

An Empirical Study on the Effectiveness of Output  
Activities Focused on Oral Reading for Improving  
EFL Learners' Speaking Skill

2013

Hyogo University of Teacher Education  
The Joint Graduate School (Ph. D. Program)  
in the Science of School Education

Department of Language Education  
(Naruto University of Education)

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An Empirical Study on the Effectiveness  
of Output Activities Focused on Oral Reading  
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A Dissertation  
Submitted to  
Hyogo University of Teacher Education

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In Partial Fulfillment  
Of the Requirement for the Degree  
Doctor of School Education

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By  
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June 2013

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## Abstract

The main purpose of this study is to examine whether output activities focusing on oral reading will be effective in order to improve Japanese EFL learners' speaking ability. This study consists of two parts, theoretical study and experimental study.

As for theoretical study, this study first made explicit how oral reading was perceived and how it was performed in history of foreign language education. This study, then, provided the literature review of the speaking process and the oral reading process, and found common elements between them. In the speaking process, the lexical and grammatical encoding plays an important role. Some similar elements found in the speaking process can be also involved in the oral reading process if we make good use of oral reading. For example, the lexical and grammatical verification is involved in the oral reading process such as "read and look up (R&L)" and the lexical and grammatical restructuring is involved in the oral reading process such as "personalized oral reading (Personalized OR)." The process of verification and restructuring are not the same as encoding involved in the speaking process, but they are similar to encoding in that learners have to pay careful attention to semantic and syntactic features while conducting oral reading. Therefore, this study defines R&L and Personalized OR as oral reading with high cognitive (i.e., taxing oral reading). However, learners do not always go through the process of verification and restructuring. Verification and restructuring are voluntary. In order to raise learners' cognitive load high, this study proposed that learners should perform Personalized Q&A. Personalized



Q&A itself is not an oral reading but this study regards Personalized Q&A as one of output activities focused on oral reading.

As for experimental study, three experiments were conducted. The first experiment was conducted in order to see if these taxing oral reading activities would actually raise learners' cognitive load more than regular oral reading (regular OR) first by measuring the time of their oral reading, the time and numbers of the pauses, and the numbers of repetition during the oral reading, and second by measuring the word retention rate. The results show that significant differences were found between regular OR and taxing oral reading. Therefore, we found that these taxing oral reading activities actually raise learners' cognitive load.

The second experiment was conducted in order to investigate whether taxing oral reading would produce a higher correlation with speaking than regular OR. Two experiments were conducted in order to investigate which of the three different activities of oral reading, regular OR, R&L, and R&L combined with Personalized OR, would correlate the most with speaking. As a result, the first experiment showed R&L and R&L combined with Personalized OR statistically correlated with speaking while the second experiment showed R&L combined with Personalized OR statistically correlated with speaking. The results of each experiment were a little different, but from the results of the two experiments, it is quite plausible that taxing oral reading will produce a higher correlation with speaking.

The third experiment was conducted in order to investigate the hypothesis; if taxing oral reading instruction which involves high cognitive load is continued for a certain period of time, learners' speaking ability can be improved. A two-month experiment was conducted to verify this hypothesis with high school students as the participants. The participants were divided

into two groups; according to the different degrees of cognitive load accompanying the oral reading activities they were engaged in. The result of the experiment disclosed different levels of improvement in the participants' speaking ability, depending upon different degrees of cognitive load of the oral reading activities; greater cognitive load led to greater improvement in speaking ability. Furthermore, the participants were divided into three groups and a six-month experiment was conducted. The result of the experiment was almost the same as the two-month experiment. In addition, it was also found that the longer the experiment was carried out, the more significant differences were found. On the other hand, it was also found that oral reading with low cognitive load is not likely to lead to the improvement of learners' speaking ability. These findings support the pedagogical value of oral reading activities as preparatory practice in speaking as long as they involve high cognitive load.

In conclusion, this study focused on a new role of oral reading as preparatory practice to improve Japanese EFL learners' speaking ability and proved its effectiveness. It is not easy to conduct output activities at school in Japan, where average class size is quite large, i.e., 40 students in a class. Oral reading, however, is suitable for this learning environment in Japan. As this study suggested, oral reading itself is not a speaking activity but it could become an activity to help to improve Japanese EFL learners' speaking ability.

## Acknowledgement

I would like to express the deepest appreciation to my supervisor, Professor Harumi Ito of Naruto University of Education for his endless support and encouragement. Without his supervision and constant help, this dissertation would not have been possible.

I would like to thank my sub-supervisors, Professor Shigenobu Takatsuka of Okayama University and Professor Kinue Hirano of Joetsu University of Education, who guided and assisted me through all stages of this work and provided me with valuable advice and warm encouragement.

In addition, I am grateful to Professor Hiroshi Ohshima of Hyogo University of Education, Professor Ohba Hiromasa of Joetsu University of Education, Professor Kazuhira Maeda of Naruto University of Education and Professor Shigenobu Takatsuka of Okayama University. As the members of an examination committee, they provided countless constructive suggestions which contributed to the completion of this work. For mistake which remain in the work, I alone am responsible.

Finally, I would like to special thanks to students at Tezukayama junior and high school, who cooperated with the work. Some of them were willing to offer their volunteer. I would like to tell each one warm personal thanks. Without their generous help, this work could not have been completed. Thanks to their help, this work became unforgettable and precious learning experience for me.

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## List of Abbreviations

ALT: Assistant Language Teacher

ANOVA: analysis of variance

CLT: Communicative Language Teaching

EFL: English as a foreign language

iBT: Internet-based Test

MEXT: Ministry of Education, Culture, Sports, Science and Technology

Personalized OR: personalized oral reading

regular OR : regular oral reading

R&L: read and look up

SLA: second language acquisition

TOEFL: Test of English as a Foreign Language

## Chapter I

### Introduction

#### 1.1 Background of the Study

In the Japanese educational environment, focus has been placed on fostering communicative competence for the past several years since the announcement of the Course of Study in 1989 and more and more teachers are now paying a lot of attention to conducting classes which center on nurturing students' speaking ability. The new Course of Study, which came into effect in 2011 (its senior high school version in 2013), asks for cooperation between primary and secondary education in developing students' communicative competence. In the new Course of Study for senior high school, the organization of subjects of English has greatly changed; new subjects are recognized as "Basic English Communication, English Communication (I, II, III)," "English Expression (I, II)" and "English Conversation." Furthermore, the new Course of Study recommends that classes, in principle, should be conducted in English (MEXT, 2009, p.7). Therefore, the new Course of Study is moving more toward the development of students' communicative competence, in particular speaking ability.

Why should we put a great importance on speaking ability? There are two reasons for this. First, English is a global language. It is true that English will no longer be the only global language because other languages such as Chinese, Spanish, Arabic and Hindi/Urdu, will challenge the

current dominance of English and they will also be important global languages by the end of 2050 (Graddl, 2006). However, the number of people who speak English as their first language is about 320–380 million in the world and approximately 1.5 billion people can communicate in a useful level of English now (Crystal, 1997). In fact, English is used as a communication tool among many people whose native language is not English. Therefore, English still plays important roles as a global language. This means that Japanese people also need English as a communication tool. As Japanese people have more cross-cultural opportunities, they need to develop their speaking abilities more including negotiation and presentation skills in English.

As the second reason, the current pathetic situation of Japanese EFL learners' speaking ability is well-known, as is seen in the TOEFL average score. The average TOEFL iBT speaking score for Japanese in 2012 is 17 points (the maximum is 30). This score is the worst not only among East Asian countries but also in the world. Due to the lack of sufficient English abilities, many Japanese people are held back in their exchanges with people in other countries and their ideas and opinions are not evaluated appropriately (MEXT, 2003). In the East Japan Great Earthquake, which occurred in 2011, not only the foreign governments but also the foreign residents complained about lack of information in English (JCER, 2011). Prompt action should be taken in order to improve Japanese people's speaking ability in English.

How can we, then, improve Japanese people's speaking ability in English? Are there any good solutions for this? Ito (2008) claims that the main reason that Japanese people's speaking ability in English are far from satisfactory is that English classes in Japan tend to make students'



learning style passive rather than active. We cannot deny that many teachers in Japan still spend more time teaching English grammar, analyzing sentence structures and translating English into Japanese. Even when they do some communication activities, they are more likely to pay attention to 'what to communicate' and 'how to communicate' in their English lessons rather than 'how much to communicate' (Ito, 2008). Therefore, this study insists that English classes should include more oral output activities and teachers should have each student's amount of speech and utterances increase in order to develop students' speaking ability.

There are various methods and techniques to increase the amount of oral output activities. This study would like to pay special attention to oral reading as a technique to increase students' amount of oral output. The present researcher has conducted various activities such as debate and discussion in English classes over the past decade. However, satisfactory results have not been achieved. One of the reasons for this is that those activities are too difficult for students with a lower ability of English. It also takes much time to prepare for those activities. Therefore, this study has paid special attention to oral reading. The reason this study has focused on oral reading is that this teaching technique of oral reading is suitable for the learning environment in Japan, where the average class size is still about 40 students. Oral reading is one of the traditional teaching techniques and can be used even in a class of 40 students. In addition, recently, oral reading has been recognized as a useful pre-activity for speaking (Ito, 2008; Tsuchiya, 2004; Yasuki, 2010). Oral reading itself is not a speaking activity, but it could become an activity to improve students' speaking ability in English if it is used in a proper way. For the reasons mentioned above, this study has focused on output activities

focused on oral reading in order to improve Japanese EFL learners' speaking ability.

## **1.2 Purpose of the Study**

The main purpose of this study is to examine whether output activities focusing on oral reading will be effective to improve Japanese EFL learners' speaking ability. To achieve this goal, this study sets up three interrelated objectives; the first objective is to find the common elements between the oral reading process and the speaking process. The second objective is to investigate which type of oral reading (among many types of oral readings) is most correlated with speaking ability. The third objective is to investigate how learners' speaking ability will be improved if oral reading instruction is implemented for a certain period of time.

Oral reading itself is an activity in which words written in the text are read aloud. In this study, oral practice without looking at a textbook is also regarded as one of oral reading activities in a broad sense.

## **1.3 Organization of the Dissertation**

This study is composed of 9 chapters including this chapter. The second chapter deals with a brief history of foreign language education and oral reading. It will focus on three major foreign language teaching methods, Grammar-Translation Method, Audio-Lingual Method and Communicative Language Teaching, and discuss how oral reading was or has been perceived in each foreign language teaching method.

Chapter III deals with the comparison between the oral reading process and the speaking process. First comes the review of the literature concerning reading process and speaking process. Second, the targeted

process of oral reading and the process of speaking are analyzed. After that, the common elements between the oral reading process and the speaking process are clarified and finally this study discusses the significance of increasing cognitive load in oral reading.

In Chapter IV, this study examines high level cognitive load in oral reading. Two experiments are reported in order to verify that “personalized oral reading (Personalized OR)” involves a higher cognitive load than “regular oral reading (regular OR).”

Chapter V examines the relationship between speaking ability and oral reading ability. An experiment on the correlation between oral reading and speaking was conducted and the results and discussion are given.

Chapter VI deals with a further experiment of Chapter V. It examines the relationship between speaking ability and oral reading ability again with larger number of the participants and gives results and discussion.

In Chapter VII, an experiment on the effectiveness of oral reading activities to improve speaking ability was conducted and the results and discussion are given.

Chapter VIII deals with further experiments on the effectiveness of oral reading activities. An experiment was conducted with a longer period and with more carefully designed treatment.

Chapter IX gives the summary of this study and provides suggestions for English language education in Japan as conclusion.

## Chapter II

### A Brief History of Foreign Language Education and Oral Reading

#### 2.1 How Oral Reading Has Been Perceived Within the Historical Transition of Foreign Language Teaching Methodology

In the history of foreign language education, language teaching methods have been influenced by theories of language and language learning of the time (Richards & Rodgers, 2001). Ito (1999) divided the transition of language teaching approaches into three stages according to how language learning and language teaching method was viewed:

- 1) The first stage: The age of knowledge education
- 2) The second stage: The age of skill education
- 3) The third stage: The age of communication education

According to Ito (1999), in the first stage, the age of knowledge education, language learning was considered as an acquisition of a linguistic system, and acquisition of a grammatical system, in particular, was emphasized. The main teaching approach was Grammar-Translation Method.

In the second stage, the age of skill education, language learning was considered as a process of habit formation, and oral/aural skills, such as listening and speaking, received most attention. The main teaching approach was Audio-Lingual Method.

In the third stage, the age of communication education, language learning was considered as an acquisition of communicative competence,

based on an idea that language is used for a variety of functions in a daily life.

This chapter will deal with these three language teaching approaches and give the theoretical background and characteristics of each approach. This study will, then, make explicit how oral reading has been perceived and how it is performed (or whether it is performed or not) in each approach. In addition, some recent research on oral reading will be examined.

## **2.2 Grammar-Translation Method and Oral Reading**

### **2.2.1 Review of Grammar-Translation Method**

Grammar-Translation Method was widely used throughout European countries in foreign language teaching from 1840s to 1940s. In Japan this method was widely used from the Meiji era to the early Showa era. However, even today, in a somewhat modified form, it is widely used in some parts of the world. There are many teachers in Japan who employ Grammar-Translation Method in their instructions.

Richards and Rodgers (2001, p.7) claims that “it (Grammar-Translation Method) has no theory and there is no literature that offers a rationale or justification for Grammar-Translation or that attempts to relate it to issues of linguistics, psychology or educational theory.”

In the age of Grammar-Translation, linguists who were strongly interested in a linguistic system took the leading part of the foreign language teaching (Ito, 1999).

The fundamental goal of foreign language study under Grammar-Translation Method was to read a text written in the target language. In order for learners to be able to translate the text, they needed

to learn about the grammatical rules and vocabulary of the target language. Therefore, vocabulary and grammar were emphasized. Accuracy was emphasized and when learners translated the target language into their native language or the other way round, learners were expected to achieve high standards in translation. If this could be done, learners were considered to be successful language learners.

In addition, it was believed that studying a foreign language gave learners ‘the mental discipline and intellectual development’ (Richards & Rodgers, 2001). In other words, studying a foreign language provided learners with good mental exercises, and it helped develop their minds and the mental exercise of learning was beneficial to them (Larsen-Freeman & Anderson, 2011).

### **2.2.2 Oral Reading in Grammar-Translation Method**

Since a purpose of learning a foreign language in Grammar-Translation Method was to be able to read literature, literary language was considered superior to spoken language (Larsen-Freeman & Anderson, 2011). Reading and writing were focused on and little attention was paid to speaking and listening and almost none to pronunciation. Therefore, oral reading was not emphasized in Grammar-Translation Method.

In order to come to a better understanding of how oral reading was used under Grammar-Translation Method, this study shows some examples where oral reading is used;

- (1) Students read aloud a few lines (or a paragraph) before they translate them into their native language.
- (2) In answering comprehension questions of the text, students read

aloud their answers in the target language.

- (3) In answering the questions where students have to rewrite a sentence into another way, they read aloud the sentence they have rewritten.
- (4) In the exercise of translation into the target language, students read aloud the sentences they have translated.

In Activity (1), this oral reading is done just as a preparatory step before students try to translate the passage into their native language. In Activities (2) and (3), students only read aloud their answers to the questions and whether the answer is correct or not is emphasized more. Oral reading itself is not important. In fact, even if students' pronunciation is poor, some teachers do not correct it. In Activity (4), oral reading is not valued, either, and the correct translation into the target language is more important.

In conclusion, oral reading under Grammar-Translation Method was not valued at all. Some teachers themselves did not know how to pronounce words correctly. Oral reading was used only as a preparatory step for translation or silent reading, or only as a means to check the correct answer.

## **2.3 Audio-Lingual Method and Oral Reading**

### **2.3.1 Review of Audio-Lingual Method**

Audio-Lingual Method was developed as a questioning and rejection of Grammar-Translation Method. From the 1950s to 1970s, it was used as the main language teaching method. The combination of the experiences of the "Army Method" used during the Second World War and the Oral

Approach developed by Charles C. Fries of the University of Michigan led to Audio-Lingual Method, adding ideas taken from structural linguistics and behavioral psychology. Audio-Lingual Method had a strong theoretical base in linguistics and psychology. The goal of Audio-Lingual Method was “to have students reach a point at which they could use language automatically and unconsciously just as native speakers do” (Chastain, 1988, p.89).

Although Grammar-Translation Method paid more attention to education on a linguistic system rather than a language skill, Audio-Lingual Method came to focus on skill-based education. Audio-Lingual Method came to pay attention to the order of teaching the four basic skills (reading, writing, listening and speaking). Listening and speaking were emphasized more in teaching, because the idea of speech primacy (Brooks, 1964; Finocchiaro, 1964; Fries, 1945; Rivers, 1968; Saville-Troike, 1973) was dominant at that time. Therefore, the teaching order of skills was as follows, listening, speaking, reading and writing. The process of teaching involved intensive oral instruction. Even in teaching reading, oral practice was thought to be necessary and it must be kept to the fore (Fries, 1945; Riverse, 1964; Silberstein, 1987). Audio-Lingual Method put more emphasis on oral communication, and good Audio-Lingual programs were supposed to produce fluent speakers of English and other foreign languages (Saville-Troike, 1973).

In Audio-Lingual Method, pronunciation was taught from the beginning and teachers provided students with accurate pronunciation, accent, rhythm and intonation. Pattern practice and drills were characteristics of the teaching technique in Audio-Lingual Method, because language learning was thought to be a process of habit formation.



Fries (1945, p.3) claimed that “accuracy of sound, of rhythm, of intonation, of structural form and of arrangement, within a limited range of expression, must come first and become an automatic habit before the student is ready to develop his chief attention to expanding their vocabulary.” It was believed that the more often forms were repeated and practiced, the stronger the habit formed and the greater the learning occurred.

In Audio-Lingual Method, new material was often presented in dialogue forms. Learners practice and memorize the dialogue through various drills and pattern practice such as repetition drills, chain drills, and substitution drills. Grammar points were often included within dialogues. Grammar points were later practiced in various drills and pattern practice.

### **2.3.2 Oral Reading in Audio-Lingual Method**

In Audio-Lingual Method, oral practice was frequently used. Brooks (1964) suggested typical activities used in Audio-Lingual Method such as repetition, inflection, replacement, restatement, completion, transposition, expansion, contraction, transformation, integration, rejoinder, and restoration. Many of these activities were conducted orally. When these activities are conducted without a printed text, they are regarded as reproduction activities. On the other hand, when these activities are conducted as learners are looking at a printed text, they are regarded as oral reading activities.

In order to come to a better understanding of how oral reading was used, this study shows a sample lesson, adopted from Larsen-Freeman and Anderson (2011).

The teacher delivers a printed text of the dialogue. She<sup>(1)</sup> has the class repeat after her, looking at the printed text.

Sally: Good morning, Bill.

Bill: Good morning, Sally.

Sally: How are you?

Bill: Fine, thanks. And you?

Sally: Fine. Where are you going?

Bill: I'm going to the post office.

Sally: I am, too. Shall we go together?

Bill: Sure. Let's go.

The teacher has the class repeat after her model for several times. When the class comes to the line, 'I'm going to the post office', which is a new grammatical point, they stumble a bit. At this point, the teacher uses a backward build-up drill (expansion drill).

T: Repeat after me: post office.

Ss: Post office.

T: To the post office.

Ss: To the post office.

T: Going to the post office.

Ss: Going to the post office.

T: I'm going to the post office.

Ss: I'm going to the post office.

The teacher then moves to the second stage, a single-slot substitution

drill. The teacher writes the target sentence (I'm going to the post office) on the black board.

<p>T: I'm going to the post office. (showing a picture of a bank) 'the bank.' (she pauses, then says) I'm going to the bank.</p>
--

From her model, the students understand that they are supposed to take the cue phrase ('bank') and put it into the proper place in the sentence. Now she gives them the first cue phrase,

<p>T: 'the drugstore' Ss: I'm going to the drugstore. T: Very good. T: 'the park.' Ss 'I'm going to the park.'</p>
--

She offers other cues (the café, the supermarket, the bus station, the football field, and the library). Similar practices such as single-slot substitution drills, or multiple-slot substitution drills continue.

In conclusion, oral reading in Audio-Lingual Method was sometimes used before reading practice or was frequently used in oral practices with a printed text. However, oral practices were often used just as drills and in some cases, they were conducted without students' understanding of the meaning. Oral reading was thus perceived as a mere preliminary step for learning how to read. Saville-Troike (1973) claims that 'it is true that most readers can encode the graphic symbols into phonemic representations and

read out loud what is written on the page, but this is not the same process as either speaking or reading and may be learned by someone who does not speak the language at all, or even understand it.' After all, oral reading in Audio-Lingual Method was used just as oral practice and it was merely reinforcement of orally introduced structures. In other words, it was nothing but the preliminary step before reading.

## **2.4 Communicative Language Teaching and Oral Reading**

### **2.4.1 Review of Communicative Language Teaching**

Communicative Language Teaching (CLT) starts from a theory of language as communication. The goal of language teaching is to enable students to communicate in the target language. The idea that knowledge of the forms of language alone is insufficient underlies CLT (Larsen-Freeman, 2011). Littlewoods (1981, p.1) also emphasizes as follows; 'one of the most characteristic features of CLT is that it pays semantic attention to function as well as structural aspect of language, combining these into a more communicative view.' In addition, learners must also know that many different forms can be used to serve many functions and also that a single form can often serve various functions (Larsen-Freeman, 2011). They must choose the most appropriate form, considering the social context and the relationship with the interlocutors. They must be able to negotiate meaning with their interlocutors.

Nunan (1991, p.279) lists characteristics of CLT as follows;

- (1) An emphasis on learning to communicate through interaction in the target language
- (2) The introduction of authentic texts into the learning situation

- (3) The provision of opportunities for learners to focus, not only on language, but also on the learning process itself
- (4) An enhancement of the learner's own personal experience as important contributing elements to classroom learning
- (5) An attempt to link classroom language learning with language activation outside the classroom

In CLT, learners are communicators. They are actively involved in negotiating meaning through pair or group work activities and task activities etc. Therefore, the teacher's role is less dominant. The teacher may demonstrate some part of the lesson, but the teacher does not always interact with students. It is desirable that the teacher presents situations that encourage students to communicate. Therefore, students work in pairs or in groups, and communicative interaction encourages cooperative relationship among students. Students are seen as more responsible for their own learning.

As for the language taught in the class, authentic materials are encouraged to be used. It is desirable to give students an opportunity to develop strategies for understanding language as it is actually used outside the class.

#### **2.4.2 Oral Reading in Communicative Language Teaching**

The activities suitable for CLT enable learners to engage in communicative exercises, share information and negotiate meaning in the target language (Brown, 2000; Ellis, 1982; Johnson & Johnson, 1998; Littlewood, 1981; Nunan, 1987, 1991; Savignon, 1997). In order to come to a better understanding of oral reading in CLT, this study shows a sample

of a CLT activity quoted from Richards (2006). The superlative adjective is a new form in this lesson.

First of all, how to use the superlative adjective and examples of sentences are given as follows;

(1) Superlative adjectives usually appear before the noun they modify as in (a).

(2) They can also occur with the noun they modify as in (b).

(3) Superlatives are often followed by relative clauses in the present perfect as in (c).

(a) The funniest person I know is my friend Bob.

(b) Of all the people in my family, my aunt Ruth is the kindest.

(c) My cousin Anita is the most generous person I've ever met.

Procedure is as follows:

**Exercise A** Complete these sentences with your own information, and add more details. Then compare with a partner.

1. One of the most inspiring people I've ever known is ...

One of the most inspiring people I've ever known is my math teacher.

She encourages students to think rather than just memorize formulas and rules.

2. The most successful individual I know is ...

3. Of all the people I know .... is the least self-centered.

4. The youngest person who I consider to be a hero is ...

5. The most moving speaker I have ever heard is ...

6. The most important role model I've ever had is ...

7. Of all the friends I've ever had .... is the most understanding.

8. One of the bravest things I've ever done is ...

**Exercise B.** Use the superlative form of these adjectives to describe people you know. Write at least five sentences.

*brave honest interesting smart generous inspiring  
kind witty*

**Exercise C.** Group work

Discuss the sentences you wrote in Exercises A and B. Ask each other follow-up questions.

A. My next-door neighbor is the bravest person I've ever met.

B. What did your neighbor do, exactly?

A. She's a firefighter, and once she saved a child from a burning building ...

According to Richards (2006), students may read aloud the example sentences as in (a), (b) and (c), but this reading aloud is mechanical practice. In CLT, form is not ignored (Canal & Swain, 1980; Ellis, 2003; Littlewood, 1981; Savignon, 1997), but it is not the final goal. In CLT, Exercises A, B and C above are more focused (Richards regards Exercises A and B as an example of meaningful practice and Exercise C as an example of communicative exercise). As in a sample lesson above, oral reading is hardly conducted in CLT. Activities involving language performance, such as Exercise C, are more emphasized in CLT.

Even in reading instruction, the principles of CLT apply equally to reading activities, and the transaction of information and meaning negotiation are focused on in reading instruction (Savignon, 1997).

Furthermore, the text is used as a resource, and tasks are required to engage students interactively with the texts and students are required to respond to something in the text (Hirvela, 1996; Maley & Duff, 1989).

This study shows a sample lesson (elementary level) of reading from Harmer (1998). The teacher introduces the topic of ‘attraction’ orally. Then she tells the students to think what is important to be attractive when they meet a new friend, and to list the qualities in the order of importance. Then the teacher tells the students to compare their lists in pairs or in groups. Then the teacher delivers the text. The teacher tells the class to read the text to see how their opinions are different depending on whether they are men and women. When the students have read the text, the teacher gets them to discuss their answers in pairs. The students now have to complete the following task.

Read the first part of the article again. Use these words to answer the questions below.

*eyes   legs   smile   figure   teeth*

Which do men think are most important?

Which do women think are the most important?

Do you agree?

Practices which are suitable for CLT are the ones which enable students to engage in communicative activities, to share and use information and to be involved in negotiations of meaning. When students read a text, they may use quasi oral reading such as lip reading, buzz reading and subvocalization but oral reading occurs less often.

In reviewing oral reading in CLT, oral reading seems to have been



discouraged. The purpose of CLT and that of oral reading are thought to be contradictory. This is because, in oral reading, there are neither transactions of information nor negotiations of meaning. Therefore, some methodologists of ALT call oral reading a bad practice. For example, Broughton, Brumfit, Flavell, Hill and Pincas (1980, p.91) criticize oral reading as follows;

“For those who teach a foreign language it is closer to ‘pronunciation’ than it is to ‘comprehension’. ... It must also be admitted that the usefulness of the skill of reading aloud is limited. Few people are required to read aloud as a matter of daily routine. To the huge majority its importance is minimal.”

Gibson (2008, p.29) also implies that ‘reading aloud (RA) seems to have been discouraged in communicative language teaching methodology, which tended to react against perceived traditional methods, including RA. RA was not seen to be genuinely personally communicative, and combined with its often inappropriate use, this may have led to its virtual rejection by this methodology.’

In Japan, the development of communicative competence has been emphasized since the middle of the 1980s. The idea that communicative activities should be used in the classroom in order to develop students’ communicative competence has come to be dominant. Since oral reading is never used in communicative activities in daily life, ALT and English teachers, who focus on communicative activities, have slighted oral reading (Suzuki, 1998).

## **2.5 Re-evaluation of Oral Reading**

Since oral reading has some training elements and is unlikely to develop communicative competence, it has less value in CLT. However,

oral reading has come to be re-evaluated in recent years. There are two reasons why oral reading has been re-evaluated.

First, CLT is somewhat under criticism for being rather indifferent to the development of basic knowledge (knowledge of basic vocabulary and basic grammar) and skills. For example, Wesche and Skehan (2002, p.216) claims that ‘strong forms (of CLT) have, spurred by research findings that reveal their inability to promote levels of accuracy matching their success in development of fluency, increasingly sought ways to incorporate a focus on form and language awareness into classroom practice.’ Similarly, Lightbown (1991, 1992) and Millard (2000) point out that the fluency of students trained in the CLT programs differs significantly from that of those trained in more traditional programs but there is often lack of grammatical accuracy. Furthermore, a number of SLA research studies (e.g., Doughty, 1991; Doughty & Williams, 1998; Harley, 1998) revealed that meaning-based learning activities alone are not sufficient in developing their language use. Those studies point out that the instruction of CLT lacks attention on forms. The concern that “language forms have been slighted in English education due to a strong emphasis on language function and language fluency” (Oshita, 2009, p.59) has arisen in Japan as well. Oral reading has the potential to develop learners’ basic skills, but it has been ignored in the EFL classroom in Japan for a long time. In recent years, the acquisition of basic knowledge and skills has come to be thought to be important. Along with this movement, oral reading has come to be re-evaluated as an important skill to be developed by EFL learners who wish to improve their communicative competence.

As the second reason, how to perceive oral reading has been changed. Oral reading itself was traditionally used for a preliminary step before

silent reading and translation. Or oral reading was used in oral practices and it was perceived as a sort of passive activity. However, in recent years, the potential of oral reading has been re-evaluated and more and more researchers are trying to find the relationship between oral reading and the four skills.

As far as the relationship between oral reading and reading skill is concerned, Kadota (2007) and Gibson (2008), for example, discuss the correlation between oral reading and reading from a new perspective. They argue that oral reading is effective in promoting automatic phonological coding and accelerating the speed of vocal and subvocal speech. Similarly, Suzuki (1998) found the positive effect of oral reading practices on reading fluency as well as reading comprehension for Japanese senior high school students. Furthermore, Miyasako (2008) investigated the effect of oral reading practice on reading comprehension of Japanese senior high school students. He found that students with lower reading proficiency improved their reading comprehension through oral reading practice, and also reported that English instruction focused on oral reading was more effective in improving students' reading comprehension than regular English instruction which was more focused on listening, vocabulary and grammar.

On the other hand, as for the relationship between oral reading and listening skill, Tsuchiya and Matsuhata (2002), for example, reported on the correlation between oral reading and listening. Their study investigated the relationship between L2 listening ability and the speed of oral reading and reading comprehension. They found that good listeners could read reading passages more rapidly and comprehend contents better than poor listeners. Similarly, Suzuki (1998) compared one English class

where oral reading was conducted only twice and the other English class where various oral reading more than twice was conducted. He found the latter class significantly improved the listening ability and silent reading speed.

As far as the relationship between oral reading and speaking is concerned, Gabrielatos (2002), for instance, reassesses the value of oral reading as a speaking and pronunciation practice as well as a reading practice. Tsuchiya (2004) asserts that oral reading is a speaking activity rather than a reading activity, and as such it should be considered as one of the oral communication activities. Similarly, various useful types of oral reading which teachers can use in their English classes have been presented and the potential of oral reading as speaking practice has been confirmed (e.g., Ito, 2008; Tsuchiya, 2004; Yasuki, 2010).

As teachers and researchers understand the potential of oral reading more clearly, more studies on oral reading are reported. Kitsudo (1993), for example, reported the effect of oral reading practice on high school students' writing skill. Other researchers also reported the effects of oral reading on internalization of vocabulary and phrases (Higashitani, 2009; Suzuki & Kadota, 2012; Takahashi, 2007), on better story-telling performance (Suzuki and Kadota, 2012), on retention of words in short-term memory (Kawashima, 2002) and on better speed reading (Watanabe, 2009). Oral reading has been re-evaluated as shown in the examples above and a lot of researchers and teachers have now started to pay attention to the potential of oral reading.

## **Note**

(1) This study mainly uses pronoun 'she/her' to refer to a teacher.

## Chapter III

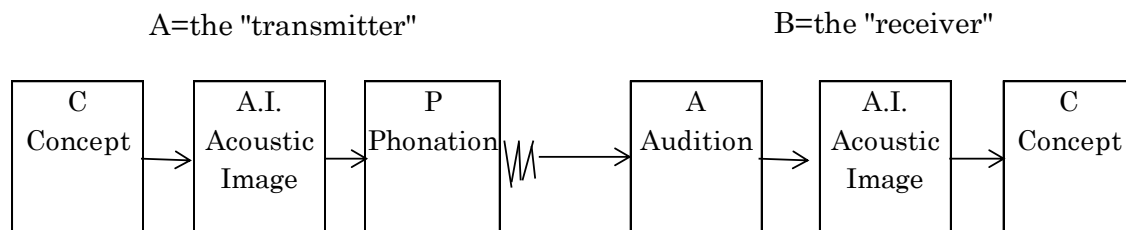
### Comparing Oral Reading Process and Speaking Process

This chapter provides the literature review of the speaking process and the oral reading process and then establishes the model of the speaking process and the oral reading process for this dissertation. This chapter also points out common elements between the speaking process and the oral reading process.

#### 3.1 Literature Review of Speaking Process

Various researchers show speaking models or processes. This chapter will present five speaking processes which have been influential to this study.

First, Palmer (1924) shows speaking processes and listening processes divided into six units, called 'Six Primary Speech Habit' (Figure 3.1.). When the transmitter conveys a message to the receiver, the transmitter converts a message to an acoustic image and pronounces a sentence by phonation.



*Figure 3.1.* Six primary speech habit

On the other hand, the receiver uses audition and converts spoken language to an acoustic image and receives the message from the transmitter. This model is not complicated and a noise which may occur in translating a message to the receiver is not considered.

Second, Shannon and Weaver’s (1949) model of communication (Figure 3.2.) is specially designed to develop effective communication between a sender and a receiver.

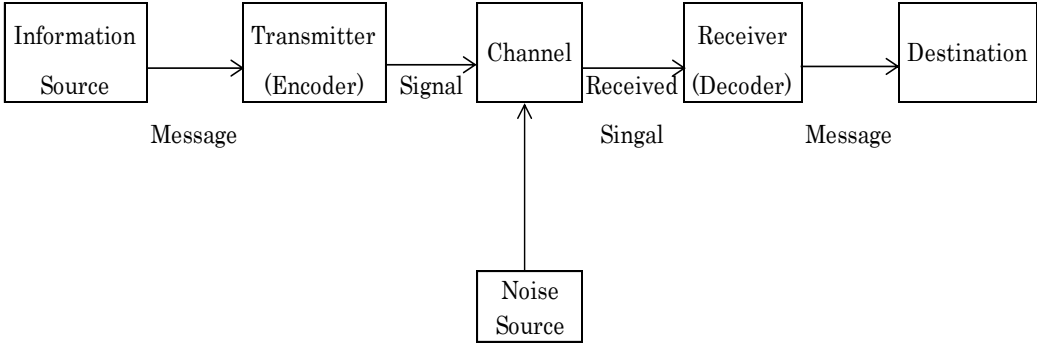


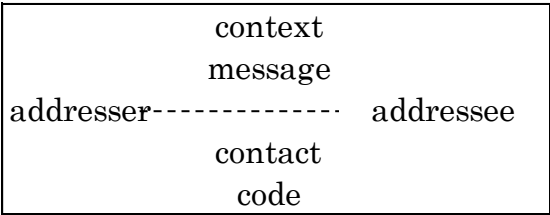
Figure 3.2. Shannon and Weaver's model

This model shows why even simple communication may be misunderstood. This model is composed of six factors; information source, transmitter, channel, receiver, destination and noise source. A message is created at the information source, which is sent through the transmitter (encoder) by way of the channel which is the route that the message travels through. Then the message is sent through a signal to the receiver. Before it reaches the receiver, it sometimes happens that the message will be affected by noise. If the message is interfered with by the noise, the initial message may be distorted and conveyed to the receiver. The receiver, then,

may convey the initial message or change the message to its destination. This model was originally intended to be used in order to facilitate information transmission over telephone lines. Later, it is applied in various communication theories.

The third model is Jakobson’s (1960) model (Figure 3.3.). In this model, any given act of verbal communication is composed of six constitutive factors;

- (1) addresser: speaker, narrator
- (2) addressee: hearer, reader, user
- (3) context: referent, about what?
- (4) message: text, what is being said
- (5) contact: channel of communication; psychological or physical connection
- (6) code: system



*Figure 3.3.* Jakobson's six factors of the speech event

Each factor has a different function of language. When the addresser sends a message to the addressee, the message requires a context, a code, and a contact to be operative. In other words, in every speech act, the addresser sends a message to the addressee and the message contains a

code. The message has a context and is sent to addressee through a contact. In this model, interpersonal verbal communication is explained and Jakobson emphasized the importance of the codes and social contexts involved in interpersonal verbal communication.

The fourth model is the speaking process proposed by Kadota (2007). Kadota (2007) identifies two stages in the speaking process. The first stage is a planning stage for speech production. In this stage semantic contents are produced that are later to be taken into the language production system. Each lexical item will be explored and chosen from the mental lexicon in order for the speaker to form a sentence in their mind. The second stage is an execution stage. In this stage, based on the phonetic representation formed in the first stage, speech sounds will be produced, using the speaker's larynx, tongue and lips, etc.

Finally, this study shows Levelt's (1989) model of speech production (Figure 3.4.), which has been cited by a large number of researchers. This model is composed of three devices as far as speaking process is concerned; the Conceptualizer, the Formulator, and the Articulator. The Conceptualizer is responsible for generating the speaker's messages to communicate. Then the Formulator is in charge of transforming the speaker's messages into linguistic forms through semantic and grammatical encoding. Finally, the Articulator turns linguistic forms into actual speech through phonological encoding. The speaking process model of this study will be based on Levelt's model and it will be shown later in p.43.



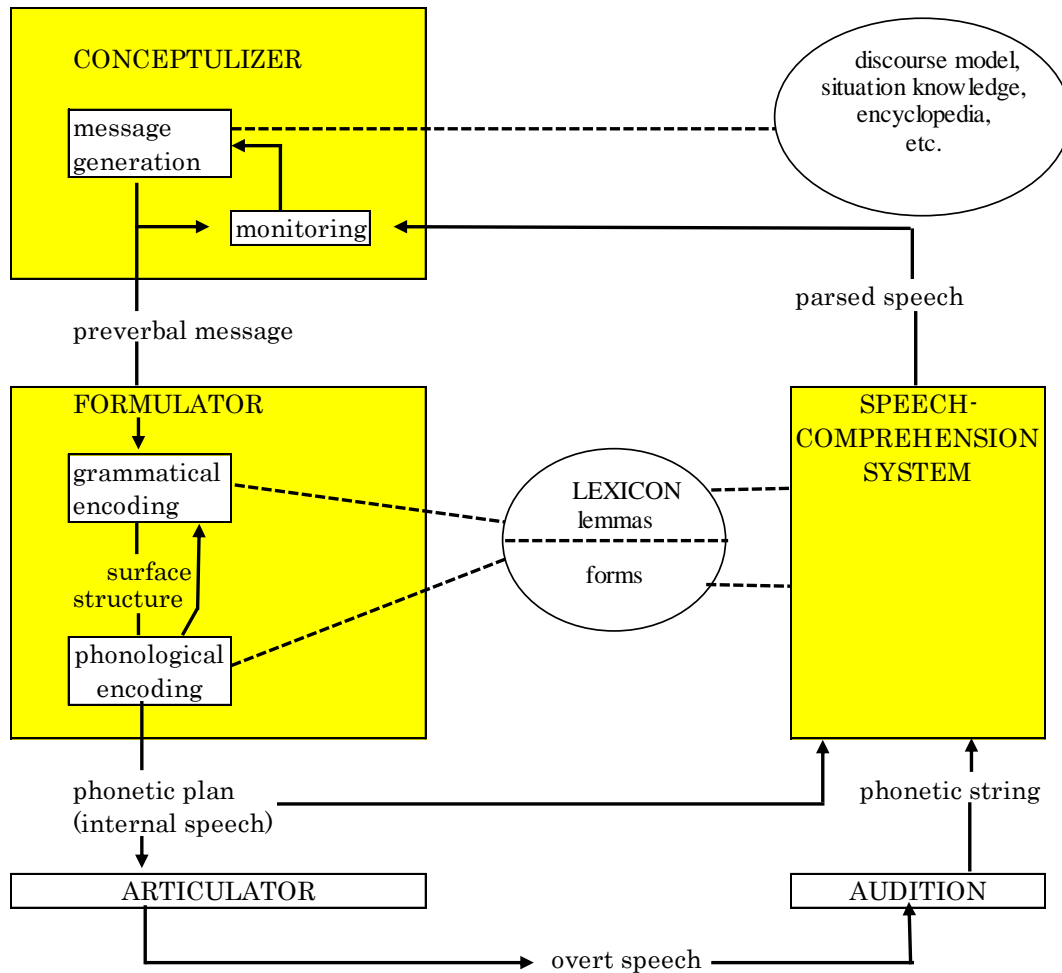


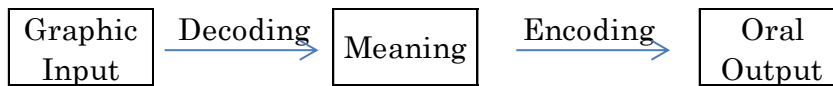
Figure 3.4. Levelt's speaking model

### 3.2 Literature Review of Oral Reading Process

Various researchers have presented oral reading models and processes. This chapter will present four oral reading processes which have been influential to this study.

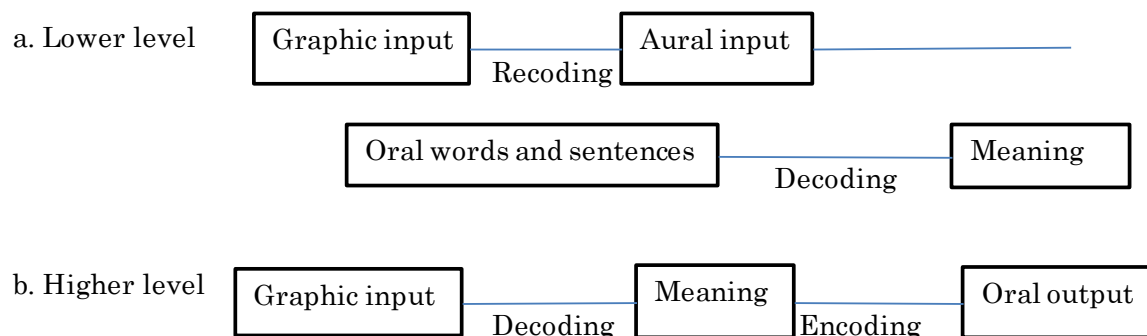
The first model is Goodman's (1968) model (Figure 3.5.). He presents three oral reading processes depending on learners' proficiency level. Figure 3.5. shows oral reading of a competent English level (proficiency level 3). In this level, the process of decoding directly from graphic input

becomes habitual. The graphic input is decoded and its meaning is comprehended. The meaning, then, is encoded phonologically and is produced as oral output.



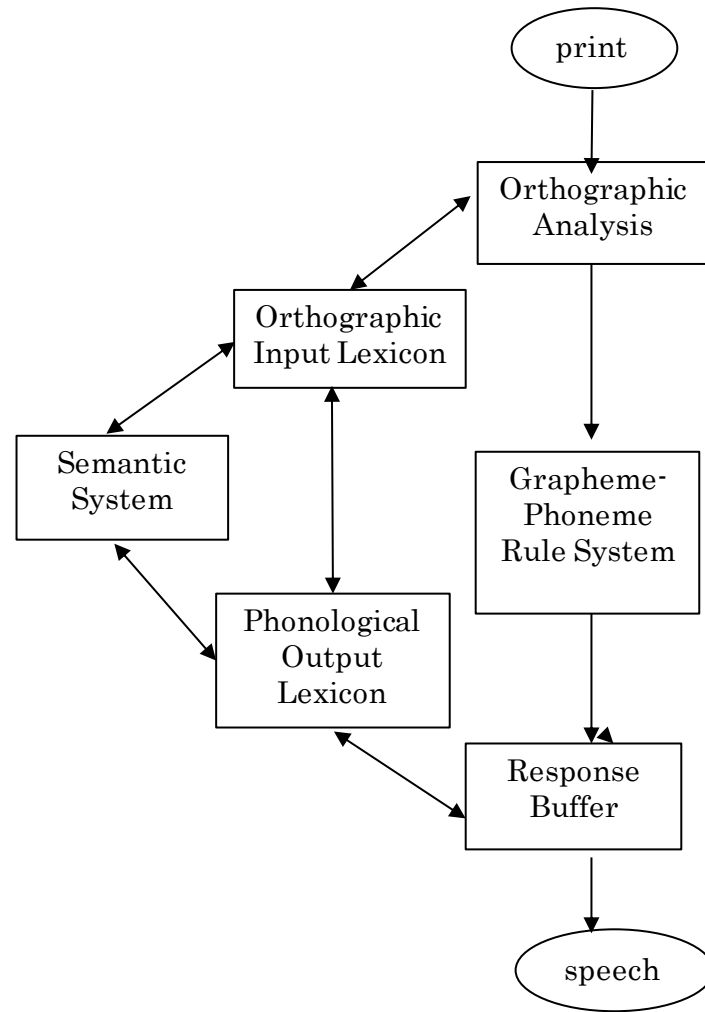
*Figure 3.5.* Goodman's oral reading process

Second, Ito (1976) presents two levels for oral reading process depending on learners' proficiency (Figure 3.6.). The first process is called the lower level oral reading process and this type of oral reading is conducted when the understanding of the meaning of words or sentences does not accompany oral reading. The second process is called the higher level oral reading process. This type of oral reading is conducted when the understanding of the meaning accompany oral reading. In the lower level oral reading process, graphic input is recoded in aural input and then instead of being perceived as a spoken language, aural input is interpreted as oral words and sentences which learners have already known or learned. Then learners guess the meaning of words and sentences. In this level, oral reading is suitable for pronunciation practice. The second process is an act of oral interpretation. This process almost complies with Goodman's (1968). Decoding occurs directly from graphic input and then the meaning is encoded as oral output. In this model of oral reading, the meaning is already encoded before oral output.



*Figure 3.6.* Ito's oral reading model

The third model is Coltheart et al's (2001) model (Figure 3.7.). Coltheart et al (2001) suggested a cascaded dual-route model (DRC) of reading aloud. DRC has two routes of process of converting print to speech; one is lexical route (semantic or non-semantic) and the other is non-lexical route. Lexical route is composed of three components: the semantic system, the orthographic input lexicon, and the phonological output lexicon. In lexical route, the meaning of a word is interpreted in the semantic system while the lexicons identify the words' orthographic and phonological form. This lexical route is incapable of producing correct phonological expressions of nonwords. Therefore, the nonwords may result in the phonetic expression close to the orthographic representation. On the other hand, the non-lexical route, which goes through the grapheme-phoneme rule system, interprets the orthographic representation, identifies the graphemes and translates these to phonemes. This route can successfully process nonwords. However it is incapable of producing rule-based pronunciation of irregular words.



*Figure 3.7.* Coltheart et al's model

The fourth model is Miyasako's(2008) model (Figure 3.8.), which shows the componential processing oral reading, focused on the reading processing in working memory. Visual information is processed in the lower level components which are composed of word recognition, parsing and proposition formation, mainly in the phonological loop. Decoded, parsed or proposition-formed information begins to be processed in the higher level which is responsible for the comprehension of text and situation. In the higher level, the propositions are comprehended as the

text and situation models consciously in the episodic buffer. And then, by way of phonological output processing, oral output is produced.

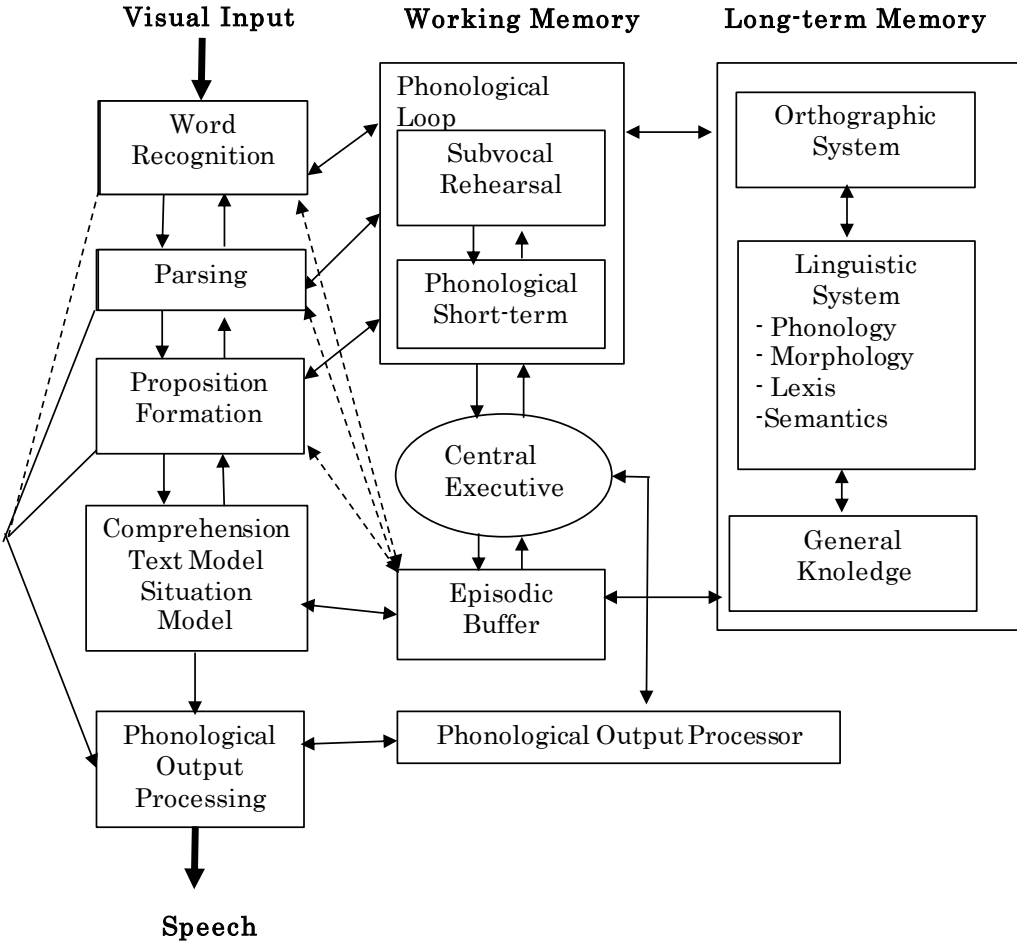


Figure 3.8. Miyasako's oral reading model

Finally, this study will pay special attention to Morikawa (2009)'s study, which explicates models of various types of oral reading (e.g., choral oral reading and autonomous oral reading), taking learners' proficiency levels into consideration. From these models are omitted the short-term memory and the long-term memory. The dotted arrows show the voluntary process. On the other hand, the solid arrows show the inevitable process. In "regular oral reading (regular OR)," as is shown in Figure 3.9., learners

recognize linguistic forms (words, phrases and sentences) within the visual input, or text through graphic decoding, and then read aloud those linguistic forms into the oral output through phonological encoding. Learners carry out this oral reading process, either comprehending the message included in the text through semantic and grammatical decoding (Proficiency Level 3) or without comprehending the message at all (Proficiency Level 2). In the latter case, learners simply transform the visual input into the oral output without understanding the meaning of sentences. It often happens indeed that learners successfully read aloud a whole text, but they do not understand what they have read. Even worse, there are cases when learners cannot transform a sentence into the oral output at all since the phonological encoding does not take place due to the lack of their phonological knowledge. In such cases, learners give up their attempt to read aloud the text (Proficiency Level 1).

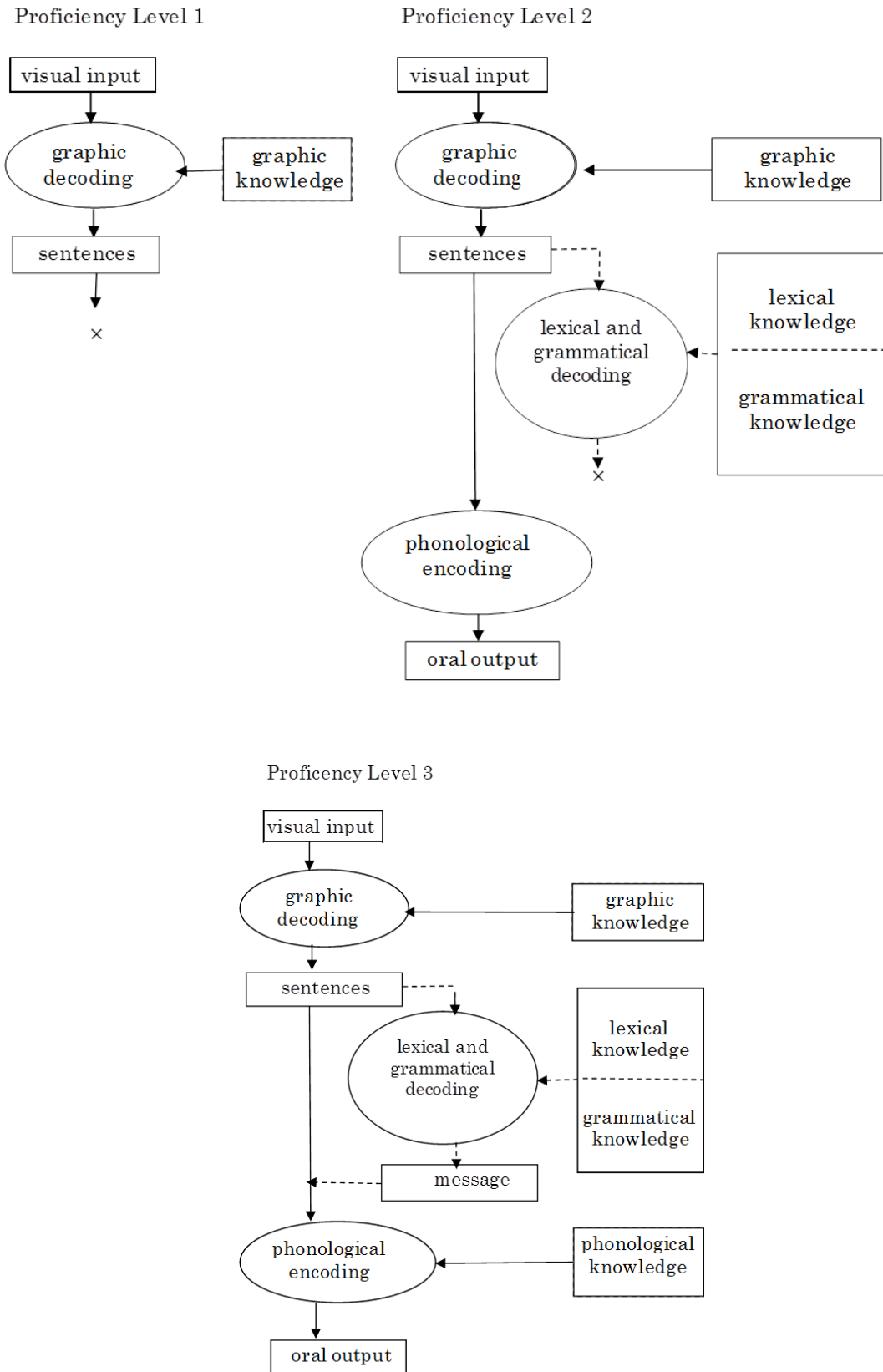


Figure 3.9. Morikawa's model of regular oral reading process

### 3.3 Process of Taxing Oral Reading

This study focuses on three types of oral readings activities<sup>(1)</sup>, taking Morikawa(2009)'s model into consideration; “read and look up” oral reading (R&L),” “personalized oral reading (Personalized OR),” and “personalized Q&A (Personalized Q&A).” The reason this study focus on these oral reading activities is that the process of these oral reading activities are partly similar to that of speaking (to be discussed more in detail later). These oral reading activities raise learners’ cognitive load, as an indicator of pressure on working memory (Yin and Chin, 2007), when they are conducted. Therefore, this study defines these types of oral reading as taxing oral reading.

#### 3.3.1 Read and Look Up (R&L)

R&L is the oral reading proposed by West (1960). Figure 3.10. shows the process of R&L. From this model is omitted the long-term memory. The squares within the model represent what is produced within the process of oral reading and the knowledge which is utilized by the speaker. The ellipses represent what is taking place within the process. The outer frame presents the process of what happens within the speaker’s mind and the square outside this outer frame represents the product. Therefore, only oral output is the actual production of the speaker.

In the process of R&L, learners first look at the visual input and identify the linguistic forms (sentences) included in the visual input, referring to their graphic knowledge. Typically, learners put those linguistic forms into their short-term memory before they look up and start to read aloud the text. Then learners transform the linguistic forms



contained in their short-term memory into the oral output through phonological encoding, referring to their phonological knowledge. Some

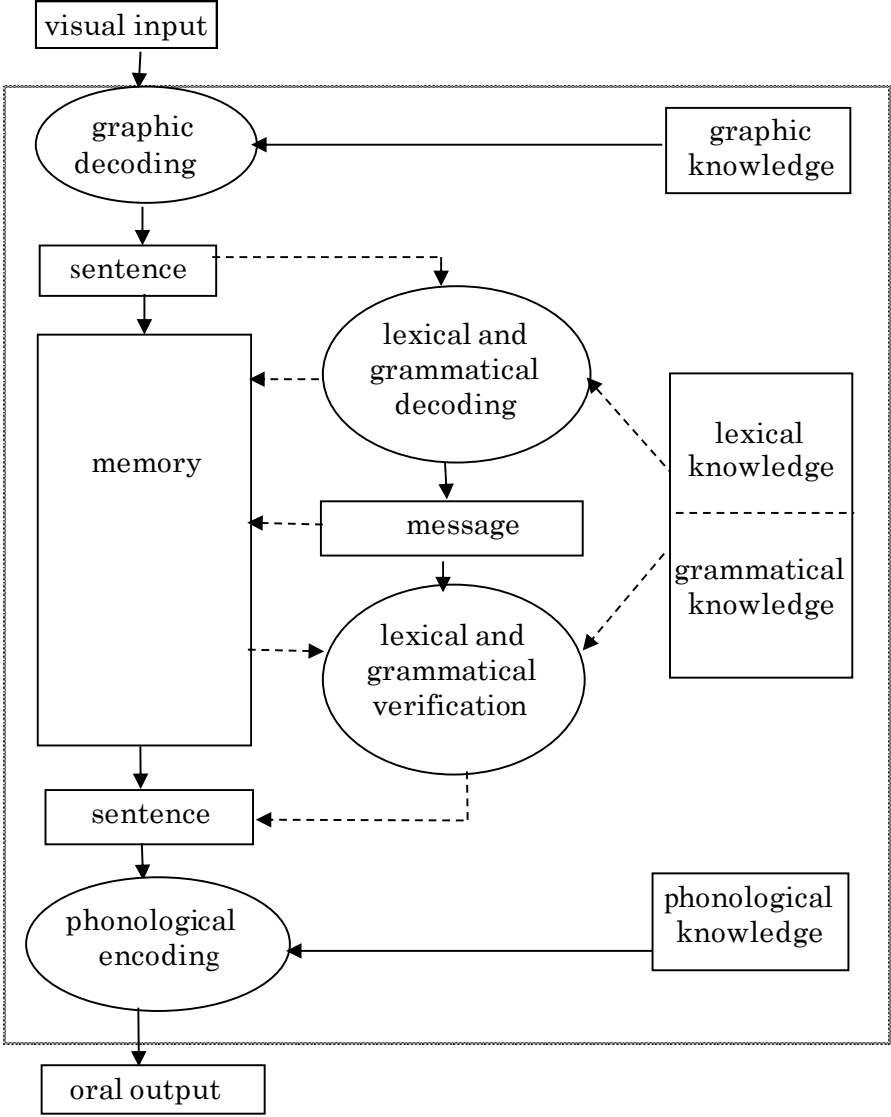


Figure 3.10. Read and look up process

learners may conduct R&L without understanding the message included in the text. However, others, in addition to identifying the linguistic forms contained in the visual input, try to understand the message included in the text through semantic and grammatical decoding, referring to their lexical and grammatical knowledge before they look up and start to read aloud. Then those learners verify the correspondence between the

linguistic forms and the message, mobilizing their lexical and grammatical knowledge. If the correspondence is verified in their short-term memory, they transform the sentence into the oral output through phonological encoding, referring to their phonological knowledge.

### 3.3.2 Personalized Oral Reading

In addition to R&L, this study focuses on another type of oral reading, Personalized OR, which can be considered to have much in common with speaking. This is much more speaking-oriented than R&L. In Personalized OR, learners read aloud a text about some famous person, pretending as if they were the famous person themselves. For example, learners read aloud a text about the life of Mother Teresa or Helen Keller, pretending as if they were Mother Teresa or Helen Keller. The following is a part of the textbook *Princess Diana* (Gilchrist, 1998, p.2).

a) In 1974 Diana went on to her mother's old school, where her sisters were also students there. By then, their mother wasn't living in London, but in Scotland. She was kind to Diana although they lived separately. She and her new husband, Peter, had a large farm on an island. Diana was looking forward to visiting it and had some lovely holidays there.

Learners are required to read aloud this passage, pretending as if they were Diana as follow:

b) In 1974 I went on to my mother's old school, where my sisters were also students there. By then, our mother wasn't living in London, but in Scotland. She was kind to me although we lived separately. She and her

new husband, Peter, had a large farm on an island. I was looking forward to visiting it and had some lovely holidays there.

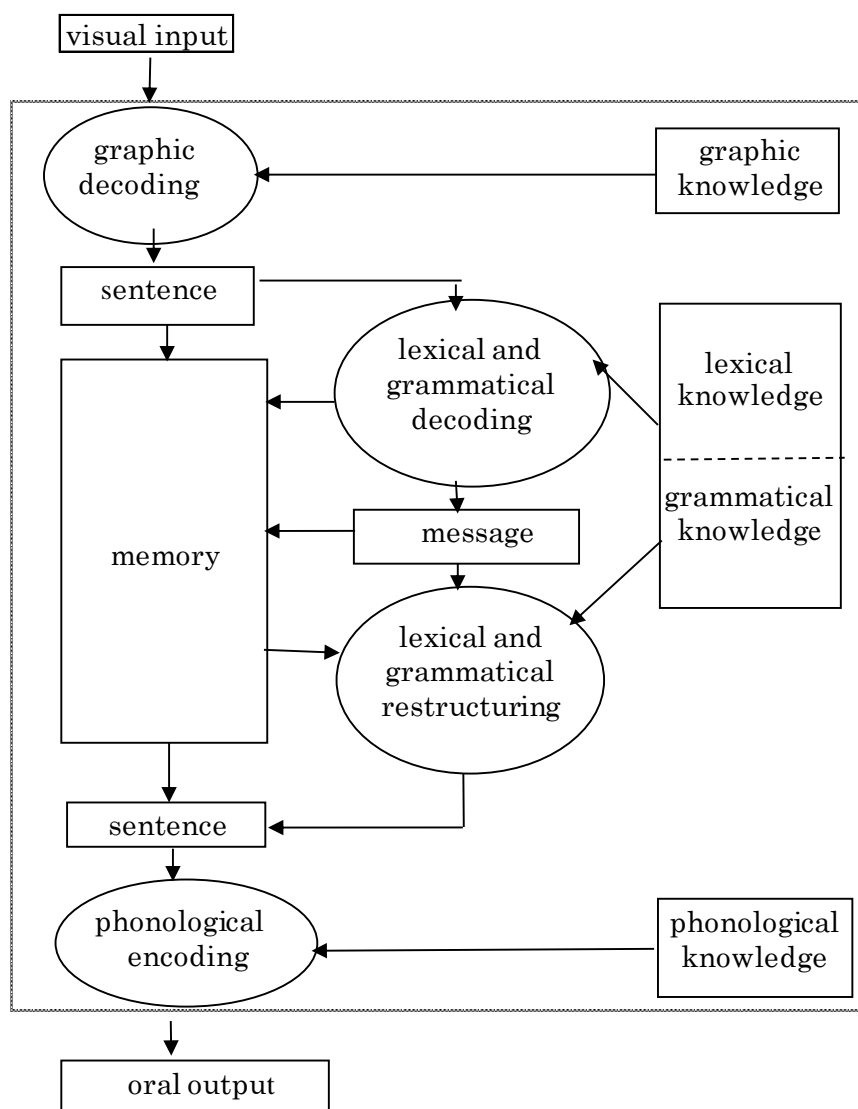


Figure 3.11. Personalized oral reading process

In order to carry out this Personalized OR successfully, learners have to change personal pronouns from third-person pronouns to first-person pronouns in real time while conducting Personalized OR. It cannot be said that they only have to change the pronouns automatically. For instance,

using the textbook Princess Diana above, learners have to think about carefully whether “she” or “her” indicates Diana or her mother. When “she” or “her” indicates Diana’s mother, they must not change the third pronoun into the first pronoun. In addition, when “they” includes Diana, they have to change “they” into “we.” In other words, learners have to read a few words ahead of the passage they are going to read aloud and then they have to make necessary modifications quickly and restructure sentences before they read the passage pretending as if they were Diana. What is the most important about this Personalized OR is that learners construct new sentences, in a way, on the basis of the message contained in the text. This is exactly what happens within the process of speaking, the only difference being that learners have to create their own message in speaking. This is the reason why Personalized OR can be considered to be more speaking-oriented than R&L. The process of Personalized OR is shown in Figure 3.11.

### **3.3.3 Personalized Q&A**

After learners can conduct Personalized OR successfully, this study proposes that learners should perform Personalized Q&A. A Q&A activity itself is one of traditional classroom activities and learners try to answer the questions from their instructor or peers and they use the words and expressions of the text and read them aloud. In Personalized Q&A, learners are required to answer the questions, pretending as if they were the famous person discussed in the text they are reading.

Personalized Q&A itself is not an oral reading but this study regards Personalized Q&A as one of output activities focused on oral reading because it presuppose Personalized OR, which is a modified version of

regular OR. Personalized Q&A is more similar to speaking activity than Personalized OR and R&L.

Using the textbook *Princess Diana* (Gilchrist, 1998) as an example again, there are several different types of questions.

First of all, Questions (A) below are called factual questions (Howatt & Dakin, 1974) and they are also referred to as display questions by Long and Sato (1985).

Questions (A)

- a) When did Diana go to her mother's old school?
- b) Where did Diana's mother live by then?
- c) What was Diana looking forward to doing at the time?

The answers to this type of questions are contained in the text and learners can answer the questions, using the words and expressions in the text. The following is an example of Q&A for this stage.

Q&A (A)

A: When did Diana go to her mother's old school?

B: In 1974.

A: Where did Diana's mother live by then?

B: She was in Scotland.

A: What was Diana looking forward to doing at the time?

B: She was looking forward to visiting her mother and her husband's large farm on an island.

This activity will raise learners' cognitive load more than Regular OR, because learners have to listen to the questions, find answers in the text and make modifications if necessary.

Factual questions in Questions (A) can be turned into personal questions in Questions (B). Learners are required to answer the questions, pretending as if they were Diana.

Questions (B)

- 1) When did you go to your mother's old school?
- 2) Where did your mother live by then?
- 3) What were you looking forward to doing?

In order to answer these questions, learners can use the expressions in the text and answer the questions as in Questions (A). However, they have to make necessary modifications (from the third pronoun to the first pronoun) and need to restructure sentences. They also have to answer questions in real time. In this type of Q&A activity, learners' cognitive load increases more than regular Q&A (A) involving factual questions. The following is an example of Personalized Q&A;

Q&A (B)

A: When did you go to your mother's old school?

B: In 1974.

A: Where did your mother live by then?

B: She was in Scotland.

A: What were you looking forward to doing?

B: I was looking forward to visiting my mother and her husband's large farm on island.

Learners' cognitive load is further raised by personal questions in Questions (C). These personalized questions are different from those in Questions (B) since they are not only personalized questions but also questions which require learners' improvisation.

#### Questions (C)

- 1) Why did you decide to go to your mother's old school?
- 2) How did you feel when you and your mother lived separately?
- 3) Why were you looking forward to visiting your mother and her husband's farm on an island?

In order to answer these questions, learners cannot always find answers in the text and they cannot always use the words and expressions included in the text. They have to prepare their own message and construct their original sentences. The following is an example Personalized Q&A:

#### Q&A (C)

A: Why did you decide to go to your mother's old school?

B: Because my sisters also went there.

A: How did you feel when you and your mother lived separately?

B: Of course it was very painful but she was kind to me whenever I visited her.

A: Why were you looking forward to visiting your mother and her husband's farm on an island?

B: Because the farm was very large and I could have lovely holidays there. In particular I could spend holidays with my mother.

This type of Q&A which includes personal questions raises learners' cognitive load much higher than when simple display questions are employed. The Personalized Q&A activity is similar to an interview activity. This activity is possible between an instructor and learners. When learners get used to this activity, it will be possible that learners themselves conduct this activity. Personalized Q&A not only raises learners' cognitive load but also reduces the personal distance between the text and learners. Furthermore, if Personalized Q&A is conducted between learners themselves, they have to make questions by themselves and they will learn how to make questions.

### **3.4 Common Elements between Oral Reading Process and Speaking Process**

#### **3.4.1 Regular Oral Reading Process and Speaking Process Compared**

According to Gabrielatos (2002, p.2), reading aloud 'only requires the speaker to deliver what is written on a page in such a way that the content is (at least) easily understood by the listener.' He also argues that spontaneous speech is more demanding, because speakers need to think of what they want to convey and at the same time, they also have to think of how to formulate it. If we follow Gabrielatos' (2002) argument, it can be said that the correlation between speaking and oral reading is rather weak.



In fact, if we look at the process of regular OR represented by Figure 3.12., we can easily see that there are not so many common elements between regular OR and speaking. In the speaking process<sup>(2)</sup>, the speaker first creates a message in his or her mind. The message is then encoded lexically and grammatically into a sentence. In this activity, the speaker refers to his or her lexical and grammatical knowledge. Then the speaker turns the sentence into phonetic sounds (i.e. oral output), referring to his or her phonological knowledge. On the other hand, in many cases of the process of regular OR, after lexical and grammatical decoding, the decoded sentence (or phrases) is just read aloud. Therefore, there are not so many common elements between Regular OR and speaking (shaded part in Figure 3.12.).

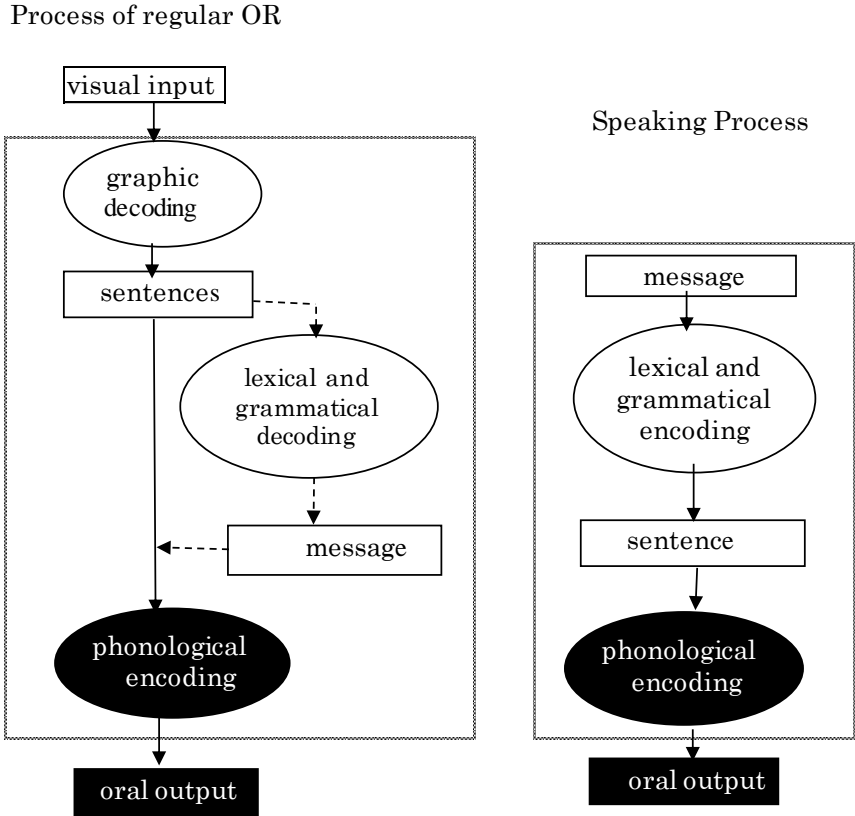


Figure 3.12. Common element between regular OR and speaking

### 3.4.2 Read and Look Up Process and Speaking Process Compared

When the process of R&L and the process of speaking are compared, we can see that this type of oral reading and speaking share some elements (shaded parts in Figure 3.13.) within their process.

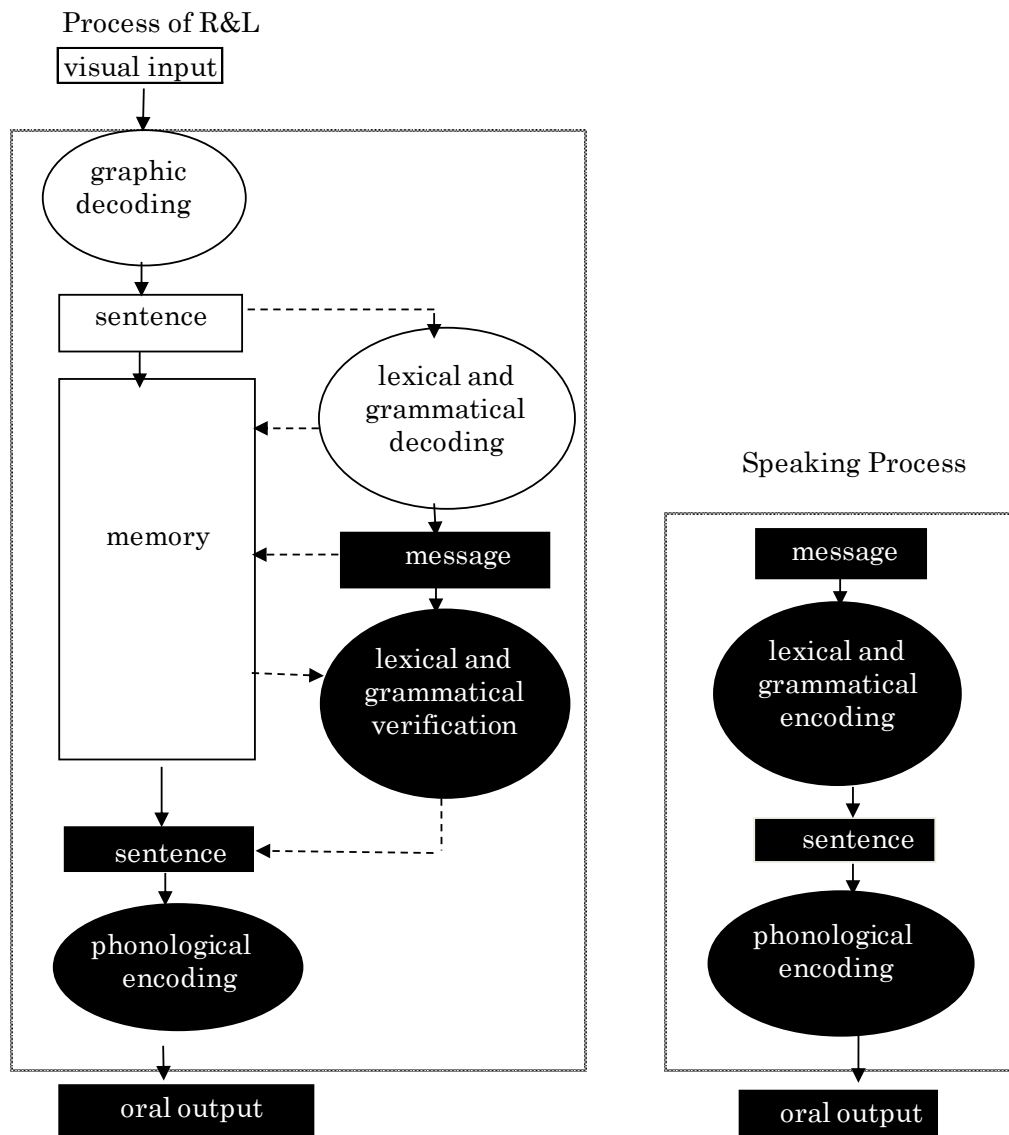


Figure 3.13. Common elements between R&L and speaking

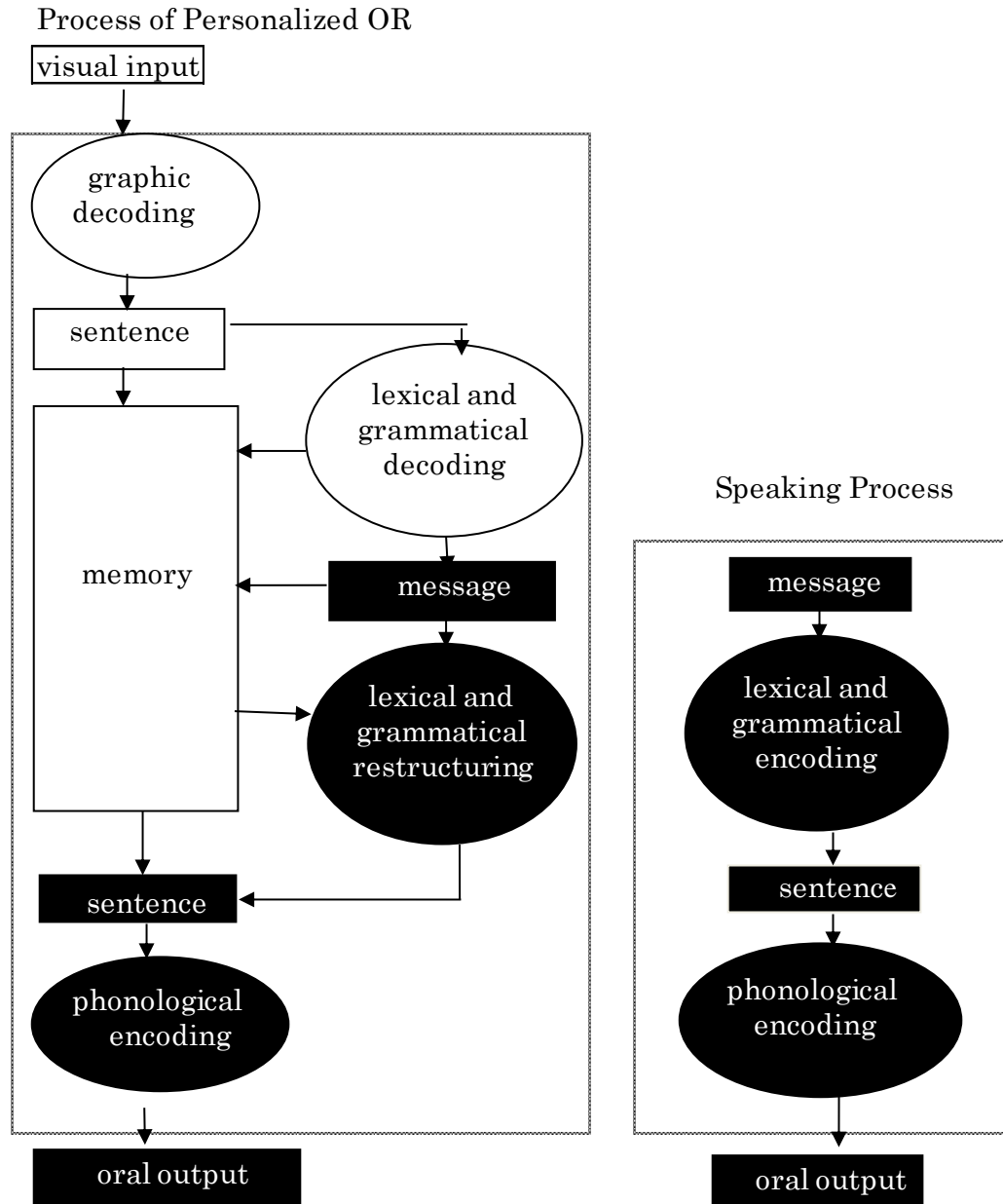
In the process of R&L, lexical and grammatical verification is involved while in the speaking process, lexical and grammatical encoding is involved. Lexical and grammatical verification is not the same as

semantic and grammatical encoding in the process of speaking, but the process of verification is close to that of encoding in that learners have to pay careful attention to semantic and syntactic features. When learners pay careful attention to semantic and syntactic features, it means that learners interact with thinking, perception, memory etc. This task can be a stressful condition for learners. However, this task, being performed under stressful conditions, can increase cognitive load.

### **3.4.3 Personalized Oral Reading Process and Speaking Process Compared**

When the process of Personalized OR and the process of speaking are compared, we can see that this type of oral reading and speaking also share some elements (shaded parts in Figure 3.14).

In the process of Personalized OR, learners go through the process of restructuring when they change personal pronouns from third-person pronouns to first-person pronouns and verb forms in real time after understanding the meaning of the message. The process of restructuring while conducting oral reading is also similar to that of encoding in the speaking process in that learners have to pay careful attention to semantic and syntactic features. This will also increase their cognitive load to a considerable degree since learners have to understand the passage through semantic and grammatical decoding before they read aloud the text and make necessary modification quickly.



*Figure 3.14.* Common elements between Personalized OR and speaking

### 3.5 Significance of Increasing Cognitive Load in Oral Reading

Cognitive load is defined as the total amount of mental activity placed on working memory (Cooper, 1998 ; Kalyiga, 2006). In this study, cognitive load is defined as learners' cognitive effort when they focus on

lexical and grammatical elements, in other words, semantic and syntactic forms when they speak in the target language.

Generally speaking, when learners speak in a foreign language, their cognitive load is raised. This is because learners create a message in their mind in their first language and encode the message into a sentence, referring to their lexical and grammatical knowledge of a foreign language. Then they turn the sentence into phonetic sounds, referring to their phonological knowledge of a foreign language. In addition, this process must be done in real time. Therefore, cognitive load in speaking process is quite high.

When the process of regular OR and the process of speaking are compared, there are not so many common elements as this study has already mentioned. Lexical and grammatical verification is involved in the process of R&L, while lexical and grammatical restructuring is involved in the process of Personalized OR. The process of verification and restructuring are not the same as encoding involved in the speaking process, but they are similar to encoding in that learners have to pay careful attention to semantic and syntactic features while conducting oral reading. Therefore, R&L and Personalized OR are defined as oral reading with high cognitive (i.e., taxing oral reading). If we want to make the oral reading process closer to the speaking process, we have to raise learners' cognitive load in oral reading to a similar degree as in speaking.

Taking these into consideration, it is suggested that if the instruction of taxing oral reading is continued, learners' speaking ability can be

improved. It is possible to conduct taxing oral reading even in the class whose size is 40-student. This study will suggest that oral output activities focused on oral reading including taxing oral reading are suitable to the EFL environment in Japan.

Theoretical study has been dealt with until this chapter. The next chapter deals with experiments. Experiment 1 deals with verification of high level cognitive load in taxing oral reading. Experiments 2 and 3 deal with investigation on the relationship between speaking ability and oral reading ability. Experiments 4 and 5 deal with investigation on the effectiveness of oral reading activities to improve speaking ability.

## Notes

(1) In this study, oral reading activities indicate not only an activity in which words written in the text are read aloud but also oral practice without looking at a textbook such as R&L and Personalized Q&A in a broad sense.

(2) Speaking model on the right in Figure 3.12. is a simplified model proposed by Levelt (1989). From this model are omitted the short-term memory and the long-term memory. The squares within the model represent what is produced within the process of speech production (message, sentence, and oral output) and the knowledge which is utilized by speakers (lexical knowledge, grammatical knowledge, and phonological knowledge). The ellipses (lexical and grammatical encoding and phonological encoding) represent what is taking place within the process. The outer frame presents the process of what happens within the speaker's mind and the square outside this outer frame represents the product.

## **Chapter IV**

### **Experiment 1**

#### **Verifying High Level of Cognitive Load in Taxing Oral Reading**

In Chapter III, R&L and Personalized OR are defined as taxing oral reading from a theoretical point of view. However, this study has not verified yet that a higher level of cognitive load is really imposed on learners when learners conduct taxing oral reading. This chapter reports two experiments which were conducted in order to verify that taxing oral reading imposes a higher level of cognitive load on learners than regular OR.

#### **4.1 Experiment 1-a: Verification Through Measuring the Time for Oral Reading**

##### **4.1.1 Purpose**

The purpose of this chapter is to investigate whether taxing oral reading such as R&L and Personalized OR involves a higher level of cognitive load than regular OR. If R&L and Personalized OR impose a higher level of cognitive load on learners than Regular OR, learners will take more time to read a text aloud and it is more difficult for them to conduct oral reading.

##### **4.1.2 Participants**

The participants were twenty second-year senior high school students in Nara, Japan. They were divided into two groups; Control Group and Experimental Group. Each group consists of 10 students. Control Group conducted regular OR while Experimental Group conducted three kinds of different taxing oral reading.

#### **4.1.3 Method**

##### *Preliminary Research*

In order to make sure that Control Group and Experimental Group are the same in terms of the oral reading ability, both groups were required to read aloud the same text (Appendix 1). They read a text without any preparation. Each participant was videotaped while she read a text aloud and the total time of oral reading was measured. As a result, the mean time of oral reading by Control Group was 69.6 seconds ( $SD = 19.69$ ), and that by Experimental Group was 70.6 seconds ( $SD = 11.52$ ). In order to verify whether there was a significant difference between Control Group and Experimental Group, an unpaired  $t$ -test was conducted. As a result, there was no statistically significant difference between them ( $t = 0.14$ ,  $df = 18$ ,  $p > .05$ ,  $r = .03$ ). This shows that oral reading level between two groups was the same.

##### *Oral Reading Test and Framework of the Experiment*

This study used four types of oral reading texts (Appendix 2) for four different oral reading activities. The reason this study used four different texts was that practice effect would be expected if the participants read aloud the same text. All the texts were taken from English textbooks for



first-year senior high school students (Communication English I) and all of them were about 100 words in length.

Table 4.1. shows the framework of the experiment. In Oral Reading Activity A, Control Group conducted regular OR and Experimental Group conducted R&L. In Oral Reading Activity B, Control Group conducted regular OR while Experimental Group conducted Personalized OR. In Oral Reading Activity C, Control Group conducted regular OR, and Experimental Group conducted R&L combined with Personalized OR. Finally, in oral reading activity D, Control Group conducted R&L, and Experimental Group conducted Personalized OR combined with R&L.

Table 4.1.  
*Experimental Treatment for the Two Groups of the Participants*

Group	Oral Reading Activity			
	A	B	C	D
Control	Regular OR	Regular OR	Regular OR	R&L
Experimental	R&L	Personalized OR	R&L combined with Personalized OR	R&L combined with Personalized OR

### *Data Collection and Rating Procedure*

Each participant was requested to conduct each oral reading activity. The participants read a text aloud immediately without any preparation and read four different texts aloud. The participants' oral reading activities were videotaped in order for the evaluator to assess the test and analyze the data. The present researcher assessed the participants' performance. Four categories were measured; (1) how long it took for the participants to read the text (the total time of oral reading), (2) how many times the participants paused during oral reading (the number of pausing), (3) how many times the participants repeated during oral reading (the number of repeating), and (4) how long the participants paused (the total

time of the pausing). In general, the researcher should not assess the performance. However, it was possible that participants' performance was assessed objectively in this experiment. Therefore, the study judged that there would be no problem if the researcher assessed participants' performance.

#### 4.1.4 Results and Discussion

Table 4.2. provides the descriptive statistics concerning the result of the assessments of the oral reading activities for Control Group and Experimental Group . It provides the means and *SDs* for the total time of oral reading, the number of pausing, the number of repeating and the total time of pausing.

According to Table 4.2., the three findings can be pointed out: 1) Experimental Group took longer time to conduct their oral reading in all the activities than Control Group, 2) both the number of repeating and the number of pausing of Experimental Group were larger than those of Control Group, and 3) the pausing time of Experimental Group was longer than that of Control Group.

From these results, it can be concluded that R&L, Personalized OR, and R&L combined with Personalized OR impose much more cognitive load on learners than regular OR. In order to investigate whether there was a statistically significant difference, this study employed the t-test. Equal variance was not found in the total oral reading time in Oral Reading Activity A, the number of repeating in Oral Reading Activity B, oral reading time, pausing time, and the number of repeating in Oral Reading Activity C. Therefore, a Welch t-test, which is used when the unequal

variances were found between two groups, was employed for these five items. Table 4.3. was the result of the t-test.

Table 4.2.

*Results of Oral Reading Activity A*

Variable	Control regular OR		Experimental R&L	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Total time of oral reading (s.)	65.1	17.66	117.40	35.52
Number of pausing	2.60	1.26	4.00	2.06
Total time of pausing (s.)	3.00	1.83	5.40	3.77
Number of repeating	1.90	0.88	3.10	1.49

*Results of Oral Reading Activity B*

Variable	Control regular OR		Experimental Personalized OR	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Total time of oral reading (s.)	59.10	14.08	71.60	17.58
Number of pausing	2.10	0.88	3.10	1.21
Total time of pausing (s.)	3.20	1.99	4.90	2.68
Number of repeating	1.40	0.70	3.40	1.58

*Results of Oral Reading Activity C*

Variable	Control regular OR		Experimental R&L combined with Personalized OR	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Total time of oral reading (s.)	62.90	15.20	124.50	39.26
Number of pausing	1.60	0.84	3.00	1.66
Total time of pausing (s.)	1.80	1.03	5.30	4.30
Number of repeating	1.70	1.25	4.00	2.74

*Results of Oral Reading Activity D*

Variable	Control R&L		Experimental R&L combined with Personalized OR	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Total time of oral reading (s.)	97.80	39.85	116.40	39.88
Number of pausing	2.70	1.70	3.40	1.62
Total time of pausing (s.)	3.30	2.45	6.00	3.93
Number of repeating	1.60	1.58	4.40	3.35

As for Oral Reading Activity A (regular OR vs. R&L), there was a statistically significant difference in the total oral reading time ( $t = 3.59$ ,  $df = 18$ ,  $p < .01$ ,  $r = .65$ ). As for Oral Reading Activity B, (regular OR vs. Personalized OR), there were statistically significant differences in the total oral reading time ( $t = 2.11$ ,  $df = 18$ ,  $p < .01$ ,  $r = .45$ ) and the number of repeating time ( $t = 3.97$ ,  $df = 18$ ,  $p < .01$ ,  $r = .68$ ). As for Oral Reading

Activity C (regular OR vs. R&L combined with Personalized OR), statistically significant differences were found in all the items (oral reading time;  $t = 4.44$ ,  $df = 18$ ,  $p < .01$ ,  $r = .72$ , the number of pausing;  $t = 2.69$ ,  $df = 18$ ,  $p < .05$ ,  $r = .54$ , pausing time;  $t = 2.81$ ,  $df = 18$ ,  $p < .05$ ,  $r = .55$ , the number of repeating;  $t = 2.30$ ,  $df = 18$ ,  $p < .01$ ,  $r = .48$ ). As for Oral Reading Activity D (R&L vs. R&L combined with Personalized OR), significant differences were found in the pausing time ( $t = 2.13$ ,  $df = 18$ ,  $p < .05$ ,  $r = .45$ ) and the number of repeating ( $t = 2.59$ ,  $df = 18$ ,  $p < .05$ ,  $r = .52$ ).

Table 4.3.  
*Results of the T-test*

Oral Reading Activity	A			B		
	<i>df</i>	<i>t</i>	<i>r</i>	<i>df</i>	<i>t</i>	<i>r</i>
Total time of oral reading	18	3.59 **	.65	18	2.11 *	.45
Number of pausing	18	1.83	.45	18	1.94	.42
Total time of pausing	18	1.96	.42	18	1.70	.37
Number of repeating	18	2.09	.44	18	3.97 **	.68

Oral Reading Activity	C			D		
	<i>df</i>	<i>t</i>	<i>r</i>	<i>df</i>	<i>t</i>	<i>r</i>
Total time of oral reading	18	4.44 **	.72	18	0.96	.22
Number of pausing	18	2.69 *	.54	18	1.02	.23
Total time of pausing	18	2.81 *	.55	18	2.13 *	.45
Number of repeating	18	2.30 *	.48	18	2.59 *	.52

\* $p < .05$ , \*\* $p < .01$

This experiment examined whether or not high cognitive load could be involved in taxing oral reading such as R&L and Personalized OR. The result shows that taxing oral reading required the participants to take more time to read aloud the text, to reread the text more often and to pause more frequently during oral reading than regular OR. Statistically

significant differences were also found between the two groups.

From these results, it can be concluded that taxing oral reading such as R&L and Personalized OR is accompanied with high cognitive load. It is assumed that this is because the process of verification is involved in R&L and that the process of restructuring is involved in Personalized OR.

## **4.2 Experiment 1-b: Verification Through Measuring the Degree of Retention of Lexical Items**

From the result of Experiment 1-a, it is plausible to say that higher cognitive load seems to be involved in taxing oral reading. This study, then, tries to verify that cognitive load is imposed on the learner through the difference of the degree of word retention.

### **4.2.1 Purpose**

The purpose of Experiment 1-b is to investigate whether taxing oral reading has better effects on the retention of lexical items than regular OR.

### **4.2.2 Participants**

Fifty-one first-year senior high school students participated in this study. They were divided into two groups, Control Group and Experimental Group. Control Group conducted regular OR while Experimental Group conducted Personalized OR.

### **4.2.3 Method**

#### *Preliminary Research*

In order to make sure that Control Group and Experimental Group

were the same level in terms of the ability to retain lexical items, a preliminary research was conducted. A text on ‘Bill Gates’ (Appendix 3) was used which consists of 137 English words. The participants had never read the text before.

First, after the text was distributed, the participants read the text silently for one minute and then were requested to read aloud the text with regular OR. After the text was collected, the list of 20 words (Appendix 4) was given to the participants, who were told to mark the words which they thought were used in the text. Among these twenty words, nine words were actually used in the text. Therefore, the total score was nine. If the participants chose the word which was not used in the text, one point per one mistake was reduced from the total score. Table 4.4 shows the descriptive result of the preliminary research.

Table 4.4.  
*Results of Preliminary Research*

	<i>n</i>	<i>M</i>	<i>SD</i>
Control	25	7.52	1.45
Experiment	26	8.12	0.81

In order to investigate whether there was a statistically significant difference, a *t*-test was conducted. There was no equal variance between the two groups. Therefore, a Welch *t*-test was used. There was no statistically significant difference between the two groups ( $t = 1.80$ ,  $df = 38$ ,  $p > .05$ ,  $r = .28$ ), which means that both groups were almost at the same level of degree of word retention. Therefore, the main experiment was conducted.

### *Oral Reading Test and Framework of the Experiment*

As an oral reading test, another text written on Audrey Hepburn (Appendix 5), which consists of 164 words, was used. The procedure was almost the same as in the preliminary research. First, after the text was distributed, the participants read the text silently for one minute. Then Control Group was requested to read aloud the text with regular OR, and Experimental Group was requested to read aloud the text with Personalized OR. After oral reading was finished, the text was collected and the list of words was given to the participants. They were told to mark the words which they thought were used in the text.

### *Data Collection and Rating Procedure*

The word list (Appendix 6) consisted of 30 words and 12 words were actually used in the text. The present researcher scored each participant's word marking. The total score was 12 points, and if the participants marked the word which was not used in the text, one point per one mistake was reduced from the total score.

#### **4.2.4 Results and Discussion**

The mean score of Control Group was 6.52 ( $SD = 5.40$ ) and that of Experimental Group was 9.00 ( $SD = 2.40$ ) (Table 4.5.). In order to investigate whether there was a statistically significant difference between the two groups, a  $t$ -test was conducted. Since there was no equal variance between the two groups, a Welch  $t$ -test was employed. As a result, there was a statistically significant difference between the two groups ( $t = 2.10$ ,  $df = 33$ ,  $p < .05$ ,  $r = .34$ ).

Table 4.5.  
*Results of Main Research*

	<i>n</i>	<i>M</i>	<i>SD</i>
Control	25	6.52	5.40
Experiment	26	9.00	2.40

From these results, it is likely to be concluded that Personalized OR is more effective in the retention of lexical items than regular OR. This is because, when Personalized OR is conducted, the process of restructuring is involved and this raises learners' cognitive load. As a result, higher retention of lexical items was significantly produced. Of course, in order to make this result generalized, further experiment is needed. Given the results of the Experiment 1-a and 1-b, it is quite plausible that high level of cognitive load exists in taxing oral reading.

There are various forms of oral reading available in teaching English. If taxing oral reading is harnessed, we can make the process of oral reading closer to the process of speaking. Therefore, if we work out well, oral reading could become a proper activity to improve students' speaking ability.



## **Chapter V**

### **Experiment 2**

#### **Investigating the Relationship between Speaking Ability and Oral Reading Ability**

Based upon the foregoing theoretical consideration about oral reading and speaking and upon the results of the experiment 1, the following two working hypotheses were formed:

- (1) Oral reading which embeds some element of semantic and grammatical verification, as in R&L, will produce a higher correlation with speaking than simply reading aloud texts, as in regular OR.
- (2) Combining R&L with Personalized OR will bring about higher correlation with speaking than regular OR and R&L respectively.

This chapter reported an experiment which was conducted in order to verify two working hypothesis above.

#### **5.1 Purpose**

The purpose of the experiment is to investigate which of the three different activities of oral reading, regular OR, R&L, and R&L combined with Personalized OR, will correlate the most with speaking.

#### **5.2 Participants**

The participants were eighteen third-year junior high school students and eleven first-year senior high school students where the

present researcher works. The eighteen third-year junior high school students are enrolled in the special course where they receive English lessons that are on the level of first-year senior high school English. The participants differ in age (ranging from 15 to 17), but the difference in English abilities among the participants as a whole is almost the same as the difference in English abilities that can be witnessed in normal classes. Therefore, the present study regards these 29 students as one group, although they are enrolled in two different classes in different grades.

### **5.3 Method**

Since this study used rather unique types of oral reading for the experiment, this study decided to give some guidance to all the participants in two separate classes before the experiment was conducted. In this guidance for the experiment, the participants were introduced into R&L and Personalized OR through exemplar texts for practice. This guidance was conducted as a preparatory step so that the readiness for the tests of oral reading and the speaking test would be formed. Then, in order to capture the correlations between oral reading ability and speaking ability, special tests of oral reading and speaking were developed by the present researcher. Both the test of oral reading and the test of speaking were conducted in the language laboratory.

The test of oral reading was conducted in the next lesson after the guidance of oral reading. The test of oral reading consists of three parts; regular OR (Oral Reading 1), R&L (Oral Reading 2) and R&L combined with Personalized OR (Oral Reading 3). Each test was conducted individually in a face-to-face form. First, the participants were requested to read the test passage silently for 20 seconds and then read aloud the

passage in a way prescribed for each type of oral reading. Two different kinds of the test passage were used for the test of oral reading.

Passage A was used for Oral Reading 1 and Oral Reading 2. Passage B was used for Oral Reading 3. Both test passages were taken from an English textbook (English I) for first-year senior high school students. They are of similar length; Passage A consists of 6 sentences with 67 words while Passage B consists of 6 sentences with 68 words<sup>(1)</sup>. The reason the test passage was changed for Oral Reading 3 is because if the same test passage had been used three times, some effects of learning which were accompanied with task repetition would have easily been predicted and oral reading ability would not have been precisely evaluated.

#### Passage A

Ryoko began judo when she was seven years old. When she was 10 years old, she joined a tournament in Hakata. She beat five boys and won the first gold medal of her life. The medal was very heavy for her. She began to dream of winning a gold medal at the Olympic Games. In 2000, she won her first Olympic gold medal at the Sydney Games.

#### Passage B

Galileo Galilei was one of the first modern scientists. He was born in Italy in 1564. He was interested in how the earth and other planets move around the sun. He found out several important facts about our world. His life of a scientist was not always easy in the 1500s. He got into trouble because his scientific ideas were not accepted by the church at that time.

The performance of the participants was recorded by a video recorder,

and then each performance was reviewed by the present researcher, who then rated each performance on a numerical scale. Three criteria were used; (1) accuracy of word pronunciation, (2) chunking, and (3) fluency. These criteria's levels were shown in Appendix 7. For each criterion, five levels of performance (1 - 5) were prepared. Therefore, the total score for Activity 1 was 15 points (5 points for 3 criteria).

The test of speaking was carried out one week after the performance of oral reading was conducted. In the test, the participants were first requested to introduce themselves in English to an ALT who acted as an assessor of the participants' speaking performance. This part was not evaluated for the test. It was included in the test in order to sensitize the participants for the test of speaking.

The test itself consists of two parts. In the first part, an ALT asked the participants two questions in English which asked for some opinions from the participants. The following are the questions that were asked of the participants:

- 1) After you graduate from school, what do you want to study and want to do in the future?*
- 2) Suppose you win the lottery and get 100 million yen, what would you like to do?*

In the second part, the participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking (Appendix 8). This test is similar to the tests of speaking which are used in the second stage of the Pre-second Grade Test conducted by the Society for Testing English Proficiency (STEP). The test of speaking was conducted

individually. The performance of the participants was evaluated against four criteria; content, fluency, attitude, and grammatical accuracy. Five levels of performance (1 - 5) were assigned to each of the four criteria as in Appendix 9. The total score is twenty points (five points for four criteria).

#### **5.4 Results and Discussion**

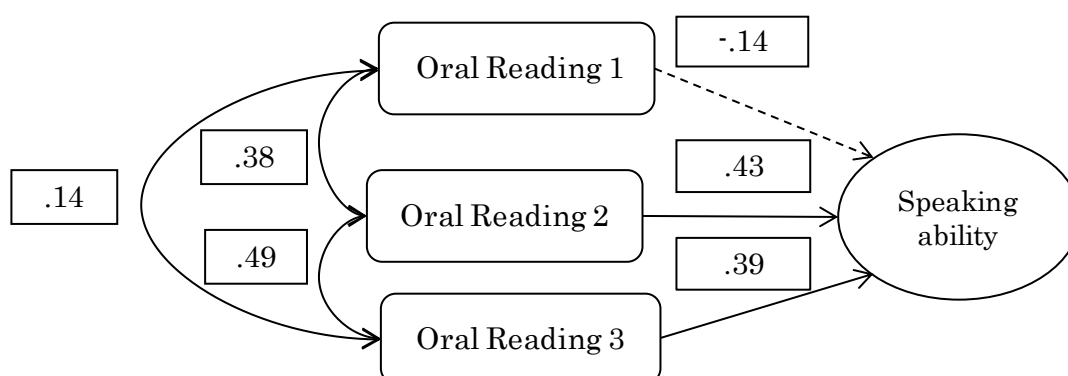
Table 5.1. below shows the results of the performance of oral reading. Oral Reading 1 required the participants to read aloud the test passage in a regular, orthodox way. Oral Reading 2 required the participants to read aloud the same passage used for Oral Reading 1, but in the form of R&L. Oral Reading 3 required the participants to combine R&L combined with Personalized OR, using a different test passage. The participants found Oral Reading 1 (regular OR) easiest to carry out. This is for what this study had expected from the theoretical analysis of the process of oral reading above. What is surprising for us is that the participants found Oral Reading 2 and oral Reading 3 almost equally easy (or difficult) in spite of the fact that Passage A used for Oral Reading 2 was relatively easier to read than Passage B used for Oral Reading 3. This study had expected that the participants would find Oral Reading 3 more difficult to carry out, since it involves more semantic and grammatical verification. This study assumes that this is probably because the participants had got used to the task of oral reading by the time they started Oral Reading 3. Of course, it needs further investigation.

Table 5.1.

*Results of the Oral Tests and the Speaking Tests (n=29)*

Oral Reading	Total Score	<i>M</i>	<i>SD</i>
Oral Reading 1	15	14.62	0.68
Oral Reading 2	15	12.35	1.23
Oral Reading 3	15	11.41	1.35
-----			
Speaking (1)	20	12.86	2.90
Speaking (2)	20	13.45	2.72

In order to verify the working hypotheses of the experiment, a multiple regression analysis was conducted against the results of the tests of oral reading and the results of the test of speaking. SPSS statistical software AMOS was used for this analysis in order to find out which of the three types of oral reading (regular OR, R&L, R&L combined with Personalized OR) would make the most significant contribution to the skill of speaking. Figure 5.1.<sup>(2)</sup> shows in a simplified form the results of the multiple regression analysis by AMOS.



*Figure 5.1.* Results of the multiple regression analysis by AMOS

The figures in the three small squares on the left-hand side show the correlation coefficients between the three types of oral reading. The correlation coefficient between Oral Reading 1 and Oral Reading 2 is 0.38,

that between Oral Reading 2 and Oral Reading 3 is 0.49, and that between Oral Reading 1 and Oral Reading 3 is 0.14. More importantly for our purposes, the figures in the three small squares on the right-hand side indicate the standardized regression coefficients, which can tell us which type of oral reading activity is most significantly correlated with speaking, or more flatly, which type of oral reading activity can make the most significant contribution to speaking. The standardized regression coefficient of Oral Reading 1 to Speaking was  $\beta = -0.14$ , that of Oral Reading 2 to Speaking was  $\beta = 0.43$ , and that of Oral Reading 3 to Speaking was  $\beta = 0.39$ . This means that R&L and R&L combined with Personalized OR can contribute more significantly to speaking than regular OR.

The experiment tried to verify two working hypotheses. The first working hypothesis predicts that embedding some element of semantic and grammatical verification in the process of oral reading, as in R&L, will produce higher correlation with speaking than simply reading aloud texts, as in regular oral reading. This prediction was well supported because the standardized regression coefficient of R&L to speaking is higher than that of regular oral reading to speaking, and the observed correlation is statistically significant ( $p < .05$ ). Although the verification in the process of R&L was voluntary for the participants, they were likely to conduct the verification and the verification had an effect on making their cognitive load high. As a result their cognitive load was as high as this study had expected, which enhanced correlation with speaking.

The second prediction that combining R&L with Personalized OR will bring about higher correlation with speaking than regular OR and R&L was supported in the case of regular OR, because the standardized

regression coefficient of R&L combined with Personalized OR was much higher than that of regular OR and the observed correlation was also statistically significant. There are two reasons for this result. One reason is that verification becomes compulsory in R&L combined with Personalized OR. This is because learners have to verify the correspondence between the linguistic forms and the message before they read aloud words or a sentence. The other reason is that because verification is compulsory in R&L combined with Personalized OR, learners' cognitive load is raised to a similar degree as in speaking. When R&L and R&L combined with Personalized OR are compared, both observed correlations are statistically significant, which means both oral readings are correlated with speaking ability. This study expected that R&L combined with Personalized OR would bring about higher correlation with speaking than R&L. However, there was no statistically significant difference and both oral readings were significantly correlated with speaking ability. Of course further investigation and experimentation will be needed.

### Notes

(1) The readability of the two passages was calculated by the software attached to Microsoft Word. It turned out that the Flesh Reading Ease for Passage A was 73.0 while that for Passage B was 65.9, which means that Passage A is easier to read than Passage B.

(2) Since the standardized regression coefficients of Oral Reading 1 to Speaking were not statistically significant (Oral Reading 1 to Speaking was  $\beta = -0.04$ ), this study used the dotted arrows, not solid arrow.



## Chapter VI

### Experiment 3

#### Investigating Further the relationship between Speaking Ability and Oral Reading Ability

In the foregoing experiment in Chapter V, the number of the participants was only 29, and their ages ranged from fifteen to seventeen. In addition, eighteen participants out of 29 were 3rd-year junior high school students and the rest were senior high school students. In order to generalize the results of the foregoing experiment, a further experiment with a larger and more cohesive group of participants is reported in this chapter.

#### 6.1 Purpose

In the previous experiment in Chapter V, the result showed both R&L and R&L combined with Personalized OR were significantly correlated with speaking ability. This result proved our hypothesis that taxing oral reading activities which embed some element of semantic and grammatical verification and restructuring in the process of oral reading will produce a higher correlation with speaking than simply reading aloud texts. The purpose of this chapter is to conduct a further experiment with a larger and more cohesive group of participants and to investigate if the result of the experiment will be the same with that of the previous experiment.

## **6.2 Participants**

The participants are 52 first-year senior high school students at a school where the present researcher works. They are all girls and are enrolled in the same course where they have received the same English lessons since they were junior high school students.

## **6.3 Method**

The method of the experiments is almost the same way as that of the previous experiment. Before the experiment was conducted, some guidance for the experiment was given to all the participants. In this guidance, the participants were introduced into R&L and Personalized OR through exemplar texts for practice. Then, in order to capture the correlations between the oral reading ability and speaking ability, special tests of oral reading and speaking were developed by the present researcher.

The test of oral reading was conducted after the guidance of oral reading. The test of oral reading consists of three parts; regular OR (Oral Reading Activity1), R&L (Oral Reading Activity 2) and R&L combined with Personalized OR (Oral Reading Activity3). Each test was conducted individually in a face-to-face form with the present researcher in the language laboratory.

Two passages (Passage A and Passage B) were prepared for the oral reading activities. The reason that two passages were used is because if the same test passage had been used three times, some effects of learning accompanied with task repetition would have easily been predicted and as a result oral reading ability would not be precisely evaluated. Both passages consist of almost the same number of the words. Passage A

consists of five sentences with 62 words while Passage B consists of five sentences with 63 words. The readability of both passages is almost the same<sup>(1)</sup>.

#### Passage A

In Diana's young life, everything was always changing. She was very sad when her grandmother died in 1972. Her grandmother was very kind to her when her parents separated. Things changed even more when her grandfather died too. Diana and her brother, Charles, had to move into the old family house but they didn't like this house because it was too old.

#### Passage B

In 1974 Diana went on to her mother's old school, where her sisters were also students there. By then, their mother wasn't living in London, but in Scotland. She was kind to Diana although they lived separately. She and her new husband, Peter, had a large farm on an island. Diana was looking forward to visiting it and had lovely holidays there.

The participants were randomly divided into two groups and different passages were used in different groups for each oral reading activity (see Table 6.1.) in order to avoid the possibility that the participants' oral reading performance would be affected by the passage.

Each participant conducted three kinds of oral reading activities (Oral Reading Activities 1, 2 and 3) and the performance of oral reading activities was assessed by the present researcher. One week after oral reading performance was measured, the speaking test was conducted.

Table 6.1.

*Experimental Treatment for the Two Groups of the Participants*

Participants	Oral Reading Activity 1	Oral Reading Activity 2	Oral Reading Activity 3	Speaking Test
Group 1	Passage A	Passage A	Passage B	Tests A · B
Group 2	Passage B	Passage B	Passage A	
Assessor	Assessor A			Assessor B

As for Oral Reading Activity 1 and Oral Reading Activity 3, the participants read a passage silently for 20 seconds and then read it aloud. As for Oral Reading Activity 2, the participants were not allowed to read a passage silently because Oral Reading Activity 2 requested the participants to read the same passage used for Oral Reading Activity 1. The performance of the participants was recorded by a video camera. Along with the scale of oral reading assessment (Appendix 10), the present researcher (Assessor A) evaluated the performance. In Oral Reading Activity 1, three criteria, (1) accuracy of word pronunciation, (2) accuracy of chunking, and (3) fluency, were used. In Oral Reading Activity 2, besides these three criteria mentioned above, one more criterion, (4) the number of times each participants looked up, was added to three criteria above. Furthermore, in Oral Reading Activity 3, another criterion, (5) the number of mistakes made in changing pronouns, was added to the four previous criteria. These criteria's levels were shown in Appendix 10. For each criterion, five levels of performance (1-5) were prepared and each oral reading performance was evaluated according to Scale of Oral Reading Assessment (Appendix 10). The total score for each oral reading performance was then converted into 25 points.

The speaking test was carried out one week after the performance of oral reading activities was measured. After the question sheet was delivered to the participants, they were requested to answer the question and their answers were recorded with a voice recorder. Later, their answers were evaluated. In the test, the participants were first requested to introduce themselves in English. This was conducted so that the participants would get relaxed and accustomed to speaking English. Therefore, this part was not evaluated for the test. The test itself consists of two parts. The first part of the questions (Speaking Test A) asked for some opinions from the participants. They are the same questions asked in the previous experiment reported in Chapter V. The following are the questions that were asked of the participants:

- 1) *After you graduate from school, what do you want to study and want to do in the future?*
- 2) *Suppose you win the lottery and get 100 million yen, what would you like to do?*

The question in the second part (Speaking Test B) is also the same question used in the previous experiment reported in Chapter V (Appendix 8). The participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking. Their answers were recorded by a voice recorder. The performance of the participants was evaluated against four criteria; content, fluency, attitude, and grammatical accuracy. Five levels of performance (1 to 5) were assigned to each of the four criteria as shown in Appendix (Appendix 9). The total score for each speaking part is twenty points. Therefore, the total score of

Speaking Test A and Speaking Test B is 40 points. An ALT (Assessor B), who works at the same school with the present researcher, evaluated the participants' speaking tests referring to the scale of speaking assessment (Appendix 9).

#### **6.4 Results and Discussion**

Table 6.2. below shows the results of the oral reading activities (Oral Reading Activity 1, Oral Reading Activity 2 and Oral Reading Activity 3) and the speaking test. This study combined two parts of the speaking test (Speaking Test A and Speaking Test B) into one as Speaking Test<sup>(2)</sup>. Oral Reading Activity 1 required the participants to read aloud the test passage in a regular, orthodox way. Oral Reading Activity 2 required the participants to read the same passage used for Oral Reading Activity 1 but in the form of R&L. Oral Reading Activity 3 required the participants to combine R&L with Personalized OR, using a different test passage. Given that the test passage used in Oral Reading Activity 3 was different from the test passage used in Oral Reading Activities 1 and 2, it may not be desirable to compare the means of each Oral Reading Activity, but the present researcher judged it is plausible because the readability of both texts are the same. The result shows that the means of Oral Reading Activity 1 was the highest and that Oral Reading Activity 1 was easiest to carry out. On the other hand, the means of Oral Reading Activity 3 was the lowest and Oral Reading Activity 3 was the most difficult. These results were exactly what this study had expected from the theoretical analysis of the process of oral reading.

Table 6.2.  
*Results of the Oral Reading Tests and the Speaking Tests*

TEST	<i>n</i>	Total Score	<i>M</i>	<i>SD</i>
Regular OR	52	25	23.33	2.96
R&L	52	25	14.95	4.24
R&L combined with Personalized OR	52	25	14.56	4.15
Speaking Test	52	40	21.80	4.78

In order to verify the hypothesis of the experiment that taxing oral reading activities which embed some element of semantic and grammatical verification and restructuring in the process of oral reading will produce a higher correlation with speaking than simply reading aloud texts, a multiple regression analysis was conducted against the results of the tests of oral reading and the results of the test of speaking. SPSS statistical software AMOS was used for this analysis in order to find out which of the three types of oral reading (regular OR, R&L, R&L combined with Personalized OR) would make the most significant contribution to the skill of speaking. Figure 6.1.<sup>(3)</sup> shows in a simplified form the results of the multiple regression analysis by AMOS.

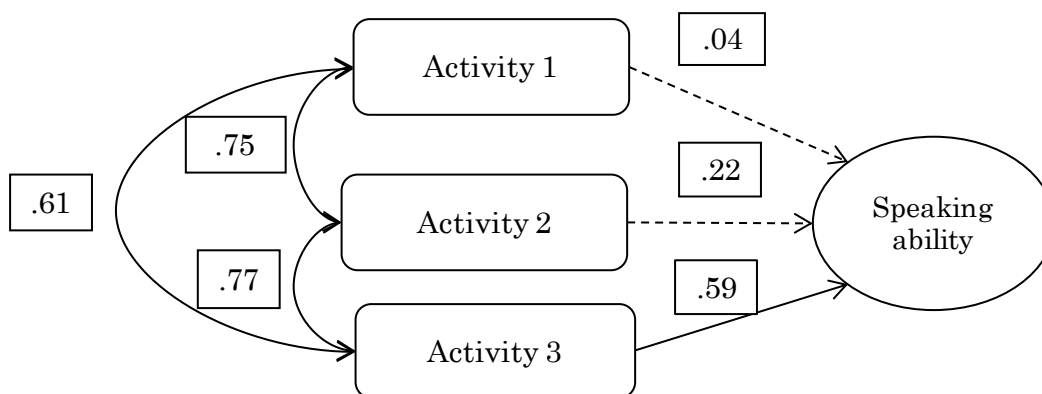


Figure 6.1. Results of the multiple regression analysis by AMOS

The figures in the three small squares on the left-hand side show the correlation coefficients between the three types of oral reading. The correlation coefficient between Oral Reading Activity 1 and Oral Reading Activity 2 was 0.75, that between Oral Reading Activity 2 and Oral Reading Activity 3 was 0.77, and that between Oral Reading 1 and Oral Reading 3 was 0.61. More importantly for this study, the figure in the three small square on the right-hand side indicate the standardized regression coefficients, which can tell us which type of oral reading activity can make the most significant contribution to speaking. The standardized regression coefficient of Oral Reading Activity 1 to Speaking was  $\beta = 0.04$ , which shows Oral Reading Activity 1 makes almost no contribution to speaking. It is plausible to say that most of the participants can conduct Oral Reading Activity 1 (regular OR). In fact, the mean of Oral Reading Activity 1 was high (23 out of 25 points) and the *SD* of Oral Reading Activity 1 was low ( $SD = 2.96$ ). On the other hand, the standardized regression coefficient of Oral Reading Activity 2 to Speaking was 0.22, where the statistical significance was not found. This means that the speaking score and the score of Oral Reading Activity 2 among the participants were not always correlative, and Oral Reading Activity 2 makes little contribution to speaking. Finally, the standardized regression of Oral Reading Activity 3 to Speaking was  $\beta = 0.59$  and the statistical significance was found ( $p < .05$ ). This means that the speaking score and the score of Oral Reading Activity 3 among the participants were correlated. In other words, the participants who got higher scores in Oral Reading Activity 3 also got higher scores in the speaking test. On the other hand, if the participants got the lower scores in the speaking test, they also got the lower scores in



### Oral Reading Activity 3.

The results of the experiment show that R&L combined with Personalized OR correlates the most with speaking ability. The result was almost the same with those of the previous experiment reported in Chapter V although the result of the previous experiment showed that R&L also statistically correlated with speaking ability.

From the results from the two experiments, it is quite plausible that taxing oral reading which embeds verification and restructuring in the oral reading process can become a good preparatory practice for speaking.

Although this study clarified that embedding semantic and grammatical verification and restructuring in oral reading has a high correlation with speaking ability, it has not proved yet that practicing oral reading which embeds semantic and grammatical verification as in R&L and Personalized OR will guarantee the improvement of learners' speaking ability. Therefore, the next chapter will report another experiment which was conducted to examine whether learners' speaking ability will actually improve if the practices of taxing oral reading are carried out in actual class.

### Notes

(1)The Flesch-Kincaid Grade level of both Passage A and Passage B is 6.9. The Flesch Reading Ease of Passage A is 67.3 while that of Passage B is 67.8. This means the readability of both passages is almost the same.

(2)Two speaking tests (Speaking Test A and Speaking Test B) were united into Speaking Test.

(3) Since the standardized regression coefficients of Activity 1 to Speaking and that of Activity 2 to Speaking were not statistically significant, this study used the dotted arrows, not solid arrow.

## **Chapter VII**

### **Experiment 4**

#### **Investigating the Effectiveness of Oral Reading Activities to Improve Speaking Ability**

The experiments reported in Chapters V and VI compared three types of oral reading – (1) regular OR, (2) R&L and (3) R&L combined with Personalized OR – in terms of their relation with speaking ability, using Japanese junior high school students and high school students as participants. The results showed that R&L, and R&L combined with Personalized OR correlated more with speaking ability than regular OR in Experiment 2 and R&L combined with Personalized OR correlated most with speaking ability in Experiment 3. These experiments suggested that embedding lexical and grammatical verification and restructuring in oral reading will guarantee a high correlation with speaking ability. In order to investigate the effectiveness of oral reading activities to improve speaking ability, another experiment was conducted.

#### **7.1 Purpose**

The purpose of the experiment is to investigate the following hypothesis; if oral reading instruction which involves high cognitive load through taxing oral reading is continued for a certain period of time, learners' speaking ability can be improved.

**7.2 Participants**

The participants of this study were 39 first-year senior high school students. All of the participants were girls. This experiment was conducted at a private senior high school where the present researcher works. The participants were divided into two groups according to different degrees of cognitive load accompanying the oral reading activities they were engaged in (Table 7.1.).

Table 7.1.  
*Experimental Treatment for the Two Groups of the Participants*

Oral Reading Activities	Control Group	Experimental Group
regular OR	○	
Personalized OR		○
R&L combined with Personalized OR		○
Personalized Q&A		○
Time for Oral Reading Activities	15m	15m
Cognitive Load	low	high

**7.3 Method**

**7.3.1 Framework of the Experiment**

The experiment was conducted from the beginning of May 2011 until the beginning of July 2011. The pre-test before the experimental treatment and the post-test after the two-month experiment were conducted in order to investigate the efficiency of the treatments. The first 15 minutes in each regular English lesson were assigned to the experimental treatment for two months. There were four English lessons per week. In total the participants had 28 lessons. The textbook *Daniel Radcliffe* (Shipton, 2008) was used for the two groups as texts for oral reading practice.

**7.3.2 Pre-test**

The pre-test was conducted at the beginning of the experiment to grasp the participants' speaking proficiency. It was conducted on the first day of the experiment. There were two parts in the pre-test. In the first part, the participants were asked to answer the following questions in English:

- 1) *After you graduate from school, what do you want to study and want to do in the future?*
- 2) *Suppose you win the lottery and get 100 million yen, what would you like to do?*

In the second part (Appendix 8), the participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking. This test is similar to the tests of speaking which are used in the second stage of the Pre-second Grade Test conducted by the Society for Testing English Proficiency (STEP).

The pre-test was conducted in the CALL room. Voice data were collected using a digital voice recorder with a headset microphone. Each participant's speaking performance was evaluated against four criteria; volume, content, fluency, and grammatical accuracy. The present researcher and an ALT evaluated each participant's speaking performance. Five levels of performance (1 to 5) were assigned to each of the four criteria (Appendix 9). The two questions in the first part were assessed together, not separately. Therefore, 40 points (4 criteria  $\times$  5 levels  $\times$  two parts of the speaking test) were allotted to one evaluator and the total score of two evaluators was 80 points.

### 7.3.3 Experimental Treatment of the Different Groups of Participants

Both Experimental Group and Control Group used the same textbook, and the allocated time was 15 minutes per lesson. Both of the groups had four lessons a week and the experiment was conducted over the first semester (two months). Both groups had 28 lessons in total and read two or three paragraphs of the text at the beginning of each lesson.

Control Group received only regular OR instruction. The participants read aloud the same text three times every lesson. First, after the instructor (the present researcher) explained the grammatical points which seemed to be difficult for the participants, the sentences were translated into Japanese if necessary. Then the participants listened to the CD and repeated the text after the CD. Second, the participants read aloud the same text individually. Finally, the participants read the text orally with CD (parallel oral reading).

Experimental Group received the instruction of Personalized OR, R&L combined with Personalized OR, and Personalized Q&A. The translation of the text was delivered beforehand, but the grammatical points which seemed to be difficult for the participants were explained if necessary. The participants listened to the CD and repeated sentences after the CD. Then they were told to conduct Personalized OR and R&L combined with Personalized OR. When the participants finished reading one chapter, Personalized Q&A was conducted. The participants were divided into groups of three or four participants. They made questions individually about the text they were reading. Then one student in the group pretended to be the famous person of the text (in this case, Daniel Radcliffe). The other students in the same group asked the questions they made, and each of them had to ask at least one question. The student who

pretended to be the famous person answered these questions as if he or she was the main character of the story (Daniel Radcliffe). All the students received the same experiment treatment under the same set of conditions.

#### **7.3.4 Post-test**

The post test was conducted to capture possible changes in speaking proficiency brought about by the two different experimental treatments. The participants were asked to answer the same questions under the same set of conditions as in the pre-test in order to keep the difficulty of the questions between the pre-test and the post-test equal.

### **7.4 Results and Discussion**

#### **7.4.1 Method of Analysis**

In order to capture the improvement of the participants' speaking ability, this study analyzed the results of the speaking tests given to Control Group and Experimental Group in the pre-test and the post-test. In total, 39 speaking performances of the two groups were analyzed, excluding the performances of those who could not take either the pre-test or the post-test for one reason or another and those whose performance could not be recorded properly or those whose voice was too weak for the evaluators to evaluate their performance.

The performance of the participants was evaluated against the four criteria mentioned above; volume, content, fluency, and grammatical accuracy as indicated in Appendix 9. These four criteria were employed because this study would like to evaluate the speaker's overall performance as well as specific features such as grammatical accuracy and fluency.

The present researcher and an ALT who works at the same school with the present researcher evaluated the speaking performance of the participants. Five levels of performance (1 to 5) were prepared for each of the four criteria. The total score was 80 points (two parts of the speaking tests of five points for four criteria for one evaluator). Since the inter rater reliability between the two evaluators was comparatively high (the pre-test was  $r = .60$  and the post-test was  $r = .69$ ), the evaluation by each evaluator was adopted as it was.

**7.4.2 Comparison between Experimental Group and Control Group**

Table 7.2. provides the descriptive statistics concerning the result of the speaking test conducted as the pre-test and as the post-test for Control Group and Experimental Group . It provides the gained scores for the pre-test and the post-test, as well as the mean scores ( $M$ ) of the total score and standard deviations ( $SD$ ) for the pre-test and the post-test.

Table 7.2.  
*Results of the Speaking Tests*

group	n	pre-test		post-test		gains
		M	SD	M	SD	
Control	22	37.82	4.06	38.91	4.39	1.09
Experimental	17	37.94	3.78	42.59	5.16	4.65

In the pre-test, there was not a big difference in the mean scores between Control Group and Experimental Group (the mean score of Control Group was 37.82 and that of Experimental Group was 37.94).

When we look at the gained scores, we can see that both Control Group and Experimental Group demonstrated some improvement in their speaking ability. In particular, Experimental Group significantly improved



the mean score (from 37.94 to 42.59) and showed larger improvement than Control Group. Figure 7.1. shows the results reported in Table 7.2. schematically.

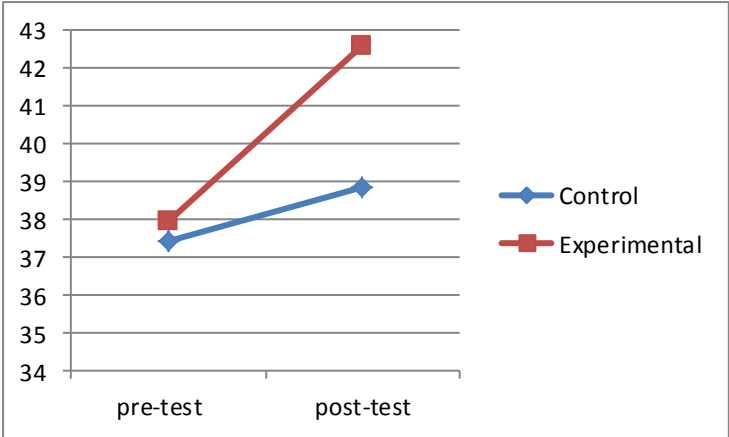


Figure 7.1. Changes of the mean scores

Furthermore, in order to capture the effects of the instruction of oral reading with high cognitive load, each participant’s gained scores between the pre-test and the post-test were focused on. Therefore, the gained scores between the pre-test and the post-test for each participant were computed and then those differences on gain scores were analyzed in one-way ANOVA<sup>(1)</sup>.

The average gained score among the participants was greater for Experimental Group ( $M = 4.65, SD = 4.60$ ) than that for Control Group ( $M = 1.09, SD = 3.29$ ) and the difference in the average gained scores between Experimental Group and Control Group was statistically significant ( $F(1, 37) = 7.93, p < .001, \eta^2 = .18$ ).

Two explanations for this result will be plausible. First, the effect of the instruction of oral reading with high cognitive load such as Personalized OR, R&L combined with Personalized OR and Personalized

Q&A may be effective even in a shorter time of instruction. Secondly, Experimental Group had many opportunities to speak in English through the taxing oral reading. During the instruction of taxing oral reading, learners used words and phrases in the text orally. Therefore, they may have gotten more confidence in speaking in English. In either way, it may be said that the instruction of taxing oral reading may help EFL learners to improve their speaking skills to a certain degree, although the effect may be smaller than the instruction of speaking activity itself.

### 7.4.3 Further Analysis

#### *Focus on Quantity*

This study tried to figure out which criterion, in particular, on the speaking test would show the greatest improvement. Table 7.3. presents the gained scores, as well as the mean scores (*M*) and standard deviations (*SD*) for the pre-test and the post-test for each criterion on the speaking test. It also shows the results of the *t*-tests conducted on the differences in mean scores. They were conducted to determine whether there was any statistically significant difference in gains in means scores between the pre-test and the post-test for each criterion in the experimental and Control Group. Figures 7.2 to 7.5. show the changes of the mean scores in each criterion reported in Table 7.3. schematically.

Table 7.3.  
*Scores for Each Criterion on the Speaking Test*

speaking test criteria	Control ( <i>n</i> = 22)				gain	Experimental ( <i>n</i> = 17)				gain	<i>t</i> (37)	
	pre-test		post-test			pre-test		post-test			<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
volume	9.59	1.61	10.29	1.51	0.68	9.71	1.36	11.53	1.75	1.82	-1.97	0.06
content	9.32	1.33	9.77	1.38	0.45	8.82	1.10	10.41	1.46	1.59	-2.92	0.01 **
fluency	10.18	1.40	10.23	1.56	0.05	10.06	0.94	11.24	1.39	1.18	-2.42	0.02 *
accuracy	8.27	0.75	8.64	0.93	0.37	8.65	1.28	9.41	1.50	0.76	-1.00	0.32

\* *p* < 0.05, \*\* *p* < 0.01

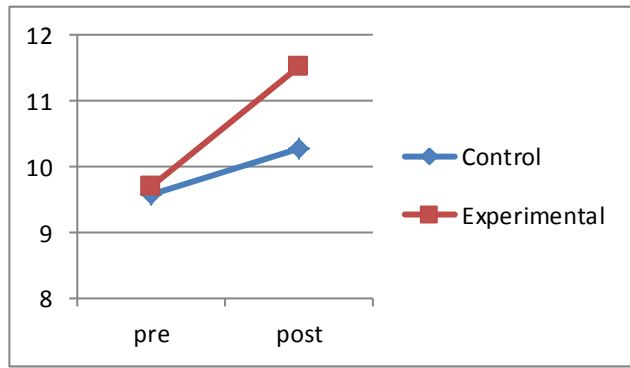


Figure 7.2. Change of the mean scores in volume

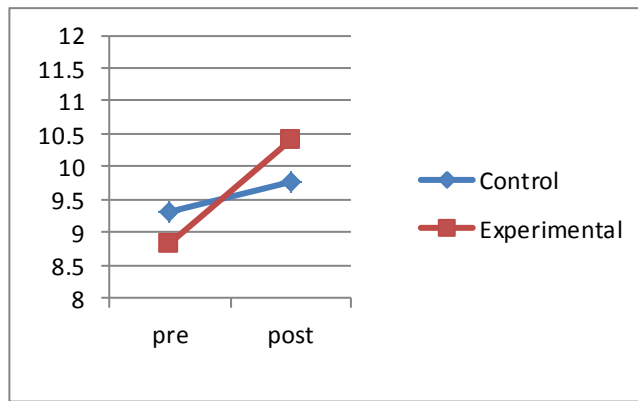


Figure 7.3. Change of the mean scores in content

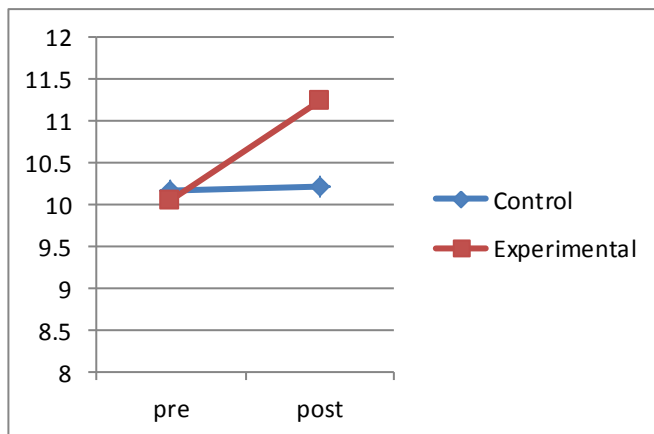
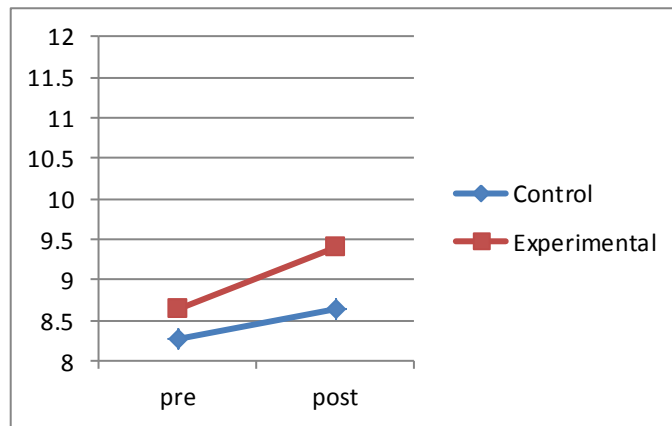


Figure 7.4. Change of the mean scores in fluency



*Figure 7.5.* Change of the mean scores in grammatical accuracy

As Table 7.3. shows, both Experimental Group and Control Group increased the mean scores in each criterion of the post-test. However, the degree of increase was greater for Experimental Group.

When we look at the gained score in volume, both groups showed the most improvement (0.68-point increase in Control Group and 1.82- point increase in Experimental Group). The difference was not statistically significant in the experiment, but the result demonstrates that both the instruction of oral reading with low cognitive load and that of oral reading with high cognitive load were effective to increase the participants' speaking in terms of the volume although the instruction of oral reading with high cognitive load seems more effective than that of oral reading with low cognitive load. That is why there was little differentiation in volume between Experimental Group and Control Group.

As for content, both groups showed the second greatest improvement (0.45-point increase in Control Group and 1.59-point in Experimental Group). Interestingly, the score of the post-test in Experimental Group was higher than that in Control Group although the score of the pre-test in

Experimental Group was lower than that of Control Group. The difference was statistically significant ( $t(37) = -2.92, p < .01, r = .43$ ). The instruction of taxing oral reading was effective in improving the participants' speaking ability in terms of the content, probably because the participants may have internalized some forms of the text while conducting taxing oral reading. However, this is only an assumption and we need further investigation to verify this assumption.

As far as fluency is concerned, while the score in Experimental Group showed significant improvement (1.39-point gained), that in Control Group showed little improvement (only 0.05-point gained). The difference turned out to be statistically significant ( $t(37) = -2.42, p < .05, r = .37$ ). This is because the instruction of taxing oral reading may have given learners more opportunities of speaking. They were required to speak quickly and in real time. They may have got accustomed to speaking in real time and quickly while conducting taxing oral reading.

Finally, when we look at the gained score in accuracy, the improvement of both groups was not as remarkable as that in other criterion although both Experimental Group and Control Group showed some improvement. The gained score was less than 1 point even in Experimental Group. It is plausible that it is more difficult to improve the participants' accuracy than it is to improve other criteria.

### *Focus on Quality*

Transcriptions given below are what some of the participants of Experimental Group answered to the questions in each speaking test. The reason that some transcriptions are showed here is to endorse the statistical tendency that Experimental Group showed the greater

improvement in the post-test.

*Question: After you graduate from school, what do you want to study and want to do in the future?*

Student A

The pre-test

I want to study about music.

The post-test

I want to learn many languages and I want to be a teacher because I like to teach and I want to use many language of foreign languages.

Student B

The pre-test

I want to learn Japanese stories and I want to work in the book store because I like book.

The post-test

After I graduate school, I want to study English more, because I want to be an English teacher. I like children too.

*Question: Suppose you win the lottery and get 100 million yen, what would you like to do?*

Student C

The pre-test

I want to use soon.

The post-test

I want to save money and I want to buy many clothes and books, and reform my house.

Student D

The pre-test

I want to travel France because I like French art.

The post-test

Suppose I win the lottery and get one hundred million yen, I would like to go to France, because I like Paris.

In the pre-test, most of the participants answered the question only in a simple sentence. However, in the post-test, some participants in Experimental Group added one more sentence to the first sentence. In the most common cases, they gave the reason for their answer. Therefore, the number of the words in the post-test increased.

In the second part of the speaking test, where the participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking, some improvement was found in Experimental Group. The following are the transcripts of some of the participants of the second part of the speaking test in Experimental Group.

Cues: the participants are given three coherent pictures as cues for speaking and are requested to tell a story in English, looking at the pictures.

Student E

The pre-test

One day, Ken and his parents went to a computer shop. Ken want to do the puzzle, so his father bought game. That evening Ken do. The next day, his father do. (32 words)

The post-test

One day, Ken and his parents went to a computer shop. They bought the software has a good puzzle for their brain. That evening, Ken played the puzzle. It is very interesting. The next day, Ken's father played the puzzle. Ken couldn't play it. (44 words)

Student F

The pre-test

One day, Ken and his parents went to a computer shop. They bought puzzle software which is good for our brain. That evening, Ken play it and he won. Ken and mother was very happy. The next day, his father played it all day. So he and his mother shocked because Ken can't play it all day. (57 words)

The post-test

One day, Ken and his parents went to a computer shop. The shop keeper said, "This computer has a good puzzle for your brain," to Ken. That evening, Ken played it and won the game. He and his mother was very happy. But the next day, his father played it for a long, long time, So no time to play for Ken. That was shock for Ken and his mother. (70 words)

Both Student E and Student F gave more detailed description in the post-test. In the pre-test, Student E could not use the past tense and the



content was not satisfactory. However, in the post-test she spoke more and managed to use the past tense although the present tense was still found. Student F also used the past tense in the post-test although some disagreement of a verb with its subject was still found.

## **7.5 Summary**

In a summary of this chapter, this study examined whether learners' speaking ability could be improved if oral reading instruction which involves high cognitive load is continued for a certain period of time. A two-month experiment was conducted to verify this hypothesis with 39 first-year senior high school students as the participants. The participants were divided into two groups according to the different degrees of cognitive load accompanying the oral reading activities they were engaged in. Control Group received the instruction of low cognitive load such as regular OR while Experimental Group received the instruction of taxing oral reading such as Personalized OR, R&L combined with Personalized OR and Personalized Q&A. The result of the experiment disclosed different levels of improvement in the participants' speaking ability, depending upon different degrees of cognitive load of the oral reading activities; greater cognitive load led to greater improvement in speaking ability. In addition, when we looked at the gains in each criterion for the speaking test, significant differences between Experimental Group and Control Group were observed in content and fluency. Furthermore, when we compared the scripts in the pre-test with those in the post-test, some improvement in Experimental Group was found; the number of the words increased and the sentence became more complicated. This finding endorses the pedagogical value of oral reading activities as preparatory

practice in speaking as long as they involve high cognitive load.

### **Note**

(1) In general two-way ANOVA is employed to compare two sets of variables such as control vs. experimental and pre-test vs. post-test. However, this study employed one-way ANOVA by comparing the gained scores between the pre-test and post-test scores between the two groups, using treatment (experimental vs. control) as the only factor. This analysis of difference scores is also called a gain score analysis.

## **Chapter VIII**

### **Experiment 5**

#### **Investigating Further the Effectiveness of Oral Reading Activities to Improve Speaking Ability**

The result of the experiment reported in Chapter VII indicated that oral reading instruction involving greater cognitive load would lead to greater improvement in speaking ability after a two-month experiment. This chapter reports a further experiment which was conducted with a longer period and with more detailed carefully designed treatment.

#### **8.1 Purpose**

The experiment period was extended to six months and the participants were divided into three groups depending on the different degrees of cognitive load accompanying the oral reading activities they were engaged in. This experiment will investigate whether the result is the same in the previous experiment and how the learners' speaking ability can be improved.

#### **8.2 Participants**

The participants of this study were 63 first-year senior high school students. All of the participants were girls. This experiment was conducted at a private senior high school where the present researcher works. The participants were divided into three groups according to different degrees

of cognitive load accompanying the oral reading activities they were engaged in (Table 8.1.).

Table 8.1.  
*Experimental Treatment for the Three Groups of the Participants*

Oral Reading Activities	Control	Experimental 1	Experimental 2
regular OR	○		
R&L		○	
Personalized OR		○	○
R&L combined with Personalized OR			○
Personalized Q&A			○
Time for Oral Reading Activities	15m	15m	15m
Cognitive Load	lower	→ higher	

**8.3 Method**

**8.3.1 Framework of the Experiment.**

The experiment was conducted from the beginning of May 2011 until the end of November 2011 at a senior high school where the present researcher works. The pre-test was carried out before the experimental treatment and two post-tests were carried out in order to investigate the efficiency of the treatments; one after the two-month experiment and the other after the six-month experiment.

The first 15 minutes in each regular English lesson was assigned to the experimental treatment for six months. There were four English lessons per week. In the total, the participants received 60 lessons. *Daniel Radcliffe* (Shipton, 2008), *Princess Diana* (Gilchrist, 1998), *Barack Obama* (Degnan-Veness, 2011) were used for the three groups as textbooks for oral reading practice.

**8.3.2 Pre-test**

The pre-test was conducted at the beginning of the experiment to

grasp the participants' speaking proficiency. It was conducted on the first day of the experiment. There were two parts in the pre-test. In the first part, the participants were asked to answer the following questions in English:

- 1) After you graduate from school, what do you want to study and want to do in the future?*
- 2) Suppose you win the lottery and get 100 million yen, what would you like to do?*

In the second part (Appendix 8), the participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking. This test is similar to the tests of speaking which are used in the second stage of the Pre-second Grade Test conducted by the Society for Testing English Proficiency (STEP).

The pre-test was conducted in the CALL room. Voice data were collected using a digital voice recorder with a headset microphone. Each participant's speaking performance was evaluated against four criteria; volume, content, fluency, and grammatical accuracy. The present researcher and an ALT evaluated each participant's speaking performance. Five levels of performance (1 to 5) were assigned to each of the four criteria (Appendix 9). The two questions in the first part were assessed together, not separately. Therefore, 40 points (4 criteria × 5 levels × two parts of the speaking test) were allotted to one evaluator and the total score of two evaluators was 80 points.

### **8.3.3 Experimental Treatment of the Different Groups of Participants.**

Both Experimental Groups and Control Group used the same textbook, and the allocated time for the treatment was 15 minutes per lesson. Three groups had four lessons a week and the experiment was conducted over the first semester and the second semester (six months). All of the groups had 60 lessons in total. They read two or three paragraphs of the text at the beginning of each lesson.

Control Group received only regular OR instruction. The participants read aloud the same text three times every lesson. First, after the instructor (the present researcher) explained the grammatical points which seemed to be difficult for the participants, the sentences were translated into Japanese. Then the participants listened to the CD and repeated the sentences after the CD. Second, the participants read aloud the same text individually. Finally, the participants read the text orally with CD (parallel oral reading).

Experimental Group 1 received the instruction of R&L, and Personalized OR. The translation of the text was delivered beforehand, and the grammatical points which seemed difficult for the participants were explained if necessary. The participants listened to the CD and repeated sentences after the CD. Then they were told to conduct R&L and Personalized OR.

Experimental Group 2 received the instruction of Personalized OR, R&L combined with Personalized OR, and Personalized Q&A. The translation of the text was delivered beforehand, and the grammatical points which seemed to be difficult for the participants were explained if necessary. The participants listened to the CD and repeated sentences after the CD. Then they were told to conduct Personalized OR and R&L combined with Personalized OR. When the participants finished reading

one chapter, Personalized Q&A was conducted. The participants were divided into groups of three to four participants and made questions individually about the text they were reading. Then one student within the group pretended to be the famous person of the text. The other students within the same group asked the questions they made, and each of them had to ask at least one question. The student who pretended to be the famous person answered these questions as if he or she was the famous person of the story. All the students received the same experiment treatment under the same set of conditions.

#### **8.3.4 Post-test**

The post-tests (the speaking test) were conducted twice to capture possible changes in speaking proficiency brought about by the three different experimental treatments. The first post-test was conducted two months after the experiment. The second post-test was conducted six months after the experiment. Between the first post-test and the second post-test, each experimental treatment was continued.

The participants were asked to answer the same questions under the same set of conditions as in the pre-test. The questions of the first post-test and the second post-test were the same in order to keep the difficulty of the questions between the pre-test and the first post-test or between the first post-test and the second post-test equal.

### **8.4. Results and Discussion**

#### **8.4.1 Method of Analysis**

In order to capture the improvement of the participants' speaking ability, this study analyzed the results of the speaking tests given to

Control Group and the two experimental groups in the pre-test, the first post-test and the second post-test. In total, 64 speaking performances of the three groups were analyzed, excluding the performances of those who could not take either the pre-test or the post-test for one reason or another and those whose performance could not be recorded properly or those whose voice was too weak for the evaluators to evaluate their performance.

The performance of the participants was evaluated against the four criteria mentioned above; volume, content, fluency, and grammatical accuracy, based on the scale of speaking test. These four criteria were employed because this study would like to evaluate the speaker's overall performance as well as specific features such as grammatical accuracy.

The present researcher and an ALT who works at the same school with the present researcher evaluated the speaking performance of the participants in all the tests. The ALT was not notified of the outline of the experiment. Five levels of performance (1 - 5) were prepared for each of the four criteria. The total score is 80 points (two parts of the speaking tests of five points for four criteria for one evaluator). Since the inter rater reliability between the two evaluators was comparatively high (the pre-test was  $r = .67$  and the first post-test was  $r = .61$ , the second post-test was  $r = .93$ ), the evaluation by each evaluator was adopted as it was.

#### **8.4.2 Comparison between Experimental Group and Control Group**

Table 8.2. provides the descriptive statistics concerning the results of the speaking test conducted as the pre-test and as the two post-tests (the post-test 1 and the post-test 2) for Control Group and Experimental Groups. It provides the gains for the post-test 1 and the post-test 2, as well as the mean scores ( $M$ ) of the total score and standard deviations ( $SD$ ) for



the pre-test and the post-tests. Figure 8.1. shows the results reported in Table 8.2. schematically.

Table 8.2.  
*Results of the Speaking Tests*

group	n	pre-test		post-test 1		gains from the pre-test	post-test 2		gains from the pre-test
		M	SD	M	SD		M	SD	
Control	18	36.01	6.26	38.44	4.17	2.39	38.00	3.79	1.94
Experimental 1	28	42.39	5.39	42.93	4.67	0.54	48.93	5.31	6.54
Experimental 2	17	37.94	3.78	42.59	5.16	4.65	52.35	5.79	14.41

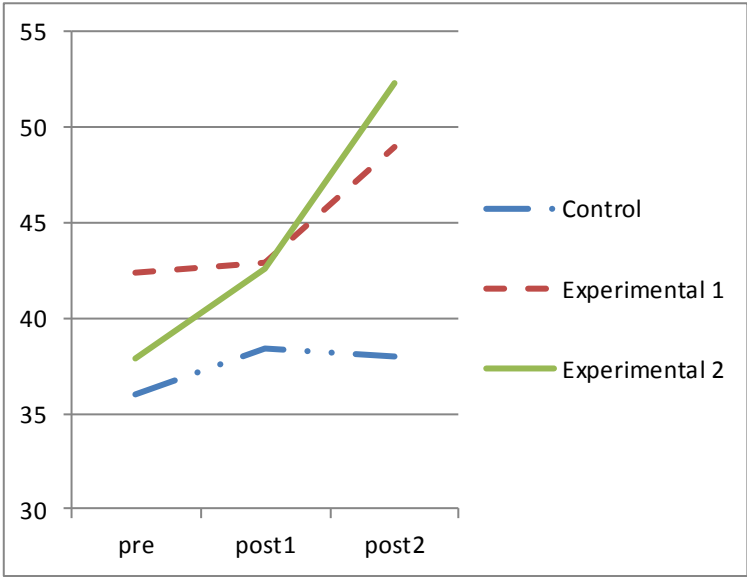


Figure 8.1. Change of the mean scores

In the post-test 1, which was conducted two months after the experiment started, as this study expected, Experimental Group 2 demonstrated significant improvement in the mean score (from 37.94 to 42.59). On the other hand, Experimental Group 1 showed less improvement in the mean scores (from 42.39 to 42.93) than this study had expected. In order to capture the effects of the experimental treatment, this study computed the gains between the pre-test and the post-test 1 and then analyzed those differences using one-way ANOVA on gains as a dependent variable<sup>(1)</sup>. The difference of mean gains among the three

groups was statistically significant ( $F(1, 61) = 3.80, p = .00, \eta^2 = .11$ ). Therefore, a subsequent multiple comparison test, the Tukey-Kramer method, was carried out to determine where the statistically significant difference exist. There was a significant difference only between Experimental Group 2 and Control Group ( $p < .05$ ).

Next, when we look at the post-test 2, which was conducted six months after the experiment started, both Experimental Groups made larger gains than Control Group in gains (Experimental Group 1, 6.54; Experimental Group 2, 14.41; Control Group, 1.94). One-way ANOVA on the gains between the pre-test and the post-test 2 revealed the difference of mean gains among three groups was statistically significant ( $F(1, 61) = 22.80, p = .00, \eta^2 = .43$ ). A multiple comparison test, the Tukey-Kramer method, showed a significant difference among all the groups; between Control Group and Experimental Group 1 ( $p < .05$ ), between Experimental Group 1 and Experimental Group 2 ( $p < .01$ ), and between Control Group and Experimental Group 2 ( $p < .01$ ). From these results, it will be safely said that as the instruction of taxing oral reading is carried out for a longer period of time, the learners' speaking ability will be improved to a certain degree.

Two explanations for these results will be plausible. First, the effect of the instruction of taxing oral reading such as Personalized Q&A, Personalized OR, R&L combined with Personalized OR may be effective even in a shorter time of instruction. On the other hand, the instruction of oral reading such as R&L and Personalized OR also seems to be effective if it is continued for a longer period of time (for 6 months in this study). This is because these oral reading instructions are also accompanied with high cognitive load.

Secondly, the instruction of taxing oral reading may have given the opportunities to speak in English to Experimental Groups. During the instruction of oral reading with high cognitive load, in particular Personalized Q&A, the participants had more opportunities to speak English and to use words and phrases in the text orally. Therefore, they may have gotten more confidence in speaking in English (although R&L and Personalized OR take longer time to be effective). In either way, it may be said that the instruction of oral reading with high cognitive load may help EFL learners to improve their speaking skill to a certain degree.

### 8.4.3 Further Analysis

#### *Focused on Quantity*

This study tried to figure out which criterion, in particular, on the speaking test would show the greatest improvement. Table 8.3. presents the mean scores ( $M$ ) and standard deviation ( $SD$ ) for the pre-test, the post-test 1 and the post-test 2 for each criterion on the speaking test. It also showed the gains from the pre-test to the post-test 2.

When we look at the gains shown in Table 8.3., Experimental Group 2 made gains in every criterion. Experimental Group 1 also made gains in all the criteria except fluency. However, the increase in gains for Experimental Group 1 was not as great as that for Experimental Group 2. On the other hand, Control Group made gains only in volume and accuracy. The increase in gains in these two criteria, volume and accuracy, however, was smaller than that of Experimental Group 1 and 2.

Table 8.3.  
*Scores for Each Criterion on the Speaking Test*

speaking test criteia	Control ( <i>n</i> = 18)						gains
	pre-test		post-test 1		post-test 2		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
volume	9.89	1.60	10.33	1.71	10.50	1.38	0.61
content	9.61	1.46	9.89	1.45	9.61	1.04	0
fluency	10.28	1.56	10.06	1.83	9.11	1.45	-1.17
accuracy	7.78	0.65	8.78	1.10	8.89	1.13	1.11

speaking test criteia	Experimental 1 ( <i>n</i> = 28)						gains
	pre-test		post-test 1		post-test 2		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
volume	11.61	1.47	11.79	2.13	15.14	2.8	3.53
content	10.75	1.73	10.54	1.4	11.71	1.38	0.96
fluency	11.14	1.21	11.21	0.99	10.96	2.10	-0.18
accuracy	8.93	1.12	9.39	1.10	11.11	1.03	2.18

speaking test criteia	Experimental 2 ( <i>n</i> = 17)						gains
	pre-test		post-test 1		post-test 2		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
volume	10.41	1.37	11.53	1.81	16.24	2.73	5.83
content	8.82	1.13	10.41	1.50	12.71	1.53	3.89
fluency	10.06	0.97	11.24	1.44	11.53	1.55	1.47
accuracy	8.65	1.32	9.41	2.73	11.88	1.54	3.23

Although one-way ANOVA should normally be employed in this further analysis to test the statistical differences in gains in each criterion, the Bartlett test revealed that the data on volume are not normally distributed ( $p < 0.05$ ). Therefore, the Steel-Dwass test was employed to find the differences in gains in volume. As for other criteria (content, fluency, accuracy), the Bartlett test revealed that the data was normally distributed ( $p = 0.061$  for content,  $p = 0.38$  for fluency,  $p = 0.10$  for accuracy). Therefore, this study employed one-way ANOVA and it showed that the differences in gains in each criterion were statistically significant ( $F(2, 60) = 21.04$ ,  $p = 0.00$ ,  $\eta^2 = .24$  for content,  $F(2, 60) = 8.15$ ,  $p = 0.00$ ,  $\eta^2 = .41$  for fluency,  $F(2, 60) = 9.63$ ,  $p = 0.00$ ,  $\eta^2 = .24$  for accuracy). Then the Tukey-Kramer tests were applied to these three criteria as multiple comparison tests in order to locate the significant difference. Table 8.4. shows the result of the Steel-Dwass or the Tukey-Kramer test.

Table 8.4.  
*Results of the Steel-Dwass or the Turkey-Krammer Test*

	Statically Significant Differences		
Volume	Control - Experimental 1**	Control - Experimental 2**	Experimental 1 - Experimental 2 *
Content		Control - Experimental 2**	Experimental 1 - Experimental 2 **
Fluency		Control - Experimental 2**	Experimental 1 - Experimental 2 *
Accuracy	Control - Experimental 1*	Control - Experimental 2**	

\* p < .05 \*\* p < .01

Several points can be mentioned. First, as for volume, gains increased in each group and all the groups showed statistically significant differences between the pre-test and the post-test. It is plausible that although all kinds of oral reading are effective in order to increase the participants' speaking volume, the taxing oral reading will be more effective. This is probably because the taxing oral reading required the participants to speak more, and the participants may have got used to speaking while they conducted the taxing oral reading.

Second, as for content, Experimental Group 2 showed greater improvement than other groups. This is probably because the participants may have internalized some forms of the text during taxing oral reading such as Personalized Q&A, and they may have learned how to speak effectively. However, taxing oral reading such as R&L and Personalized OR will not be enough to internalize some forms of the text or to learn how to speak effectively. Nevertheless, this is only an assumption and this study needs further investigation in order to clarify this point.

Thirdly, as for fluency, unfortunately, the gains of Control Group and Experimental Group 1 were negative, which was unexpected. On the other hand, Experimental Group 2 showed greater improvement than the other groups. This is probably because taxing oral reading such as Personalized Q&A, may have given learners more opportunities to speak while conducting Personalized Q&A. They are required to speak quickly and in real time. They may have got accustomed to speaking in real time and

quickly while conducting oral reading with high cognitive load. However even the gains in fluency in Experimental Group 2 was only 1.47, which was not as remarkable as those in the other criteria. It is plausible that it is more difficult to improve learners' fluency than to improve other criteria such as volume and content.

Finally, when we look at accuracy, we can say that taxing oral reading seems to be effective in improving learners' accuracy. This is because the participants paid more careful attention to semantic and syntactic features when they conducted taxing oral reading. Although the gains of Experimental Group 2 were bigger than those of Experimental Group 1, both groups showed some improvement. As a result, the significant difference was not found between them.

### *Focus on Quality*

Transcriptions given below are what some of the participants of Experimental Group 2 answered to the questions in each speaking test. The reason that some transcriptions are showed here is to endorse the statistical tendency that Experimental Group 2 showed the greater improvement in the post-test 2.

*Question: After you graduate from school, what do you want to study and want to do in the future?*

Student A

The pre-test

I want to be a doctor, so I want to learn medical and I want to save many sick people.

The post-test 1

I would like to study things of becoming a doctor because I want to save many poor sick people.

The post-test 2

When I graduate from this school, I want to go to the university to be a doctor. If I become a doctor, I want to save people who is sick. And I want to go abroad, because I want to save foreign people who is sick.

Student B

The pre-test

I want to learn Japanese stories and I want to work in the book store because I like book.

The post-test 1

After I graduate school, I want to study English more, because I want to be an English teacher. I like children too.

The post-test 2

After I graduate from school, I want to go abroad myself, for example France and Italy. They are very beautiful country. First, France is very beautiful country and very famous architecture. I want to study architecture in French. Italy is also bright country. I want to see many people and to make friends a lot. But it takes a lot of time for me because I want to save money to go abroad myself. I want to help my parents.

Most of the students in Experimental Group 2 showed improvement in the post-test 1. However, some of them did not show as much improvement as in the transcripts of Student A and Student B. However,

even these participants showed improvement in the post-test. They added more sentences to the first sentence in the post-test 2 and gave more information. However, some grammatical mistakes were still found.

*Question: Suppose you win the lottery and get 100 million yen, what would you like to do?*

Student C

The pre-test

I want to use soon.

The post-test 1

I want to save money and I want to buy many clothes and books, and reform my house.

The post-test 2

I want to go many abroad and I'll buy clothes, books and so on. And I buy a lottery again. If I get the money, I am very happy and it is fun.

Student D

The pre-test

I would like to travel around the world with my friends and family.

The post-test 1

I would like to buy a new house for my family.

The post-test 2

If I win the lottery and get one hundred million yen, I want to go abroad, for example, Finland and France and Italy. I study French, Italy and a language of Finland. I must go to language school. I use hundred million yen to study language.



The example of student C showed that the progress in speaking went well when the post-test 1 and the post-test 2 were compared. In the post-test 2, she added more sentences in order to express her feelings. The example of student D showed remarkable improvement in the post-test 2 although it was not found in the post-test 1.

The following transcripts were the second part of the speaking test. The participants were requested to tell a story in English, looking at three coherent pictures given as cues for speaking.

Cues: the participants are given three coherent pictures as cues for speaking and are requested to tell a story in English, looking at the pictures.

Student E

The pre-test

One day, Ken and his parents went to a computer shop, because they have to buy the software. The woman said, "This software has a good play for your brain." The next evening, his son play it the evening, but he is not doing the next day. (47 words)

The post-test 1

One day, Ken and his parents went to a computer shop, because Ken want to buy a computer game. The shop woman "this computer soft has a good puzzle for your brain." The next day, he play the game soon. He can the very well. But the next day, he can't play the game, because his father plays all days. (60 words)

## The post-test 2

One day, Ken and his parents went to a computer shop because he wanted game software. The store woman said, "The software has a good puzzle for your brain." It is his wanted game. He asked his parents, "I want this game." His parents buy it. That evening, he play the game. It's fun. His mother said, "Congratulations." But next day, he can't use computer because his father use it all day. He want to play game. So he told his mother that he want to play the game, but he couldn't. (92 words)

The total number of total words of Student E in the post-test 2 was about twice as large as that of the pre-test ( from 47 words to 92 words). Student E could not use the past tense in the pre-test. However, she learned to use the past tense in the post-test 2 although the present tense was still found. In the post-test 2, she added more sentences and described the picture in more details. Not only Student E but also most other students in Experimental Group 2 described the pictures satisfactorily in the post-test 2, although some of grammatical mistakes were still found.

## 8.5 Summary

This study examined whether learners' speaking ability could be improved if taxing oral reading instruction is continued for a certain period of time. A six-month experiment was conducted to verify this hypothesis with 62 first-year senior high school students as the participants. The participants were divided into three groups according to the different degrees of cognitive load accompanying the oral reading

activities they were engaged in. Control Group received the instruction of low cognitive load such as regular OR while Experimental Group 1 received the instruction of taxing oral reading such as R&L and Personalized OR, and Experimental Group 2 also received the instruction of taxing oral reading such as Personalized Q&A including Personalized OR, Personalized OR with R&L.

The result of the experiment disclosed different degrees of improvement in the participants' speaking ability, depending upon different degrees of cognitive load of the oral reading activities; greater cognitive load led to greater improvement in speaking ability. The longer the experiment was carried out, the more significant differences were found. These findings support the pedagogical value of oral reading activities as preparatory practice in speaking as long as they involve high cognitive load.

The questionnaire conducted six months after the experiment started. The questionnaire was conducted with five-point Likert scale, in which 5 indicates very positive and 3 indicates neutral and 1 indicates very negative. The questionnaire showed that Experimental Group 2 responded very positively to the question on the oral reading activities. Experimental Group 1 also responded positively but not so much positively as Experimental Group 2 (Appendix 10).

As for the questions on the relationship between the oral reading and speaking ability, Experimental Group 2 responded very positively (4.4 in average) to the question that "I think my speaking ability improved because of oral reading activities." Experimental Group 1 also responded somewhat positively (3.6 in average) to the same question. On the other hand, Control group showed slight positive response (3.3 in average).

As for the questions concerning the confidence of the participants in speaking ability, Experimental Group 2 showed a high average (4.5 in average) to the question that “I have become more confident of speaking English I have acquired through oral reading activities.” On the other hand, Experimental Group 1 and Control Group responded less positively to the same question (3.3 and 3.0 in average respectively).

These results of the questionnaire clearly indicate that the participants have fairly positive perception about oral reading activities as a whole. In particular, greater cognitive load of oral reading led to greater perception of improvement in speaking ability and confidence in the English speaking skill which were acquired through oral reading activities.

This chapter verified the hypothesis that learners’ speaking ability could be improved if taxing oral reading instruction was continued for a certain period of time. In addition, from the questionnaire, it was found that thanks to taxing oral reading, the participants gained more confidence and their English speaking skill improved.

#### **Note**

(1) In general two-way ANOVA is employed to compare variables between different groups. However, statistically significant differences were found among groups in the pre-test. Therefore, this study employed one-way ANOVA by computing the difference between the pre-test and post-test scores for each participant, and then analyzing those differences and using treatment as the only factor. This analysis of difference scores is also called a gain score analysis.

## Chapter IX

### Conclusion

#### 9.1 Major Findings of the Study

The primary goal of this study was to investigate the effectiveness of output activities focused on oral reading for improving Japanese EFL learners. In order to achieve the primary goal, three interrelated objectives were set up and were clarified.

The first objective was to find the common elements between the oral reading process and the speaking process by examining the two processes. In the speaking process, grammatical and lexical encoding is involved. If we want to make oral reading closer to the speaking process, the process similar to that of encoding must be necessary. In regular OR, that kind of quasi-encoding process is not involved. On the other hand, in R&L and Personalized OR, grammatical and lexical verification and restructuring are involved. The process of verification and restructuring are not exactly the same with the process of encoding involved in the speaking process, but they are similar to encoding in that learners have to pay careful attention to semantic and syntactic features while conducting oral reading. The more attention learners pay to semantic and syntactic features, the higher learners' cognitive load is raised. However, this verification or restructuring is voluntary. When learners conduct R&L without understanding the message of the text, their cognitive load may not be raised so much. This is also true of Personalized OR. When learners change pronouns automatically without understanding the meaning of the

message in Personalized OR, their cognitive load will not always be raised. Therefore, this study suggested Personalized Q&A, which always raises learners' cognitive load. In Personalized Q&A, learners are required to answer the questions from their instructor or peers, pretending they were the famous person discussed in the text they are reading. Personalized Q&A is a more speaking-oriented activity. The present study recommended Personalized Q&A should be conducted as an advanced activity of Personalized OR.

The second objective was to investigate which oral reading (among many types of oral readings) would be correlated with speaking ability. From the theoretical point of view, the present study clarified that R&L and Personalized OR accompanied the process closer to the speaking process than regular OR. Therefore, it was hypothesized that such types of oral reading as R&L and Personalized OR would be more taxing to learners, that is imposing heavier cognitive load on learners, and therefore, more similar to speaking activity than regular OR. In order to verify whether these two types of oral reading are really taxing or not, this study, first, investigated whether high level of cognitive load is really imposed on learners when learners conduct R&L and Personalized OR. The result showed that R&L and Personalized OR required the participants to take more time to read aloud the text, to reread the text oftener and to pause more while doing oral reading than regular OR. Statistically significant differences were also found. Therefore, it was verified that high level of cognitive load is really imposed on learners when R&L and Personalized OR are conducted. Second, in order to verify the hypothesis that taxing oral reading would be correlated more to speaking than regular OR. This study conducted two experiments in order to examine which oral reading is

more correlated to speaking. The result of the first experiment showed that R&L, and R&L combined with Personalized OR were statistically correlated to speaking ability. The result of the second experiment showed that R&L combined with Personalized OR were statistically correlated to speaking ability. From both results, it was clarified that these oral readings, defined as taxing oral reading, are correlated to speaking ability and regular OR, which presumably imposes less cognitive load, is not correlated to speaking ability.

The third objective was to investigate how learners' speaking ability would be improved if oral reading instruction is continued for a certain period of time. This study conducted two different experiments to verify this. In the first experiment, the participants were divided into two groups according to different degrees of cognitive load accompanying the oral reading activities; Control Group conducted only oral reading with low cognitive load such as regular OR, while Experimental Group conducted taxing oral reading such as personalized OR, R&L combined with Personalized OR and Personalized Q&A. Both groups conducted oral readings in the first 15 minutes per lesson. Two months after the experiment was started, the post test was conducted and the result showed that Experimental Groups showed the statistically significant improvement of their speaking.

In the second experiment, the participants were divided into three groups; Control group, Experimental Group 1 and Experimental Group 2. Control Group conducted oral reading with low cognitive load such as regular OR. Experimental Group 1 conducted taxing oral reading such as R&L, Personalized OR, and R&L combined with Personalized OR. Experimental Group 2 conducted taxing oral reading such as Personalized

OR, R&L combined with Personalized OR and Personalized Q&A. In the post test, which was conducted two months after the experiment started, the statistically significant difference was found between Control Group and Experimental Group 2. In the post test, which was conducted six months after the experiment, statistically significant differences were found not only between Control group and Experimental Group1 but also between Control group and Experimental Group 2 as well as between Experimental Group 1 and Experimental Group 2. From the results of the experiment, it was revealed that the greater cognitive load of oral reading led to greater improvement in learners' English speaking ability. On the other hand, it was also found that oral reading with low cognitive load is not likely to lead to the improvement of learners' speaking ability.

## **9.2 Implications for Speaking Instructions**

The purpose of this study was to investigate whether an output activity focused on oral reading is effective for improving Japanese EFL learners' speaking ability. This study found that if oral reading instruction such as taxing oral reading was continued for a certain period of time, the effect on improving speaking ability was bigger. There are some implications for speaking instructions from this study.

The first implication is that it is important to do oral output activities in school in order to improve Japanese learners' speaking ability. When it comes to speaking English, we cannot deny that Japanese EFL learners' speaking ability is far from satisfactory. This is mainly because teachers in English classes do not spend much time conducting oral output activities focused on speech and utterances given by each student. Students learn a lot of words and grammar rules, but they learn few



examples of how to use them and they lack oral output activities which put what they have learned into practice. Therefore, this study suggests that more oral output activities should be conducted in order to develop students' speaking ability.

The second implication is that oral reading can be appropriate as output activities and it can be suitable for a learning environment in Japan. Oral output activities are essential in order to improve students' speaking ability, but it is not easy to conduct output activities at school in Japan, where average class size is quite large, i.e., 40 students in a class. Oral reading, however, is suitable for this learning environment in Japan. Oral reading is one of the traditional teaching techniques and, recently, it has been recognized as a useful pre-activity for speaking. As the present study suggested, oral reading itself is not a speaking activity but it could become an activity to help to improve Japanese EFL learners' speaking ability.

As the third implication, it is worth noting that Personalized Q&A has served advantages of its own. First, Personalized Q&A is not only an ordinary oral reading activity. It is a more speaking oriented activity. Second, it improves the authenticity of oral reading because learners answer the questions as if they were the main character of the text. Third, it reduces psychological distance between the text and learners. Finally, if Personalized Q&A is conducted between learners, they have to make questions by themselves and they will learn how to make questions.

### **9.3 Limitations of the Study and Agendas for Further Research**

Several limitations to this study need to be acknowledged. First, this study is based on the assumption that a high cognitive load accompanies

R&L and Personalized OR. The experiments which may endorse this assumption were conducted in this study. However, they did not lead to a direct verification that a high cognitive load accompanies R&L and Personalized OR. In order to verify that a high cognitive load really accompanies R&L and Personalized OR, the examination into the brain waves may be needed. However, under the circumstances where the present researcher is, such an examination is impossible. Therefore, there was no other way but to rely on an indirect method of examination that was done in this research. It is hoped that the examination into the brain waves will be carried out as a future research.

Second, one of the assessors was the present researcher, which might have had some effect on the results. A few more assessors besides the present researcher are needed in order to enhance the validity of the research.

Third, there was a limitation to the experiment design as to how to divide the groups. The participants were divided into Control Group and Experimental Group by the class where the participants belong, so they are not samples chosen at random. It would have been idealistic to divide groups by random allocation, which would have ensured that each participant has an equal chance of being assigned to one group or the other. However, such random grouping was almost impossible, because classes worked as an inseparable unit and the participants took all the lessons in their own class.

Fourth, this study did not conduct speaking activities themselves. Only oral reading activities were conducted for the purpose of improving the participants' speaking ability. However, contrary to what is expected, oral reading activities improved the participants' speaking skill. Oral

reading activities may be effective in Japanese schools, where the class size is big.

Finally, this study was conducted only at a high school where the present researcher worked. Further research will be needed in order to make generalization; if these experiments are to be conducted at junior high schools or at other high schools, can we expect the same results? What is the suitable length of the text and how much amount of time is suitable for the experiments?

Concerning these limitations mentioned above, further researches are necessary. As the first further research, a direct examination should be conducted in order to verify that a high cognitive load accompanies R&L and Personalized OR. Second, in order to make generalization of the effect of taxing oral reading, more experiments should be conducted at different stage of schooling such as at university or at junior high school. Further researches and experiments into taxing oral reading are strongly recommended.

Finally, the present researcher would like to thank all the participants in the study who shared their time and experience for this study. Without their participation, this study would not have been possible.

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## Appendices

### Appendix 1

#### Text for the Preliminary Research

音読教材（統一教材）

次の英文は乗客乗員 155 人が乗った US エアウェイズ旅客機が両エンジン停止状態に陥った際、冷静な判断でハドソン川への不時着水を成功させた機長として知られている Sullenberger(サレンバーガー)の話です。

Captain Sullenberger grew up in Texas and passed his pilot's license at 14. When he joined US Airways in 1980, he had already served as a pilot in the US Air Force for seven years. He is also an experienced glider pilot and has a master's degree in psychology. He often said that few pilots ever faced life-or-death situations in a lifetime of flying. On Thursday such a moment came for him.

After reporting the “double bird strike,” the Captain had two choices: to land at the small airport near the Hudson or on the river itself. He chose the second one.

## Appendix 2

### Texts for the Main Research

音読教材①（普通の音読・顔上げ音読）

次の英文は、アメリカの女子柔道家である Rusty Glickman(ラスティ・グリックマン)さんの話です。1959(昭和 34)YMCA のニューヨーク大会で優勝しますが、女子を理由に金メダルを剥奪されました。女子柔道をオリンピック種目にするために力を尽くした女性です。

Rusty Glickman grew up in Brooklyn, New York. As a young girl, she had a reputation as a tough person. She started to learn judo and became so good that her coach asked her to go to the New York State YMCA Judo Championships.

There was no rule that stated only men could compete, but no woman had ever participated. So everyone assumed that she was a boy. Rusty substituted for an injured teammate, and helped team with the championship. She stood proudly with everyone to receive the gold medal, but after the ceremony Rusty heard her name called.

音読教材②（普通の音読・なりきり音読）

歌手アンジェラ・アキさんの話です。

Anjela Aki was born in Tokushima in 1977, to a Japanese father and an American mother. She looked a little different from the other classmates, and they often left her out. But she was good at playing the piano, so music made her popular. She still felt uncomfortable, though.

Angela went to high schools in Okayama and Hawaii, and a university in Washington, D.C. In every place, however, she felt out of place.

One day, Angela went to a concert by Sarah McLachlan. Sarah's songs impressed Angela, and inspired her to become an influential singer like Sarah.

音読教材③（普通の音読・顔上げ音読＋なりきり音読）

次の英文は、災害に見舞われた山間の村で、犬と幼い兄弟の交流を描いた作品『マリと子犬の物語』の主人公、綾と亮太の話です。

Aya and her brother Ryota lived in Yamakoshi Village, Niigata Prefecture, with their father and grandmother. One day, they found a dog. Aya wanted to keep her. She asked her father and he said yes. Aya was delighted and named the dog Mari. The next year, Mari had three puppies. They were named Gu, Choki, and Pa. Aya and Ryota played happily with their four dogs every day.

On the evening of October 23, 2004, Aya and her grandfather were at home. Ryota and his father were out. Mari suddenly barked loudly outside the house. The next moment, the ground shook.

音読教材④（顔上げ音読・顔上げ音読＋なりきり音読）

次の英文は、1968年メキシコオリンピック男子走高跳において、従来の跳躍スタイルであった「ベリー ロール」より、新しい跳躍スタイルである「背面跳び」を最初に世界的大会で実施した選手 Dick Fosbury(ディック・フォズベリー)の話です。

Now American Dick Fosbury is on his third and last try. If he clears this height, he will get the gold medal and set a new Olympic record. The spectators are watching him anxiously and curiously. He has been using quite a strange style of jumping.

Now he has started running to the bar. His head, his shoulder, his back, and now his legs go over the bar! Yes! He did it! The spectators are giving him a standing ovation.

Fosbury himself is quite modest about his achievements. After returning from Mexico, Fosbury decided to become an engineer. (98)



### Appendix 3

#### Text for the Preliminary Research

##### Bill Gates

Everyone in the world knows about this man, who is billionaire and established a very famous computer company, Micro Soft Company. His name is Bill Gates.

Bill Gates was born in 1955 in Seattle. He had two sisters. His family was wealthy and his father was a lawyer and his mother worked for a famous company as a secretary.

He was not an outstanding student when he was an elementary school student but he was very clever and very interested in a computer, in particular, the part of software of a computer. When he graduated from school, he decided to go to a famous national university, Harvard University. There, he met Steven Anthony Ballmer, who became a CEO at Micro Soft Company. They happened to meet there and lived in the same dormitory in Harvard University.

## Appendix 4

### List of Words for the Preliminary Research

次の単語のうち本文に出てきたと思われる単語にチェックを入れなさい。

- 1  millionaire
- 2  billionaire
- 3  largest
- 4  Harvard
- 5  Oxford
- 6  national university
- 7  Los Angeles
- 8  Seattle
- 9  lawyer
- 10  doctor
- 11  teacher
- 12  high
- 13  Apple computer
- 14  clever
- 15  outstanding
- 16  software
- 17  hardware
- 18  technology
- 19  hard working
- 20  computer

## Appendix 5

### Text for the Main Research

#### Audrey Hepburn

Audrey Hepburn was an actress. She won all of the top awards in show business, namely the Academy, Tony, Emmy, and Grammy awards. Her life as an actress was full of success.

But Audrey's life as a child was not a happy one. Her father left her family when she was six years old, because he wanted to support the Nazis although the rest of the family did not want to. When the Nazis attacked Holland where she lived, they would not let the local people buy enough food. Audrey and her family had to make flour from tulip bulbs to bake bread.

Audrey moved to England and became an actress. Then, she was chosen to play the lead role in a play called Gigi. She moved to America and made her play the lead debut. Later she made her Hollywood debut as well. Roman Holiday was her first movie, and one of the most popular movies in which she played the lead role.

## Appendix 6

### List of Words for the Main Research

次の単語のうち本文に出てきたと思われる単語にチェックを入れなさい。

- 1  Academy
- 2  Germany
- 3  Italy
- 4  Holland
- 5  Sweden
- 6  Broadway
- 7  New York
- 8  Tiffany
- 9  Roman Holiday
- 10  movie
- 11  TV
- 12  the Nazis
- 13  mother
- 14  father
- 15  the lead debut
- 16  an international star
- 17  bulb
- 18  war
- 19  occupation
- 20  attacked
- 21  took over
- 22  actress
- 23  singer
- 24  show business
- 25  ten years old
- 26  hard time
- 27  flee
- 28  bomb
- 29  bread
- 30  flower

## Appendix 7

### Scale for Oral Reading Assessment

Score	Accuracy of word	Chunking	Fluency
5	All the words are correctly pronounced.	All the segmentation is conducted appropriately.	can read within 30 seconds.
4	A few words (1~2) are not correctly pronounced.	Most of the segmentation is conducted appropriately. 1~2 wrong segmentation occurs.	Can read within 45 seconds.
3	Several words (3~4) are not correctly pronounced.	Some segmentation is not conducted appropriately. 3~4 wrong segmentation occurs.	Can read within 60 seconds
2	Many words (5~6 words) are not correctly pronounced.	Only some of the segmentation is conducted appropriately. 5~6 wrong segmentation occurs.	can read within 75 seconds
1	More than 7 words are not correctly pronounced.	Almost all the segmentation is not conducted appropriately. More than 7 wrong segmentation occurs.	can read more than 95 seconds

## Appendix 8

### Second Part of the Speaking Test

Your story should begin with this sentence: One day, Ken and his parents went to a computer shop.



## Appendix 9

### Scale for Speaking Assessment

	Content	Fluency	Attitude	Grammatical accuracy
5	gives a clear description. Ideas logically presented and well structured. The volume is sufficient.	expresses him/herself fluently and spontaneously, almost effortlessly.	shows very good signs of interest in speaking and makes an effort to extend the detailed description.	maintains a high degree of grammatical accuracy. Errors are rare and difficult to spot.
4	gives a sufficiently clear description. Ideas presented well. The volume is enough.	produces language with a fairly good tempo. Although he/she can be hesitant as he/she searches for patterns and expressions, there are few long pauses.	shows good signs of interest in speaking and makes some effort to extend the detailed description.	shows good grammatical control. Occasional 'slip' or lexical errors may occur but do not make mistakes which lead to misunderstanding.
3	gives a somewhat clear description but talks lacks structure(ideas not logically presented).	keeps going comprehensibly, even though pausing for grammatical and lexical planning and repair occurs sometimes.	shows acceptable signs of interest in speaking but doesn't strive to extend the description.	shows several grammatical and lexical errors and systematically makes basic mistakes; nevertheless it is clear what he/she is trying to say.
2	The volume is not enough. Gives no more than one-two sentences.	constructs phrases despite very noticeable hesitation and false starts. Very limited range of expression.	shows some signs of interest in speaking, but unsatisfactory.	shows only limited control of a few simple grammatical structure. Many basic grammatical and lexical errors.
1	No assessable input. Says very little.	manages very short and isolated utterances with much pausing to search for expressions. Very limited range of expression.	shows no interest in speaking.	many basic grammatical and lexical errors causing a breakdown in communication.

## Appendix 10

### Scale for Oral Reading Assessment

Type of oral reading	Oral Reading 1(Regular oral reading)				
	Oral Reading 2 (Read and look up)				
	Oral Reading 3 (Read and look up combined with personalized oral reading)				
Score	Accuracy of word pronunciation	Chunking	Fluency	the number of read and look up	the number of mistakes of changing pronoun
5	All the words are correctly pronounced.	All the segmentation is conducted appropriately.	can read within 30 seconds.	11~12	No mistakes
4	A few words (1~2) are not correctly pronounced.	Most of the segmentation is conducted appropriately. 1~2 wrong segmentation occurs.	Can read within 45 seconds.	13~14	one mistake
3	Several words (3~4) are not correctly pronounced.	Some segmentation is not conducted appropriately. 3~4 wrong segmentation occurs.	Can read within 60 seconds	15~16	two mistakes
2	Many words (5~6 words) are not correctly pronounced.	Only some of the segmentation is conducted appropriately. 5~6 wrong segmentation occurs.	can read within 75 seconds	17~18	three mistakes
1	More than 7 words are not correctly pronounced.	Almost all the segmentation is not conducted appropriately. More than 7 wrong segmentation occurs.	can read more than 95 seconds	more than 19	more than four mistakes



## Appendix 11

### Questionnaire on Oral Reading Activities

クラス	番号	名前	とても思う	そう思う	やや思う	ややそう思わない	そう思わない	まったく思わない
<b>あなた自身について</b>								
		1 あなたは英語の学習が好きですか。	6	5	4	3	2	1
		2 英語はあなたの将来に必要なものだと思いますか。	6	5	4	3	2	1
		3 英語を話せるようになりたいですか。	6	5	4	3	2	1
<b>音読活動を通して</b>								
		1 音読活動は楽しかった。	6	5	4	3	2	1
		2 音読活動は難しかった。	6	5	4	3	2	1
		3 音読活動を授業中に熱心に取り組んだ。	6	5	4	3	2	1
		4 音読活動の1回ごとの時間は適切であった。	6	5	4	3	2	1
		5 音読活動のテキスト(教材)の難易度は適切であった。	6	5	4	3	2	1
		6 音読活動は発音の練習に役立った。	6	5	4	3	2	1
		7 音読活動を行うことにより単語を覚えやすくなった。	6	5	4	3	2	1
		8 音読活動を行うことにより文の構造や文型を理解できるようになった。	6	5	4	3	2	1
		9 音読活動を行うことにより本文の内容が把握できるようになった。	6	5	4	3	2	1
		10 音読活動によりテキストを読むこと(黙読)の速度が速くなった。	6	5	4	3	2	1
		11 音読活動によりリスニング力が伸びた。	6	5	4	3	2	1
		12 音読活動によりは自分のスピーキングが伸びた。	6	5	4	3	2	1
		13 音読活動で話すことに自信を持てるようになった。	6	5	4	3	2	1
		14 予習・復習で以前よりも音読をするようになった。	6	5	4	3	2	1
		15 英語学習においてこれからも音読はつづけていこうと思う。	6	5	4	3	2	1
		16 今後も音読活動を授業に取り入れてほしい。	6	5	4	3	2	1