

Letter Name (Alphabet) and Letter Sound (A Field Study at KinderStation Preschool (TK Cahaya Bangsa Utama) Yogyakarta)

Yohana Ika Harnita Sari*

Sekolah Vokasi, Universitas Gadjah Mada, SEKIP Unit 1, Bulaksumur Yogyakarta 55281

ABSTRACT

Teaching reading to early learners is begun with teaching how to identify and pronounce each letter in a word. Therefore, every preschool or primary school has its own technique in teaching pronunciation as the stepping stone to teach reading to its students. KinderStation Preschool (TK Cahaya Bangsa Utama) Yogyakarta is one of the preschools in Yogyakarta that teaches reading to the students using phonics approach, especially analytic phonics. This paper has two objectives. First, it is to describe the application of phonics at KinderStation Preschool. Second, it aims to describe the result of the application of phonics at KinderStation Preschool. To answer those goals, field study is utilized by doing observation and interview. The employment of analytic phonics covers three points; they are the learning materials, the learning media, and the learning process applied in KinderStation Preschool. The application of phonics in teaching reading results on the development of students' reading fluency. The students have automatic recognition of letters and are able to pronounce words easily and correctly.

ARTICLE INFO

Paper type:

Research Article

Article history:

Received 25 January 2016

Revised 15 February 2017

Accepted 23 May 2017

Available online xxxx

Keywords:

- Letter name (alphabet)
- Letter sound
- Phonics
- Preschool

1. Introduction

Reading is considered as a receptive skill in language learning. It is not acquired, but learned. Thus, reading becomes a subject taught in schools. There are three points as the main goals of teaching reading in general. They are to develop (1) automatic word recognition (fluency), (2) comprehension of the text, and (3) a love of literature and a desire to read [1]. Those three goals are hierarchical since goal number one is the basic need in reading, which is on the level of knowing. The second goal is in the level of understanding and the last goal is for enjoyment or pleasure. Meanwhile, in teaching reading to young learners, the teacher will only focus on the first goal, i.e. building and develop automatic word recognition. To become skillful readers, they should be able to recognize and identify words, in which a word is formed by some letters. The words in English are arranged by letters from a to z, called letter names or alphabet. There are 26 letters of alphabets in English language, but those letters produce 44 sounds [2] as described in Appendix 1. The sounds consists of 5 short-vowel sounds, 18 consonant sounds, 7 digraphs, 6 long vowel sounds, 3 r-controlled vowel sounds and 5 diphthongs or other special sounds [3]. Although few of the English letters are pronounced irregularly in word-context, like *u* in "university" and "umbrella" and also *h* in "hour" and "horse", teaching the students about the common sound is really beneficial for them. If the students are able to identify the letters and those common sounds, they will be able to read most words in English as written by Anderson et al. (1985) as cited in [1] that:

English is an alphabetic language in which there are consistent, though not entirely predictable, relationships between letters and sounds. When children learn these relationships well, most of the words

* E-mail Address: yohanaikahs@ugm.ac.id

in their spoken language become accessible to them when they see them in print. When this happens, children are said to have ‘broken the code’.

Consequently, teaching reading to early learners should be started with teaching them about the letters, both the letter names and the letter sounds. They learn the letter names visually by observing its symbol and learn the letter sounds phonologically by pronouncing it. Moreover, they have to make construction between the symbol they see and to pronounce it as stated by Ehri (1992) (cited in [4]) that:

When children learn about letter names and sounds, they use their knowledge to form systematic visual-phonological connections between letters seen in words and sounds detected in their pronunciations ... usually initial or initial and final letters. ... When readers acquire phonemic segmentation skill and phonological recording skill, they use this knowledge to form complete visual-phonological connections. ... Individual letters are linked to individual phonemes.

The student’s knowledge about letters leads them to the awareness of phonemes. Phoneme is the smallest unit of sound which alters a word’s meaning [5]. [6] agrees that “spoken language is made up of discrete units of sounds, called phonemes, like the /b/ sound in “bat” or “boy”.” Hence, phonemic awareness happens when the students recognize that spoken language is formed by single sounds [7]. Single sound is not always an individual letter (e.g. /a/ in “ant”), it can be a combination of two letters called digraph (e.g. /oo/ in “cook”), and it might be tri-graph, i.e. a three-letter combination (e.g. /are/ in “care”) [8]. So, two words with different number of words (e.g. “mug” and “moon”) may have the same number of phonemes. The word “mug” consists of 3 words and 3 phonemes, whereas “moon” has 4 words but only 3 phonemes. The further example about segmenting words into phonemes is presented in Appendix 2.

Phonemic awareness is not an innate skill; it is acquired through learning process. The process itself needs appropriate approach so that the students can learn to spell and pronounce a word, which at a later stage to read a passage, more easily. Phonics is considered as a proper approach in which teaching spelling pattern and sounding pattern relationship based on alphabetic principle (Adams, 1990; Blevins, 2006 as cited in [9]). [8] is in line with the definition that phonics is teaching how to transfer letters or groups of letters into sound systematically. In addition, [6] declares that “phonics is pattern to decode written language”. In other words, phonics is an approach which employs the relationship between symbols and sounds by sounding out the letters or groups of letters.

[10] and [8] classify phonics approach into two strategies based on the learning process conducted in the classroom as the application of the approach. They are analytical phonics and synthetic phonics. When the analytic phonics is employed, the letter sounds are taught in the context of meaningful words or text. For example, if the letter *k* becomes the main attention of the lesson, some words which have /k/ sound as the initial sound will be presented; such as “king”, “key”, “kite”, and “kitten”. In this step, attention is drawn to the /k/ sound pronounced at the beginning of the words. After all letter sounds have been taught in this technique, the next step is teaching the letter sounds that are at the end of the words (e.g. /x/ sound at “box”, “fox”, “six” and “ox”), after that in the middle of the words (e.g. /e/ sound in “pen”, “hen”, and “cent”, and in consonant – vowel – consonant (CVC) words (e.g. /j/, /a/, and /m/ sounds in “jam”). When the form of CVC word is mastered, it means the students master all of the letter sounds of the whole words. Then, the students will deal with sounds in digraphs and word families as explained by [10] that “After mastering consonant-vowel-consonant words, children are taught about vowel and consonant digraphs and shown word families of similarity spelt words, e.g. ‘cake’, ‘bake’, ‘make’, ‘lake’; ‘coat’, ‘boat’, ‘float’, etc.”

The next strategy is called synthetic phonics. The basic concept of this strategy is that all of the letter sounds should be taught first before the students are acquainted with words or texts. Thus, after all letter sounds are learned, the single sounds should be blended to build some words (Feitelson, 1988 as cited by [10]). For example, when the students are learning about letters *t*, *a*, *p*, and *s*, they are to build some words from that letters like “tap”, “pat”, “taps”, and “pats”. Then, they are to pronounce each letter in each new word while synthesizing (blending) all the sounds together to form the pronunciation of the new word. By doing this, the students produce the pronunciation by themselves, without teacher’s assistance [10]. [8] also proposes some teaching schemes based on synthetic phonics. They are (1) letter sound materials are set and taught in certain sequence; (2) the students have short period lessons but many materials to learn; (3) the first meetings take more time and effort in introducing them with the new letter sounds; (4) the students learn how to combine sounds to make words,

and practice it; (5) they learn to spell and read at the same time; (6) attractive sources, games, and activities are used; and (7) the teaching-learning process provides chance for language development.

Moreover, [1] proposes ten guiding principles in teaching phonics to English language learners in general. (1) Connect phonics and vocabulary instruction. The teacher should prepare a keyword of the day which is related to the phonic sound learned, e.g. “ball” for /b/. (2) Use kinesthetic activities to connect a sound to an action. For example, the teacher may display a ball and bounce it while saying /b/ - /ball/. (3) Work on articulation. The teacher should help the students to focus on the learned sound and model how the sound is formed by paying attention to the position lips, teeth, and tongue as illustrated in Figure 1. (4) Learn the confusing sounds for each language the students speak. For example, many Indonesian students, they tend to pronounce /f/ and /v/ in the same way. (5) Use music, body language, and realia / visuals to teach new words or concept. Realia is real objects and visuals can be in the form of photos, videos, or simple drawing on the board. (6) Connect phonics learning to writing and real-life application. (7) Use technology, for example computer software, internet, DVDs, etc. (8) Provide each student with a bilingual dictionary. (9) Provide comprehensible input; by providing clear, simple explanations and examples. (10) Modify your response expectations based on each student’s level of language proficiency. Teacher may give different response starting from a word like “Yes”, a phrase “Good job”, even a sentence “Well, I like the ball.”

KinderStation Preschool (TK Cahaya Bangsa Utama) is an English-speaking private preschool in Yogyakarta which adapts phonics as an approach in teaching reading to the students. This approach is employed as an enrichment of International Primary Curriculum (IPC) utilized there. IPC is an integrated learning which combines some subjects such as mathematics, science, language – art, field trip, art & craft, music, and Montessori. English language is one of the languages taught there. It aims at involving the students in the activities which lead them become confident and proficient readers and writers. Accordingly, KinderStation Preschool has phonics as one of the sub-subjects to reach the goal of the English language subject. Thus, this paper has two objectives. First, this paper aims to describe the application of phonics at KinderStation Preschool. The second goal is to describe the result of the application of phonics at KinderStation Preschool.

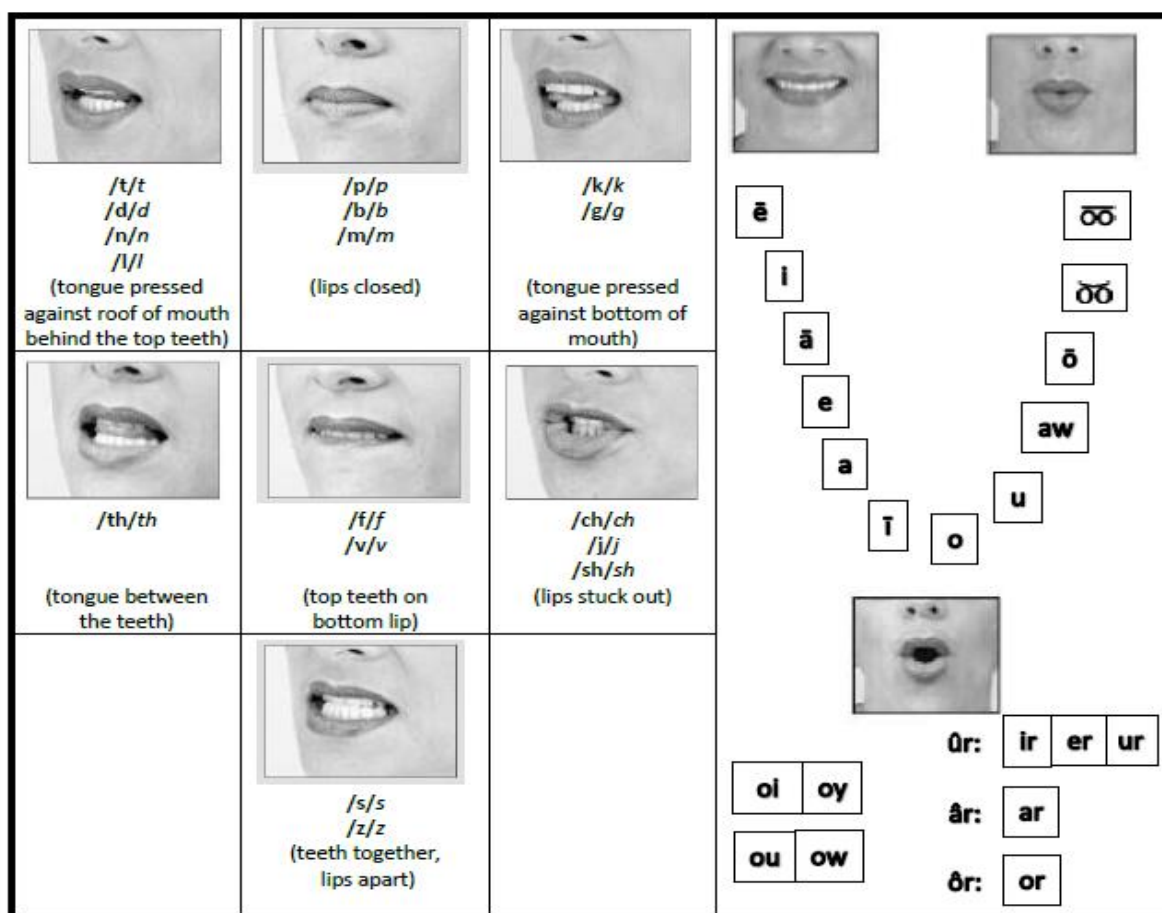


Figure 1. Consonant and Vowel Mouth (Lips, Teeth and Tongue) Position (Taken from [1])

2. Research Method

Since the goals of this paper are to describe the application of phonics as the sub-subject of English language subject, used at KinderStation Preschool and to describe the result of the application, the writer did field study by doing observation and interview with the Principal of KinderStation Preschool (*Vincentia S.D. Ika Sari, M.Si*). Library study is also done to get some basic theories of phonics. Hence, the descriptive data are presented in the discussion.

3. Result and Discussion

Referring to the stages of reading development theory proposed by Chall (1983) cited in [1], the students of Kinderstation Preschool fits in Stage 0 called Pre-reading. It is said that this stage happens after birth until the children are about six. The children recognize letters, words, and printed symbols while developing their vocabulary. The learning materials, media, process, and also the result of the application of Phonics at KinderStation Preschool are described below.

3.1 Learning Materials

KinderStation Preschool has five classes based on age classification. They are Bumblebee (1.5 – 2 years old), Beetle (2 – 3 years old), Dragonfly (3 – 4 years old), Caterpillar (4 – 5 years old), and Butterfly (5 – 6 years old). Phonics is learned in all classes, except Bumblebee because it is still considered as baby class and most of the activities done is related to physical movement (gross motor skill) and nursery rhymes. In addition, the materials for those classes are distributed based on the level of difficulties. Beetle students start the phonics by recognizing letter names (visually) and single-letter sounds of the 26 letters of the English alphabet (*/a/ to /z/*). The letters functions as the initial sound in some words. As a matter of fact, the students are acquainted with the letter sound in their first ages as to build their phonemic awareness at the very early stage. It reflects Johnston and Watson's opinion that the phonemic awareness of preschool students is related to early literacy skills; such as identifying the alphabet letters and the printed stuff in their environment, like the printed name of a product and the wrappers of candies [11]).

Then, for the next class will deal with sound families since spelling is easier when the words are clustered based on their sound families (Hope, 2001:3). Dragonfly class learns to pronounce some words with short vowel sounds (like */ad/, /am/, /ap/, /ag/, /an/, /at/, /ed/, /eg/, /en/, /et/, /ib/, /id/, /ig/, /in/, /ip/, /it/, /ix/, /og/, /op/, /ot/, /ox/, /ub/, /ug/, /up/, /ud/, /un/, /ut/*). The learning focus of this class is various ending sounds.

Next, Caterpillar students deal with words which have double-letter consonant sounds (like */bl/, /cl/, /fl/, /br/, /cr/, /fr/, /gl/, /pl/, /sl/, /dr/, /gr/, /pr/, /tr/, /sm/, /sn/, /st/, /sw/, /nt/, /nk/, /ng/, /ck/, /ch/, /sh/, /th/, /ph/, /wh/*). Those sounds are grouped into (1) initial consonant blends, they are */bl/, /cl/, /fl/, /br/, /cr/, /fr/, /gl/, /pl/, /sl/, /dr/, /gr/, /pr/, /tr/, /sm/, /sn/, /st/, /sw/*, and (2) digraphs, i.e. */nt/, /nk/, /ng/, /ck/, /ch/, /sh/, /th/, /ph/, /wh/*.

At last, the Butterfly class is to learn words with double-letter vowel sounds (*/ai/, /ay/, /ea/, /ee/, /oa/, /oi/, /oy/, /ou/, /ow/, /oo/, /ar/, /or/, /er/, /ir/, /ur/*). They are called (1) long vowel sound (*/ai/, /ay/, /ea/, /ee/, /oa/*), (2) diphthongs (*/oi/, /oy/, /ou/, /ow/*), and (3) the other sounds; like */oo/, /ar/, /or/, /er/, /ir/, /ur/*.

The classification of the materials in KinderStation Preschool figures out the first aim of teaching reading [1], i.e. developing reading fluency. It is started with recognizing letters and words and at the end the students are intended to possess automatic recognition of letters and words. By having that recognition, they are able to spell and pronounce words easily.

3.2 Learning Media

KinderStation Preschool uses some media to support the phonics learning process. They are reader, workbook, word wall, picture, video, and game. Reader is a book prepared for children who are learning to read. The readers which are used in KinderStation Preschool contain printed letter with related words and the pictures of the words. Readers are always accompanied by workbooks since workbooks contain the exercise of the materials learned in the readers. Word wall is also employed there. It is a display of some letters or words that the students have learned. It functions as reminder for the students about the letters or words they have pronounced or spelled before. Moreover, teachers often use it to quiz the students by pointing a letter or a word

and ask a student to pronounce it. And even a student can quiz another student in turn. The teachers usually change it periodically (every semester). The interesting point of the word wall is that not only the teachers who are allowed to add or change the content of the word wall itself, but the students sometimes are involved in making or displaying it. Other than that, pictures are also hung at the classrooms' wall or ceiling. The pictures may have two functions, as decoration and as learning media. Pictures may help the students memorize some words in order to develop their vocabulary. Video is also utilized there. It is easier nowadays to get video as media to learn from internet or payable CDs. Besides, games such as flash card games and letter blocks are also used by the teachers to make the learning process more lively and interesting. In addition, the teachers may apply some other media based on their creativity; like providing the real objects and doing role play with it.

The use of learning media in the teaching – learning process at KinderStation Preschool reflects four (which are the fifth, sixth, seventh, and ninth) of ten guiding principles in teaching phonics to English language learners which is advised by [1]. They are using visual object, connecting it to real practice, using technology (internet and CDs), and providing logical input (simple description and examples).

3.3 Learning Process

Phonics takes 20 minutes for each meeting in each class, which is done twice a week (for Beetle and Dragonfly classes) and four times a week (Caterpillar and Butterfly classes). In general, the steps in the learning process are as the following. First, the teacher will do pre-activity, such as playing a video (if it is the first meeting, it functions as introduction and if it is the second or the following meeting, it will work as a reviewer). Afterward, the teacher will introduce one letter sound using a flash card, pronounce it and emphasize on how the students should pronounce it correctly by showing them the shape or position of his or her mouth and get the student repeat after him/her. Then, the teacher points a related picture or word (in the flash card) or show the real object (if it is possible) while emphasizing the letter sound that is learned. After that, he/she asks the students to repeat it. They may use the flash cards or reader. Next, the students will do an exercise from the workbook, for example matching pictures with the words, do phonics games, or do a role play. At the end of the lesson, the teacher will choose some letters or sounds to be stuck by the students on the class word wall. The example of the learning activity is presented in Figure 2.

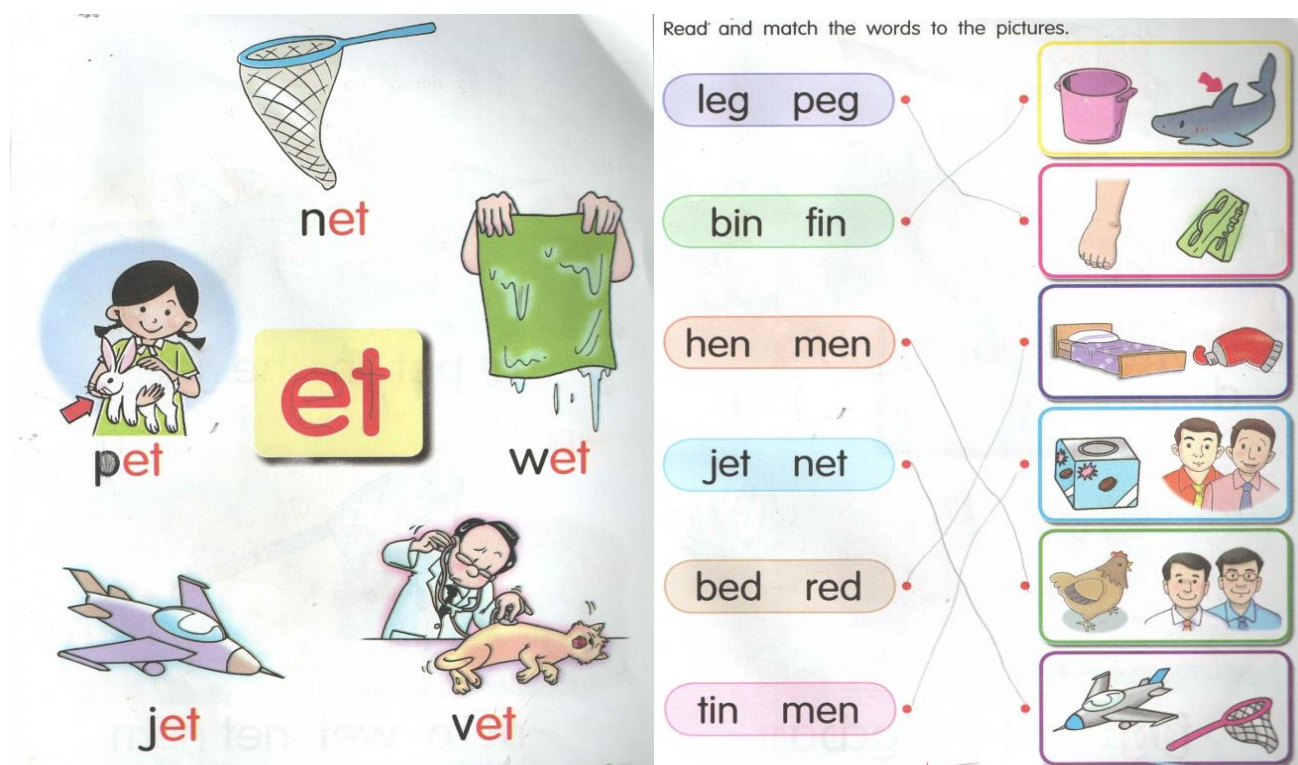


Figure 2. Example of Learning Activity.
(Taken from [12])

The concept of analytic phonics is really revealed in the learning process here. It starts with putting a letter sound as the center of attention and providing the context, which is in the form of pictures or words which possess the sound intended. The students will deal with the words provided, they are not asked to learn some single sounds and combine the sounds into words by themselves. Nevertheless, at the first stage (Beetle class) the students will learn 26 single sounds from the alphabet. Those single sounds take place as the initial sounds in the words. Next, in Dragonfly class, the focus is on short vowel sounds as ending sounds of words. And then, the Caterpillar class concentrates on initial consonant blend sounds and also initial and ending digraph sounds. Moreover, in Butterfly class, the students deal with long vowel sounds, diphthongs, and some other sounds which are used as middle word sounds. By having all the stages there, at the last stage (Butterfly class) the students will be able to master the concept of words which has initial – middle – ending sounds. As a result, they are capable to pronounce words and spell it correctly.

Furthermore, the learning process also reflects the other three of ten guiding principles in teaching phonics to English language learners which is proposed by [1]. They are the first, second, and third principles. Those are (1) the students will choose some words to be the keywords of the day and stick them on the word wall, (2) they also use body movement, like role play, to associate sounds with action, and even, (3) they learn how to articulate the sound correctly.

In addition, some of the students meet some obstacles during the learning process. They sometimes do not understand what they are learning easily. Thus, the teacher needs to do many repetitions, so it really takes time. As the consequence, the teacher often cannot meet the achievement target. Some other students, are often absent on the day they have phonics class; as a result, they miss some lessons. Besides, there are some students who are not following the age stages set by the school, since they are not joining the school from the Beetle class, but the other next classes (like Dragonfly class, Caterpillar class or even Butterfly class). For example, a student starts joining KinderStation Preschool in Caterpillar class. He is lack of knowledge that his classmates learned in the previous classes about single letter sound and short vowel sound. He directly will learn about some initial consonant blends and digraphs. Of course, it confuses him and the teacher needs to give extra explanation to him so that he can follow the ‘normal’ process in that class. To overcome those obstacles, the teachers propose some solutions by giving the students, whose some learning difficulties, some extra lessons at school or by asking the parents to give them more practice at home.

3.4 Result

Basically, the learning materials employed from Beetle to Butterfly are continuous. Thus, the result of the application of phonics could be revealed at Butterfly class in which the students have already learned all sounds required. The students’ achievement in Butterfly class is that the students (particularly the students in academic year 2015-2016) are able to pronounce three-letter and four-letter words correctly. They understand the concept of initial, middle, and ending sound. For example, they pronounce ‘tricky’ words like “sick” and “six” in correct way. They know that they should not pronounce it in the same way because those words have different ending sounds: *-ck/* and *-x/*. Moreover, they are capable to decode written words more easily. It is because they have phonemes awareness. The students can recognize different sound for each letter even they are able to pronounce the confusing sound like */f/* and */v/*. They know that pronouncing the word “van” is different from the word “fan” since their initial sounds are not the same. In short, the students of Butterfly class meet the first aim of teaching reading which is stated by Blevins (2006:8). It is developing reading fluency which includes possessing automatic recognition of letters and pronouncing words easily.

4. Conclusion

KinderStation Preschool applies phonics approach in teaching reading to the students and focus on employing analytic phonics. In analytic phonics, the students learn letter sounds in word-context. The learning materials are single-letter sounds of the 26 letters of the English alphabet (*/a/* to */z/*), some words with short vowel sounds, words which have double-letter consonant sounds, and words with double-letter vowel sounds. Those materials are distributed based on the class-level (age). Moreover, the media used are reader, workbook, video, word wall, pictures, and games. And, the general main activity in the learning process is done by introducing a letter sound, pronouncing it, referring the letter sound to a word or picture and emphasizing on the letter sound learned, and then asking the students to repeat it. It can be said that the employment of analytic phonics in KinderStation Preschool is in line with all of the guiding principles in teaching phonics to English language learners in general proposed by [1], except the fourth (learn the confusing sounds for each language the students speak) and eight

(provide each student with a bilingual dictionary). Those guiding principles are as follows. (1) Connect phonics and vocabulary instruction. (2) Use kinesthetic activities to connect a sound to an action. (3) Work on articulation. (5) Use music, body language, and realia / visuals to teach new words or concept. (6) Connect phonics learning to writing and real-life application. (7) Use technology, for example computer software, internet, DVDs, etc. (9) Provide comprehensible input; by providing clear, simple explanations and examples. (10) Modify your response expectations based on each student's level of language proficiency. Besides, the two outcomes of the application of phonics in teaching reading are the students have automatic recognition of letters (phonemic awareness) and they are able to pronounce three-letter and four-letter words easily and correctly.

In addition, problems are also found during the learning process. They are more about difficulties in understanding the materials and attendance in classes which affect the material mastery. Consequently, teacher should do many repetitions and give some extra lesson for those who have those difficulties.

References

- [1] Blevins, Wiley. 2006. *Phonics from A to Z: A Practical Guide*. New York: Scholastic Inc.
- [2] Hope, Diana. 2001. *The Complete Phonic Handbook: The Grapho-phonics and Spelling Reference*. Greenwood, Western Australia: R.I.C Publications.
- [3] Elam, Sandra. 2007. *Phonics Primer*. The National Right to Red Foundation. Retrieved 15 October 2016 from <http://www.nrrf.org/old/PhonicsPrimer.pdf>
- [4] Duncan, L.G., Seymour, P.H.K., and Hill, S. 2000. *A small-to-large unit progression in metaphonological awareness and reading?* The Quarterly Journal of Experimental Psychology 53A (4), 1081-1104. Retrieved 29 June 2016 from <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=11&sid=1b738198-39df-4599-8c45-c4d745322c34%40sessionmgr106&hid=118>
- [5] Johnston, Rhona and Watson, Joyce. 2007. *Teaching Synthetic Phonics*. Exeter, UK: Learning Matters Ltd.
- [6] Ghate, Onkar. 2003. *Phonics Still The Best Method To Teach*. The Central New York Business Journal. Volume 17, No. 49 – December 5, 2003, 22. Retrieved 29 June 2016 from <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=18&sid=1b738198-39df-4599-8c45-c4d745322c34%40sessionmgr106&hid=118>
- [7] Barringer, Crystal. 2006. *Teaching Beginning Reading Strategies in the School Library Media Center: A "How To" Guide*. Library Media Connection August/September 2006, 34-35. Retrieved from <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=27&sid=1b738198-39df-4599-8c45-c4d745322c34%40sessionmgr106&hid=118>
- [8] Bald, John. 2007. *Using Phonics to Teach Reading and Spelling*. London: Paul Chapman Publishing.
- [9] Chu, Min-Chin and Chen, Shu-Hui. 2014. *Comparison of the Effect of Two Phonics Training Programs on L2 Word Reading*. Psychological Reports: Relationship & Communications 2014, 114, 1, 272-291. Retrieved from <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=14&sid=1b738198-39df-4599-8c45-c4d745322c34%40sessionmgr106&hid=118>
- [10] Johnston, Rhona and Watson, Joyce. 2005. *The Effect of Synthetic Phonics Teaching on Reading and Spelling Attainment: A Seven Year Longitudinal Study*. The Scottish Executive. Retrieved 15 October 2016, from <http://www.gov.scot/resource/doc/36496/0023582.pdf>
- [11] Johnston, Rhona and Watson, Joyce. 2007. *Teaching Synthetic Phonics*. Exeter, UK: Learning Matters Ltd.
- [12] Chin, Sally. 2010. *Phonics Reader for Preschooler*. Johor Bahru: Penerbitan Pelangi Sdn. Bhd.

APPENDICES

Appendix 1. Common Spelling of the Sound

Symbol

Common Spellings of the Sound

a	a hat and a		ai plaid										
ā	a-e cake	ai rain	ay tray	a baby	ea break	ey they	ei vein	eigh weigh	aigh straight	et croquet	au gauge		
ã	are care	air chair	ear pear	ere where	eir their	ayer prayer							
ä	ar car	a bath	ear heart	au laugh	er sergeant								
b	b bat	bb rabbit											
ch	ch child	tch watch	tu future	ti question	te righteous								
d	d did	dd add	ed filled										
e	e let	a many	ea bread	u bury	ie friend	ai said	ay says	eo leopard	ae aesthetic	ei heifer			
ē	ee bee	ea leaf	y happy	ey key	ie chief	i ski and machine		e equal	ei receive	eo people	ay quay	oe phoenix	
ēr	ir first	er fern	ur church	ear pearl	or word	our journey	yr myrtle						
or	er mother	ar liar	ir elixir	or doctor	our honour	ur augur	yr zephyr	re centre	eur chauffeur				
f	f fat	ff stuff	gh laugh	ph phone	ft often	lf calf							
g	g get	gg egg	gh ghost	gu guest	gue catalogue								
h	h hot	wh who											
i	i bit	e England	o women	u busy	ui build	y hymn	ie sieve						
i	i-e kite	y sky	ie tie	i blind	igh high	uy buy	ye rye	ei height	ai aisle	is island			
j	j jam	g gent, giant and gypsy			dge bridge	gg exaggerate		di soldier					
k	c coat	k kid	ck duck	cc acclaim	ch Christmas	lk folk	cq acquire	qu liquor					
l	l land	ll spell											
m	m me	mm summer	mb climb	lm calm	mn autumn								
n	n nut	nn bunny	kn knit	gn gnat	pn pneumonia								
ng	ng song, ring, bang and hung				ngue tongue								

(Taken from [2])

Symbol Common Spellings of the Sound

o	o hot	a swan	ho honest									
ō	oa boat	o-e bone	ow low	o open	oe toe	ough though	ew sew	eau beau	eo yeoman	oo brooch		
ô	a ball and walk		aw paw	or fork	au sauce	oor door	ore more	oar board	ough bought	augh taught	ar war	our four
oi	oi oil	oy boy	uoy buoy									
ou	ou house	ow cow	ough bough									
p	p pup	pp puppy										
r	r run	rr carry	wr wrong	rh rhyme								
s	s sick	ss miss	c cent, circus and cycle			sc science	ps psychology		st listen			
sh	sh ship	ce ocean	s sure	ci special	si tension	sci conscience		ch machine	ti station			
t	t tap	tt button	th Thomas	ed tapped								
th	th thin											
TH	th then	the breathe										
u	u mug	o come	oo flood	ou double								
ü	oo book	ou could	u full	o wolf								
ü	oo moon	ew screw	oe shoe	ue blue	ough through	u rule	ui fruit	o who	ou croup	oeu manoeuvre		
v	v van	f of	ph Stephen									
w	w will	wh wheat	u quick	o choir								
x	x box	cks socks										
y	y yes	i opinion	j hallelujah									
yü	you you	ew few	iew view	ue cue	yu yule	eué queue	eu feud	eau beauty	ieu adieu			
z	z zero	zz buzz	s has	ss scissor	x xylophone							
zh	s measure	si division	z azure	ge garage								

(Taken from [2])

Appendix 2. Example of Segmenting Words into Phonemes

Words	No. of letters	No. of phonemes	Phonemes splits and their associated spellings
fat	3	3	/f/ /a/ /t/
book	4	3	/b/ /oo/ /k/
duck	4	3	/d/ /u/ /ck/
cuff	4	3	/c/ /u/ ff/
shell	5	3	/sh/ /e/ /ll/
scream	6	5	/s/ /c/ /r/ /ea/ /m/
which	5	3	/wh/ /i/ /ch/
phone	5	3	/ph/ /o/ /n/
yacht	5	3	/y/ /ach/ /t/
bought	6	3	/b/ /ough/ /t/

(Taken from [11])