PHONOLOGICAL ANALYSIS ON BLENDING AND SEGMENTING FOR EARLY LITERACY OF K-1 AND K-2 CHILDREN IN I CAN READ ENGLISH COURSE IN BANDUNG CITY

Bagus Herlambang

I Can Read English Course

Hendar

English Department, Faculty of Languages, Universitas Widyatama, Indonesia

Corresponding author: Bagus Herlambang, I Can Read English Course

E-mail: bagusherlambang2409@gmail.com

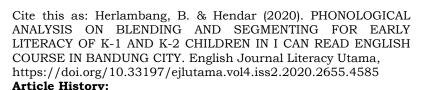
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Abstract:

The research deals with blending and segmenting of reading acquisition skills given to the Early Literacy of K-1 and K-2 Children in I Can Read English Course in Bandung City. The research aims at identifying (1) which skill should be taught first to the students of bilingual school (K1 and K2), blending or segmenting and (2) in using the blending and segmenting, which word divisions (CVC, VCC, CCV) should be taught first to the students of bilingual school (K1-K2). The main data source in this descriptive quantitative research is taken mainly from 38 students of I Can Read English Course studying in bilingual school of K1 and K2. The research stage consists of following steps: Dividing students into two groups, which will be taught Segmenting-Blending and Blending-Segmenting for ten (10) meetings, providing a list of three word division groups which will be used by the instructor later to test the student's accomplishment in eleventh (11th) meeting, analyzing the test result, conducting the supporting analysis using PRAAT program, and drawing a conclusion based on the findings in analysis. The theoretical framework used in this research comes from Roach (2009) relating to the vowel and consonant phonemes and Adams (1996) regarding the six stages of phonemic awareness skills. The result shows that (1) the B-S group shows better performance with the accomplishment rate of blending and segmenting for 66,7% and 46,7% respectively. In addition to that, the word division of CVC shows the highest rate of approachability by the students with 70%, followed by the VCC and CCV with 50 % and 45%, respectively. The results are supported by PRAAT analysis showing that the students tend to make mistakes for the VCC and CCV, especially during the consonant blend. Based on that, blending should be taught first, followed by segmenting by firstly using the CVC words.

Keyword:

Phonology; Blending; Segmenting; Word Division; Phonemic Awareness



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INTRODUCTION

Language is one of the ways used by human to communicate each other. It has something to do with two basic skills equipped by human, namely receptive and productive skills. Receptive is all about the human skill in listening and reading; meanwhile, productive is related to the human skill in speaking and writing. In other words, in learning a language, one cannot be separated with learning those four basic skills, i.e. listening, reading, speaking, and writing.

Learning about language means learning about the linguistics. One of the linguistics branches focuses on the sound in the language itself, this is called Phonology. Odden (2013) coined that phonology is a subject studying about the sound or phoneme in a language, unlike the morphology

that studies about the word structure, syntax that studies about the sentence structure, or even historical linguistics, that studies about how language changes over time.

When it comes to the phonology, it cannot go far from the discussion about how the sound structure, stress and intonation are pronounced. In phonology, one of the most recently used method in helping people to learn English language is phonics. Dana Dance-Schissel (2015) stated that phonics focuses on the individual parts, or letters and their sounds, that combine to form the whole word, or we can say, the part-to-whole processing of text. Dana Dance Schissel (2015) also stated that this method best suited for young learners where they can learn about decoding a word, to begin read and understand new words later.

Luthy and and Stevens (2011) stated that, the students, viz. young learners, are required to understand the smallest unit of a word right before that start to read a word in written form. In this way, they are expected to be able to identify the phoneme (smallest unit of sound in a speech giving different meaning). The study of DiMaio-McCracken (2004) suggested that the knowledge towards phonics and phonemic awareness is often overlooked since it can give huge advantage, especially in improving the early literacy skill, such as writing and reading for young learners.

Learning phonics for young learners in learning English language is fruitful not only for non-English speaking countries, but also for the English-speaking countries themselves. The study of McArthur et al. (2018) suggested that, phonics can improve the literacy for young learners with below average skill of reading in English-speaking countries such as Australia, Canada, United States, and England. This is due to the fact that, even if they are fluent in speaking using English, when they are facing with written form of the language itself, these young learners struggle to read it.

In the process of understanding phonics method, the learners should master the skills of phonemic awareness. Yopp (1992) defined phonemic awareness as a set of skills to hear and manipulate sound in speech and understand that the spoken word as well as the syllables consist of sequence of sound. Phonemic awareness itself is part of a bigger umbrella that is widely known in phonology, namely phonological awareness. In phonemic awareness, there is a set of skills that needs to be mastered by the learners, which will be explained further in the following section.

Based on the explanations above, the author decided to study two of the skills needed to be mastered by the learners, which are employed in *I Can Read* English Course, namely *blending* and *segmenting* skills.

LITERATURE REVIEW

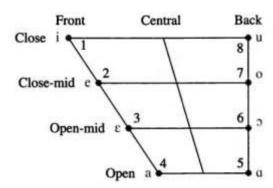
In a nutshell, phonology is a study of the distribution of the sounds (Roach, 2009:11). This is supported by Spencer (1996: 2) stating that phonology concerns with the linguistic patterning of sounds in human language. Phonology is used to seek the principals governing the way of sounds are controlled in language and the possible variations of the sounds. In this study, this is started by analyzing English language itself, to determine which sound unit is used and what pattern it forms.

In linguistics, phoneme is the smallest sound unit in language which can give different meaning, such as /s/ in sing and /r/ in ring. According to Murray in Allyn and Bacon (1995), phoneme is the main concept in phonology, where various sound categories are used and received by the native speaker. This is in accordance with the explanation from Gimson (2008: 4) stating that phoneme as a basic unit of language's phonology, which later combined with other phonemes to form meaningful units such as words or morphemes.

Referring to Roach (2009: 10-14) and Spencer (1996: 10-25), phoneme is divided into two main classes, vowel and consonant. While for the writing form for the phoneme or the transcription of phoneme, /.../ is used.

There are some differences between vowel and consonant. For vowel, there is a little to no friction in the articulatory organ, where the air friction occurs only in the vocal cord. Moreover, in articulating vowel, articulation is not needed. All of the vowel occurs from the vibration of vocal cord. Principally, there is *cardinal vowels* as a main referring points for vowels. They are designed by the International Phonetic Association in 1989 (Roach, 2009:12), as depicted in the Figure 1 below as vowel quadrilateral.

Figure 1. Vowel Quadrilateral



Roach (2009: 13-19) also divided vowel into several types, namely monophthong (short vowel and long vowel), diphthong, and triphthong. While for the consonant, Spencer (1996: 11-17) and Roach (2009: 34) divide it based on three aspects: 1) place of articulation; 2) Manner of Articulation; and 3) Voicing.

In learning the vowel and consonant and decode it into a word, there is one method that can be used to help young learners in term of literacy, namely phonics. Grey et al. (2007) explained that phonics is knowledge about letters, spelling and words. In other words, by learning phonics, a child can identify the letter or combination of letters or grapheme and turn it into sounds. By using phonics, children will learn to associate the grapheme and the sound representation of it.

Prior to phonics, children should master the phonemic awareness first. According to Kilpatrick (2015), phonemic awareness is an awareness and ability of the learner to manipulate each phoneme in speech. Phonemic awareness is part of bigger umbrella, phonological awareness. Yopp (1992) stated that phonemic awareness is the most basic thing in the mapping process from spoken to written form.

Adams (1994) suggested that even if phonemic awareness is essential in the process of learning to read, it is not easily established, and children need explicit instruction to gain the necessary skills. Adams (1994) also showed that there are six layers of skill in phonemic awareness that should be mastered by children to get their reading acquisition. The skills are:

1. Isolation

Isolating the sound means understanding that a word consists of phoneme sequence and every phoneme can be distinguished one and another. Isolating the first phoneme is a good way to introduce learners to develop their isolation skill

Example:

Teacher: "What's the beginning sound in fish?"

Student: "/f/"

Teacher: "What's the middle sound in cat?"

Student: "/a/"

2. Blending

The next skill is quite harder where this involves the process of listening. The learners are required to listen and blend the isolated phoneme(s) to form a word. This process requires learners to hold every element mentally when a word is being formed, where this will challenge the learners' active working memory. When sounding the word, the learners will say the phonemes first, and in split second, blend the phonemes into a word.

Example:

Teacher: "Can you please blend /b//u//n/?"

Student :"bun"

Teacher: "Can you please blend /d//o//g/?"

Student : "dog"

3. Segmenting

In segmenting, the learners will learn how to segment or stretch a word into the component of phonemes. In doing this, the learners can use the visual aid to help them, such as their own fingers

(e.g. thumb as first phoneme, index finger as middle phoneme, and middle finger as last phoneme, for three-phoneme words).

Example:

Teacher: "Can you please segment blue?"

Student:"/b/ (using his thumb) /l/ (his pointer finger) /ū/ (middle finger)"

Teacher: "Can you please segment apple?"

Student: "/a/ (thumb) /p/ (pointer) / l(middle finger)"

4. Addition

This is the fourth stage and the beginning of the advanced skills in phonemic awareness. The learners are required to manipulate the phoneme. Addition involves the phoneme addition to a word to make a new word with new meaning.

Example:

Teacher: "Can you say sea?"

Students: "Sea."

Teacher: "What will happen if I add /l/ at the end of that word?

Teacher: "What word do we have now?

Students: "Seal."

5. Deletion

In this stage is another manipulation skill towards the phoneme. Unlike the previous skill, the learners have to delete the phoneme(s) which will lead to the formation of a new word with a new meaning.

Example:

Teacher: "Can you repeat after me? Say boar!"

Students: "Boar."

Teacher: "What if I take out the first or beginning sound from the word? What word do we have now?"

Students: "Oar."

6. Substitution

This is the final stage in phonemic awareness skills. This is the most complex where it requires learners to understand how to add and delete the phonemes. In substituting the phoneme, the learners are asked to alter the phoneme, even change the phoneme type (e.g. from short vowel into long vowel phoneme).

Example:

Teacher: "Students, I have this one word, bit. Let's say it together."

Students: "Bit."

Teacher: "I will take out the middle sound and replace it with /ī/. What word do we have now?" Students: "Bite."

While for the word division, CVC is used referring to the suggestion of Seymour, Aro and Erskine (2003), stating that CVC is more complex derivational structure from the basic structure, CV (Consonant-Vowel). This support the study of Bondarko (1969), suggesting that the basic structure of spoken language is CV, where it is commonly found in various language, where it comes first from baby's babbling. This pattern is produced in speech breakdown. The rest VCC and CCV are taken due to the fact that they are commonly found in the books used as teaching material in the place of the study conducted.

METHOD

This is a descriptive research that uses quantitative method. Sugiyono (2013:29) stated that descriptive research is used to describe and give a bigger picture towards the researched object through the data or sample as it is; meanwhile, Kasiram (2008) stated that quantitative method is the research that uses data in form of figures as a tool to analyze and review the study, especially about the object that has been studied. The aim of this quantitative descriptive research is providing description, pictures, or depiction in systematic, factual and accurate way regarding the facts, natures as well as the relationship of each researched phenomenon.

Table 1 Respondent Demography

Characteristics	Category	Category No. of Students	
Sex	Male	18	47,3
	Female	20	52,7

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	Total	38	100
Age	4 years old	9	23,7
	5 years old	18	47,3
	6 years old	11	29
	Total	38	100

In this study, the sample of the data are obtained from the K-1 and K-2 students in I Can Read Arjuna, Bandung as shown in the Table 1 above. Prior to the observation, three sets of word (CVC, VCC, and CCV) with ten words for each set, are prepared. Following that, the learners who come from bilingual school and aged four to six years old (K-1 and/or K-2) are divided into two groups where they will be observed for ten meetings with a test at the eleventh meeting. These two groups will receive two different approach from the teacher as they learn the phonemic awareness skills. The first group, will be taught *Segmenting* first for five meetings, followed by *blending* for the rest five meetings, later this group is referred as S-B group. Meanwhile, the second group will be taught *Blending* for first five meetings and followed by *Segmenting* skill for the next five meetings, later this group will be referred as B-S group. At the eleventh meeting, the learners will be tested regarding their ability in both *blending* and *segmenting* skills. The result of the test later will be analyzed further with the help of PRAAT, an application used to analyze the audio of each student, to support the result of the study.

Research Questions

In this study, there are two research questions, which are:

- 1.Between *blending* and *segmenting*, which skill should be taught first to the K-1 and K-2 learners from bilingual school?
- 2.By considering the *blending* and *segmenting* skills and degree of word difficulty, which word division (CVC, VCC, and CCV) that should be taught first to the K-1 and K-2 learners from bilingual school?

FINDINGS AND DISCUSSION

From the findings, it is found that there are differences between two groups, based on the achievement of the test held at the eleventh meeting.

Blending

The data for *blending* are obtained at the eleventh meeting. The data of *blending*, as shown in the Table 2 below, are taken in average number of all the word divisions (CVC, VCC, and CCV). For the data collection, the learners are deemed correct if they are able to *blend* the phoneme given by the teacher, with the maximum of three repetitions.

Table 2 The Result of Blending for Both S-B and B-S Groups

Groups	Average No. of Word (Blending) / learner (out of 30 words)		(Blending) / learner (out of 30	
S-B Group	14 words	47		
B-S Group	19 words	63		

From the Table 2 above, it can be seen that the B-S Group, in average, performs better. From the total of thirty (30) words, B-S Group can *blend* nineteen (19) words in average or 63%, compared to the S-B group that can *blend* fourteen (14) words out of thirty (30) words or 47%.

Segmenting

The data for *segmenting* are obtained in the same fashion as the *blending*. The data are obtained following the test at the eleventh meeting. As shown in the Table 3 below, the data are taken in average number of all the word division (CVC, VCC, and CCV). For the data collection, the learners are deemed correct if they are able to segment the word into individual phoneme (first sound, middle sound, and last sound).

Table 3 The Result of Segmenting for Both S-B and B-S Groups

Groups	Average No. of Word (Segmenting) / learner (out of 30 words)	
S-B Group	12 words	40
B-S Group	18 words	60

Based on the data in the Table 3 above, it is clear that out of thirty (30) words, eighteen (18) words in average or 60%, are able to be segmented by the B-S Group. On the other hand, the S-B group is only able to segment twelve (12) words out of thirty (30) words or only 40%.

Word Division

The data for the word division are collected based on the learners' achievement in doing both blending and segmenting during their test at the eleventh meeting. In testing the learners' understanding using this set of word divisions, the teachers gave the words in random order of set (e.g. CVC, VCC, CCV or VCC, CCV, CCV etc.). The result of the learners' achievement is shown in the Table 4 below (in average number of words correct).

Table 4 The Result of Learner's Achievements for Each Word Division

Word Division	Group	Average No. of Words (<i>Blending</i>)	%	Average No. of Words (Segmenting)	%
CVC	S-B Group	6 Words	60	5 Words	50
CVC	B-S Group	8 Words	80	7 Words	70
VCC	S-B Group	4 Words	40	4 Words	40
VCC	B-S Group	6 Words	60	6 Words	60
CCV	S-B Group	4 Words	40	3 Words	30
CCV	B-S Group	5 Words	50	5 Words	50

Table 4 above shows the average number of words decoded in term of blending and segmenting of the learners regarding the word division used in learning process of *blending* and *segmenting* skills. It can be seen that for the B-S group, that is taught to master the *blending* skill for the first five (5) meetings and followed by *segmenting* for the next five (5) meetings, shows slightly better performance in *blending* compared to the S-B group, with the average number of nineteen (19) words and fourteen (14) words, respectively. This average number is taken among the three sets of words (CVC, VCC, and CCV) with total of thirty (30) words.

The same trend occurs with the *segmenting*, the B-S group shows better average performance when they have to segment all of the words scattered among three sets (CVC, VCC, and CCV). In average, B-S Group is able to segment eighteen (18) words in average, compared to the S-B group who is only able to segment twelve (12) words in average.

Table 5 Average No. of Correct Words of each Word Division (taken from S-B and B-S Groups

Word Division	Blending (out of 20 words of blending and segmenting)	%	Segmenting (out of 20 words of blending and segmenting)	%
C-V-C	14 words	70	12 words	60
V-C-C	10 words	50	10 words	50
C-C-V	9 words	45	8 words	40

In terms of the word division, it can be seen also in the Table above, that CVC gets the most average number of correct from both *blending* and *segmenting* with fourteen (14) words or 70% and twelve (12) words or 60%, respectively. This is followed by the VCC word division with the rate of average number of correct words of ten (10) words or 50% for both *blending* and *segmenting*. The most

difficult word division among three is CCV word division, with nine (9) words in average number of correct or 45% for *blending* and eight (8) words in average number of correct or 40% for *segmenting*.

The result for this word division is supported by further analysis using PRAAT software. Based on the data analysis of the recordings of learners when they are doing the test, most of the students make mistakes in both VCC and CCV. This is caused by the condition when they have to do the blend consonant (consonant-consonant), e.g ts/ts/, tr/tr/, pr/pr/, fr/fr/, and fl/fl/. In terms of vowel, some of the children also struggle when they have to distinguish the phonemes /æ/and/e/.

The PRAAT analysis is conducted by analyzing the acoustic nature of the children's voice. The analysis will focus on the pitch and the intensity of each phoneme spoken by the children. The result of pitch will be put in Hz while intensity will be marked with dB. The value for both pitch and intensity will be measured and compared with the result of analysis of native speaker. This will act as a benchmark. Table 6 below will show the data of pitch and intensity from the native speaker and the sample of the learners.

Table 6 Comparison of Pitch and Intensity between Native Speaker and Learner (Non-native)

(NON Mative)						
No.	Phoneme	Pitch (Hz)		Intensity (dB)		
NO.	(s)	Native Learner		Native	Learner	
1	/æ/	228.5	236.5	77.6	72,8	
2	/e/	282.2	264.6	77.1	72,3	
3	/f/	267	354.7	72.5	81,2	
4	/1/	229.8	270.9	75.5	82,4	
5	/r/	218.8	204.3	77.1	73,1	
6	/s/	269.3	309.7	73.1	72,7	
7	/t/	302.7	264.9	75.1	79	

For the /æ/ and /e/ vowels, there is slight difference between the native and learner. For the /æ/ vowel, native has a pitch of 228.5 Hz compared to the learner who shows higher figure with 236.5 Hz. Otherwise, for the /e/ vowel, while the native pronounces with quite high pitch (282.2 Hz), the learner instead, pronounce the vowel with lower pitch (264.6 Hz). This difference in term of pitch leads to the mispronounce of the learner.

CONCLUSION

Based on the data analysis and the discussion in the previous section, it can be concluded that the *blending* should be taught first and followed by *segmenting skill*. This is based on the result that B-S group, whose treatment is *blending* first and *segmenting* later, shows better performance in the test. In *blending* test, B-S group got 66.7% average correct answer compared to 46.7% of S-B group. For the *segmenting* test, again, B-S group performs better, where they scored 60% in average correct answer, compared to 40% of S-B group.

Regarding the word division, the first word division should be used in teaching *blending* and *segmenting* for the K-1 and K-2 learners of bilingual school is CVC, followed by VCC and CCV. This is based on the result that CVC has the highest rate of viability where for the *blending*, 70% of the words are correct and 60% of the words are correctly segmented in *segmenting*. While CCV is the hardest among three word-sets, with the rate of viability only 45% and 40% for both *blending* and *segmenting*.

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