SOUND-LETTER ASSOCIATION AND SOUND BLENDING IN PRESCHOOL CHILDREN'S EARLY READING

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Abstract

Reading instruction in English to preschool children has been a central issue among reading instructors for decades. It has always centred on whether to begin teaching the children using the lower level or the higher level skills. This paper addresses the issue of teaching preschool children the sound-letter association and sound blending at an early stage when reading in English. Specifically, it focuses on the intervention of sound-letter association in order to demonstrate that learning the sound-letter association first will help preschool children to blend the sounds and eventually to be able to read fluently. We discuss the approaches used and provide evidence based on the pre and post- test results. Our findings indicate that the sound-letter association and sound blending as skills must be acquired by preschool children before they begin to learn reading as it scaffolds their ability to see how sounds and alphabets are related and to read words. We argue that introducing to preschool children sound-letter association and sound blending before moving them into real reading will make them better readers.

KEYWORDS: SOUND-LETTER ASSOCIATION, EARLY READING, PRESCHOOL, SOUND BLENDING, SYNTHETIC PHONICS, ALPHABETIC PRINCIPLE

INTRODUCTION

Effective reading instruction is a critical factor in reading in English among preschool children. It has been a central issue for decades (Adams, 1990; Chall, 1967; Ehri et. al, 2001). The issue has always been centred on whether to begin teaching the children using the lower level skills or the higher level skills. Introducing sounds and letters association as well as teaching the children to blend the sounds are among the lower level skills. Researchers have shown that by teaching preschool children the sounds and letters' association including teaching them to blend those sounds before they begin to learn to read has helped them read (Bowey, 2006; Hudson, Torgesen, Lane, & Turner, 2012; Wyse & Goswami, 2008). However, some scholars believe in teaching children to read for meaning from the very beginning rather than focusing on the sounds that the words are made up of (Goodman, 2005; Krashen, 2008). Focusing on the alphabetic understanding and phonological recoding is what constitutes the sound-letter association and sound blending or better known as alphabetic principle (National Reading Panel, 2000).

Consequently, various studies or reviews have been carried out to show the importance of learning the association of sounds and letters among early readers. The most leading reviews are The United States' National Reading Panel and The Independent Review of the Teaching of Early Reading in the United Kingdom or better known as The Rose Report. The National Reading Panel (2000) has listed

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five key elements that are crucial to the reading success among children. The first two key elements are related to the lower level skills and they focus on phonics elements. The first key element outlined by National Reading Panel (2000) is phonemic awareness and the second key element is phonics. Phonemic awareness is the ability to explore and use phonemes in spoken language, where phonemes are defined as the smallest units of the spoken language (National Reading Panel, 2000b). Meanwhile, Rose (2005), listed three important aspects in its review. The first aspect is the best practice in teaching early reading and teaching synthetic phonics. Rose (2005) stated that the key features of teaching beginners to read should constitute the sound-letter association, which should be done clearly and in sequence; to apply the skill of blending from a single phoneme to words; and also that blending and segmenting is reversible. Therefore, studies on the use of alphabetic principle in teaching early reading to preschool children seem necessary in order to gain understanding of the impact it has on the ability of the children in sound-letter association and sound blending.

In the Malaysian context, a study looking at the effects of phonemic awareness as instruction in teaching English as a foreign language was conducted in the rural area among Year 1 students (Johnson & Tweedie, 2010). Johnson and Tweedie (2010) found that there were significant gain from the pre-test and post-test done on 5 tests which included sound fluency, word reading and nonsense word reading. Another study carried out in Malaysia which also demonstrated that teaching of phonics helped children to become better readers was done by Su and Hawkins (2013). A case study using THRASS (teaching handwriting, reading and spelling skills) Phonics showed positive findings where the subject of their case study were able to identify the phonemes, sound out, decode and read words in English after 10 weeks of intervention (Su & Hawkins, 2013).

ALPHABETIC PRINCIPLE

The alphabetic principle is referred by Byrne (1998) as a direct notion that letters in our printed language stand for individual sounds in our spoken language. Whereas, the National Reading Panel (2000), elaborated that alphabetic principle encompasses two parts - alphabetic understanding and phonological recoding. Therefore this means that there is a need for children to understand that letters are associated with sounds and that these sounds can be blended together to form words. The ability to understand that each letter of the alphabets carries sounds and that these sounds can be blended together to form meaningful words are what encompass the alphabetic principle. This ability can also be determined by applying the ability to blend string of sounds together to read nonsense words. These two skills of understanding that letters carry sounds and that they can be blended together to form words are indeed crucial in learning to read.

However, the ability to associate the sounds with the letters of the alphabets is not an indicator of being successful at decoding (Hudson et al., 2012). A reader should be able to blend the sounds together to form words and those who lack automaticity in blending the sounds will find it difficult to decode unfamiliar words (Hudson et al., 2012). Hudson et al., (2012) study on the relationship among the component skills of reading on 198 eight year-old students suggested that readers need to become automatic in sound blending, individual sounds-letters association and larger letter patterns for in order to become successful at decoding. Hudson et al., (2012) suggests that reading instructions should focus on automaticity rather than accuracy alone. Hence, it has been shown that alphabetic principle in early readers is an important step in becoming fluent readers. This finding further confirmed what Oudeans (2003) in her study mentioned in one of her findings that the children with initially low phonemic segmentation skills were able to apply the knowledge on the sound-letter association and blending to read real words.

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Torgesen, Rashotte, and Alexander (2001) found that the measurements on nonsense word reading offered unique contribution in predicting oral reading fluency more than the variance by measure of real word reading. This is supported by Fien et al., (2010) who did a study on the relationship among nonsense word fluency to the oral reading fluency and reading comprehension. Their findings showed that nonsense word fluency gains from pre-test to post-test were statistically significant and had meaningful effects on both the outcomes of oral reading fluency and reading comprehension.

Researches have shown that poor skills in phonology contribute to the inability of some beginning readers to automatically use the alphabetic principle successfully; therefore, early reading intervention should include instruction on these skills (Chall, 1999; Langdon, 2004; Ritchey, 2004). The instruction should not be restricted to only the traditional method and the alphabetic principle should not only be taught using the traditional approach. DiLorenzo, Rody, Bucholz, and Brady (2011) tested the use of alphabetic principle using picture mnemonics. Their study has shown that the subjects who were exposed to picture mnemonics scored better on their alphabetic principle test (DiLorenzo et al., 2011).

AIMS AND HYPOTHESIS

Alphabetic principle is valuable for children who are learning English as a second language. It can be achieved by using a suitable approach in teaching these children how to read. This paper addresses the issue of teaching preschool children alphabetic principle at an early stage. Specifically, it focuses on the intervention of the sounds-letters association and blending of these sounds in order to demonstrate that learning the alphabetic principle first helps preschool children to read fluently. Hence, this study employed the synthetic phonics approach as the intervention on the alphabetic principle to six-year-old children. The synthetic phonics approach is used since synthetic phonics requires the students to be trained in sound-letter association and the blending of the sounds. This is done so that children are able to translate any letters into sounds and finally blend these sounds into words. Hence, they are able to understand that letters carry sounds and they can, without help, read words (Bowey, 2006). One group of children were given a pre-test and an intervention before they were given a post-test. An intact group pre-test and post-test design was used and their scores were compared.

We expected that the children's' scores in the pre-test assessment of Correct Letter Sound (CLS) would be the same as their post-test scores (H1) and their pre-test scores in the Whole Word Read (WWR) assessment would also be the same as their post-test (H2). We assumed that the pre-test scores of the alphabetic principle would be the same as the post-test scores of the children (H3).

METHOD

Participants

Twenty five monolingual Malay students (10 boys and 15 girls) took part in this study. The children were attending a preschool in one of the government primary schools in the Klang Valley. They were from the lower middle socioeconomic class and have never received any specific sound-letter association training. All subjects were 6 years old at the time of the study. Their exposure to the English Language was mostly in school. The subjects English language proficiency was of the low

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level and this was their first year in preschool. The preschool they were attending only catered to 6 year old children.

Material and Procedure

This study was conducted at the beginning of the school year in February for the duration of 16 weeks. During the first week the children were given the pre-test and this was followed by a 14-week intervention. The post-test took place in the final week upon completion of the intervention.

The children were tested individually before and after the intervention on letter-sound association and nonsense-word reading using the DIBELS Next (2011) Nonsense Word Fluency (NWF) instrument from the benchmark assessment for Grade 1. The benchmark assessment for Grade 1 was employed since the Grade 1 students in the United States are six years old which is the same age as the subjects of this study. The Nonsense Word Fluency (NWF) materials from middle of year Benchmark 2 was used for the pre-test and materials from end of year Benchmark 3 was used for the post-test and the performances on assessments were compared.

Intervention

The intervention given to the children was carried out by one of the researchers. The lesson plan and outline for the 14-week lessons were designed using the ReadEasy Phonics Programme which employed the synthetic phonics approach. The synthetic phonics approach trains the students in the sound-letter association and the blending of the sounds. According to Dooner (2012) the use of the synthetic phonics approach in reading begins with the foundation that English Language has 44 sounds and they are taught in a specific way. Furthermore this approach shows children how these 44 phonemes are represented by letters and that they are taught to learn the code from simple ones to the more complex systematically (Dooner, 2012).

The lesson for the intervention consisted of a 4-hour lesson per week which was conducted for an hour a day for four days a week. The lesson consisted of the teaching of 24 sounds or phonemes and 10 consonant blend in a specific sequence based on the ReadEasy Phonics book. The sounds taught to the subjects followed this order; /k/, /æ/, /t/, /b/, /o/, /n/, /m/, /p/, /h/, /s/, /d/, /g/, /i/, /r/, /l/, /dʒ/, /ʌ/, /f/, /e/, /ks/, /v/, /y/, /w/, /z/ and the consonant blend in the final position taught were /nd/, /st/, /mp/, /nt/, /nk/, /st/, /sk/, /lp/, /lt/, /ld/. The sounds introduced were either two or three sounds in a week. The lesson ended with an individual levelled reading. The lessons were divided into introduction of sounds, blending of the sounds, reading at word, phrase or sentence level, writing activities which were done to enhanced understanding of the lesson and finally levelled reading. Levelled reading was done individually since the progress of the subjects are based on the child's own pace in reading.

56 one hour lessons were designed and developed. For the first two lessons, the subjects were only taught the sounds of the letters. There was no blending of sounds since blending is not possible with the first two sounds learnt. Learning how to blend the sound started with the third lesson after three sounds had been learnt. The subjects were able to blend all the three sounds learnt into a word, which was 'cat'. The lesson consisted of activities that introduce the sounds, blending the letters into words, reading words from sounds learnt, writing and levelled reading. The content of the lesson were taken from the ReadEasy Beginner's Reader and ReadEasy Activity Book 1 and Book 2.

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The selection of the activity for this intervention was in accordance with the key instructional programme provided by the National Reading Panel (2000). The National Reading Panel (2000) mentioned that for a phonics programme to be successful there must be a plan for teaching all major letter-sound correspondences, teach students to blend the grapheme to form words, begin with consonant-vowel (CV) and consonant-vowel-consonant (CVC) words.

Pre-tests and post-tests

The instrument used for this study was from the Dynamic Indicators of Basic Early Literacy Skill Next (DIBESL Next, 2011), the Benchmark Assessment for Grade 1. The material for Grade 1 was used in this study because the Grade 1 students in the United States are 6 years old in the school year. This age is equivalent to Malaysia's preschool students as previously stated.

DIBELS' initial research and development started in the late 1980s and early 1990s (DIBELS Next, 2011). The DIBELS measures were designed to be economical and efficient indicator of students' progress in early literacy skills. DIBELS was published in 2002 and has been expanded based on research, thus DIBELS Next. DIBELS NEXT has been field-tested from 2006 until 2010 to document its reliability, validity as well as sensitivity in measuring changes in students' performance (DIBELS Next, 2011).

DIBELS Next comprises of six measures which are 'First Sound Fluency' (FSF), 'Letter Naming Fluency' (LNF), 'Phoneme Segmentation Fluency' (PSF), 'Nonsense Word Fluency' (NWF), 'DIBELS Oral Reading Fluency' (DORF) and 'Daze'. DIBELS next are standardized assessments which mean that they are administered and scored the same way every time it is done and with every student (DIBELS Next, 2011). DIBELS Next (2011) also include alternate forms of equally difficult items so that students' progress can be measured over time and most importantly, DIBELS Next measures are sensitive to growth even over short periods of time.

DIBELS Next is a set of measurements used to assess early literacy and reading skills for students from kindergarten (preschool) to grade 6. It was designed to link to the early literacy skills and sensitive to growth and change in response to instruction or intervention in those specific areas; and serves as key indicators of beginning reading (DIBELS Next, 2011; National Reading Panel, 2000). It is a standardised assessment therefore it should be able to compare results. The test is sensitive to even small changes from the pre-test to the post-test. Therefore, it is the most appropriate instrument apart from the 'Nonsense Word Fluency' (NWF) measure for this study due to the children having the treatment for only 14 weeks.

A study conducted by DiLorenzo, Rody, Bucholz and Brady (2011) using the 'Nonsense Word Fluency' (NWF) measure indicated significant difference between the control and the treatment group who used an innovative approach in teaching letter-sound association. Nonsense Word Fluency (NWF) is mentioned as an efficient screener for beginning alphabetic principle and can have a variable relationship with other measures depending on the level of the students (Harn, Stoolmiller, & Chard, 2008).

For the purpose of this study, the Nonsense Word Fluency (NWF) materials from middle of year Benchmark 2 was used for the pre-test and materials from end of year Benchmark 3 was used for the post-test. It assesses the knowledge of basic letter-sound association and the ability to blend letter sounds into consonant-vowel-consonant (CVC) and vowel-consonant (VC) words. Nonsense Word

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Fluency assessment has two sets of scores which are Correct Letter Sound (CLS) score and Whole Word Read (WWR) score. The children were awarded two sets of scores for the single assessment that they did. The correct letter sound (CLS) assesses the knowledge of sound-letter association whereas the whole word read (WWR) assesses the blending of the sounds.

Correct Letter Sound (CLS)

The correct letter sound score in the Nonsense Word Fluency (NWF) assessment was based on the number of letter sounds produced correctly in one minute. The students were given a set of nonsense word consisting of consonant-vowel-consonant (CVC) and vowel-consonant (VC) words and then were asked to pronounce them. For example if the child reads kiv as /k/ /i/ /f/ the score for the correct letter sound is 3. If the child reads dif as /di/ /f/, or /dif/ the score is also 3. After one minute, the test was stopped and the scores were computed by totalling the number of correct letter sounds made by the child.

Whole Word Read (WWR)

The score for the whole word read in the Nonsense Word Fluency assessment was based on the number of make-believe words read correctly as a whole without first being sounded out. For example, if the child reads dif as 'dif', the score is 3 points for CLS and 1 point for WWR, but if the child read it as '/d/ /i/ /f/ dif', the score is 3 point for CLS but 0 point for WWR. After one minute, the test was stopped and the scores were computed by totalling the number of whole word read by the child.

FINDINGS

Paired-samples t-test was conducted to evaluate the impact the intervention had on the children's scores on the alphabetic principles assessment. Prior to that, a test of normality was done to determine the distribution of scores. When a significant effect emerged from the paired-samples t-test, the effect size was calculated using eta-squared.

Correct Letter Sound (CLS)

The test of normality was carried out on the pre-test of CLS scores. Table 1 presents the test of normality for pre-test scores of the Correct Letter Sound (CLS). The Kolmogorov-Smirnov significant value was .000 suggesting violation of the assumption of normality since a non-significant result (sig. value of more than .05) indicates normality (Pallant, 2010). Nevertheless, the actual shape of the distribution can be inspected by the normal probability plots in the Normal Q-Q Plot shown in Figure 1 below which appears to be reasonably normally distributed.

Table 1: Test of Normality for Pre-test Scores of Correct Letter Sound (CLS)

Tests of Normality

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	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre CLS	.310	25	.000	.691	25	.000

a. Lilliefors Significance Correction

Figure 1: Normal Q-Q Plot of Pre-test of Correct Letter Sound (CLS)

The test of normality was done on the post-test of CLS scores. Table 2 presents the test of normality for post-test scores of Correct Letter Sound (CLS). The Kolmogorov-Smirnov significant value was .029 indicating a non-significant result (sig. value of more than .05) which indicates normality (Pallant, 2010). This is further supported by the shape of the distribution as indicated by the normal probability plots in the Normal Q-Q Plot as shown in Figure 2 which suggest normal distribution.

Table 2: Test of Normality for Post-test Scores of Correct Letter Sound (CLS)

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post CLS	.184	25	.029	.929	25	.081

a. Lilliefors Significance Correction

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Figure 2: Normal Q-Q Plot of Post-test of Correct Letter Sound (CLS)

A paired-samples t-test was conducted to evaluate the impact of the intervention on the children's scores of Correct Letter Sounds (CLS). There was a statistically significant increase in CLS scores from pre-test ($M = 4.16$, $SD = 6.49$) to post-test ($M = 27.12$, $SD = 10.00$), as shown in Table 3 below. The t score is $(25) = 11.201$ and the p score is $< .000$ (two-tailed). The mean increase in CLS scores was -22.960 with 95% confidence interval ranging from -27.191 to -18.729 . Table 4 shows the comparison between the pre-test and post-test scores of Correct Letter Sound (CLS). The eta squared statistic (.58) indicated a large effect size based on the guidelines proposed by (Cohen, 1973).

Table 3 : Paired-samples statistics showing mean scores of pre-test and post-test for Correct Letter Sound (CLS)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_CLS	4.16	25	6.498	1.300
	Post_CLS	27.12	25	10.005	2.001

Table 4: Paired-samples t-test showing comparison between pre-test and post-test for Correct Letter Sound (CLS)

Paired Samples Test

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair1	Pre CLS Post CLS	-22.960	10.249	2.050	-27.191	-18.729	-11.201	24	.000

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Whole Word Read (WWR)

The normality test was done on the pre-test of WWR scores. Table 5 presents the test of normality for pre-test scores of Whole Word Read (WWR). The Kolmogorov-Smirnov significant value was .000 suggesting violation of the assumption of normality since a non-significant result (sig. value of more than .05) indicates normality (Pallant, 2010). Nevertheless, the actual shape of the distribution can be inspected by the normal probability plots in the Normal Q-Q Plot as shown in Figure 3 below appears to be reasonably normally distributed.

Table 5: Test of Normality for Pre-test Scores of Whole Word Read (WWR)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Pre WWR	.438	25	.000	.522	25	.000

a. Lilliefors Significance Correction

Figure 3: Normal Q-Q Plot of Pre-test of Whole Word Read (WWR)

The normality test was done on the post-test of WWR scores. Table 6 presents the test of normality for post-test scores of Whole Word Read (WWR). The Kolmogorov-Smirnov significant value was .174 indicating a non-significant result (sig. value of more than .05) which indicates normality (Pallant, 2010). This is further supported by the shape of the distribution as indicated by the normal probability plots in the Normal Q-Q Plot as shown in Figure 4 which suggests normal distribution.

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Table 6: Test of Normality for Post-test Scores of Whole Word Read (WWR)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Post WWR	.147	25	.174	.934	25	.110

a. Lilliefors Significance Correction

Figure 4: Normal Q-Q Plot of Post-test of Whole Word Read (WWR)

A paired-samples t-test was conducted to evaluate the impact of the intervention on children's scores of Whole Word Read (WWR). There was a statistically significant increase in WWR scores from pre-test ($M = 0.40$, $SD = 0.866$) to post-test ($M = 4.56$, $SD = 3.343$) as shown in Table 7 below. The t score is $(25) = -6.614$ and the p score is $< .000$ (two-tailed). The mean increase in WWR scores was -4.160 with 95% confidence interval ranging from -5.458 to -2.862 . Table 8 shows the comparison between the pre-test and post-test scores of Whole Word Read (WWR). The eta squared statistic (.34) indicated a large effect size based on the guidelines proposed by (Cohen, 1973).

Table 7: Paired-samples statistics showing mean scores of pre-test and post-test for Whole Word Read (WWR)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_WWR	.40	25	.866	.173
	Post_WWR	4.56	25	3.343	.669

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Table 8: Paired-samples t-test showing comparison between pre-test and post-test for Whole Word Read (WWR)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_WWR Post_WWR	-4.160	3.145	.629	-5.458	-2.862	-6.614	24	.000

Alphabetic Principle

The scores for both CLS and WWR were combined and the test was done to show the results for alphabetic principle. The normality test was done on the pre-test of alphabetic principle scores. Table 9 presents the test of normality for pre-test scores of alphabetic principle. The Kolmogorov-Smirnov significant value was .000 suggesting violation of the assumption of normality since a non-significant result (sig. value of more than .05) indicates normality (Pallant, 2010). Nevertheless, the actual shape of the distribution can be seen by the normal probability plots in the Normal Q-Q Plot as shown in Figure 5 below appears to be reasonably normally distributed.

Table 9: Test of Normality for Pre-test Scores of Alphabetic Principle

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre_Alphabetic_Principle	.281	25	.000	.706	25	.000

a. Lilliefors Significance Correction

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Figure 5: Normal Q-Q Plot of Pre-test of alphabetic principle

The normality test was first done on the post-test of alphabetic principle scores. Table 10 presents the test of normality for post-test scores of alphabetic principle. The Kolmogorov-Smirnov significant value was .122 indicating a non-significant result (sig. value of more than .05) which also indicates normality (Pallant, 2010). This is further supported by the shape of the distribution as indicated by the normal probability plots in the Normal Q-Q Plot shown in Figure 6 which suggest normal distribution.

Table 10: Test of Normality for Post-test Scores of Alphabetic Principle

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post Alphabetic Principle	.155	25	.122	.908	25	.027

a. Lilliefors Significance Correction

Figure 6: Normal Q-Q Plot of Post-test of alphabetic principle

A paired-samples t-test was conducted to evaluate the impact of the intervention on children's scores of alphabetic principle. There was a statistically significant increase in alphabetic principle scores from pre-test ($M = 2.26$, $SD = 3.47$) to post-test ($M = 15.84$, $SD = 6.25$) as shown in Table 11 below. The t score is (25) = -13.58, and the p score is $< .000$ (two-tailed). The mean increase in alphabetic principle scores was -13.58 with 95% confidence interval ranging from -16.088 to -11.071. Table 12 shows the comparison between the pre-test and the post-test scores of alphabetic principle. The eta squared statistic (.83) indicated a large effect size based on the guidelines proposed by (Cohen, 1973).

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Table 11: Paired-samples statistics showing mean scores of pre-test and post-test for alphabetic principle

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Alphabetic_Principle	2.260	25	3.4765	.6953
	Post_Alphabetic_Principle	15.840	25	6.2562	1.2512

Table 12: Paired-samples t-test showing comparison between pre-test and post-test for alphabetic principle

Paired Samples Test									
		Paired Differences					t	df	Sig. 2- tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair1	Pre_Alphabetic_Principle Post Alphabetic Principle	-13.5800	6.0771	1.2154	-16.0885	-11.0715	-11.173	24	.000

DISCUSSION

The aim of the present study was to assess the effect of an intervention which focuses on the letter-sound association and blending of these sounds in order to help six-year-old preschool children read fluently. This intervention catered to introducing students with alphabetic principle and focuses on the lower level skills of reading first, rather than the higher level skills. Hence, the synthetic phonics approach was used as the intervention for this study. The synthetic phonics approach trains the children the sound-letter association and the blending of the sounds in a systematic way; beginning from simple sounds to a more complex sounds and the blending of these sounds. Due to this, children are able to self-teach themselves new words by independently sounding out and blending the sounds.

In the Correct Letter Sound (CLS) task, the comparison between the pre-test and the post-test scores based on the paired-samples t-test, showed that the overall post-test scores has improved significantly compared to the overall pre-test scores. The significant improvement is due to the intervention on synthetic phonics approach which applies the sound-letter association and blending of these sounds before students are asked to do real reading. This also implies that by teaching children sound-letter association, they are able to recognise the associations of sounds and letters at a faster rate since this approach does not require them to memorize.

The effects of the intervention in this experiment are consistent with the findings from previous studies. For instance, McGeown and Medford (2014) who used the synthetic phonics approach as the method of instruction in their study signified that word reading was most strongly and consistently

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predicted by sound-letter knowledge via a suitable method of instruction. Moreover, Cummings, Dewey, Latimer, and Iii (2011) and Ham et al., (2008) study indicated that performance in the correct letter sound of their subjects predicted their success in later reading fluency.

In the Whole Word Read (WWR) task, the comparison between the pre-test and the post-test scores based on the paired-samples t-test, shows that the overall post-test scores has improved significantly compared to the overall pre-test scores. The significant improvement is due to the intervention on synthetic phonics approach which teaches the students not only the association of sounds and letters but also on blending of these sounds before any real reading took place. This also implies that by teaching children blending, they are able to read words even when the words are nonsense-words. This shows that the children did not memorize the words rather recognize them by the sound-letter knowledge that they were taught.

Interestingly, children were able to blend the sounds from the nonsense-word from the task given. This strong significance of ability to blend sounds into words is consistent with previous literature (DiLorenzo et al., 2011) which suggest that the kindergarten students who received instruction using Itchy's Alphabet were better able to decode unfamiliar (nonsense) words than those who were in the comparison class.

In the alphabetic principle overall assessment, the comparison between the pre-test and the post-test scores based on the paired-samples t-test, shows that the overall post-test scores has improved significantly compared to the overall pre-test scores. The significant improvement is due to the intervention on synthetic phonics approach which applies the sound-letter association and blending of these sounds before students are asked to do real reading. This also implies that by teaching children sound-letter association, they are able to recognise the associations of sounds and letters at a faster rate hence, read even nonsense word since they are able to apply the skill in letter-sound from the synthetic phonics approach employed.

CONCLUSION

This study suggests that learning using the synthetic phonics approach boosts six-year-old preschool children in the alphabetic principle skills. Our results indicates that the alphabetic principles as a skill must be acquired by preschool children before they start to learn reading as it scaffolds their ability to see related sounds to alphabets. We argue that introducing the preschool children alphabetic principle before moving them into real reading will make them better readers. Thus, our findings show that preschool teachers should be trained to use the synthetic phonics approach and by implication the findings demonstrates that this approach can be introduced to children in primary schools to learn to read in English well.

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