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How Learners Process Meaning:
A Comparison of Implicit and Explicit
Instruction in Storytelling

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A Thesis Presented to
The Faculty of the Graduate Course
at
Kyoto University of Education

In Partial Fulfillment of
the Requirements for the Degree of
Master of Education

By
Reiko Yamamoto
(Student Number: 055087)

Kyoto, Japan

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Reiko Yamamoto

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Introduction

What is the first process of children's language acquisition? It might be noticing and enlarging the world of meaning. After that, they will be ready to convey various meanings to each other. However, since communicative competence was prescribed to be the most important goal of English as a Foreign Language (EFL) classes in Japanese schools, communicative activities have been a matter of the greatest interest for EFL teachers. Omi (1999: 148) claims, "Many such activities, intriguing as they may seem, are a waste of time, because they do not contribute to the input of good language". EFL teachers should pay more attention to what kinds of materials should be used and how they should be presented in order to enlarge students' world of meaning.

A comparison of first language (L1) and second language (L2) classes in Japan offers an interesting contrast. It has been my question why only L1 classes are full of authentic and good text although both are "languages". In English classes, the younger students' reaction in listening to good text reminded me of what Omi goes on saying that good language teaching is expected to sink into the learner physically (p.148). As a result the learner attains the ability to sense good language.

In my classroom, I had the revelation that the ability seems to be attained if I follow the way of a mother, who offers good

hints and timely triggers to her infant. "Good hints and timely triggers by mothers", which may sound obscure, are studied by researchers like Masataka (2001). As he noted, it is not a coincidence that materials for children such as nursery rhymes or stories have certain patterns in any language. They make materials appealing and supportive for language acquisition in some way. That discussion is often applied to storytelling in L1. A mother reads not only easy books but also books including difficult vocabulary for infants. Nevertheless, it causes them no difficulty, mainly because there is no need and no duty to understand meaning. In storytelling, infants simply enjoy hearing their mother's voice, guessing a story, and the sound of unfamiliar words themselves. They know the meaning of words is going to become clear naturally, gradually, and unconsciously. Ideally speaking, children ought to meet new language that way.

Ten years of experience as a mother and storyteller shows me that telling stories requires various skills to keep attracting children's attention. Most mothers are not experts at such skills from the beginning. Valuable suggestions are derived from authentic materials full of instructions about how to attract children's attention and how to help them notice the meaning of each word without any verbal explanation. In other words, such materials evolve to bring out mothers' skills as a teller

effectively. Children acquire L1 through good language input and support by their parents in this way. It might be possible that EFL teachers can give students good input in the same way. Although we find little previous research on storytelling in EFL, I am sure that good language input at the early stage will make a foundation for learning EFL. It would be worthwhile to pursue these intriguing research questions further.

As a first trial, I selected the storybook "From Head to Toe" in my first lesson in elementary school. It contains a lot of simple repetition. The 5th graders were nervous and quiet. However at the third repetition, one girl mumbled shaking her body, "*Can* you *do* it? *I* can *do* it!" I never told her to imitate, but its rhythmical sound was so attractive that she was inspired to move her body in a dance-like way. This might be how an infant meets L1. This case may prove that storytelling in EFL also stimulates children's minds and evokes physical sensitivity.

Many studies on storytelling have concentrated on comprehension, yet in this thesis I will attempt to research the mental and physical response caused by storytelling. The answer might contribute not only to EFL education in elementary school but also to that in junior high school. My goal is to follow the first process of acquiring L1 in an EFL classroom: noticing and enlarging the world of meaning.

Chapter 1. Theoretical Aspects of Storytelling

1.1 What is Storytelling?

A story itself is a good material for language acquisition. However, listening to a story read aloud has an extra attraction: the interactive process of storytelling. In discussion about the relationship among text, readers, and author, the act of interpretation enables readers to enjoy the text freely (Fish, 1980). In storytelling, there should exist a second interpretation, which means that a reader or teacher conveys an interpretation of his or her own to listeners or students with oral interpretation. In short, a story is interpreted doubly. This might be why storytelling has a rich and free world of meaning. In itself, this is equivalent to a listener's mental representation created on the basis of the reader's. In the model of "double interpretation" shown in Figure 1 (black arrows mean interpretation, and gray ones mean interaction), what a reader gives listeners is fertile verbal stimuli, not explanatory notes. If a teacher just reads straight from the pages, the story will probably be flat and uninspiring. However, the goal of storytelling is very different. The teacher also tries to convey the moods, different character voices, and emotions. This interactive process may have a dynamic effect on listeners.

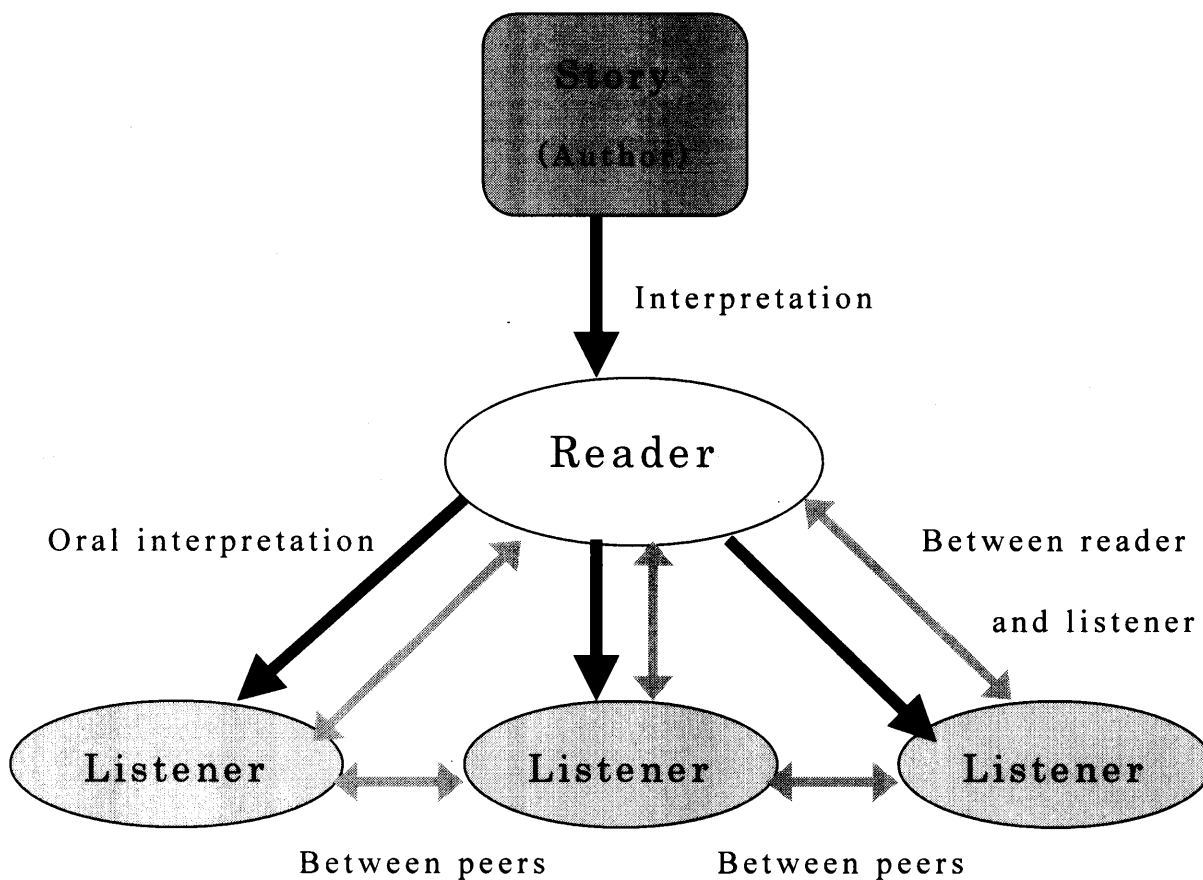


Figure 1. Double interpretation model in which the reader interprets the story and tells it as oral interpretation. There is also dynamic interaction between the listeners, and between the reader and the listeners.

Storytelling is different from listening to audio material, because of the interaction between reader and listeners. First, their verbal or physical reactions give the reader hints to arrange the way of reading or adding verbal or physical clues for comprehension. This explains why oral interpretation by the same teacher differs each time. There are also interactions

between peers. Frequently students talk to each other just after storytelling in EFL in order to ascertain their comprehension. This contributes to each student's inferring meaning (without explanation in L1). Some students are sensitive to something that appears to be key words or the irregularity of rhythm, while others are not. The sensitive students' utterances of key words give a great lead to less sensitive peers in listening to the same story again. Furthermore, the stimulus from peers can be a spur to become more and more sensitive to language input.

The significance of the interaction proposed above is supported by previous research in L1. Mackey *et al.*, (2000: 476) studied the connection between interaction and learning. They articulated that negotiated interaction is one means for drawing attention to linguistic form, making it salient and thereby creating a context for learning. Ko *et al.*, (2003: 303) analyzed sessions involving negotiation of meaning (NOM) that occurs between two tellings of a story. They noted that storytelling is a scaffolding that offers the possibility of meaningful social interaction among students and between storyteller and teacher. "Without the ability or willingness to engage with a more knowledgeable other or a readiness to incorporate and appropriate what has been revealed in interaction with the more knowledgeable other", they argued, "the learner cannot make

progress – at least not immediately” (pp. 320-321). Although all these studies are based on cases of L1, such interaction will be more supportive for listeners in EFL. For these reasons, I believe it is worthwhile to arrange session time in storytelling and strive for the affective classroom outcomes that accompany effective storytelling.

K. Goodman (1989) asserted that “Reading is a guessing game”, and emphasized the significance of focusing on the meaning of the whole text, not on that of each word. The successors of his whole-language theory have developed his view of storytelling: with the use of big books specially designed for that purpose, skilled oral interpretation can lift children to a high level of comprehension (Y. Goodman, 1989; Kuwahara, 1992; 1996). K. Goodman named such texts “predictable books” and defined them as having some characteristics in common such as old stories, rhythm, rhyme, repetition of vocabulary, repetition of structures, and a typical story pattern. Akita (1997; 1998; 2001) used the term “repetitive priming effect” to substantiate the effect of repetition in storytelling. This term means that repetition expedites the speed of processing input. Children are fond of listening to the same story repeatedly. They even chant or recite with the reader when a familiar part, which they look forward to, is read in its turn. Akita (1997: 19) asserted that

repetition also enables children to ascertain the correctness of their prediction or memory. Simultaneously, by giving it careful appreciation, they feast on the revived, familiar story. Children become relaxed in the stable world of a story. In my classroom, I have found that such characteristics in authentic materials attract students' attention just as in L1. All of these inquiries suggest that storytelling is a vast treasure trove of clues and triggers especially for beginners like infants or young children. This study is based on the belief that storytelling is just as powerful in EFL.

1.2 What Constructs Storytelling?

I surmise that storytelling leads to three types of learning: (1) *conscious learning*, (2) *subconscious learning*, and (3) *expanding imagination*. Storytelling makes children conscious of meaning in a story. At the subconscious level, it stimulates their senses. Also, they are tempted to imagine. Each of these factors will be considered from a theoretical perspective:

(1) Conscious learning refers to analytical understanding. Without consciousness, children never comprehend and memorize what they hear. Parents often notice that their children adopt a strong attitude against adults' corrections. Instead children display a potential ability to notice the meaning by themselves.

Ikari (2003) pointed out that they are aware of the link between the situation and language, and that they do not need others' teaching, or analytic information. Many Japanese parents wonder why their children confuse "I'm home [tadaima]" for "Welcome back [okaeri]". It is because they are only aware of the situation where these phrases are used. A second example is the utterances of Minh, a fourteen-month-old boy: [dúk ə dæ:] (look at that), ['ʌ sæ:] (what's that). Ikari quoted these two cases in order to reinforce his argument that children acquire language holistically through unifying situations and common meanings, combining linguistic and semantic information. Then, how do children process language input in real situations and add them to memory? Previous studies have reported that the process of *attention*, *noticing*, and *comprehension* is essential for vocabulary to be understood and kept in *memory* (e.g., Tenma, M. *et al.*, 2002; Ikari, 2003). If we apply this process to storytelling, what attracts children's attention is repetition and exaggeration (Steinberg, 1982). Noticing the meaning with interest creates conditions that make it possible to achieve comprehension without explanation by adults. This process may satisfy children's desire to use their innate ability and raise their interest at the same time. Anderson *et al.* (1987) advocated that storytelling evokes intense interest in children, and encourages

them to recall sentences. It is significant that the processes of attention, noticing, and comprehension are closely connected to memory. In this thesis this process is called conscious learning of storytelling and defined as one of the factors constructing storytelling.

(2) Subconscious learning refers to listeners' reaction to unique narration. Many researches have established that the uniqueness of infant-directed speech is supportive for children in noticing the meaning. Of course children are neither aware of the uniqueness nor sure about how it is supportive. Mothers never "teach" their children vocabulary. Instead they simplify their speech to make it more comprehensible (Schmitt, 2000: 121). Some distinguishing features in mothers' talk to infants are styled "motherese". Previous studies have disclosed its effect in children's language acquisition (Snow, 1972; Condon & Sander, 1974; Kobayashi, 1997; Omura *et al.*, 2001; Liu *et al.*, 2003; Gelman *et al.*, 2005). Steinberg (1982) noted that there are both simplification and exaggeration in adults' talk to children. Adults are likely to use shorter and simpler vocabulary and employ simplified phonemes and structures, while they exaggerate each sentence by grading of tone, modulating of speed, stress and pitch, using repetition and paraphrasing. All of these are efficacious in making each component of language outstanding,

attracting children's attention and making vocabulary easy to remember. Other scholars also pointed out that infant-directed speech is exaggerated by higher overall pitch, wider pitch excursions, more distinctive pitch contours, slower tempo and longer pauses (Lehiste, 1973; 1977, Masataka, 1992; 2001; Tenma, *et al.*, 2002). Liu *et al.* (2003: 7) elaborated that mothers' acoustic exaggerations, which make individual units more distinct, are likely to direct infants' attention to the appropriate acoustic information in speech, helping them learn the subtle dimensions that distinguish phonetic units in their native language. This argument corresponds to the discussion of the present study and what Masataka (2001) postulated. He noticed that children dig out specific words just by hearing the same rhyme repeatedly and even put them in memory. Though children are cognizant of just a lump without junctures when they hear a sentence, they can dig out each word somehow. Thorpe and Trehub (1989) observed that infants perceive the silent increments between groups of sounds as what is longer than identical intervals within a group. Children unconsciously pay attention to the pause between words emphasized by comparatively irregular phonemes perceived after the continuing same tempo and same pitch. Lehiste (1977: 258) reported that the rhythm of the sentences must be considered isochronous, and that a listener has his own average interval,

which makes it possible to understand other's rhythmical utterance with stress or accent. While a listener expects an utterer to be isochronous, utterances often deviate from regularity. One example is the case wherein a listener notices when a syllabic at the end of an utterance is longer. An utterer, on the other hand, purposely lengthens a phoneme just before the next grammatical unit by intention of breaking the regular rhythm. This means that rhythm is also a propagater of grammatical information. Clues such as pitch and pause are, therefore, used as a signal of presence of boundary. Through storytelling, a teacher can use elements of motherese that support interpersonal communication and language learning.

The element "embodiment" is also present at the subconscious level. Storytelling attracts children's attention to the extent that they imitate or move their bodies – nod or tap – sometimes synchronizing with a storyteller. Merleau-Ponty (1945) asserted a physical connection to language in humans. In his research on infant-directed speech, Masataka (1992: 220) stated: "The attention-getting function is confirmed by the fact that these pitch modifications come into play when the mothers are having to make an effort to elicit responses from their infants and noticed, through acoustic research, that infants tended to mimic those patterns, although they tended not to do so." It

seems that rhythmic movement is related to articulation of phonetic segments. The phenomenon called "synchronization" is found in the earlier stage. Masataka (2001: 71) stated that a newborn baby's kicking movement occurs in synchrony with his laughter, which arises with the growth of his pharynx. A baby utilizes physical movement as a tool in order to acquire the pattern, which is the foundation of phonation. Kita (1997: 134) attached a great deal of importance to physical movements in synchrony with the utterance. He stated that we innately have the ability to comprehend the utterances of others without thinking analytically, and designated this function "physical thinking". To develop and control physical muscle is indispensable to producing phonetic sounds (Steinberg, 1982). When an infant traces an adult's movement, he not only mimics the movement but also resonates with the adult physically. It is like the case in which we unconsciously stamp our feet with music (Werner & Kaplan, 1974). It is noticeable that what gives a baby rise to this synchrony is limited exclusively to human voice (Bower, 1978). Synchronism of speaker and listener is a significant aspect of subconscious learning.

In studying the rhythmic structure of human speech communication, Condon (1974) discovered two kinds of synchrony: self-synchrony and interactive-synchrony.

Self-synchrony means the synchrony of the speech and a speaker's movement. Interactive-synchrony means that a listener's body also moves in process units, which are synchronous with the articulate structure of a speaker's speech. It appears as the precise dance-like sharing of micro-body-motion patterns of change between speaker and listener. With this movement, we unconsciously understand each other at the physical level. This mutual activity was named the "communication dance" by Condon (1974: 456). A listener's body responds to what a listener's mind understands a speaker says. In treatment of children who have difficulties in acquiring language, some researchers noticed that they are poor at rhythmic movement and dislike music (Akita, 1998; Healy, 1998). They seem to lack some kinds of cognitive ability, which should be cultivated by the development of rhythmic sense or physical ability to do the "communication dance". Rhythmic sense or physical ability can be developed by practice. Combley (2000) introduced the program of multi-sensory approach to support children with low cognitive ability. It was intended to make children notice the existence of "phonemes" including rhythm and rhyme. In this program they practice hand tapping and listen to rhyming verse repeatedly in a pleasant atmosphere. It is a multi-sensory approach to utilize sensitive modalities. Such practice might be substituted for

storytelling. It is credible to surmise that storytelling will develop rhythmic sense and physical reactions of EFL learners.

Memory also has a close relation to embodiment. Recent studies on memory are based on the assumption that we organize the meaning of an object through physical senses and keep it in memory with physical recollection. Ikari (2003) figured the sources of meaning information both in noticing meaning and in recollection (Figure 2). Physical sense in storytelling does not exactly mean visible movement such as mumbling or tapping. A listener can synchronize with a reader with inner sense. All kinds of senses impressed in the listener's brain can be a source of meaning organization.

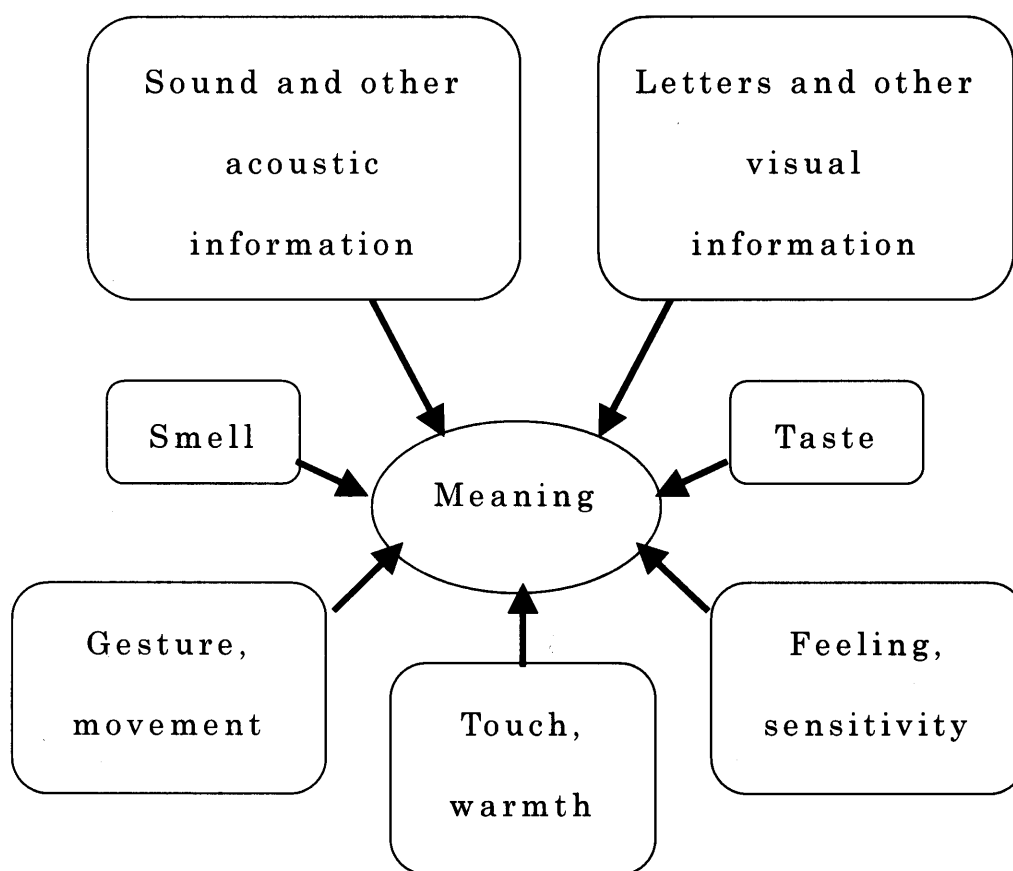


Figure 2. The sources of meaning information (Ikari, 2003)

(3) Expanding imagination refers to creating images of stories. An image springs to a listener's mind while he or she is listening to the same story repeatedly. Mandler (1992) tried to reveal the concept of a certain term organized by children. He stated that self-motion is not the same type of description as the parameters that describe movement. On the contrary, it is the concept of self-movement that relates different perceptual descriptions of the motion. The image-schema such as self-motion and containment forms the earliest meanings that the

mind represents. Tsukimoto & Uehara (2003) argued that to imagine is both a virtual and physical activity and that a nervous system can be activated without actual physical movement. When we hear the word "heavy," we imagine something that is "heavy," with the virtual sense impressed in our brain when we heaved something heavy. They showed that imagination is conducted in the same part of the brain as physical movement. This data gives a lucid exposition of the truth that image training has a positive effect in sports.

Storytelling is like image training in acquiring language. Imagination is defined as a motive force to make the best use of an image or symbol. Okamoto (2005) described:

Children's imagination is expedited through storytelling by parents or teachers. Children are unfortified against the new world enough to empathize a story, and get full of affection in storytelling. The emotional swell or deep feeling gives play to children's imagination more than it does to adults'. Storytelling makes a situation where some different kinds of images cross each other In this situation an image in a child's mind becomes more fertile and more meaningful (translated by the author).

Kelley (2005) stated that imagination is never awakened by explanatory sentences. He asserts that language activates verbal schema, and that a story activates emotional schema. A story gives a framework to a child's affectivity, he persisted, while explanation like a report activates only cognitive schema, which has no visual, experiential, or affective data.

Protocol analysis has been marked as a method of studying the imaginative aspect of storytelling. It is reported that a lot of think-aloud protocol pertains to images, and imaging makes narrative animated and lively (Trabasso & Magliano, 1996). From a university student's transcript in reading poetry, Mial and Kuiken (1999; 2002) concluded that a function for comprehension is the primary power of feeling and that feeling is the bodily sense of all experienced affect.

Imagination is the root function in the mind. It is molded by various factors including a rearing environment and personality. Notwithstanding, it must be remembered that expanding imagination is an important factor in itself for storytelling.

1.3 How is Meaning Organized in Storytelling?

As I put in the preceding section, conscious learning, subconscious learning, and expanding imagination are considered

to be three factors that construct storytelling. A student who keeps the three factors well balanced will develop all of them favorably, because these factors have a mutual influence on each other. This can be paraphrased as synchronicity of storytelling. The synchronization of the embodiment with mental operation also goes for the fact that one could never be developed without the other's development. This shall be proven in the experiment.

The construction of storytelling is shown in Figure 3. The length of each arrow shows the degree of each factor's development. Naturally, children comprehend more meanings in proportion with the development of these factors. However, the balance of the three factors is significant because it is the very advantage of storytelling. This is distinct from analytic teaching, which only develops conscious learning. The closer the diagram ABC gets to an equilateral triangle, the closer the processing EFL becomes to processing L1. Also, as for the area of ABC, the larger the area is, the more the world of meaning expands with the power of activated senses.

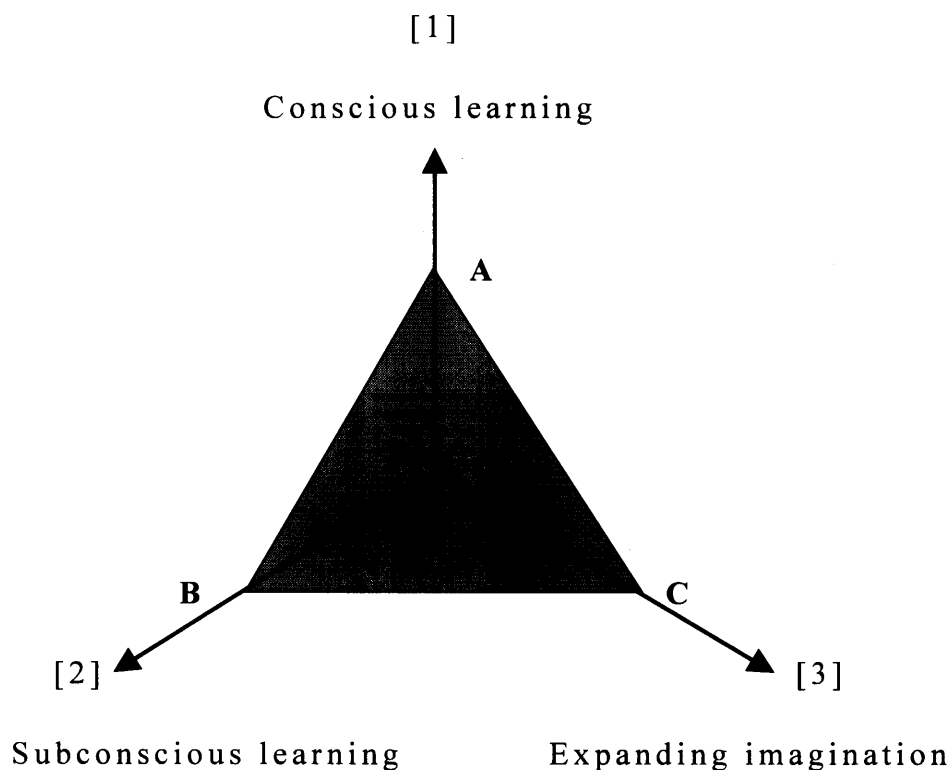


Figure 3. The interrelated triangle showing the three factors of storytelling

Processing more meaning is sure to foster the acquisition of new language in memory. Another diagram is needed to illustrate this point. In Figure 4, the diagram in figure 3 is viewed from diagonally above. Arrows 1 and 2 are perpendicular to triangle ABC, and they are equal in length. This shows how both arrows lengthen in accordance with the spread of the triangle.

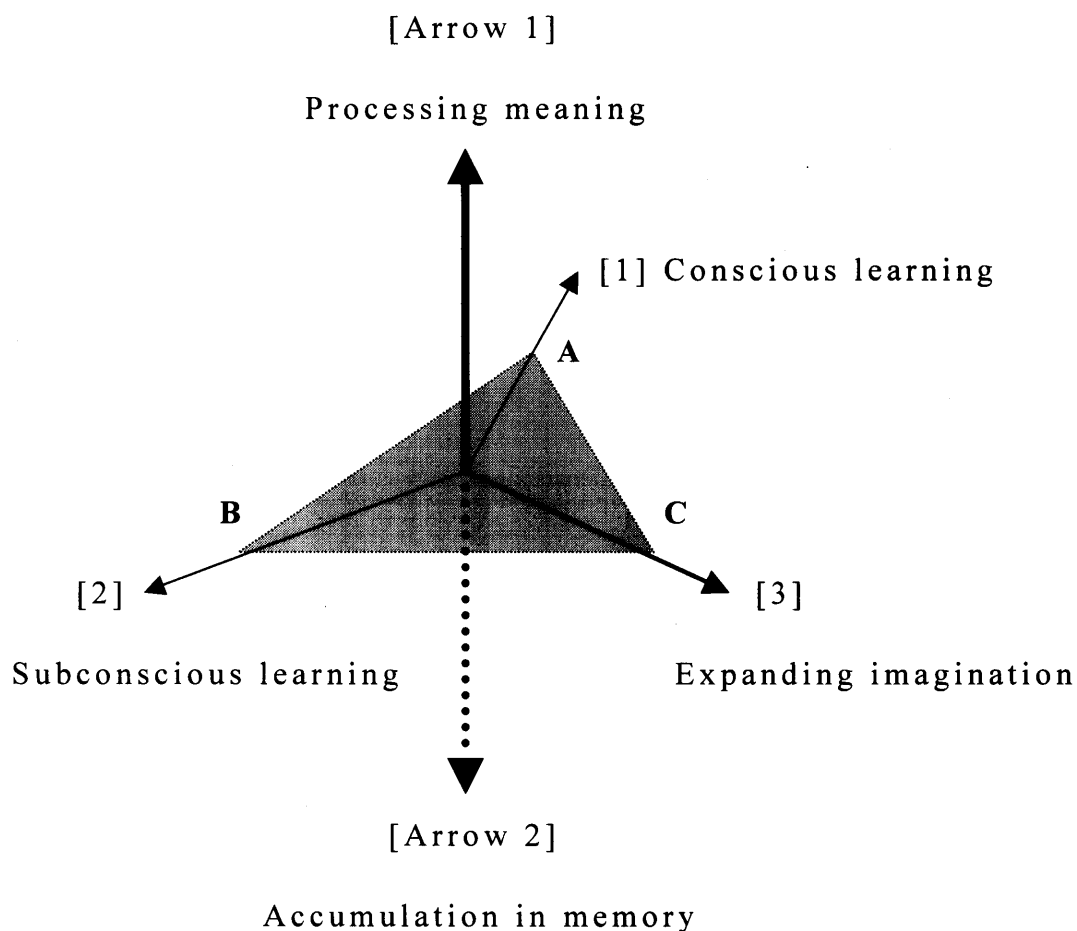


Figure 4. As the triangle expands, more meaning can be processed and more memory can be accumulated.

In summary, in contrast with analytic learning of EFL, storytelling in EFL could realize holistic learning. Storytelling activates the three factors by its numerous kinds of hints and perfects students' process of meaning organization: attention, noticing, comprehension, and memory.

Chapter 2. Experiments

2.1 Purpose

Although explanation in L1 is sure to help students comprehend stories in EFL, I suggest that children are capable of organizing meaning without explanation. Proving this experimentally will lead to the corroboration that storytelling offers learners various hints which activate conscious learning, subconscious learning, and expanding imagination. It also confirms the process of meaning organization.

Researchers have attained evidence for vocabulary acquisition through storytelling in L1 for older students. Although storytelling has been found to be effective, results have never been proven to exceed those of explanatory lessons (Elley, 1989). Mason (2005) conducted an experiment in EFL for college students comparing storytelling and explanatory lessons. Despite the fact that the results of the two kinds of lessons were equal, she claimed the superiority of storytelling because the required time for storytelling was shorter. We neither have enough precedents of the same sort of experiment nor do we have satisfying results.

This paper describes an empirical study on storytelling in EFL for younger students. It has been conducted to explore how the three factors which have contributed to infants' L1 acquisition

operated in younger students' when they listened to a story.

As discussed in the former chapter, the process of acquiring vocabulary has four steps: attention, noticing, comprehension, and memory. The purpose of this experiment was to find if storytelling produced a powerful effect to memory and if it worked as well as or better than explanatory lessons.

2.2 Hypotheses

The term "meaning organization" is employed in the hypotheses of this study. Typically, the aim of an empirical study in second language acquisition is to get results in new words learned in comparing methods. However, the process of storytelling is not teaching and memorizing vocabulary. I hypothesize that students can organize meaning by themselves in storytelling.

Preceding studies also support these hypotheses. Elley (1989) concluded that reading stories aloud to children is a significant source of vocabulary acquisition, that teachers' explanation of words as they are read can more than double such gains, and that the new learning is relatively permanent. It seems, however, that the types of hints surveyed in Chapter 1 cannot function with explanation. Schmitt (2000) emphasized the importance of mental process for memory. He persisted that

guessing a word from context does not mean that it will be remembered, and that if a word is easy to guess, then a learner will infer it quickly with the minimum amount of mental processing in order to carry on with reading. He adduced Ellis (1997: 122):

Mastery over the orthography and phonology of a second language is also gained incidentally, for the most part... Meaning is one lexical aspect amenable to conscious learning, particularly by means of guessing a new word's meaning from context, using imagery, and utilizing appropriate strategies for connecting meanings to word forms. Meaning is so central to vocabulary learning.

Then he defined reading without explanation like this: "Extra meaning information colors the word in an implicit way. It describes the stylistic variations that make each word more or less appropriate for certain language situations or language processes."

This study sought to test the following hypotheses: (1) Meaning is holistically organized by conscious learning, subconscious learning, and expanding imagination in storytelling. (2) Meaning is anchored in memory through the three factors. Notwithstanding the absence of a precedent, the second

hypothesis ventured to say that vocabulary gained implicitly in storytelling is more permanent than that gained by explicit learning.

2.3 Participants

One hundred and forty-six students in Kyoto Elementary School and Kyoto Junior High school attached to Kyoto University of Education participated in this experiment: two 5th grade classes, and two 7th grade classes. All the participants had little prior English learning. The 5th graders had an English lesson once a week for four years. Since the experiment was conducted just after entrance into junior high school, the 7th graders had not had much previous vocabulary learning, either. Since both groups had roughly the same amount of previous learning, the same story was read to all groups.

A pretest (listening comprehension test: word-picture matching, multiple choice comparison questions after listening to dialogue) was conducted in order to check whether there was a significant difference in language proficiency between the two classes at each grade. The score was analyzed with a T-test (Table 1), because both grades showed a normal curve. Consequently, two classes of each grade showed no significant difference ($t=.155$, $F=1.060$, $p=.307$, in the 5th grade, and $t=.338$,

$F=.020$, $p=.888$, in the 7th grade), and the homogeneity of both matched classes was proven.

Table 1.

The comparison of two classes of each grade

Class	5 th Grade		7 th Grade	
	Control	Experimental	Control	Experimental
<i>N</i>	33	34	40	39
<i>Mean</i>	4.33	4.41	5.20	5.33
<i>SD</i>	1.96	2.18	1.83	1.68
<i>F</i>		1.060		.020
<i>T</i>		.155 ^{n.s.}		.338 ^{n.s.}
<i>P</i>		.307		.888

2.4 Materials

Storytelling was part of the lesson of each class since the beginning of the semester, and “*The Little Red Hen*” (Appendix 1) was read to all groups. It included some familiar words for students and many unfamiliar ones. This book had some illustrations in it, which gave students no hint toward meanings except for some easy words like *dog*. Thus there was no fear of preventing students’ process of organizing meaning. Moreover, the book had some characteristics of “predictable books” as defined by Goodman (1981): rhythmical repetition, narrative repetition, and a typical plot of old stories. After continuing at the same tempo, irregular phonemes appeared in this story, which students noticed as hints, as noted in Thorp and Trehub (1989).

Also, I expected that this story would contribute to their understanding with its irregular pattern of a plot in the last scene.

The posttest and the delayed test were the same test (Appendix 2). It was a listening comprehension of vocabulary items from the story. Question types were choosing English words, writing Japanese meaning, grouping, and choosing pictures. A questionnaire was given to the experimental classes (Appendix 3) that consisted of sixteen items related to conscious learning, subconscious learning, and expanding imagination. All of the items demanded students to answer "Yes" or "No". The students had two opportunities to respond to the questionnaire after two lessons of storytelling. It was expected that the number of "Yes" responses might have changed in some way. In order to supplement this in revealing the students affective responses, I recorded their statements during the session time.

2.5 Procedure

To devise the method of telling a story in the experimental classes, the three suppositional factors and what develops them in listening to a story were defined (Table 2). This experiment demanded teachers' maximum effort to bring out inner reactions from students.

Table 2.

Definitions of the three factors that construct storytelling

Factors	Definition	What develops the factor
[1] Conscious Learning	To be conscious of superficial features: • Boundaries between words • Vocabulary • Grammar	• Reader's oral interpretation • Repetitive reading • Peer interaction session • Interest in hearing stories
[2] Subconscious learning	Instinctive reaction or appetite for deeper involvement: • Physical reaction or embodiment • Synchrony with a reader • Noticing the pattern of language • Rhythmical sense	• Reader's oral interpretation • Repetitive reading • Funny repetition of sound • Pleasing rhythm • Stimulus on various senses • Interest in hearing stories
[3] Expanding imagination	Various kinds of images made fertile by noticing or guessing meaning with interest	• Rich narration to expand imagination • Repetitive reading • Interest in hearing stories

As mentioned in chapter 1, peer response session time is an essential part of learning during storytelling. For every group in the experiment, time was allotted between two tellings of the story. The session was only among peers, and the teacher gave no advice except for some encouragement like "You're right," or "Excellent guess!" Aside from the session time, no information in L1 was added to the story. The procedure of the implicit

learning class is outlined as in Figure 5. It was repeated twice. In the explicit learning class, the text of the storybook was analytically taught to students and a peer session time was allotted. In reading the story aloud, the teacher made each juncture between words stand out and explained the meaning of each word and each sentence in Japanese. Moreover, the whole story was never read straight through. Students in the control class learned the first part of the story in the first period, and the second half in the second period. After the second period, both classes had a listening comprehension test on the story as a posttest (Appendix 2), and had the same one as the delayed test more than one month later.

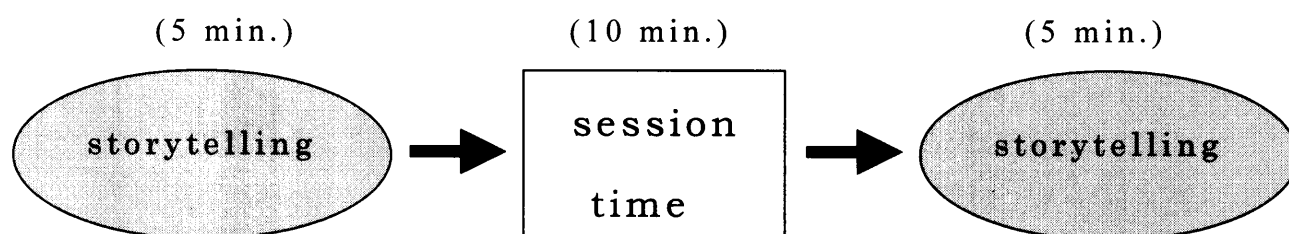


Figure 5. Storytelling time allotment for one lesson period

Mason (2005), who used a similar design in her experiment, tried to explain the superiority of storytelling to analytical teaching, considering the time required. In this experiment, the timing was equal and peer response session time was arranged for

both classes. The only different condition was the method of presenting a story. Figure 6 displays the comparison of explicit learning (control group) and implicit learning (experimental group). Being immediately given explanation in Japanese, students in the explicit learning group had no time to guess or imagine. It was surmised that they would understand more words than the implicit learning group but forget them sooner. In the implicit learning group, on the other hand, meaning was hypothesized to be anchored in their minds more permanently, and it was organized with the senses of emotions of each student, and, being full of colorful nuance and shade,

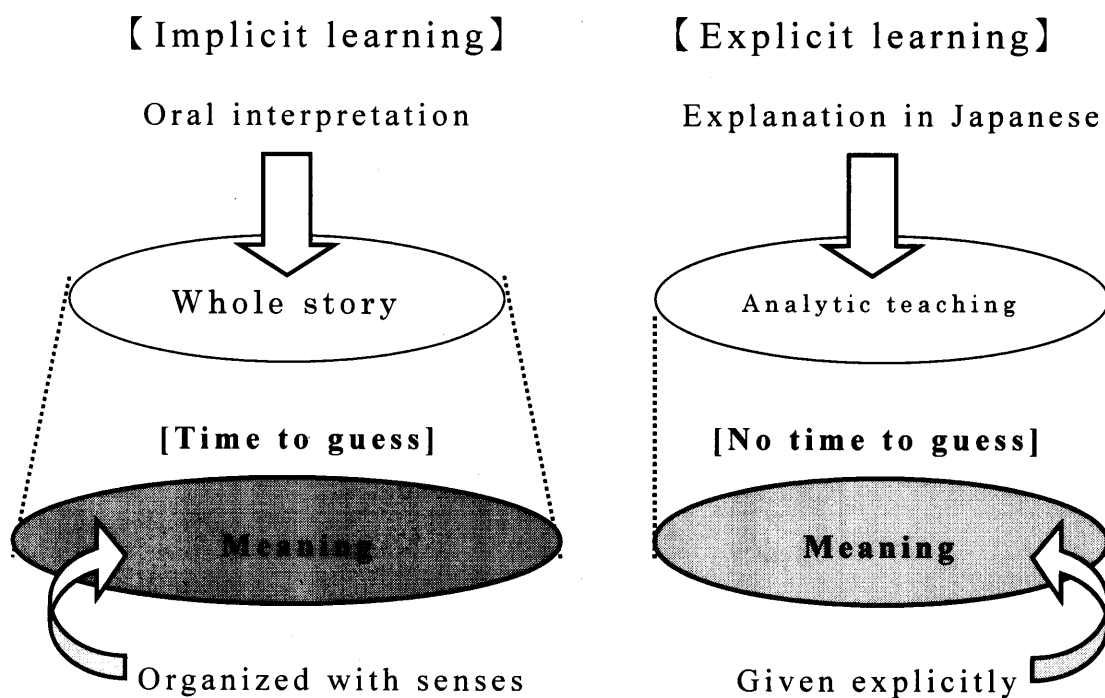


Figure 6. The comparison of implicit and explicit learning

In addition to the posttest and the delayed test, the students in the experimental groups were asked to answer the questionnaire (Appendix 3) at the end of each lesson. Their discussion during the peer session was also recorded. Both were intended to verify each student's inner reactions, which might reveal the change at the conscious, subconscious, or imaginative level.

Chapter 3. Results and Analysis

3.1 The Wilcoxon's Rank Sum Test

The results of the posttest and delayed test were attained as follows (Table 3).

Table 3.

The result of the post and delayed test

	Posttest		Delayed test		diff.	p
	Mean	SD	Mean	SD		
5 th (explicit learning)	12.12	3.63	8.70	3.39	3.42	.000
5 th (implicit learning)	11.29	4.60	9.62	4.34	1.67	.031
7 th (explicit learning)	14.18	3.37	11.38	4.35	2.80	.000
7 th (implicit learning)	14.85	3.90	11.82	3.90	3.03	.000

As for the posttest, neither the implicit learning group ($M=11.29$, $SD=4.60$) nor the explicit learning group ($M=12.12$, $SD=3.63$) showed a difference in the 5th grade ($p=.157$). Neither did the implicit learning group ($M=14.85$, $SD=3.90$) and the explicit learning group ($M=14.18$, $SD=3.37$) in the 7th grade ($p=.233$). The delayed test was predicted to decrease in score after more than one month. Although the score of all groups were lower than that of the posttest, the 5th grade implicit learning group ($M=9.62$, $SD=4.34$) was better in retention than the explicit learning group ($M=8.70$, $SD=3.39$) in the 5th grade. As for the 7th grade, no difference was found between the implicit learning group ($M=11.82$, $SD=3.90$) and the explicit learning group

($M=11.38$, $SD=4.35$). The Wilcoxon's rank sum test was conducted to evaluate the hypothesis that the implicit learning groups keep more words in memory at each grade. The results of the 7th grade showed no difference between the implicit learning group ($z=4.616$, $p < .001$) and the explicit learning group ($z=4.760$, $p < .001$). The results of the 5th grade indicate that the implicit learning group ($z=2.157$, $p < .05$) retained words better than the explicit learning group ($z=5.003$, $p < .001$). There was a tendency towards difference between the two groups in the 5th grade.

3.2 Interaction Analysis

An interaction analysis was conducted to determine the effect of time on the implicit learning and explicit learning groups. The scores were examined by multiple comparisons in order to determine whether implicit learning resulted in longer retention over time. Table 4 shows the significant effect among the 5th graders, $F(1.66)=5.510$.

Table 4.

The result of the analysis of variance

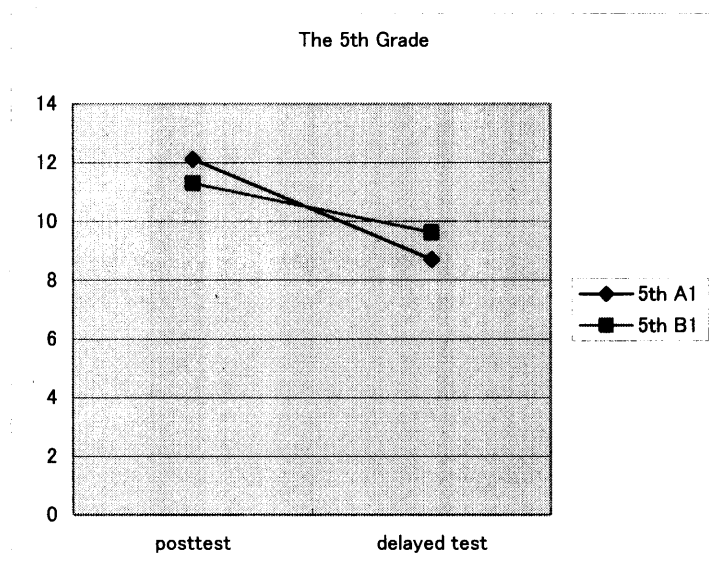
[T=Time (T₁=posttest T₂=delayed test)]

[LG=Learing group (LG₁=explicit LG₂=implicit)]

<i>SV</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
5 th T×LG	25.5777	1.000	25.5777	5.510*	.022
7 th T×LG	.503	1.000	.503	.130	.719

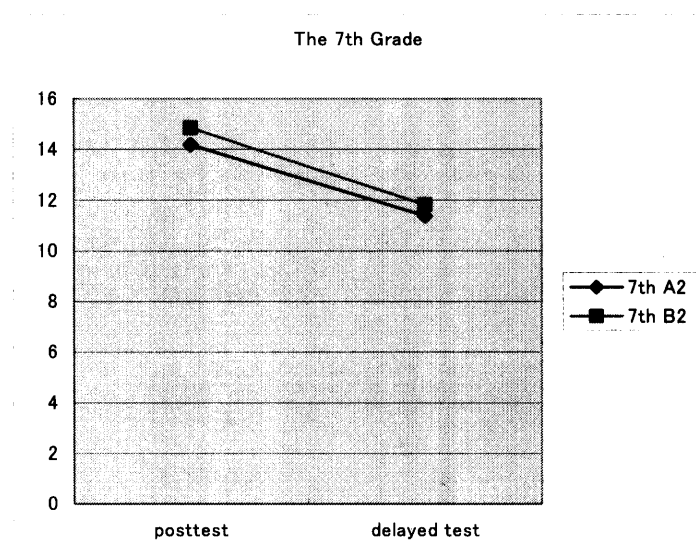
Table 4 and Figure 7 show that the interaction of the two variables was statistically significant for the 5th grade ($F=5.510$, $p<.05$), but not for the 7th grade ($F=.130$, $p=.719$). This is demonstrated by the graph of the 7th grade, which runs parallel (Figure 8).

Figure 7. The plot of the 5th graders' scores



A1:Explicit learning group B1:Implicit learning group

Figure 8. The plot of the 7th graders' scores



A2:Explicit learning group B2:Implicit learning group

Moreover, in checking the effect between participants, significant differences were not revealed between the two groups of the 7th grade ($p=.497$). In order to analyze the interaction of the two groups of the 5th grade, the simple main effect was examined (Table 5).

Table 5.

Simple main effects in Time $\times$ Learning group interaction

<i>SV</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Learning group $\times$ posttest:	11.456	1	11.456	.666	.418
Learning group $\times$ delayed test:	14.195	1	14.195	.933	.338
Time $\times$ implicit:	524.292	14	37.449	4.118**	.002
Time $\times$ explicit:	328.134	13	25.241	5.136**	.001

As a result, the scores of the posttest between the two groups were almost the same ($F=.666$, $p=.418$), as were the score of the delayed test ($F=.933$, $p=.338$). Also, in the implicit learning group as well, the scores of the delayed test significantly declined after the posttest ($F=4.118$, $p=.002$), similar to the scores of the explicit learning group ($F=5.136$, $p=.001$). Table 5 shows that both groups forgot the learned vocabulary from the story to some extent.

3.3 Chi-square Test

In order to measure the difference of the extent of their forgetting, each student's gap score between the two tests was analyzed statistically (Table 6). As for the gap score, the implicit learning group ($M=1.71$, $SD=3.74$) kept more points than the explicit learning group ($M=3.42$, $SD=2.35$). A chi-square test identified significant differences between the two groups ($F=4.779$, $p<.05$).

Table 6.

The result on a chi-square test of the "gap"

Subject	Chi-square	Df	SD	F	p
5 th A & B	5.718	1	.76	4.779*	.011

3.4 Questionnaire

The questionnaire (Appendix 3) consisted of sixteen items, each of which was labeled as representative of the three factors: *conscious learning*, *subconscious learning*, and *expanding imagination*. Questions 1, 2, 3, 4, and 5 were related to conscious learning, questions 6, 7, 8, 9, 14, 15, and 16 were related to subconscious learning; and questions 10, 11, 12, and 13 were related to expanding imagination. First I examined whether these factors were sampled satisfactorily in correlated with sixteen items as variables. "Yes" answers were converted into 1 point, and "No"

answers into 0 points. Some items seem to have correlation as hypothesized, but the analysis of the variables showed no significant correlation (Table 7). The correlation analysis revealed no discernable patterns. The author could only conclude that the proposed factors correlated vaguely.

Table 7.

Correlation between items in questionnaire

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Q1	1.00															
Q2	.019	1.00														
Q3	.001	.000	1.00													
Q4	.088	.019	.134	1.00												
Q5	.012	.004	.004	.265	1.00											
Q6	.003	.007	.082	.050	.032	1.00										
Q7	.001	.147	.030	.088	.012	.044	1.00									
Q8	.009	.019	.001	.088	.012	.272	.012	1.00								
Q9	.001	.000	.000	.134	.000	.082	.030	.019	1.00							
Q10	.269	.173	.173	.013	.010	.397	.005	.269	.044	1.00						
Q11	.378	.520	.016	.008	.026	.083	.062	.008	.000	.360	1.00					
Q12	.000	.104	.066	.187	.500	.408	.058	.187	.066	.260	.044	1.00				
Q13	.281	.073	.326	.040	.012	.008	.107	.438	.023	.143	.154	.354	1.00			
Q14	.258	.417	.004	.214	.096	.012	.039	.214	.033	.116	.293	.268	.422	1.00		
Q15	.046	.035	.035	.231	.023	.061	.013	.231	.035	.458	.204	.518	.416	.696	1.00	
Q16	.302	.355	.012	.003	.001	.000	.000	.029	.012	.001	.418	.174	.226	.389	.001	1.00

Another noteworthy point is how the number of "Yes" answers changed from the first lesson to the second. The 5th graders had more prominent learning gains than in the 7th graders, but not significantly (See Appendix 4). The 5th graders and the 7th graders were compared using the number of "Yes" answers by Pearson's chi-square test. The results are displayed in Table 8,

revealing significant differences between the two grades on the second questionnaire (Chi=4.799, $p<.05$).

Table 8.

The result on the relation of two grades in questionnaires

	5 th grade Mean	7 th grade Mean	chi-square	<i>p</i>
1 st questionnaire	14.0	12.0	.759	.384
2 nd questionnaire	15.6	12.8	4.799*	.028

Chapter 4. Discussion

4.1 Meaning Organization

If we assume that explanation in L1 supports students' comprehension, storytelling in EFL would create a disadvantage for them in understanding. Despite this assumption, no difference was found in the posttest scores between the experimental group and the control group at each grade. Next, I focused on determining whether there were differences from a perspective of meaning organization. The students listened to a story told in ways devised to activate conscious learning, subconscious learning, and expanding imagination. Notwithstanding, the students were able to understand some difficult vocabulary in the story without explanation in Japanese. That is to say, storytelling might activate children's ability to process language input holistically as in L1. During the peer session time, they showed excitement when they realize that their inferences sometimes fit with their peers'. In the posttest to check vocabulary learned in the story, their score was comparable to that of the control group. This might prove that students can adequately guess meaning when they are presented with suitable material in suitable ways. That is to say, storytelling can activate children's ability to process language input holistically as in L1. This supports the first hypothesis: "Meaning is

holistically organized by conscious learning, subconscious learning, and expanding imagination in storytelling.”

4.2 Retention of Meaning

In the graphs whose transverse axis is a comparison of the posttest and the delayed test, all the four groups showed a declining line (Figures 7 and 8). This shows that the natural process of forgetting occurred in all the groups. With respect to the extent of this forgetting, the difference between each group will now be discussed. From the viewpoint of the gradient of the declining graph, the implicit learning class of the 5th grade was an exception. The comparison of the two classes of the 5th grade yielded a remarkable result of the interaction (Table 4). This suggests that the implicit learning group forgot less words than the other. Indeed, about twenty-six percent of the implicit learning group (nine students) scored higher on the delayed test, while three percent of the other group (one student) did. Ordinarily, on any kind of vocabulary test, the score of the delayed test never surpasses that of the posttest. Since there was no instruction between the posttest and the delayed test, this revealed that students independently developed their understanding of the story even after they finished reading it. Perhaps these students continued to consider the story between

the posttest and the delayed test, and this consideration led to more correct answers.

Now we discuss the aspects of storytelling that effected their memory. There is a possibility that the three factors realized the process of attention, noticing, comprehension, and memory. In their conscious learning, students were attracted to the story deeply enough to concentrate on guessing meaning. Their reaction showed that they were realizing subconscious learning too. Observation of the students during storytelling demonstrated their engagement in the activity. They synchronized with the teacher on a physical and emotional level. Some students were tapping or swinging synchronizing with exaggerated or repeated part of storytelling. Even in listening to the questions in the posttest, some students moved their body in order to remember, and mumbled, "I've got it! I remember this scene!" This was never the case in the explicit learning class. The implicit learning group immersed in the world of imagination in listening to the story, when the image was recovered in their mind and contributed to their retrieval of vocabulary. Therefore, it is possible that the three factors effected the process of memorization. This leads to the support of another hypothesis: meanings organized with various senses through the three factors become strongly rooted into long-term memory.

4.3 Questionnaire and Transcripts

To examine some affective processes, a questionnaire (Appendix 3) was given to all the students. Sixteen items of the questionnaire were intended to clarify whether each student realized conscious learning, subconscious learning, or growing imagination. The 5th graders chose the answer "Yes" to more of the items than the 7th graders. Moreover, the number of "Yes" answers remarkably increased in the second questionnaire. The more often they listened to the same story, the more their sensory emotional reaction was facilitated. This might mean that younger students are susceptible to the input of "good language" (Omi, 1999: 147) – even if it is not L1.

Transcript data analysis may offer some cases to prove that the 5th graders reacted actively to storytelling. It made contrast with the 7th graders who concentrated on guessing meaning as if it was their obligation. It was quite possible that the 5th graders enjoyed listening to and guessing words that were out of their lexicon. Moreover, they were enthusiastically trying to make use of auditory stimuli to process the whole story holistically. The following six examples (translated by the author) in protocol data serve to illustrate what they produced during storytelling or the session time. Boldface italics are used to represent parts where inner processes are demonstrated.

Protocol of the 7th graders

- (1) "*Listen to the same story? It's kind of dull.*"
- (2) "*What does it mean?*" (Almost all the statements were related to guessing meaning.)

Protocol of the 5th graders

- (1) "*Bingo! I've got the meaning.*" (to himself during storytelling)

He enjoyed guessing the meaning.

- (2) "*Please read this story again! I'd like to listen more. I'm sure I will understand next time.*" (to a teacher after storytelling)

She gradually started to understand the stream of a story, so after listening twice, she pleaded the teacher to read once again. She was involved in the story and enjoyed guessing, too. . She was certain that the story became comprehensible by listening to it repeatedly.

- (3) "Why do you tell me the meaning so soon? *That makes no fun!*" (to his peer in the session time)

He did not like being taught the meaning. His statement suggests that he wanted time to think about and enjoyed inferring meaning.

- (4) "You know, *the sound changes when the words stick to each*

other... So it's hard to listen...." (to her peer in the session time)

She carefully listened to the repeated story and noticed the linking of the words and changing of the sound. However, its difficulty never baffled her. She rather enjoyed listening to various acoustic sounds very carefully.)

In contrast to the 5th graders' utterances, no eminent utterances were found in the 7th graders' protocol data. Nothing but the meaning of each word attracted their interest. Thus most of their protocol consisted of the same phrase, "What does this word mean?" It is no wonder that the result of the questionnaire was unchanged through the two periods, because they did not develop the three factors of storytelling to the extent of the 5th graders. Junior high school students do not seem to be as sensitive to language input as elementary school students. They might not be young enough to abandon themselves to linguistic stimuli. Perhaps since they had just started studying English as a school subject, they took on a more analytical attitude and they would rather concentrate on the meaning of each word and correct grammatical forms. Consequently, it may have hindered them from processing the language input in a relaxed and engaged way, as the storytelling teacher wanted them to do.

Chapter 5. Conclusion

The focus of this research was to search for a way to develop a second language classroom with good and authentic text just as in an L1 class. The aim was to find out whether or not storytelling has effects to internalize meaning organization of listeners. The hypotheses had grounding that the meaning of a story is organized holistically by the senses. According to Ikari (personal communication February 4, 2006), infants' language processing shifts from a holistic one to an analytic one. However, it does not mean that holistic processing decays. This is illustrated in Figure 9 below.

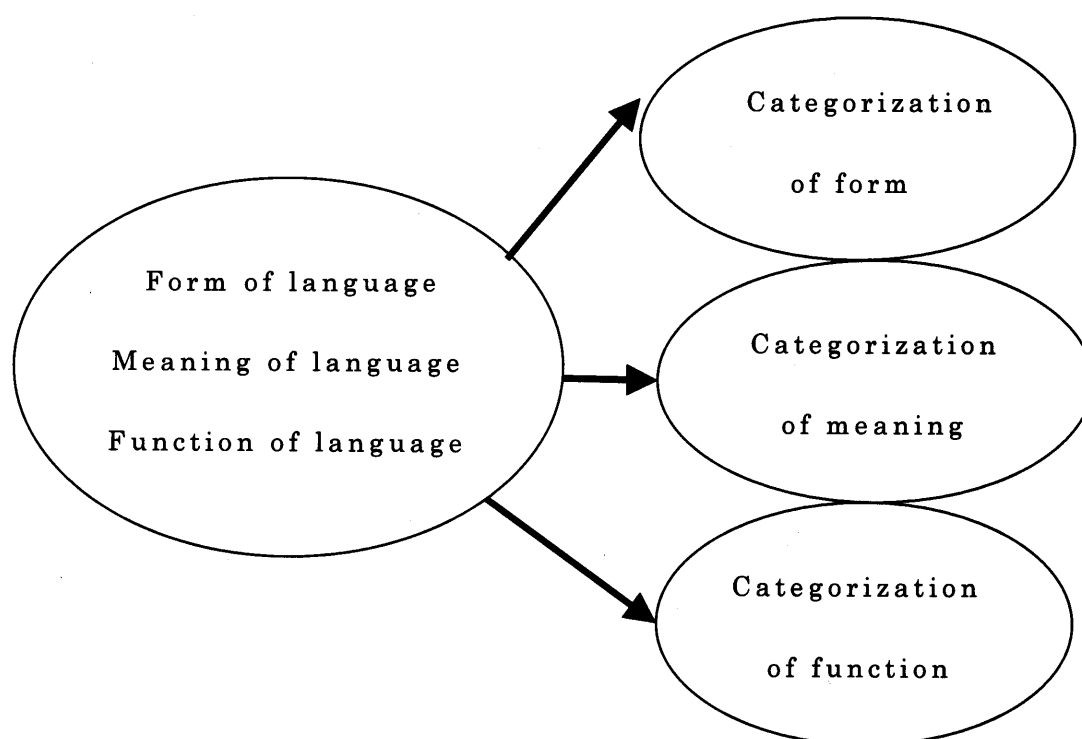


Figure 9.

A transition of processing in language acquisition (Ikari, 2006)
(translated by the author)

While most lessons in school are concentrated on the three circles on the right in this figure, the left circle covers processing L1 by infants. From this consideration, Ikari (ibid.) drew the conclusion that elementary school students are expected not to be taught but to be given support to notice by themselves. By doing so, they can make all kinds of input immanent. This research might support the suggestion that the very approach to answer this demand is storytelling in an elaborated way. The

experiment revealed that storytelling had conspicuous effects on the elementary school students, but not on the junior high school students. This corresponds to the significant superiority of the 5th graders' positive answers to the questionnaire. A quantitative analysis of a questionnaire showed that elementary school students were more moved physically and emotionally than junior high school students. Children both organize meaning and 'reorganize' meaning even with the passage of time, which could be called memory.

Junior high school students may have shifted to analytic process as represented by the three circles on the right in figure 9. However in the experiment, the explicit learners of the 7th grade, who learned analytically, never exceeded the implicit learners in the posttest. It is notable that the implicit learners attained the same level as the explicit learners. No significant difference was revealed between the two groups. It is likely that junior high school students can organize meaning holistically, but analytical teaching dominates junior high school education currently. Although the result of the experiment did not prove the effectiveness of storytelling, the result suggests that storytelling should serve a purpose to offer students an opportunity for holistic processing. What's more, considering that processing methods do not completely switch to analytic

mode as Ikari (ibid.) said, it is meaningful to give junior high school students opportunities to process EFL holistically.

Another possibility is that storytelling might become a bridge between junior high and elementary school lessons. In fact, a gap between junior high and elementary school in the way of teaching EFL causes students anxiety and distress. One solution to this might be for junior high school teachers to arrange the tasks of holistic learning (like storytelling) besides tasks of analytic learning (like grammatical instruction) in curriculum for the purpose of widening students' world of meaning. Storytelling takes only ten minutes to do in class at junior high school, and offers great rewards. This paper is concluded raising the significant proposal: storytelling is a task adoptable to both junior high school lesson and elementary school lessons to activate students' physical ability and senses to process meaning holistically.

As children grow, they develop their physical ability and senses. They are ready to widen the world of meaning. If L2 teachers can teach in the ways of fostering children implicit learning, students may be able to process in ways similar to students in their L1. Storytelling has a strong possibility to make EFL lessons resemble L1 acquisition both in elementary and junior high schools. It will contribute to students' subsequent

learning to get a firm grounding in a new language at the beginning of learning, because "language" does not only consist of knowledge.

Finally, I point out that the one-month span of this experiment was not long enough and that a more finely modulated experiment could have been made. For example, an old folk tale chosen as the material, which stars only animals, may have been too easy and childish for junior high school students to empathize with its characters. Students might have been more interested in and more stimulated by a more complicated and intellectual story. The validity of adopting storytelling in elementary school and junior high school will depend on further empirical study with a diversity of materials and a range of methods beyond those I have used here.

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Appendix 1 Story (an old folk tale)

"The Little Red Hen"

Published by Ladybird Ltd, A Penguin Company

"Will you help me plant the wheat?" asked Little Red Hen.

"No," said the rat, the cat and the dog.

"Then I will plant it all by myself," said Little Red Hen.

And she did.

"Will you help me cut the wheat?" asked Little Red Hen.

"No," said the rat, the cat and the dog.

"Then I will cut it all by myself," said Little Red Hen.

And she did.

"Will you help me make the flour?" asked Little Red Hen.

"No," said the rat, the cat and the dog.

"Then I will make it all by myself," said Little Red Hen.

And she did.

"Will you help me make the bread?" asked Little Red Hen.

"No," said the rat, the cat and the dog.

"Then I will make it all by myself," said Little Red Hen.

And she did.

"Will you help me eat the bread?" asked Little Red Hen.

"Yes," said the rat, the cat and the dog.

"No," said Little Red Hen. "I will eat it all by myself."

And she did!

Appendix 2 Posttest and Delayed test

(The manuscript read by the author is entered in *Italic letters*.)

1 Listen to four words and circle one that was in the story.

- ① (A *mouse* B *rat* C *bag* D *bird*)
- ② (A *wheat* B *rice* C *food* E *table*)
- ③ (A *drive* B *sing* C *make* D *cry*)

2 Listen to four words and circle one that is different from others.

- ① (A *dog* B *cat* C *bag* D *rat*)
- ② (A *said* B *asked* C *make* D *did*)
- ③ (A *bread* B *flour* C *wheat* D *help*)

3 Listen to words or phrases and translate them in Japanese.

- ① *little red hen* ② *rat* ③ *wheat* ④ *flour* ⑤ *she asked*

4 Listen to phrases and pick out the picture that each phrase represents.

- ① (*make the bread*) ② (*cut the bread*)
- ③ (*eat the bread*) ④ (*plant the wheat*)

5 Listen to sentences and fill in the blanks in Japanese in order to complete the translation.

① "No", *said the cat*. 「いいえ」と () は () 。

② "Then, I will make it all by myself."

(), 私は () それを作しましょう。

③ *And she did*. そして彼女は () 。

Appendix 3 The Questionnaire

(Students were explained how to answer the questionnaire before listening to a story, but not informed about the note below.)

STORYTELLING アンケート

1 次の質問の「はい」か「いいえ」に○をしよう。

- | | | |
|--------------------------|----|-----|
| ① チャンク・リーディングが手がかりになったか | はい | いいえ |
| ② 前のセッションで友達の発言が参考になったか | はい | いいえ |
| ③ 前のセッションで先生の発言が参考になったか | はい | いいえ |
| ④ 聞くときの集中力がついてきたか | はい | いいえ |
| ⑤ 以前に聞いたことのある英語がヒントになったか | はい | いいえ |

2 次の質問の「はい」か「いいえ」に○をしよう。

- | | | |
|-------------------------------|----|-----|
| ⑥ 英語のひびきはきれいだなと感じたか | はい | いいえ |
| ⑦ 繰り返しがきれい（おもしろい）と感じたところがあったか | はい | いいえ |
| ⑧ 繰り返しなどが、意味を考えるヒントになったか | はい | いいえ |
| ⑨ 声の上げ下げやししゃべり方はヒントになったか | はい | いいえ |

3 次の質問の1～4のどれかに○をしよう。

- | | | | | |
|---------------------------------|-------------|---------|------------|----------|
| ⑩ 想像することが楽しいと感じる | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑪ わからなくても聞いているのは苦痛ではない | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑫ 自分の想像力は豊かになってきた気がする | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑬ 英語で聞いていると、自分なりにお話や情景が頭に浮かんでくる | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑭ 英語に耳が慣れてきた気がする | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑮ 自分のリズム感はよくなってきた気がする | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |
| ⑯ これからも英語でお話を聞きたい | (1: とてもそう思う | 2: 少し思う | 3: あまり思わない | 4: 思わない) |

Appendix 4 Result of the Questionnaire: Number of 'Yes'

[5th graders:34 students, 7th graders:39 students]

Question	5 th Grade		7 th Grade	
	1st	2nd	1st	2nd
1. Was phrase reading helpful?	32	33	31	31
2. Was your peer's utterance in session helpful?	31	34	33	33
3. Was a teacher's utterance in session helpful?	29	34	35	36
4. Were your powers of concentration affected?	30	34	36	33
5. Were your familiar words helpful?	30	34	27	35
6. Was the sound comfortable or beautiful?	32	31	30	30
7. Did you enjoy repetition?	26	31	25	28
8. Was repetition helpful?	26	32	32	29
9. Was exaggerated intonation or reading helpful?	29	32	32	33
10. Did you enjoy imagining if you don't understand?	34	34	32	31
11. Were you untroubled by an incomprehensible story?	31	34	31	29
12. Are you getting richer imagination?	27	34	24	30
13. Did image of a story come to your mind?	31	34	26	29
14. Are you getting used to listening to English?	27	32	28	31
15. Are you getting better rhythmic sense?	30	31	24	30
16. Do you want to listen to more stories in English?	32	34	31	33