

Narrative Discourse Processing in Second-Language Japanese

Midori INABA

(Department of Teaching Japanese as a Foreign Language)

Abstract

This study investigated the characteristics of L2 (second language) narrative discourse processing with particular attention to development of the structural and linguistic knowledge required for narrative production (Hudson and Shapiro, 1991), and the interrelation of these kinds of knowledge in development. The theoretical background is Berman and Slobin's (1994) work on the development of L1 (first-language) narrative discourse competence, which claimed that linguistic knowledge itself does not suffice for children to construct a well-organized narrative and that, rather, narrative production is a joint process of structural and linguistic knowledge; and Karmiloff-Smith's (1985, 1986a, 1986b, 1992) Representational Redescription model showing that L1 development occurs bottom-up and then via top-down in the middle period, and finally through integration of data and internal representation. The main concern of the study, then, is to identify the features of L2 discourse processing, examining the L1 features proposed in the above-mentioned studies. The central issue here is what features L2 learners, who are supposed to have a mature perspective on the story but do not have full L2 linguistic command, show in their discourse processing. A fictional story elicited from adult JSL (Japanese as a Second Language) learners at five different levels of JSL proficiency was analyzed regarding the thematic coherence on the macro-level of plot organization (global structure), stipulating three elements: onset, unfolding, and resolution of the plot (Labov and Waletzky, 1967). The results of the study showed that L2 learners manifest completely opposite trends to those of the L1. That is, 1) they showed top-down processing of their narratives from the initial phase of development; and 2) structural knowledge itself did not suffice for L2 learners to produce a well-constructed narrative: rather, whether they could construct it depended largely on their L2 linguistic command itself. This study will provide a broader perspective on the study of narrative discourse in L1 and L2 language acquisition.

1. Introduction

Narrative production is a cognitive and linguistic task that draws on many kinds of knowledge — for example, general knowledge about events, memories of specific episodes, knowledge about people and typical social interactions, about structural characteristics of different narrative genres, about verb tense and linguistic connectives, and about the listener's needs. The task that a narrator faces is how to coordinate this knowledge in producing a narrative (Hudson and Shapiro; 1991, p. 89). This study seeks to understand how L2 learners draw on their structural knowledge and L2 and L1 linguistic knowledge to construct a thematically motivated L2-narrative, and how they draw on their mature perspective for constructing an L2 narrative. The linguistic features of L2 narratives are also explored.

The present study is motivated by the crosslinguistic study of the development of children's narrative discourse competence based on the same elicitation task (frog story) by Berman and Slobin (1994), revealing

the following developmental features. There is a common developmental pattern towards increasing cohesion and coherence among children in five languages (English, German, Spanish, Hebrew and Turkish). The ability to organize thematically-motivated narrative developed with age. Knowledge of a range of grammatical forms and lexical items for describing individual events developed relatively early (by 3-year-olds), while knowledge of narrative structure and of how to recruit linguistic forms for elaboration on events and the relations between them emerges rather later (from around age 5).

Inaba (1999) investigated the development of the narrative discourse competence of Japanese children (ages from 3 to 11), focusing on structural and linguistic knowledge¹ (Hudson and Shapiro, 1991) in producing a well-formed narrative. The analysis concerned how children developed these different strands of knowledge in constructing the global structure of the story, and how they drew on and interconnected these kinds of knowledge in their narrative discourse processing, dealing with oral narratives (frog story).

Inaba (1999) found that structural knowledge in itself does not guarantee a linguistically rich and elaborate narrative, and linguistic knowledge in itself does not suffice for children to put together a well-constructed narrative, either. L1 development occurs as a combination of structural knowledge and linguistic knowledge, and these kinds of knowledge are interrelated in development, supporting the claim by Berman and Slobin (1994) that narrative development is a joint process of event comprehension and language production. Inaba (1999) also presented results showing that L1 discourse processing occurs bottom-up first, going through top-down processing in the middle stage, and then moves to the stage of integration of data and internal representation, supporting Karmiloff-Smith's (1984, 1985) work.

The current study, then, attempts to characterize L2 narrative discourse processing. The central issue is what features L2 learners, who are supposed to have mature content knowledge and structural knowledge but do not have full L2 linguistic command, present in the course of L2 development. These results were discussed comparing them to those of Japanese children and adults (Inaba, 1999).

2. Method

2.1 Subjects: JSL Learners

The subjects were English native speakers who were studying or had learned Japanese as a second language (JSL). They had all learned basic Japanese grammar before the task of this study was given. They consisted of five groups of learners at different levels of JSL proficiency. These levels were elementary (Level I), pre-intermediate (Level II), intermediate (Level III), advanced (Level IV) and post-advanced (Level V). There were ten subjects in each group.

The subjects at Levels I to IV were classroom learners undergoing intensive JSL instruction at a university in Japan. Most of them were in their early twenties. Level V-subjects were university English teachers who taught in Japan. Most of them were in their early forties. The division of the levels I to IV was based on the results of a grammar test given to the subjects before narrative task.² It included basic Japanese grammar generally taught in an elementary- and intermediate-level Japanese courses. It was adopted from the Trial Test B³ for Japanese Language Proficiency Tests made and administered in 1983 by the Society for Teaching Japanese as a Foreign Language, supported by the aid of Japan Foundation (1983, 1-3).⁴ The test consists of seventy-five questions. The format of the test is multiple-choice with four choices each. The full score is seventy-five. Table 1 shows the levels to which the subjects were assigned as a result of the test.

Table 1: Level Assignment for JSL Learners

Level		Score interval (%)
I	elementary	$30 < p$
II	pre-intermediate	$30 \leq p < 50$
III	intermediate	$50 \leq p < 70$
IV	advanced	$70 \leq p$
V	post-advanced	—

Those who scored under 30% of the test were assigned to Level I, above 30% to under 50%, Level II, above 50% to under 70%, Level III, and above 70%, Level IV.⁵

Level V consisted of post-advanced learners of Japanese. Most of them were much older than the subjects at Levels I to IV. Many of them had taken some formal JSL instruction in the early period of their study, and after that they learned Japanese in a naturalistic way rather than through further formal instruction, such as university language courses. They had stayed in Japan eleven years, on average. The minimum stay was four years and the maximum twenty-one years, which is much longer than the stays of Level-I, -II, -III and -IV subjects. It should be noted here that neither a long period of naturalistic exposure nor a higher total number of hours of formal instruction necessarily guarantees fluency in Japanese. These subjects, however, were classified into a post-advanced group according to the author's judgment based on informal interviews with them. The grammar test was not given to the Level V subjects because some of them were not used to this kind of written test and therefore it would not yield reliable data.

2.2 Data collection

The subjects were asked to tell a story both in L2 Japanese and L1 English based on the picture story book, without verbal text, entitled "Frog, Where Are You?" (Mayer, 1969). It is a story of a boy and his dog who go looking for their pet frog, which has escaped. The main action of the story consists of their adventures in a forest encountering various animals during their search, and they finally find the frog. The book is composed of twenty-four scenes.

The basic procedures and instructions for collecting stories followed Inaba (1999). Although this book is for children, the subjects were instructed not to tell the story using childish language. A basic vocabulary list was provided for JSL learners in order to avoid a situation in which they could not tell the story because they lacked the vocabulary. The vocabulary offered consisted only of nouns. This addition did not affect the present study, since the development of vocabulary is irrelevant to the concerns of the research.

Data for JSL subjects at Levels I, II, III and IV were collected at a university in Aichi prefecture, and also through interviews with the author of the study. Level-V subjects audio-taped the story by themselves at home. These data were collected in 1992-8. The audio-taped data were transcribed. Prosodic information was not entered in these transcripts, since it could not be fully taken into account in this study, despite its importance.

2.3 Procedure of Analysis

This study stipulated three elements of the story as criteria of the ability to relate the contents of the picture book as an integrated whole. The three core components stipulated are I: **the onset of the plot** (the boy's realizing that his frog has disappeared); II: **the unfolding of the plot** (the boy's search for the missing frog); and III: **resolution of the plot**, (the boy's finding the frog he lost or one to take its place). A full global narrative structure is defined as including explicit reference to all three cardinal elements of the plot.⁶

The texts were scored⁷ for these three elements in the following ways. Component I required explicit mention of the boy's noticing that the frog was missing; a child/subject who merely referred to the jar as empty without relating it to the boy's discovery was not credited. To receive credit for II, explicit mention must have been made of searching (or looking, or calling) for the frog, and this must have gone beyond the initial start of the search inside the bedroom; and for III, the frog that the boy takes home at the end of the story must have been explicitly described as being the same as or substituting for the frog the boy lost (Berman and Slobin; 1994, p. 46). The overall plotline consists of explicit reference to all three components.

3. Results

3.1 Global Structure

The analysis in this section concerns the overall plot line of the story. The texts of the JSL learners were examined to determine whether or not they had constructed a global structure. Table 2 shows the percentages of JSL learners making explicit reference to all three plot components of the global structure. These figures

show a level-related proportional increase, from 20% at Level I up to 60% at Level V. This indicates that their ability to construct a global structure in the L2 developed with their general L2 proficiency.

Table 2: Percentage of JSL Learners Making Explicit Reference to All Three Plot Components

	Level (N=10 per group)					Average
	I	II	III	IV	V	
Percentage	20	30	40	60	60	42

The score of Level V (60%), however, did not reach that of the adult native speaker (in Table 3). It should be noted here that the learners in this group would have mentioned all three components if they had narrated the story in their L1, as is clear from the fact that most of adult narrators (92%) across five languages explicitly mention all three plot components shown in Table 3.

Table 3: Percentage of Native Speakers Making Explicit Reference to All Three Plot Components

	Adults of Five Languages (N=58)	Adults of Japanese (N=10)
Data Source	Berman and Slobin (1994, p. 49)	Inaba (1999, p. 107)
Percentage	92	100

These results indicate that JSL learners do not always organize a global structure although they are assumed to have an adult perspective on the story. JSL learners were not able to mention all the necessary components of the global structure when their L2 proficiency was low. Their narratives gradually become better organized according to their general L2 development. But their development was very slow, with more than one-third (40%) of learners at the post-advanced level still failing to construct a global structure in the data of the present study. This suggests that they have some difficulty in reflecting their full perspective when they narrate in the L2.

Compared with the development of Japanese as a first language, the percentage of Level I (20%) is higher than that of Japanese children at the early stage, 0% for the 3-year-olds.⁸ Japanese children showed clear age-related proportional increase in development, but in the case of JSL learners the percentage did not stay at 60%, even at post-advanced level.

3.2 Plot Components

This section will explore the development of the three components separately through further analysis. The main concerns are 1) which component(s) is/are difficult for learners to produce, and 2) whether developmental trends for each component are similar to that found in L1 development. Table 4 gives the percentages of JSL learners who made explicit reference to these three core plot components. An overview of the data reveals that Components II and III reached quite high proportions at Level I, 80% and 70%. When analyzed by the difficulty of the components, Component I appears to be the most difficult among the three; the average is the lowest (50%). Component II seems to be the easiest, since it elicited the highest score on average (96%). These results are in contrast to what was observed in the Japanese children and adults (Inaba, 1999), for whom Component I was the least difficult.

In developmental terms, mention of Component I, in proportion, rose from 20% at Level I and showed a

Table 4: Percentage of JSL Learners Making Explicit Reference to Each of Three Core Components

Component	Level (N=10 per group)					Average
	I	II	III	IV	V	
I	20	40	50	70	70	50
II	80	100	100	100	100	96
III	70	80	80	90	90	82

level-related increase in proportion. However, it only reached 70% at Level V, and did not achieve the adult level of mention, shown in Table 5, even then. Component II rose from 80% at Level I up to 100% at Level II, manifesting quite an early development. The average (96%) was much higher than that found in Japanese native speakers (71%).⁹ Component III rose from 60% at Level I up to 90% at Level IV. It showed a slow increase in proportion with level, but it approximated the Japanese adult level of mention at an advanced level (Level IV).

Table 5: Percentage of Adult Native Speakers Making Explicit Reference to Each of Three Core Components

Component	Adults of Five Languages (N=58)	Adults of Japanese (N=10)
Data Source	Berman and Slobin (1994, p. 48)	Inaba (1999, p. 106)
I	100	100
II	100	100
III	92	100

The results from JSL learners showed many different features compared to those from Japanese children and adults. The order of difficulty of the components was different: Component I was revealed to be the most difficult for JSL learners, while it was the easiest for Japanese children and adults.

In developmental terms, Japanese children showed clear age-related development for all three components, and the score of mention reached the adult level of mention at a certain stage of development. JSL learners, on the other hand, showed a much higher score of mention from the outset for two of them, reflecting their mature perspective. The other component, however, showed a particularly late development. This proved to be an important factor in their failing to construct a global structure.

3.3 Linguistic Features of L2 Narratives

This section focuses on JSL learner's failure to mention each component. It illustrates the linguistic failures of JSL learners and attempts to seek causes of failure based on a qualitative analysis of their texts. The first analysis concerns Component I: the onset of the plot (the boy's realizing that his frog has disappeared). As defined in section 2.3, it requires explicit mention of the boy's noticing that the frog is missing to be credited: a subject who merely refers to the jar discovery was not credited.

One factor of JSL learners' failure is that the story was very simplified and a detailed reference or explanation for the scene was not made. The following text excerpted from a JSL learner at Level I only describes the event that the frog has disappeared. The reference to the boy's realizing that his frog has disappeared was not made, so this version lacks an important piece of information for the onset of the plot. This feature is mainly observed in the texts by learners at the elementary level.

Ex. 1 *Asa wa kaeru-kun wa imasen.*
 "In the morning the frog is not there." [E-1-f]

Another factor is that their texts only describe a situation depicted in a picture of the book: "the boy's awakening" and "the frog's disappearance" in this scene. The description was often made by the combination of simple sentences chained in temporal sequences. They failed to refer to the internal aspect of the protagonist, that is the boy's noticing the disappearance of the frog. This feature is frequently observed in the elementary-level texts, as shown in Ex. 2 and Ex. 3.

Ex. 2 *Billy to inu okimasu. Kaeru wa imasen.*
 "Billy and the dog wake up. The frog is not there." [E-1-a]

Ex. 3 *Inu to otokonoko okimashita. Demo Kaeru wa inai. Bin wa empty deshita.*
 "The dog and the boy woke up. But the frog is not there. The jar was empty." [E-1-b]

The other failures are caused by the lack of the vocabulary as well as grammatical sophistication, especially in the use of connectives in this case. JSL learners combined two or more clauses with inappropriate connectives. Component I required at least three sub-elements: that is, the background element (the boy has woken up), the plot advancing elements (the boy's discovery), and the state of affairs depicted (the jar is empty or the frog's disappearance). In order to describe these sub-elements in thematic organization, narrators need to connect them in a hierarchical construction by using appropriate connectives in Japanese. In this process of putting all the necessary sub-elements into a single sentence, complex, or compound sentences, they made errors. One of the common errors is caused by inappropriate use of "toki (when)" clause, as shown in Ex. 4.

- Ex. 4 *Asa okita toki kaeru wa inai.*
 "When (he) woke up, the frog is not there." [E-3-f]

The "toki" clause just specifies the temporal location of the event stated in the main clause (second clause). Like the "when" clause in English, the "toki" clause does not imply that the subject in the clause finds or notices the event or state in the main clause. Thus the text in Ex. 4 failed to express the meaning of "notice". In order to express the meaning of "the boy notices", this should be explicitly mentioned in a sentence like that in Ex. 5.

- Ex. 5 *Asa okita toki otokonoko wa kaeru ga inai koto ni kigatuita.*
 "When the boy woke up, he noticed that the frog had gone."

Another way to express the meaning of "notice" is using a conjunction "to" (or "tara") in place of "toki", as shown in Ex. 6. This conjunction implies that the state expressed in the second clause is a finding as a result of the action of the first clause (Toyota, 1979). This is one of the most common patterns found in the texts of Japanese native speakers for Component I.

- Ex. 6 *Asa ni natte shounen to inu ga mezameru to soko ni wa kaeru no sugata ga arimasendeshita.*
 "In the morning the boy and the dog woke up to find that the frog had gone." [J-20-g]

Another pattern combining two clauses used by JSL learners is the "-te (and)" form of a verb, shown in Ex. 7.

- Ex. 7 *Tsugi no asa otokonoko ga okite bin no naka ni nanimo inakatta.*
 "The next morning the boy woke up and there was nothing in the jar." [E-4-j]

The -te form functions to link clauses or predicates. It generally indicates that the action or state expressed in the first and second clause occur sequentially. However, it does not indicate the sense of "notice" or "find" at all. Thus, the text in Ex. 7 failed to express one of these meanings. An explicit mention is also required for the "-te" clause to express the meaning of "notice" or "find". Ex. 8 is a text from a Japanese adult who used the "-te" form appropriately for the scene.

- Ex. 8 *Asa ni natte Jack wa kara ni natteshimatta bin o mite gakkari.*
 "The next morning Jack disappointed to see that the jar was empty." [J-20-f]

The next analysis concerns Component II: the unfolding of the plot (the boy's search for his missing frog). To comply with the definition of Component II, an explicit mention must have been made of searching for the frog, and this must have gone beyond the initial start of the search inside the bedroom. The previous section showed that most of the JSL learners mentioned this component. Only two of the Level-I learners failed to mention it. There are mainly two reasons they were not credited with a mention. One was a deletion of the

object in the statements, so they failed to specify what the boy was looking for. An object can be deleted in clear contexts, but in their texts, it was ambiguous.

- Ex. 9 *Otokonoko ga fuku o kaeteimasu. Inu ga sagashiteimasu.*
 “The boy is changing his clothes. The dog is looking for.” [E-c-1]
- Ex. 10 *Otokonoko ga mori e ikimashita. Otokonoko ga ana ni sagashiteimasu.*
 “The boy went to the forest. The boy looked down a hole.” [E-c-1]
- Ex. 11 *Fukurou kimasu. Rui-san yondeimasu. (Scene14)*
 “The owl comes. Rui is calling.” [E-e-1]

The other reason is that their narration mainly described only actions or situations depicted in the picture, without explicitly mentioning the boy’s search for the frog. Compare the following texts by a JSL learner and a Japanese adult. The former did not make reference to the boy’s search for the frog, while the latter explicitly did.

- Ex. 12 *Otokonoko ga mori e ikimashita.*
 “The boy went to the forest.” [E-1-c]
- Ex. 13 *Otokonoko to koinu wa kaeru o sagashi ni mori e ikimashita.*
 “The boy and the little dog went looking for the frog in the forest.” [J-20-d]
- Ex. 14 *Otokonoko wa iwa ni noborimashita.*
 “The boy climbed a rock.” [E-1-c]
- Ex. 15 *Otokonoko wa kondo wa iwa ni nobori ki no eda ni tsukamatte kaeru o yobimashita.*
 “The boy then climbed the rock and called the frog, grabbing the tree branch.” [J-20-d]

It is interesting to note that the same learner mentioned more about the search for the frog all over the story in their L1 version of the story, shown in the following examples. However, in the L2 narrative, he just mentioned it twice, and those times the verbs lacked objects, obscuring his intended meaning. This is evidence that he had a perspective on the story, but his linguistic ability was insufficient to express what he wanted to mention.

- Ex. 16 *The dog was looking in the jar, cannot find the frog. (Scene 4) [E-1-c]*
- Ex. 17 *Otokonoko opened the window and called out for the frog. (Scene 5) [E-1-c]*
- Ex. 18 *Otokonoko called out for the frog next to the forest. (Scene 8) [E-1-c]*
- Ex. 19 *He looked down a hole for the frog, as the dog barked at the beehive. (Scene 9) [E-1-c]*
- Ex. 20 *Otokonoko grabbed onto some branches, he called out for the frog. (Scene 14) [E-1-c]*

The last investigation concerns Component III: resolution of the plot (the boy’s finding the frog he lost or one to take its place). The texts were scored using the following definition: the frog that the boy takes home at the end of the story must be described explicitly as being the same as or substituting for the frog the boy has lost. The following texts by JSL learners at Level I and II illustrate examples of this failure at the end of the story, failing to specify the frog.

- Ex. 21 *Billy no te ni {kaeru no} ¹⁰ kaeru no kodomo o motteimasu.*
 “Billy has a baby frog in his hands.” [E-1-a]
- Ex. 22 *Kaeru to inu to otokonoko ga uchi e kaeri mashita.*
 “The frog and the dog and the boy went back home.” [E-2-i]
- Ex. 23 *Satoshi-kun ga ippiki kogaeru o motte kaerimasu.*
 “Satoshi (the boy) took one of the baby frogs and went home.” [E-3-b]

Qualitative analysis of the L2 texts suggested several factors of failure in L2 development. One is a kind of simplification of the story. The learner avoided or omitted mentioning details of the scene essential to construct a plot, such as background information, the internal aspect of the protagonist, plot-advancing elements and so on. Another is that they only described the events or actions depicted in the picture book, and ordered the events along the sequential axis of an unfolding plot line, failing to organize a narrative according to thematic relevance. Another factor is the lack of L2 linguistic knowledge. When they did not find the appropriate way to express what they wanted to say in L2, they substituted a similar expression to the best of their ability. Most of these failures seem to be attributable to the learners' lack of L2 competence.

4. Discussion and Conclusion

This study investigated the characteristics of L2 narrative discourse processing with particular attention to development of the structural and linguistic knowledge required for narrative production, and the interrelation of these kinds of knowledge in development. The development of the ability to construct a global structure for the story is assessed through application of a definition requiring explicit reference to all three cardinal components of the plot: the onset of the plot (Component I), unfolding of the plot (Component II), and resolution of the plot (Component III).

JSL learners manifested a different tendency in development from Japanese children and adults as reported in Inaba (1999). Japanese children and adults showed an age-related development in constructing the global structure of the story. However, most JSL learners at the early stages of L2 development failed to construct a global structure. They showed a proficiency-related proportional increase in constructing it successfully, but the development did not reach Japanese adults' level of mention even at the post-advanced level learners. The results of the study indicated that L2 learners did not always succeed in producing well-constructed narratives, although they had a knowledge of narrative structure.

JSL learners also showed different features from Japanese children and adults in the developmental process of the three components. The first component showed a considerably lower degree of mention, and did not increase much in the higher levels. The other two components already gained quite high levels of mention beginning at the elementary level, reflecting their mature narrative discourse ability. This contrasts to the L1 development which showed a clear age-related development for the three components. It should be noted here that the first component, which showed the latest development in the L2 acquisition, showed the earliest development in the L1 development. These results indicate that components difficult for L2 learners to verbalize are not always the same as those for L1 subjects. The main cause of failure in organizing a narrative according to thematic relevance is attributed to the lack of L2 linguistic command, which resulted in simplification of the story, a lack of descriptive detail, a picture description of the story, or a substitute use of similar (but not exact) expressions.

Berman and Slobin (1994) and Inaba (1999) showed that children's texts show the following features in the course of L1 narrative development: 1) a text which is linguistically and structurally non-elaborated; 2) a text which manifests juvenile linguistic expression but is thematically well-constructed; and 3) a text which demonstrates rich linguistic means serving the purpose of picture description, but not an organized narrative. The first feature suggests that the narrative discourse processing occurs bottom-up first. The second feature demonstrates the top-down processing of narratives (Karmiloff-Smith, 1984, 1985). It also shows that

structural knowledge in itself does not guarantee a linguistically rich and elaborate narrative. The third feature indicates that linguistic knowledge in itself does not suffice for children to put together a well-constructed narrative, either. Berman and Slobin (1994) and Inaba (1999) claim that development occurs as a combination of structural knowledge and linguistic knowledge, and these kinds of knowledge are interwoven and interact in development.

The results of this study showed that L2 learners manifest trends completely opposite to those of the L1 speaker. In the case of L2 development, the knowledge of narrative structure or mature narrative competence does not suffice for L2 learners to produce well-constructed narratives, since the present study rarely find texts with richness of expression, but which nonetheless failed to relate explicitly to critical plot-motivated components. Rather, whether they could construct a narrative which had thematic organization largely depended on their L2 linguistic command itself. In light of discourse processing, L2 learners showed top-down processing of their narratives from the initial phase of development. This is much different from the Karmiloff-Smith's (1992) Representational Redescription model that L1 development is from bottom-up and via top-down in the middle period, and then integration of data and internal representation. Although this study is limited to fictional story telling, it provides a broader perspective on the study of narrative discourse in L1 and L2 language acquisition.

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Notes

1. In this paper, the term "linguistic knowledge" is used in the sense of "microlinguistic knowledge" (Hudson and Shapiro, 1991).
2. The test was given about two months before the narrative task. It was a part of the grammar section of the placement test administered by the university at the beginning of the semester.
3. Questions 1 to 75 of section III of Trial Test B were adopted. The original test has more questions. See Hayashi (1991, pp. 326-436) for further detail.
4. The tests were widely used for JSL learners with various backgrounds from all over the world, and basic statistics such as item difficulty, item discriminating power, and reliability for the tests were analyzed and published in Murakami (1989) and Hayashi (1991). The advantage of adopting this test is that the published data can be used as an objective scale to measure the relative Japanese proficiency of the subjects.
5. Level I corresponds approximately to grade 4 of the Japanese Language Proficiency Test (JLPT), which supposes about 150 hours of classroom instruction. Level II corresponds approximately to grade 3, about 300 hours of instruction. Level III corresponds approximately to grade 2, about 600 hours of instruction, and Level IV corresponds approximately to grade 1, about 900 hours of instruction. Note that the subjects' Japanese background does not always agree with this qualification because the hours of study are just a formal guideline for the grades.
6. These criteria were originally devised by Berman and Slobin (1994, p.46), based on the work of Labov and Waletzky (1967), in the crosslinguistic analysis of L1 global structure. This study applied it so as to evaluate the L2 narrative structure by the same standards as Berman and Slobin (1994).
7. The scoring was also adopted from Berman and Slobin (1994, p. 46).
8. This figure for Japanese children is taken from Inaba (1999, p. 107).
9. This figure for Japanese children is taken from Inaba (1999, p. 106).
10. Curly brackets indicate false starts or repairs including repetition.

References

- Berman, R. A., & Slobin, D. I. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Hayashi, O. (Ed.). (1991). *Nihongo test handbook*: Taishukan Shoten.
- Hudson, J. A., & Shapiro, L. R. (1991). From knowing to telling: The development of children's scripts, stories, and personal narratives. In M. Allyssa & C. Peterson (Eds.), *Developing narrative structure* (pp. 89-136). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

- Inaba, M. (1999). Development of Global Structure in First-Language Narratives. *The Bulletin of Aichi University of Education (Humanities/Societies)*, 48, 103-112.
- Karmiloff-Smith, A. (1984). Children's problem solving. In M. Lamb, A. L. Brown, & B. Rogoff (Eds.), *Advances in cognitive psychology: Vol. 3*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Karmiloff-Smith, A. (1985). Language and cognitive processes from a developmental perspective. *Language and Cognitive Processes*, 1, 61-85.
- Karmiloff-Smith, A. (1986a). From meta-processes to conscious access: Evidence from children's metalinguistic and repair data. *Cognition*, 23, 95-147.
- Karmiloff-Smith, A. (1986b). Stage/structure versus phase/process in modeling linguistic and cognitive development. In I. Levin (Ed.), *Stage and structure: Reopening the debate* (pp. 164-190). Norwood, NJ: Ablex.
- Karmiloff-Smith, A. (1992). *Beyond modularity: A developmental perspective on cognitive science*. Cambridge, MA: MIT Press.
- Labov, W., & Waletzky, J. (Eds.). (1967). *Narrative analysis: Oral versions of personal experience*. Seattle: University of Washington Press.
- Mayer, M. (1969). *Frog, where are you?* New York: Dial Press.
- Murakami, T. (1989). Sougo hyoka no tame no hyoka no jitsurei, *Nihongo test nyumon* (pp. 201-233): The Society for Teaching Japanese as a Foreign Language.
- Toyota, T. (1979). Hakken no "TO". *Nihongo Kyoiku*, 36, 91-105.

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