

Context Dependent Linguistic Development:

Notes from an Elementary School English Program

Tomoko WATANABE¹ Manabu WATANABE²

The process of language learning is difficult to study because one can neither directly observe it as it happens, nor look at what really has been learned and stored in the learner's neural system. All we can see is what input has been given to the learner, and what output s/he has produced : there exists a black box, for what happens between the input and the output is not available for direct observation. However, researchers may be able to make informed guesses from careful analyses of the input and the output, and that is what we attempt to do in this paper.

The rest of the paper proceeds as follows. First, we describe the English program we are studying, and some theoretical issues pertaining to the program, in Section 1 and 2 respectively. Then, we report our classroom observations from our visits in October 2009 and February 2010 in Section 3. Section 4 states some concluding remarks.

1. Ogata Program

Ogata Program is an English language program offered at Ogata Elementary School in Ogata Village, Akita Prefecture in Japan. The program is the school's official "English Activities" class that is allowed within the current National Curriculum, and is run by a private language school³ on the contract-basis with the village. The language school provides course designing, teaching materials, coordination among involved parties, and the native English-speaking instructors for the classes from the 3rd graders through the 6th. The class meets every week for one hour. The homeroom teacher attends all the sessions, and assists the language instructor. From both pedagogical and administrative points of view, thus, Ogata Program is different from most elementary-school English Activities classes, which Japanese homeroom teachers plan and teach.

Significant differences are found in the class content, too. A typical foreign language class

¹ Ph.D. in English and Applied Linguistics, Associate Professor at Tohoku Gakuin University.

² Ph.D. in Linguistics, part-time lecturer at Tohoku Gakuin University and Tohoku University.

³ Ahlstrom and Associates Incorporated. 5-14-1 Sanno, Akita, 010-0951, JAPAN

in Japan is structured around targeted expressions or grammar points. The learner will first receive as input a spoken text (often in written form) that contains those targets. Then, the words and grammar that constitute the input are explained to the learner in their native language, i.e., Japanese. In this approach, the input the learner gets in class always comes with word-by-word explanation, as well as ample chances for repeated listening (through playbacks of the recorded speaking). We call this approach the “traditional”. In real life, however, the spoken words disappear as we hear them, and we will never be given detailed explanation of what each word means, nor many chances to hear them repeated, under normal circumstances. The learner will never develop skills for this “realistic” listening, unless the teacher stops both explaining everything in Japanese and repeating the recording multiple times in the classroom. Ogata Program takes this challenge.⁴

2. Top-down comprehension, and listening skills

One may wonder, then, how the instructor can be sure that the beginning learners understand what is explained to them in English, if all instructions are done in English. The key is top-down comprehension. Top-down comprehension (i.e., *gestalt* understanding) is a type of understanding process that is achieved by assembling pieces of information from various contextual sources such as i) one’s pre-existing knowledge (long-term memory), ii) situational information (physical environment/circumstances), and iii) linguistically-coded information (text). On the contrary, bottom-up comprehension is a type of understanding that is typically achieved by decoding pieces of linguistically-coded information (text) one-by-one. To give examples, learning how to play baseball, or to play the trumpet, typically requires top-down comprehension, while learning how to use a new electric appliance from the accompanying manual involves bottom-up comprehension. Usually, top-down comprehension is more intuitive (heuristic), while bottom-up comprehension is more linguistic (compositional). Bottom-up comprehension, thus, tends to be more difficult, and it requires stronger linguistic skills.

In Ogata Program, top-down comprehension is encouraged, and facilitated. A key teaching

⁴ The authors are aware of another English program that takes the same challenge. It is the program for kindergarten children, which is extended for elementary school students, offered at Meysen Academy in Sendai. The program emphasizes learning English through experience, not explanation in Japanese. For more information, contact Timothy Broman, the curriculum developer. For more detailed descriptions of the programs developed by Ahlstrom and Associates Incorporated, see 渡部 (2006), Watanabe & Watanabe (2007) and Watanabe (2007).

technique for successful top-down comprehension is to make the content “visible” when the instructor speaks. Typically, visible content includes physical objects and movements, pictures, and facial expressions. If the learners can see these as they listen to the instructor (for example, if the instructor says “Point to the window” as s/he actually points to the window), they can understand what the instructor means without explanation in Japanese.

The learners’ knowledge and experience can also make the content “visible” in a more extended sense. For example, many card games are in the children’s shared knowledge. Therefore, the learners will understand the instructor’s explanation of the rules in English without much problem. Look at how the instructor explains the rules of a new card game to a class of the 3rd graders in Ogata Program. The excerpt below is taken from our October 2009 visit. The whole interaction takes 5 minutes. The main instructor, Brian, begins his talk, holding a set of cards. One letter is printed on each card. Another instructor, Darren, is present in the room, as well as the homeroom teacher, Mr. Sugo.

Brian : We are going to play a *Gimme* game. It’s a new game. And for this game, we are going to use these cards. [Showing one card] This is … /h/, right? [Showing another card] And this one is … /k/. [Showing another card] And this one is …/s/. [Showing another card] This one, I don’t know. [Looking confused] Oh, /d/. And what else we have here? [Showing another card] This is …/n/. And for this game, you have one card. For example, if I give Darren a card…

Darren : [Receiving the card] Thank you.

Brian : And if I give Sugo-sensei a card…

Mr. Sugo : [Receiving the card] Thank you.

Brian : And I have one card. I ask a question, “DO YOU HAVE blah-blah-blah.” I have /k/, but don’t show it. [Asking one student] Do you have /k/? No? [To Mr. Sugo] Do you have /k/?

Mr. Sugo : No.

Brian : [To Darren] Do you have /k/?

Darren : Yes.

Brian : If he says YES, and I have /k/, we’ll do paper-rock-and-scissors. [B and D do *jan-ken*.] Darren wins, so I give him the card. “HERE.” “THANK YOU.” He’s got one point, two cards. [To Darren] And, you put them on your desk.

Darren : [Putting his cards on the desk] My desk.

Brian : And, come to me, and say, “Brian, give me a card.”

Darren : Give me a card.

Brian : [Handing a card to D.] Here you go.

Darren : Thank you.

Brian : And one more time. [A few more demonstrations of the rule.] A couple of more rules, and we can play. [Showing a pair of capital H and small h] Is this one point? [Students say YES.] [Showing a pair of the same letter in different colors] Is this one point? [Students say YES.] Now, if you get one point, what do you do? In your pocket?

Students : No! Desk!

Brian : [Walking to Darren with two cards] Is this okay? No! Put the cards on your desk. And, please keep your card secret. Don't go like this. [B. walks showing everybody his card]. We'll help you. "Darren, help! What's this?" Okay?

In the above example, the linguistic input from the instructor contains grammar that may be considered too advanced for the beginners : for one, if-clauses are used a few times. However, the learners can reach the understanding of the game rules explained because they supplement their lack of linguistic knowledge with their so-called world knowledge (in this case, procedural knowledge of card games in general), and with the context knowledge (in this case, the instructor's physical demonstration accompanying the verbal explanation).

3. Some characteristics of English learning in Ogata Program

Ogata Program emphasizes top-down comprehension, and thus, assumes top-down listening skills that accompanying it⁵. The teaching method encourages the learners to use whatever clues available to them to understand the input. One may fear, then, that this top-down approach may discourage, or worse, prevent, linguistic development, because the learners can easily grasp the meaning of the oral input without decoding the input linguistically. We shared such view, too, at first. However, our answer to the question now is "no", after we observed the learners' behaviors in class carefully. We report some of the characteristics that lead us to such a conclusion.

3.1 Comprehension

The children in Ogata Program are encouraged to engage in top-down comprehension. For

⁵ We also would like to point out the fact that, in our real life, we perform quite a lot of top-down processing when we listen to someone speaking, by taking in facial expressions and other physical clues, as well as visual aids presented. Only a few forms of communication deny access to non-oral clues : telephone and radio. Besides, these forms of communication are difficult even for advanced learners, and for native-speakers sometimes. Therefore, we believe that incorporating top-down listening in beginning learners' class is realistic in both senses.

example, the instructor gives them directions that require TPR (Total Physical Response), such as “Touch your nose,” “Jump,” or “Point to the window,” and they perform the action physically. They connect the verbal cues to the physical actions, initially by looking at the instructor’s demonstrated movements. They are never explained what “touch” means, or that the sentence structure is imperative : it is sufficient if they can understand that a certain action is demanded, and what action is demanded. Classroom instructions are extended forms of TPR : “Make groups of 4,” and the children move their desks immediately; “Volunteer?” to solicit help, and some raise their hands to assist the instructor. The learner learns to comprehend these routine instructions quickly through their experience in the English classroom as well as in other classes taught in Japanese. Top-down comprehension is also achieved with more complicated verbal instructions, like the set of rules shown in Section 2.

It is often feared that too much emphasis on top-down processing can hinder bottom-up linguistic decoding. Interestingly, however, we saw some instances of bottom-up linguistic comprehension skills developing in these children during our visits to the class. For example, in the TPR session of the 3rd graders class, when the instructor said, “Point to a boy (or a girl)” without demonstrating any action, the children responded to the linguistic cue quite naturally. This shows that the children know that i) the verb phrase *point to* refers to a kind of action, ii) the terms *boy* and *girl* refer to the biological sex that each individual manifests, and iii) the whole phrase, *point to xxx* is imperative. That is, the children did not simply mimic the instructor’s movements, but demonstrated their ability to decode linguistically-encoded information.

In the TPR portion of the 4th graders class, when the instructor said, “Touch the desk”, the children immediately touched the desk. But, when they were told to “Touch the ceiling”, they laughed, and some of them even shrugged. They somehow had abstracted what “touch” means from previous sessions using the same word, and they knew instantly what they were told to do was impossible to perform physically.

Another good example comes from game rule explanation. When the 3rd graders were explained how to play *Gimme game* orally, there were no demonstrations (i.e. no play-out by the instructors). But, they learned the fairly complicated rules quite quickly. These instances showed that learners started to develop their own linguistic comprehension skills (that is, bottom-up comprehension skills) in English.

3.2 English output

English output manifests another interesting aspect of the learners' linguistic development. The general tendency is this : As the children's grades go up, their Japanese utterances outnumber English ones drastically.

For example, in the 3rd graders class, about half the students played the *Gimme* game, asking in English, "Do you have /t/?" or "Do you have /k/?" Some got around with just "/t/?" or "/k/?" without the full form of the question. And, the shortened form of the questions was used by most of the students when they were very excited in the game at the end of the second round. Interestingly, however, questions in Japanese such as "/t/ ある?" were not heard very often throughout the two rounds. In other words, no matter how excited the 3rd graders got in the game, they never imagined they could perhaps collect the cards faster if they used Japanese in the game. The situation drastically changed in the 6th graders class. Almost all linguistic interactions among the children that one of the authors observed were in Japanese.

Increased use of Japanese is often seen as a negative sign of English development, especially in a program where all sessions are conducted in English. This, however, may be a sign of some other kind of development. Let us explain below.

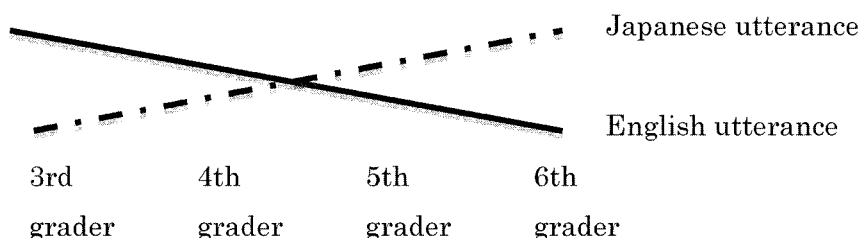
As the children proceed in grades and become older, their linguistic skills in Japanese develop accordingly. By the time they are the 6th graders, their command of Japanese exceeds their limited English : after all, their exposure to English has been only one hour a week for a few years, and the rest of their learning is conducted in Japanese. And they are old enough (and smart enough) to figure out the best strategy to win a card game : Use Japanese to collect cards quickly.

Another interesting phenomenon is observed in relation to this. As their Japanese outputs increase, the number of spontaneous (i.e. unconscious) Japanese translation by the students increases, too. There were some 6th graders (for some reason, they were all outspoken boys) who verbalized in Japanese what they understood in English, probably unconsciously. In fact, those instances looked like automatic responses to the stimuli : they simply reacted to English instructions in their own language reflexively. And surprisingly, the translations were all correct. This automatic translation reaction rarely occurred in the 3rd graders : when it did, it was sporadic, and at word level. We speculate that their Japanese skills are not yet strong enough to overtake their English outputs in the English class.

We should point out, however, that the translation older children produce always comes from top-down comprehension. For example, a student heard the instructor ask "What time did you go

to bed?” and uttered, “寝た時間?” S/he is not likely to produce bottom-up, or word-by-word translation like “何時にベッドに行ったか?”. In other words, the oral translation observed in Ogata Program is based on the idea expressed in the utterance as a whole.

To summarize, the general trend in language development observed in Ogata Program is, as their grades go up, fewer English utterances are observed while playing the games, and more desire to express themselves in their stronger language, i.e., Japanese in this case. On the contrary, younger children utter more English phrases in games, and (probably) no desire to translate them. The general tendency is shown as in the following X schema figure :



Coinciding with more Japanese translation output, it should be noted that Japanese-accented English pronunciation, which is not observed among younger children, is pervasive among the 5th and 6th graders. Our speculation that the stronger language suppresses the weaker one seems to apply to the phonology as well. In fact, decreased English output, emergence of automatic Japanese translation, and Japanese-accented English pronunciation all seem to take place around the same time. Such loss of “good” pronunciation in their spontaneous utterances as they grow is somewhat disappointing. Introduction of explicit articulation training may be an alternative approach to the later stages of the program.

3.3 Repeating, and phonological development of grammar

In contrast to some negative behavior described above, we also noted instances of positive behavior among the older children : namely, repeating. The 6th graders often repeated what the instructors said to them in English, and this repeating behavior was not limited to a word. They repeated a phrase, such as “on the desk”, and even longer phrase such as “Don’t play with the card.” Moreover, phrasal units, or chunks, were perfectly conceived, and articulated as

phonological units. That is, they stress so-called content words (such as *don't*, *play*, and *card*), and they don't put unnatural breaks between words.⁶

We consider this repeating behavior is another instantiation of automatic reflexes that stem from their top-down comprehension processes. When in conversation, the listener indicates to the speaker that s/he understands what s/he hears in various ways such as nodding and interjections (e.g. *uh-huh*, *yes*, *I see*). Repeating is one such tool. For example, in the exchange below,

A: Put the card on the desk.

B: On the desk.

A: Yes, on the desk.

Person B is indicating that s/he understands where s/he must put the card by repeating the phrase.⁷ Older learners in Ogata Program seem to be doing this naturally, as they listen to the instructor's explanation. At the same time, they are beginning to grasp the phrasal structure of English and be able to reproduce it.

4. Some concluding remarks

Top-down teaching is often feared to suppress bottom-up language development. In one sense, the students are "tricked" into believing they understand English, when their understanding is heavily assisted by non-linguistic information, such as visual clues, world knowledge, experience, and context. Some teachers even say they don't learn the language in this approach.

We, however, believe that the learners' behaviors as described above DO suggest that they learn the language, although the learning processes involved are somewhat untraditional: the knowledge they gain and the way they gain it through top-down learning is qualitatively different

⁶ We have found a similar instance in a junior high school English class before. (The students at this school all learned English at elementary school in a program similar to Ogata Program.) A female student was asked to stand up and read the text aloud. She stumbled at a prepositional phrase "in the park." The last word was blanked out in the worksheet, so she had to recall it from her memory. After a few attempts, she remembered the word, and she repeated the entire prepositional phrase, not just the missing word. This indicates that this student has a rudimental grasp of phrase structure. Most Japanese learners of English would only say the missing word in a situation like this. Even when they read aloud after a model provided by the teacher or the CD, they tend to ignore the chunking and read word-by-word. For more descriptions of this phenomenon, see Watanabe (2007).

⁷ If the phrase is spoken in raising intonation (i.e. *On the desk?*), it would indicate that you don't understand, or you are not sure if your understanding is correct.

from the knowledge gained and the learning processes observed in the traditional approach. We also believe that this alternative approach may supplement what the traditional approach may lack.

Before we go further, let us show some of major contrasts between Ogata Program and the

Table 1. Characteristics and assumptions in Ogata Program

| | |
|--|--|
| What the students learn with explicit instruction | Phonics ⁸ |
| | Recognition of individual sounds |
| | Recognition of individual alphabet letters |
| | Sound-letter correspondence (matching a letter with a sound) |
| | Segmentation of sound sequences |
| | Spelling convention (from left to right) |
| | Total Physical Response |
| What the students learn without explicit instruction | Words and expressions used |
| | Top-down comprehension skills in English |
| | English phonological phrase structures such as prepositional phrase, and verb phrase |
| | Basic English sentence structures, and their associated functions |
| What the students don't learn | Enjoyment in English communication |
| | Word meanings in Japanese |
| | Grammatical terms and their notions |
| | Bottom-up translation skills |
| What the students don't learn | Articulation skills (How to say something correctly) |

Table 2. Characteristics and assumptions in the traditional approach

| | |
|--|--|
| What the students learn with explicit instruction | Word meanings in Japanese |
| | Grammatical terms and their notions |
| | Bottom-up translation skills |
| | Articulation skills |
| What the students learn without explicit instruction | Trainings in academic thinking |
| | Intellectual enjoyment? — maybe |
| What the students they don't learn | Top-down comprehension skills in English |
| | English phonological phrase structures such as prepositional phrase, and verb phrase |

⁸ Teaching of phonics is not described in this paper, but it is a major part of Ogata Program. In fact, the cards used in the games are intended to teach phonics.

traditional approach in the tables above. The list is not intended to be comprehensive of all the aspects of the programs.

Interestingly, characteristics and assumptions in Ogata Program, and those in traditional English classes in Japan may seem to distribute complementarily. This, in fact, leads us to believe that the approaches taken in Ogata Program and traditional English classes may supplement each other to facilitate the learners' successful learning experiences. We need both top-down and bottom-up teaching. There are situations where you must listen carefully for details expressed by individual words. At some point, grammatical rules need to be explained so that they can put the words in the correct order in their speech, and their collective word knowledge must be sorted by category like nouns, and verbs. Also, some specific training may help improve the learners' pronunciation.

Currently, none of these bottom-up assistances is provided in Ogata Program. We believe, as we argued earlier, that the natural development of language learning should begin with top-down processing as bottom-up comprehension requires higher linguistic skills, but we also believe that that program can be fine-tuned, and enhanced by bottom-up instruction too if incorporated into the program appropriately. Here, we see a two-tier approach in elementary school English education.

As an endnote, we are fully convinced that games, or any such activity that manifests some "game" characteristics, are the greatest tool throughout our learning. Game characteristics include opponents, rules, winners, and losers, probability, opportunity, thrill, unpredictability, and so on. Those characteristics fascinate even the 6th graders who are not "children" anymore in their developmental stages. Many teachers fear that the older children might lose interest if the game is too simple or too difficult. What we saw in the 6th graders' classes, however, indicates that there is no such need to worry. If the game was too simple, they tried to make it more complicated by negotiating the rules with the instructors (using their limited English). If the rules were too complicated, they enjoyed "learning" the rules by playing the game. We believe that "game" has some intrinsic nature that could facilitate successful foreign language learning experience. Language teachers should be encouraged to utilize the teaching method to achieve their pedagogical goals.

References :

- 渡部友子 (2006) 「入門教育としての小学校英語教育のあり方 — 中学校で英語を学びやすくするために」富山県立大学紀要第 16 巻, pp. 73-80.
- Watanabe, T. (2007) 'Psychological effects of learning English at elementary school : From a follow-up study at the junior high level.' *The Annual Review of English Language Education in Japan*, Vol. 18, 231-240.
- Watanabe, T. & M. Watanabe (2007) 'A pseudo-immersion approach for children starting to learn English as a foreign language,' *NCYU Inquiry of Applied Linguistics : The 2006 Issue*, 359-377.