

16th ICLICE 2019 Istanbul 031-025 Hiroko Kashimoto

Effects of Phonics Instruction For Pre-Service of Elementary School Teachers

Hiroko Kashimoto*, Haruyo Yoshida
Osaka Kyoiku University, Lecturer, Japan
Corresponding Author: officekathy2012@gmail.com

ABSTRACT

Osaka Kyoiku University, a national university for teacher-training, provides two teaching English courses for future elementary school teachers in accordance with the teacher-training core-curricula. This is task-oriented research, which shows an effective way to promote undergraduate students' clear pronunciation using phonics instruction. This paper describes the effect of practical phonics instruction showing the test results from university students. The phonics instruction for about fifteen or twenty minutes was conducted practically during the half a semester, focusing on the sound of alphabet letters, digraph, some basic phonics rules. The students were given two different types of tests. First, the dictation of the alphabet phoneme was taken as a pre-test and the students were asked to write how they feel about teaching English to the elementary pupils at the same time. Many students wrote that they felt insecure about teaching English to their future students. Then, at the end of the semester, students did the same dictation test as a post-test and wrote what they learned and what they want to try in the classroom. Also, they were asked to record their pronunciation of minimal pairs in ten English sentences. These collected data were analyzed quantitatively and qualitatively. One of the most pressing issues now in Japan is the teaching of English to young learners. This means that teaching phonics even to undergraduate students is necessary to teach children, whereas almost all the students haven't experienced to learn phonics when they were elementary school pupils. It follows that it is very important to gain experiential knowledge of English sounds as well as how to teach letters and sounds to pupils. Phonics theory and practice improved undergraduates' pronunciation simultaneously.

Keywords: phonics, teacher-training, teaching English to young learners

Introduction

The Ministry of Education, Culture, Sports, Science and Technology; MEXT provided *the Course of Study* (primary school learning guidelines) in 2017, which will be implemented from 2020. So that elementary pupils will learn English not only speaking and listening but also reading and writing through linguistic activities. It aims to develop their English qualities and abilities that serve as the basis for communication. However, both in-service teachers at elementary schools and teacher-training students still lacked the necessary training for instruction. Along with the questionnaire survey (2019) conducted by AEON Co., Ltd. on 270 in-service teachers, about half (48%) responded that they were not very confident / anxious about teaching foreign languages as a subject. Under such circumstances, it can be said that it is becoming more and more important to know and fully master the teaching methods related to "reading and writing" for children in the teacher training courses as well as in-service teacher training.

This researcher has been teaching English to elementary pupils for more than twenty-five years, and also English-related subjects in elementary school teacher training

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

courses at OKU since 2016. It was found out that many university students are not confident in their pronunciation and are worried about teaching English to elementary pupils. In addition, the result of the test of listening to alphabetic phonemes for university students showed almost the same as the stumbling part of elementary school pupils. Hence, what, how much and how to teach was a big problem in the limited class time.

Therefore, it is set to enable students in elementary school teacher training courses to confidently pronounce the 26 letters (25 sounds) of the alphabet as the goal in OKU specialized subjects relating to foreign languages, which is conducted during semi-annual, 15 times. In the subject, university students experience the method of letter teaching that this researcher has conducted for elementary school students.

Purpose of Study

This paper introduces the actual practice of reading and writing that was conducted in the first half of 2019 at OKU, and analyzed the results of the phoneme listening check test and questionnaire survey conducted before and after the semester. Furthermore, it will discuss and provide suggestions for teaching in future teacher training courses.

Research questions

These are the Research questions;

RQ1) Does teaching phonics to university students help them learn phonemes?

RQ2) Can university students become confident in teaching English to their children by knowing the rules of phonics?

RQ3) What is the minimum level of teaching literacy in the teaching training course?

Methodology

Participants, Implementation Period

Participants in this study were about 30 third-year undergraduate students (except for English education majors). In the first half of 2019 (April to July), phonics instruction was conducted 13 times in the required subject "English for Elementary Schools" (90 minutes, 15 times). The student's level of English (by self-report checking CEFR Can-Do descriptors, see Figure.1) is generally between CEFR A2.2 and B1.

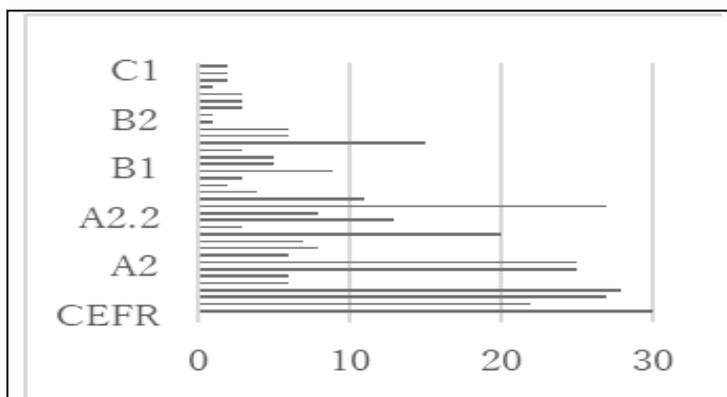


Figure 1. The student's level of English

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

Research Methods

From 10 to 15 minutes of each class time from April, the students were taught to the pronunciation of each letter according to the area of production for vowels and consonants through experiencing activities as a warm-up activity as in accordance with the plan shown in Table 1. In the Table, the items of the educational material for children “*Enjoy Phonics 2*” (2016, Zyuken Kenkyusha) were used.

Table1
Lesson Plans

	Contents		Contents
1	Orientation	8	Magic E
2	Pre-Check Test	9	Digraph & Blend
3	Alphabet letter names & sounds	10	Vowel Sounds
4	Alphabet Jingle	11	Vowel Teams (1)
5	Initial Sounds (1)	12	Vowel Teams (2)
6	Initial Sounds (2)	13	Review
7	Rhyming Words	14	Post-Check Test

Actual instruction was divided into the following three steps.

1st step: Alphabet Letter Sounds

2nd step: Alphabet Phonetic Sounds

3rd step: Blending & Decoding Activities

At the second lesson when phonics is not being taught, a preliminary check test was conducted for 25 phonemes of the alphabet (the overall accuracy rate at this time was 69.2%). Before the instruction, students weren't able to pronounce perfectly, for example, not only / l / and / r /, / m / and / n / are ambiguous, but also / g / and / z / were not clear. Since there were many students who could not distinguish, introducing correct letter names was the start of the lessons. In the second step, letter sounds were introduced with the aid of visual aids as well as how to make and sounds to the pupils, and then Alphabet Jingles*¹ are repeated several times at the beginning of the lessons. After enough practice step1&2, students learned blending three sounds, adding explanations about things that children easily make the sounds as the third step. In addition, after giving lectures about initial sounds, end-of-word sounds, onset-lime, Silent E / Magic E, so on, the students did Micro teaching as they did for pupils, and were able to experience and introduced various activities that were actually conducted for children. The post check test was performed at the 14th lesson. The content of the test was the same as the pre-test.

Pre / Post-Test

In April and July 2019, the checking test were provided. The test has four items (A. Alphabet phoneme sounds, B. Words, C. Syllable decomposition, D. Phoneme decomposition), E. Questionnaire, and F. Free description. In Part A, students listen to the 25 phonetic sounds that a native speaker pronounces in random order and write the letters. In Part B, they also listen to the words (including meaningless words) pronounced by the native speaker (for example, listen to /en/ and write “en”). In Part C, listen to English words spoken by the native speaker and write a circle on the number of syllables of that word (for example, listen to the word “dog” then circle on 1), and in Part D, listen and write a circle the number of phonemes of English words spoken by the native speaker (for example, listen to the word “dog” then circle on 3). Part E is questionnaire of the 5-points Likert scale about; (1) confidence in speaking English (pronunciation), (2) confidence in seeing words that you don't know, and (3) confidence in teaching children the rules of

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

English sounds and letters). Part F asks questions about teaching English in foreign languages classes, for pre-test: “What you feel and what you want to do in the future”), for post-test: “What you want to learn and learn in the future” Please write what you want.”) and students wrote freely. In this paper, the results of analysis of A, E, and F are described.

Recording Test

The students also read and recorded 10 English sentences including minimal pairs such as “Nothing will sink in the lake”. These 10 sentences (see Appendix 1) used samples from Kobayashi (2008.) Recording was done using the voice input on Google Drive. The result of their speech was statistically analyzed using SPSS.

Literature Review

Allen Tamai (2010) cites “knowledge of alphabet letters” and “phonological awareness” as two important abilities for early reading stage. As the basics of reading and writing, it is important to improve the speech recognition ability as well as the ability to know the alphabet’s “letters”, “sounds” and “relations between letters and sounds”. In various researches and practices, it is recommended that students get familiar with the sounds in listening and speaking activities and then relate to the literacy in the English as a Foreign Language (EFL) circumstances. Furthermore, Japanese language is based on the morphographic writing systems and English uses phonographic ones. So that the Japanese young learners should learn English literacy very carefully and need a lot of efforts.

The Elementary School Study Guide Commentary (MEXT, 2017) indicates that “the relations between pronunciation and spelling should be taught at junior high school”. At the same time, *Elementary School Foreign Language Activity / Foreign Language Training Guidebook* (MEXT, 2017) tells teachers should teach “how to read the letter names” and “how to read the letter sounds”, which means how pronounce or read the English words. The transitional (just only using between 2017-2018) text books called “We Can! 1 & 2” (2016) have the “Sounds & Letters” section (see Figure 2), which is at the bottom of the pages showing letters and pictures that starts with the letter sounds), and the new official textbook companies have prepared teaching materials and tools for reading and writing. They intended for children to notice that English letters have sounds. (For example, NEW HORIZON Elementary 6 by Tokyo Shoseki).

Kashimoto has been teaching literacy to elementary school students in the English classroom for children. At that time, refer to Reading Skills Pyramid (Figure 3) shown by Time4 Learnig.com in the United States, and for reading skills, as shown in Figure 3, there are five areas (phoneme recognition, phonics, vocabulary, understanding, fluency). In order to “read” or “speech letters”, it is important to improve phonological awareness, but when Japanese pupils learn English as a foreign language, they should learn the alphabet letter names and sounds in addition of the above. It is indispensable to do it attentively as same as the first language. However, when the in-service teachers and the undergraduate students were the elementary pupils, they did not experience such letter guidance, and few of them have been taught phonics even in their junior high schools. Therefore, it is necessary that undergraduate students in elementary school teacher training courses, who will teach foreign languages in the future, need to learn from the basics of alphabet learning.

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

Unit 5

Let's Watch and Think 映像を見て、登場人物が夏休みにしたことなどを表に書こう。

名前	Mark	Emma	Kosei
したこと			
感想			

Let's Listen 登場人物が夏休みにどこに行ったのかを聞いて、線で結びよう。

Let's Read and Watch 夏休みの日記を読み、映像を見て、内容を確かめよう。また、その内容に合う絵を選ぼう。

My Summer Vacation
Date: August 12th

I went to the sea.
I enjoyed swimming.
I ate fresh fish.
It was fun.

A

B

C

1 John 2 Christina 3 Satoshi 4 Aoi

Figure 2. We Can! 2

Allen Tamai (2019) also cites five stages of alphabet learning as follows:

- 1) To be able to recognize the shapes of the Alphabet letters.
- 2) To be able to understand the names of the Alphabet letters correctly when they listen to the sounds.
- 3) To be able to understand the sounds of the Alphabet letters correctly when they see the letters.
- 4) To be able to say the correct names of English letters.
- 5) To be able to write the Alphabet letters when they listen to the Alphabet letter names.

Reading Skills Pyramid

by Time4Learning.com

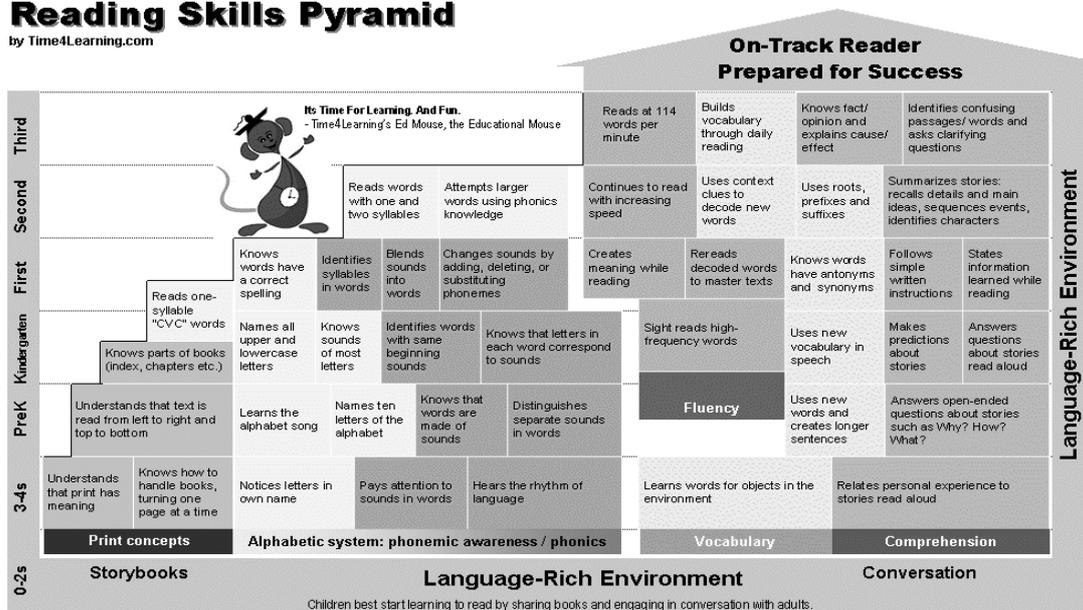


Figure 3. Reading Skills Pyramid

from <https://www.time4learning.com/readingpyramid/index.htm>

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

On the previous practice of the researcher (Kashimoto, 2017), the students at OKU had no noticeable difficulties in recognizing the letter shapes, but there were some problems that could be perfected from number 2 to 5 of the list of above.

Findings

Based on the test results, three research questions are proved. Here are the research questions.

RQ1) Does teaching phonics to university students help them learn phonemes?

RQ2) Can university students become confident in teaching English to their children by knowing the rules of phonics?

RQ3) What is the minimum level of teaching literacy in the teaching training course?

Pre/Post Test Result

PART A: Phoneme Checking Test result. Figure 4 shows the average value of each phoneme. In the phonetic writing test for students, the overall accuracy rate was 69.2% in the pre-test, and 85.3% in the post-test. In the post test, the result of all phoneme except /m/ and /g/ have risen (since the original score is quite high, so it can be said ceiling effect).

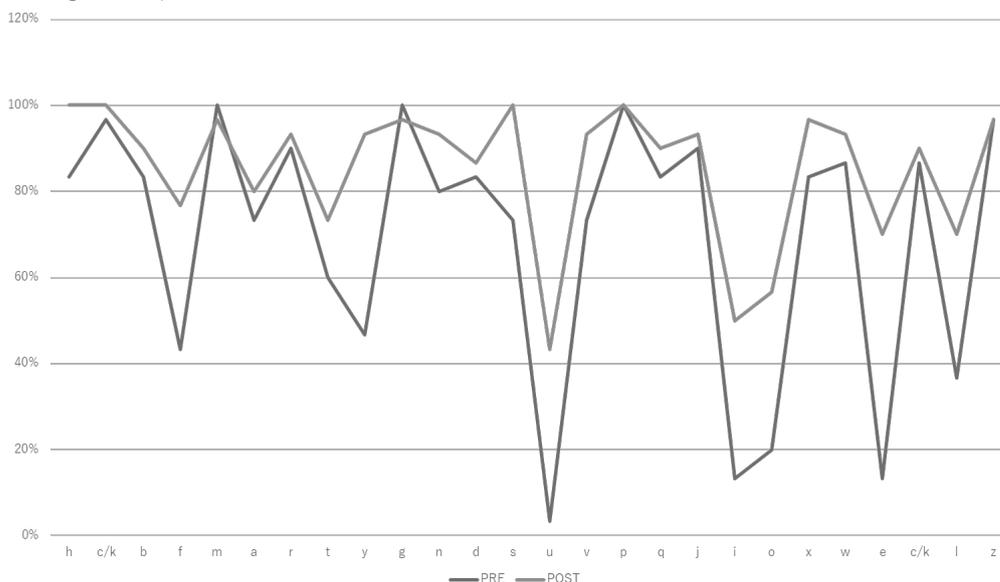


Figure 4. Phoneme Checking Test result

However, looking at Table 2 which shows the Descriptive statistics of the t-test (df=29),

[e] $t = -6.238, p = .000$, [y] $t = -5.037, p = .000$, [i] $t = -4.176, p = .000$,

[u] $t = -4.709, p = .000$, [f] $t = 3.612, p = .001$, [o] $t = -3.247, p = .003$,

[s] $t = -3.247, p = .003$,

They are significantly different, and also,

[h] $t = -2.408, p = .023$, and [x] $t = -2.112, p = .043$

They are able to say different. In the descriptive statistical results of the pre-test, listening to phonemes of [u, i, o, l, e, y, a, f] and [r] was particularly weak. It is assumed that it is very difficult for Japanese learners to identify and create short vowels, but the sounds such as [l, r], and [f] are also weak.

From the above, it can be said that the alphabet instruction was effective, especially about the short vowels' sounds for the undergraduate students. So that, RQ 1 was proved.

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

Table 2

Descriptive statistics of Phoneme Checking Test

	phoneme	frequency	min	max	mean	SD
1	h	30	1	1	1.00	0.000
2	c/k	30	1	1	1.00	0.000
3	b	30	0	1	0.90	0.305
4	f	30	0	1	0.80	0.407
5	m	30	0	1	0.97	0.183
6	a	30	0	1	0.80	0.407
7	r	30	0	1	0.93	0.254
8	t	30	0	1	0.77	0.430
9	y	30	0	1	0.93	0.254
10	g	30	0	1	0.97	0.183
11	n	30	0	1	0.93	0.254
12	d	30	0	1	0.90	0.305
13	s	30	1	1	1.00	0.000
14	u	30	0	1	0.47	0.507
15	v	30	0	1	0.90	0.305
16	p	30	1	1	1.00	0.000
17	q	30	0	1	0.90	0.305
18	j	30	0	1	0.93	0.254
19	i	30	0	1	0.57	0.504
20	o	30	0	1	0.60	0.498
21	x	30	0	1	0.93	0.183
22	w	30	0	1	0.97	0.254
23	e	30	0	1	0.77	0.430
24	c/k	30	0	1	0.93	0.254
25	l	30	0	1	0.70	0.466
26	z	30	0	1	0.97	0.183

PART E: Questionnaire. In this section, students answered three questionnaires below and circle on the 5-points Likert scale.

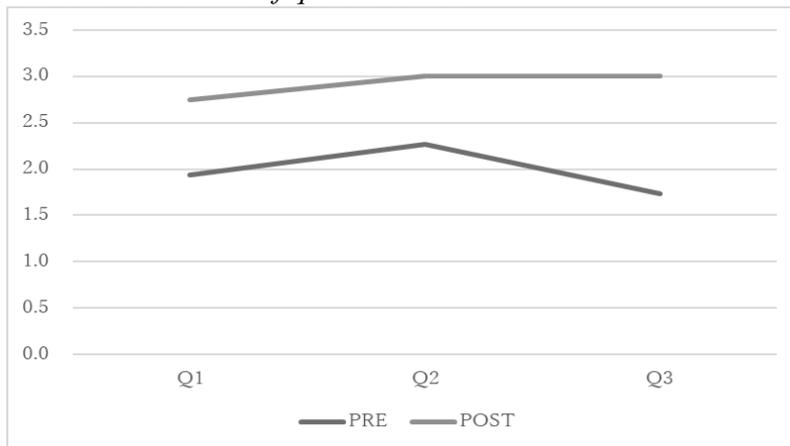
Q1) confidence in speaking English (pronunciation)

Q2) confidence in seeing words that you don't know

Q3) confidence in teaching children the rules of English sounds and letters)

The result shows Table 3. The all average of the them went up. It means the phonics instruction was effective for improving the confidence of teaching English to elementary pupils.

Table 3. *The results of questionnaire*



PART F: Free description. Students wrote freely about teaching English in foreign languages classes, asking at pre-test: “What you feel and what you want to do in the future”), at post-test: “What you want to learn and learn in the future” Please write what you want.”). At the pre-teat, some students wrote,

- Current pupils can practice the pronunciation of the alphabet and listen to it with such as chants, but I haven't done, so I'm not confident to teach English.
- I have no confidence in my English. I feel embarrassed for my pronunciation.
- I am not good at English. I don't know the rules of English sounds and letters.

Whenever, after the instruction, their description has changed, such as

- Through the Phonics instructions, I became to understand the rules of English pronunciation. However, if I can tell that I can explain it to my children, I probably won't be able to understand it, so in the future I would like to understand it linguistically, not sensuously.
- I'm still unable to pronounce, so I want to be able to pronounce with a little more confidence. I also want to be a little more familiar with the rules for letters.
- I want to improve my pronunciation. I want to improve my knowledge and skills so that my students can enjoy teaching English.

Many students describe as above. It turns out that they feel that their pronunciation has improved and that further practice is needed. From these results, the RQ2 can be said proved.

Recording Test result

Looking at the results of the utterance check test (Table 4), it assumes that students don't have the notable difficulties with pronouncing / s /, / sh /, / th /, / r /, / i /, / i: /, / b /, / v /. However, these phonemes are usually said to be difficult for Japanese. So that, the following hypothesis can be considered.

1. Students are consciously speaking about phonemes, which are generally said to “be poor for Japanese people” on the test.
2. When speaking, there is a tendency that the word closer to the end of the sentence is more conscious than in the middle of the sentence.

Therefore, it needs to be verified in future research.

EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

Table 4
The result of t-test (Recording)

		<i>t</i>	<i>df</i>	<i>P</i>
1	nothing-sink	1.447	22	0.162
2	light-right	0.826	22	0.418
3	rise-raise	-2.612	22	0.016
4	mouse-month	-2.077	22	0.05
5	she-sea	-3.425	22	0.002
6	boat-vote	2.912	22	0.008
7	caought-coat	-0.371	22	0.714
8	fill-feel	-4.114	22	0.000
9	fry-fly	1.283	22	0.213
10	read-red	-1.000	22	0.328

Discussion

The results of Nam’s research (2006), which described the role of modified phonics instruction in acquiring phonemic awareness for Korean adult EFL learners, showed that “modified phonics instruction was significantly effective on both perception and production tests regardless of the length of the treatment. Moreover, a relatively high correlation between perception and production was observed.” (p.231)

Also, according to Wyse and Styles (2007),

The Rose Report concludes with the signal of stronger state intervention in the training of teachers: ‘effective monitoring of the teaching and learning of phonicwork by those in positions of leadership’ will be required and this ‘priority must be reflected in the effective training of the teaching force’ (Rose, 2006, p. 21). (p.41)

According to *the Elementary school teacher training course foreign language (English) core curriculum* (MEXT), the overall goal is to acquire operational skills and background knowledge about English, students will be able to get

- (1) English skills necessary for class practice
- (2) Background knowledge about English are clearly specified.

Furthermore, the achieving goal of (1) are mentioned,

- 1) to have the listening skills necessary for class practice.
- 2) to be able to speak (exchange / presentation) necessary for class practice.
- 3) to have the reading skills necessary for class practice.
- 4) to acquire the writing skills necessary for class practice.

However, it is difficult for many undergraduate students, who are not confident in their English proficiencies, to improve their four English skills with only 15 class hours and a class size of 50-60 students. Though the practice, with the aim of improving both the teaching ability for children and their own pronunciation, it would be a realistic goal that all students in the elementary school teacher training course should become proficient in 26 letters (25 phonemes) of the alphabet. This is not an easy goal from the practice. Also, acquiring a minimum “Classroom English” is necessary. These two are the minimum required skills for teaching foreign languages as an elementary school teacher.

Limitations

Obviously, it is important to start with the development of phoneme recognition skills before teaching the students. From 2020, foreign language activities will be mandatory for 3rd and 4th graders. In this paper, it is assumed that phonological recognition ability is sufficiently developed during that period.

The sample of this study is small in this practice, and Google Drive voice input was used for the speaking test. Thus, it will be necessary to explore the possibility of increasing the number of samples and using a more accurate voice input device.

Recommendations

In the future, how should guidance (especially for literacy teaching) be given to the pupils who need special support in foreign language classes, and find out what kind of knowledge and skills are necessary for the teachers.

Conclusion

One of the most pressing issues now in Japan is the teaching of English to young learners, especially in the curriculum of elementary education. In-service teachers, unfortunately, do not have enough knowledge and experience to achieve the goals that MEXT has set out. Thus, teaching syllabi now includes phonics instruction to in-service teachers. According to Allen Tamai (2019), the most important point for gaining literacy to Japanese young learners is to foster in them phonological awareness and to integrate literacy instruction cultivating speech-language (phonological/phonemic proficiency). It mentions that elementary school teachers need the knowledge and skills of phonics, which is known to be a primary path to teaching the rules of English sounds and letters, especially for children. This means that teaching phonics even to undergraduate students is necessary to teach children, whereas almost all the students haven't experienced to learn phonics when they were elementary school pupils, even in Junior high schools. It follows that it is very important to gain experiential knowledge of English sounds as well as how to teach letters and sounds to pupils. Phonics theory and practice improved undergraduates' pronunciation simultaneously.

As students' free descriptions which they wrote at the post-test, many students responded positively to this explicit phonics instructions, noting how it improved their own pronunciation and gave them confidence both to speak English and to impart the same information to their future students. At the same instant, they described that they need more opportunities continually to be familiar with the rules.

*1 Alphabet Jingle: A phonics alphabet jingle is a character that is cast from A to Z, with a set of letters, their pronunciation, and the words that begin with that pronunciation, such as "A / ae /, / ae /, apple"

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EFFECTS OF PHONICS INSTRUCTION FOR PRE-SERVICE OF

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Appendix

Recording Test samples

- 1) Nothing will sink in the lake.
- 2) Look at the light on your right.
- 3) I must rise to ask raise my wages.
- 4) The cat catches a mouse every month.
- 5) She went to the sea.
- 6) He used the boat to go to the vote.
- 7) She caught a cold after she took off her coat.
- 8) Fill in the document when you feel ready.
- 9) No one wishes to fry a fly to eat.
- 10) He read the red-covered book.