspectual features, such as [+/-habitual] [+/-telic] into different L2 lexical items, which resulted in two kinds of bidirectional misuse. This is consistent with a claim of the Feature Reassembly Hypothesis.

6. Conclusion

This study investigated knowledge of both syntax and verbal morphology in affirmative-with-VP-adverb contexts. Elicited written and spoken data by adolescent L1 classroom learners provide possible evidence for the Full Transfer Full Access and the Feature Reassembly Hypothesis. Success in syntactic operations and variability in

[49] Wakabayashi and Yamazaki (2009) found that not 'linear' but 'syntactic' distance, caused by intervening constituents, disrupts affix hopping, which results in greater difficulty in producing an affixal form of 3ps-*s* for L1 Japanese learners.

[50] The response '*I am loving it*' to '*How do you like this linguistics class?*' is "perfectly acceptable, although the *state* verb *love* is not allowed to be used in the form of progressive tense. This suggests aspectual ambiguity in English (Tsujimura, 2007:385).

morphological production suggest that a functional category Tense with specified features and UG control are operative in adolescent L2 grammars. In addition, selective morphological variability suggests failures to reassemble semantic and morphosyntactic features onto morphological realisation. English and Japanese both have the same overt tense/aspect morphology on the surface (Sugaya and Shirai, 2007:4), but they represent lexical aspect differently: in English, lexical verbs entail their aspectual features, while in Japanese, the imperfective marker *-teiru* and temporal adverbials alternate interpretations in aspectual features. The two kinds of bidirectional misuse suggest that the different representations of L1 semantic features might be another source of reassembly problems, which could cause morphological variability. This study presented a different perspective on the source of morphological variability in L2 acquisition: appropriate aspectual interpretation underlies successful acquisition of verbal morphology. To examine more closely how the syntax-semantics interface reflects morphological representation, further studies are needed.

References

Chomsky, Noam (1995). *The minimalist program*. The MIT Press, Cambridge, MA.

Chomsky, Noam (1998). Minimalist inquiries: the framework. *MIT Working Papers in Linguistics* 15: 1-56.

Chomsky, Noam (2001). Derivation by phrase. In Michael Kenstowicz (ed.), Ken *Hale: a life in language*. MIT Press, Cambridge, MA. 1-52.

Chomsky, Noam (2005). Three factors in language design. *Linguistic Inquiry* 36: 1-22.

Epstein, Samuel D., Suzanne Flynn, and Gita Martohardjono (1996). Second Language Acquisition: Theoretical and Experimental Issues in Contemporary Research. *Behavioral and Brain Sciences* 19 (4): 677-714.

Eubank, Lynn (1993/1994). On the Transfer of Parametric Values in L2 Development. *Language Acquisition* 3: 183-208.

Gabriele, Alison (2008). Calculating Telicity in Native and Non-Native English. In Roumyana Slabakova, Jason Rothman, Paula Kempchinsky, and Elena Gavruseva (eds.), *Proceedings of the 9th Generative Approaches to Second Language Acquisition Conference (GASLA 2007)*. Cascadilla Proceedings Project, Somerville, MA. 37-46.

García Mayo, María del Pilar, Amparo Lázaro Ibarrola, and Juana M. Liceras (2005). Placeholders in the English interlanguage of bilingual (Basque/Spanish) children. *Language Learning* 55: 445-489.

Goad, Heather, Lydia White and Jeffrey Steele(2003). Missing Inflection in L2 Acquisition: Defective Syntax or L1-Constrained Prosodic Representation? *Canadian Journal of Linguistics* 48:243-263.

Hawkins, Roger and Gabriela Casillas (2008). Explaining frequency of verb morphology in

early L2 speech. *Lingua* 118: 595-612.

Haznedar, Belma (2001). The acquisition of the IP system in child L2 English. *Studies in Second Language Acquisition* 23: 1-39.

Ionin, Tania (2013). Morphosyntax. In Julia Herschensohn and Martha Young-Scholten (eds.), *the Cambridge Handbook of Second Language Acquisition*. Cambridge University Press, Cambridge, UK. 505-528.

Ionin, Tania and Kenneth Wexler (2002). Why is 'is' easier than '-s'?: acquisition of tense/agreement morphology by child second language learners of English. *Second Language Research* 18: 95-136.

Lardiere, Donna (1998a). Case and tense in the 'fossilized' steady state. *Second Language Research* 14: 1-26.

Lardiere, Donna (1998b). Dissociating syntax from morphology in a divergent end-state grammar. *Second Language Research* 14: 359-375.

Lardiere, Donna (2007). *Ultimate Attainment in Second Language Acquisition: A Case Study.* Lawrence Erlbaum Associates, Mahwah, NJ.

Lardiere, Donna (2008). Feature assembly in second language acquisition. In Juana M. Liceras, Helmut Zobl and Helen Goodluck (eds.), *The role of formal features in second language acquisition*. Lawrence Erlbaum Associates, New York. 106-140.

Lardiere, Donna (2009). Some thoughts on the contrastive analysis of features in second language acquisition. *Second Language Research* 25 (2): 173-227.

Leung, Yan-kit Ingrid (2006). Full Transfer vs. partial transfer in L2 and L3 acquisition. In Roumyana Slabakova, Silvina Montrul, and Philippe Prévost (eds.), *Inquiries in linguistic development: Studies in honor of Lydia White*. John Benjamins, Amsterdam. 157-188

Li, Yen-hui Audrey (1999). Plurality in a classifier language. *Journal of East Asian Linguistics* 8: 75-99.

Paradis, Johanne (2005). Grammatical Morphology in Children Learning English as Second Language: Implications of Similarities with Specific Language Impairment. *Language, Speech, and Hearing Services in Schools* 36: 172-187.

Prévost, Philippe and Lydia White (2000a). Accounting for morphological variation in L2 acquisition: truncation or missing inflection? In Marc-Ariel Friedemann and Luigi Rizzi (eds.), *The acquisition of syntax*. Longman, London. 202-235.

Prévost, Philippe and Lydia White (2000b). Missing surface inflection or impairment in second language acquisition? Evidence from tense and agreement. *Second Language Research* 16: 103-133.

Radford, Andrew (2009). *Analysing English sentences: A minimalist approach*. Cambridge University Press, Cambridge.

Schwartz, Bonnie D. and Rex Sprouse (1994). Word order and nominative case in non-native language acquisition: a longitudinal study of (L1 Turkish) German

interlanguage. In Teun Hoekstra and Bonnie D. Schwartz (eds.), *Language acquisition studies in generative grammar*. John Benjamins, Amsterdam. 317-368.

Schwartz, Bonnie D. and Rex Sprouse (1996). L2 cognitive states and the full transfer/full access model. *Second Language Research* 12: 40-72

Slabakova, Roumyana (2008). *Meaning in the Second Language*. (*Studies in Language Acquisition Series* 34). Mouton de Gruyter de Gruyter, Berlin and New York.

Slabakova, Roumyana (2009). What Is Easy and What Is Hard to Acquire in a Second Language? In Meslissa Bowles, Tania Ionin, Silvina Montrul, and Annie Tremblay (eds.), *Proceedings of the 10th Generative Approaches to Second Language Acquisition Conference* (GASLA 2009). Cascadilla Proceedings Project, Somerville, MA. 280-294.

Sugaya, Natsue and Yasuhiro Shirai (2007). The acquisition of progressive and resultative meanings of the imperfective aspect marker by L2 learners of Japanese. *Studies in Second Language Acquisition* 29: 1-38.

Tanaka, Eri (2007). *Path and Telicity in Japanese (Kotoba no Karakuri)*. Eihoosha, Tokyo.

Tsujimura, Natsuko (2007). *An Introduction to Japanese Linguistics*. 2nd edition. Blackwell, Malden, MA.

Ueda, Yasuki and Tomoko Haraguchi (2008). Plurality in Japanese and Chinese. *Nanzan Linguistics*: *Special Issue* 3(2): 229-242.

Vainikka, Anne and Martha Young-Scholten (1994). Direct access to X'-theory: evidence from Korean and Turkish adults learning German. In Hoekstra T & Bonnie D. Schwartz (eds), *Language Acquisition Studies in Generative Grammar.* John Benjamins. Amsterdam. 265-316.

Vainikka, Anne and Martha Young-Scholten (1996 a). Gradual development of L2 phrase structure. *Second Language Research* 12: 7-39.

Verkuyl, Henk J. (1993). *A theory of aspectuality: the interaction between temporal and atemporal structure.* Cambridge University Press, Cambridge, UK.

Wakabayashi, Shigenori and Tae Yamazaki (2009). *Santangen no –s no ayamari mirareru toogokoozoo to senteki kyori no eikyo*. Kagaku-kenkyu-hi hookokusho 15520364: 45-64.

White, Lydia (2003). Fossilization in steady state L2 grammars: persistent problems with inflectional morphology. *Bilingualism: Language and Cognition* 6: 129-141.

Y. Yang, Suying and Yue Yuan Huang (2004). *A cross-sectional study of be+verb in the interlanguage of Chinese leaners of English*. Paper Presented at the First National Symposium on SLA, Guangzhou, China.

Author contact information:

Akiko Muroya: amuroyv@essex.ac.uk

This paper has been updated with minor revisions and replaced April 15, 2014.