

The Teaching of Sound-Letter Association across Gender among Young English Language Learners

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Abstract

Teaching reading in English to young six-year-old non-native speakers of English requires a specific approach. Children at this age are best taught to read from the smallest unit of sounds and continue to learn how these sounds are associated with the letters of the alphabets before they embarked into reading words. However, some scholars argue that approaches in teaching young children to read should differ between genders. Gender factor has been widely deliberated in the domain of reading in English among children. This paper addresses the issue of teaching the sound-letter association among 6-year-old preschool children. Specifically, it will focus on the gender factor in learning the sound-letter association and blending of those sounds via the use of the synthetic phonics method of reading instruction. We will discuss the method of instruction used in this study and provide evidence based on the findings of a pre and post-test. Our findings indicate that there were no gender differences of the lower level skill specifically in the sound-letter association. The findings suggest that both male and female preschool children learned at the same rate using the synthetic phonics method of instructions. We argue that though gender is considered as one of the contributing factors in successful reading in English, for example at the comprehension or vocabulary level, it is however not a fundamental factor with the lower level skills specifically, in learning the sound and letter association and blending these sounds. In other words, children's success in associating sounds and letters, and in blending sounds in English does not differ in terms of their gender.

Keywords sound-letter association, six-year-old, reading, gender differences

INTRODUCTION

Teaching young children who are non-native speakers of English to read in English requires several strategies and approaches which are different from teaching other age groups of English Language learners. Several studies have shown that being able to read at a young age provides an assurance to both schools and parents that these children are on the right track in becoming successful reader by their third grade (Baker, Park, & Baker, 2010; Kame'enui, Simmons, & Coyne, 2000). Teaching reading to young non-native speakers of English at the age of six requires a specific approach in order for them to be able to read and master reading skills well.

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Hence, children at this age are best taught to read from the smallest unit of sounds and continue to learn how these sounds are associated with the letters of the alphabets before they embarked into reading words. Children should be taught the lower level skills such as phonemic awareness and blending of sounds before they consider reading for high level skills such as comprehension. However, some scholars argue that approaches in teaching young children to read should be different for both males and females because these scholars believe that there is a gender factor in the domain of reading in English among children (Below, Skinner, Ferrington, & Sorrell, 2010; Chatterji, 2006).

LITERATURE REVIEW

Categorising children based on gender seems as a very broad and crude way of examining differences among children in terms of reading skills. However, studies have proven that there are differences in reading ability among male and female children (Logan & Johnston, 2010). Ayers (1909, as cited in Below et al., 2010) had conveyed concern over lack of male achievement in reading as compared to female achievement. Several findings from several researches had confirmed Ayers' concern over the issues on gender, age and grade levels (Below et al., 2010). Gender differences in reading that favoured females were found for each year and the effect size (approximately 0.17) remained constant across years (Below et al., 2010).

Physiological-maturational and cultural-societal factors may be related to male deficits in reading skills (Holbrook, 1988, as cited in Below et al., 2010). Researchers investigating physiological-maturational theories have examined processing differences between male and female. These theories involve sequential processing which refers to the ability to process information in sequence, and simultaneous processing is the ability to integrate parts of information into a meaningful whole (Below et al., 2010).

Studies on gender differences in reading mostly favour female over male (Berglund, Eriksson, & Westerlund, 2005; Bouchamma, Poulin, & Ruel, 2014; Johnston, McGeown, & Watson, 2011; Logan & Johnston, 2010). Over the years researchers have carried out several studies to find answers as to why females outperformed males in reading success. Earlier studies suggests females outperformed males in the area of verbal activity (Berglund, Eriksson, & Westerlund, 2005; Westerlund & Lagerberg, 2008), their attitudes to reading, motivation and their frequency in reading (Below et al., 2010; Logan & Johnston, 2009; Morgan & Fuchs, 2007), alongside with the receptive language abilities, general conceptual abilities and non-verbal abilities (Locke, Ginsborg, & Peers, 2002). On the other hand, more recent studies have shown that female outperformed male in their reading strategies (Bouchamma, Poulin, & Ruel, 2014; Logan & Johnston, 2009; 2010), cognitive abilities (Logan & Johnston, 2009; 2010), reading approach (Johnston, McGeown, & Watson, 2011) and their ability to decode letters of the alphabets and to comprehend what is being read (Logan & Johnston, 2010).

In terms of reading skills, a few studies have confirmed that gender differences do exist. These studies revealed that females outperformed males in the lower level skills of phonemic awareness and phonics (Below et al., 2010). Despite findings from studies which mostly favour female over male, a review by Logan and Johnston (2010) cited several studies that shows male superiority over female. However, other studies found that there are no gender differences in reading specifically in the area of phonemic awareness, phonics, fluency (Chia & Kee, 2013; Dodd & Carr, 2003) and comprehension (Below et al., 2010; Johnston et al., 2011).

Findings from studies that favour female over male in reading success ranges from the lower level skills of phonemic awareness, phonics and fluency (Below et al., 2010) to the higher level skill of reading comprehension (Chia & Kee, 2013; Logan & Johnston, 2010). Below et al., (2010) study compared boys' and girls' performance across four early reading skills of phonemic awareness, phonics, orthography, and fluency using a cross-sectional design, applied the five Dynamic Indicators of Basic Early Literacy Skills (DIBELS) measures in order to measure the performance of 1,218 kindergartens through fifth-grade students. Two-way repeated measures analyses of variance with time of year (fall, winter, and spring) operated as the within-subjects variable and gender functioning as the between-subjects variable. Their findings show that girls scored significantly higher than boys on the four kindergarten measures of phonemic awareness, phonics, orthography and fluency although their findings found only small differences.

A recent study by Chia and Kee, (2013) on the five reading components listed in the National Reading Panel (2000) which are phonemic awareness, phonics, vocabulary, reading fluency and reading comprehension on 65 six-year-old preschool children in Singapore shows that there are no significant difference between boys and girls on phonemic awareness, phonics, vocabulary and reading fluency. However, their study noted that there are differences in reading comprehension, which is the higher level skill of reading. Their findings support the earlier studies by Dodd and Carr (2003) who compared three important skills of early literacy namely letter-sound association, letter-sound recall and letter reproduction. Dodd and Carr (2003) studied 83 subjects whose ages ranged from four to six years old. These children performed better on letter-sound association than other skills and there were no differences between girls and boys in terms of their performance.

METHODOLOGY

This study is a part of a larger study which investigated the effects of synthetic phonics method on early reading ability using a quasi-experimental design. The study aimed at investigating gender factor in learning the sound-letter association and blending of those sounds via the use of the synthetic phonics method of reading instruction.

Subjects

Twenty five monolingual six-year-old Malay students 10 boys and 15 girls participated in this study. The subjects attended a preschool annexed to a government primary school in the Klang Valley. They were from the lower middle class socioeconomic group and had not received any specific sound-letter association training. Their exposure to the English Language is mostly in school and their English language competency is considered to be very low. They were all in their first year of preschool.

Materials and Procedure

The study was conducted at the beginning of the school year over a period of 16 weeks. A pre-test was administered in the first week and this was followed by a 14-week intervention. The post-test was administered in week 16 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. The performances on the two assessments were then compared.

Intervention

The intervention was conducted by one of the researchers. The lesson plan and outline for the 14-week lessons were based on the ReadEasy Phonics Reading Series (Nik Nawi & Ahamad, 2001) which employed the synthetic phonics method. The Synthetic phonics method focused on the sound-letter association and the blending of the sounds. The synthetic phonics method placed its basis in reading on the 44 sounds in the English Language and the children using this method were taught in a certain way (Dooner, 2012). This method taught children how the 44 phonemes correspond to letters in the alphabets and that they began learning them beginning with the simple forms and gradually building up to the more complex forms in a systematic way (Dooner, 2012).

The intervention consisted of a weekly 4-hour lesson. The lessons comprised of the teaching of sounds from the 24 phonemes and 10 consonant blends in a specific sequence based on the ReadEasy Phonics Reading Series (Nik Nawi & Ahamad, 2001). Two or three sounds were introduced in each week. The lesson comprised of introduction of sounds, blending of sounds, word reading and it ended with an individual levelled reading.

The subjects were exposed to a total of 56 lessons of one hour each. For example in lessons one and two, the subjects were taught only the sounds of the letters such as /k/ and /a/. There was no blending of sounds since blending was not possible with the first two sounds (/k/ and /a/) learnt. Learning how to

blend the sound began with lesson three where with the third sound learnt (/t/), the subjects were able to blend all the three sounds into a word, which was 'cat'.

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) stresses that for a phonics programme to be successful there must be a plan that teaches all the major letter-sound correspondences, which includes teaching students to blend the grapheme to form words, beginning with consonant-vowel (CV) and consonant-vowel-consonant (CVC) words.

Pre and Post-Tests Instrument

This study used one instrument to measure sound-letter association and sound blending. It was a Nonsense Word Fluency (NWF) Benchmark Assessment for Grade One. The instrument used for this study was adopted from the Dynamic Indicators of Basic Early Literacy Skill Next (DIBELS Next) by Good and Kaminski (2011). The Grade One material was used in this study because Grade One students in the United States are six years old. This age group is equivalent to Malaysia's preschool students who begin their preschool at the age of six.

Initial research and development in DIBELS began in the late 1980s and early 1990s (Good & Kaminski, 2011). Its measures were designed to be economical and effective indicator of students' progress in early literacy skills. The DIBELS was first published in the year 2002 and it was further expanded to DIBELS Next (Good & Kaminski, 2011). It has been field-tested from 2006 until 2010 to document its reliability, validity as well as sensitivity in measuring changes in students' performance (Good & Kaminski, 2011).

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 sound-letter association and sound blending (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 assessed 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 Fluency assessment had two sets of scores which were Correct Letter Sound (CLS) score and Whole Word Read (WWR) score. The CLS was a test for the sound-letter association whereas the WWR was a test for sound blending.

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 words consisting of consonant-vowel-consonant (CVC) and vowel-consonant (VC) words and then were asked to pronounce them. For example if the child read *kiv* as /k/ /i/ /f/ the score for the correct letter sound was 3. If the child read *dif* as /di/ /f/, or /dif/ the score was also 3. The test was done in one minute 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 read *dif* as 'dif', the score was 3 points for CLS and 1 point for WWR, but if the child read it as '/d/ /i/ /f/ dif', the score was 3 point for CLS but 0 point for WWR. This test was done in one minute and the scores were computed by totalling the number of whole word read by the child.

FINDINGS

This paper addresses the issue of teaching the sound-letter association and sound blending among six-year-old preschool children more specifically, on the gender factor in learning the sound-letter association and blending of those sounds via the use of synthetic phonics method of reading instruction. Prior to carrying out the independent-samples t-test, a test of normality was conducted. The independent-samples t-test shows no significant difference in both sound-letter association and blending of those sounds between male and female children. The results are presented in tables and figures below.

Test of Normality and Normal Q-Q Plot

The normality test was carried out on the post-test of the Correct Letter Sound (CLS). Table 1 presents the test of normality for post-test scores of Correct Letter Sound (CLS). The Kolmogorov-Smirnov significant value is .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 inspected by the normal probability plots in the Normal Q-Q Plot shown in Figure 1 which also suggest normal distribution.

Table 1 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

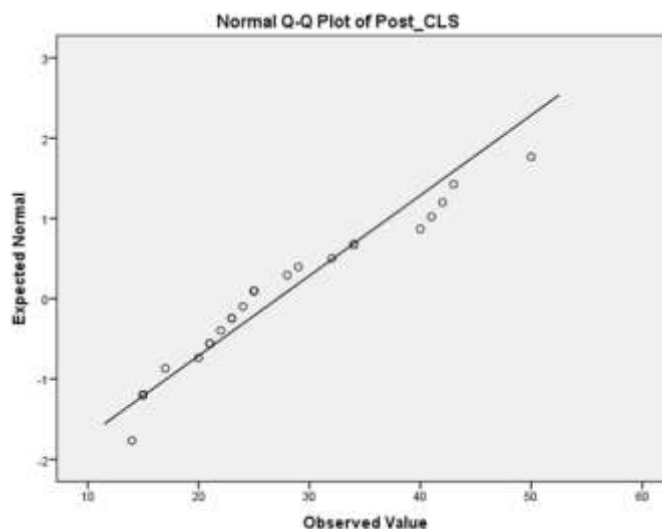


Figure 1 Normal Q-Q Plot of Post-test of Correct Letter Sound (CLS)

The normality test was conducted on the post-test scores of Whole Word Read (WWR). Table 2 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 > .05) which indicates normality (Pallant, 2010). This is further supported by the shape of the distribution as inspected by the normal probability plots in the Normal Q-Q Plot shown in Figure 2 which suggest normal distribution.

Table 2 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

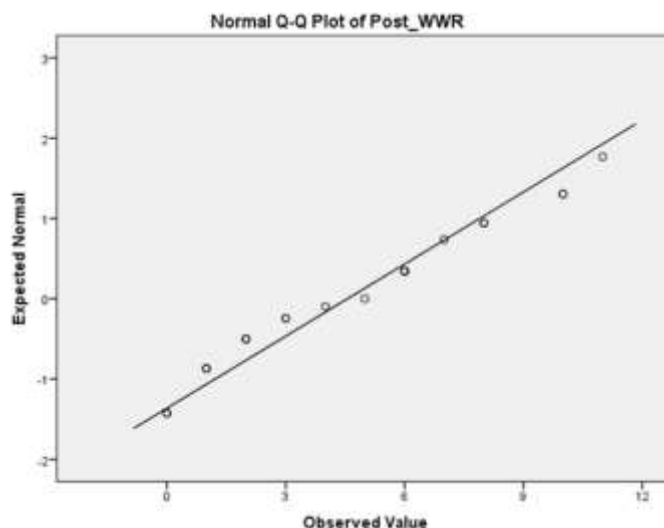


Figure 2 Normal Q-Q Plot of Post-test of Whole Word Read (WWR)

Table 3 presents the comparison between the male and female subjects for the post-test of the correct letter sound scores. The mean for the male group is 27.50 with 11.58 standard deviation and the mean for female group is 26.87 with 9.23 standard deviation. The significant value for Levene’s test for equality of variances is .197 which is larger than .05, which means that the assumption of equal variances has not been violated. Hence, the t value taken is .152 and the degree of freedom is 23. The significant value (2-tailed), $p = .881$. This means that there is no significant difference between the male and female subjects in the treatment group after the intervention.

Table 3 Independent-Sample T-test for the male and female subjects in the treatment group for correct letter sound post-test

Group	N	Mean	SD	<i>t</i>	<i>P</i>
Male	10	27.50	11.58	.152	.881
Female	15	26.87	9.23		

This means that male and female young English Language learners do not differ in their ability to associate sounds and letters. This finding is similar to earlier studies which found no difference between male and female students in associating sounds (Chia & Kee, 2013; Dodd & Carr, 2003). In addition, these findings also do not support previous research conducted by Below et al., (2010) which uses the same instrument as the current study to measure phonemic awareness and phonics. Their study found that females are superior to males in their phonemic awareness and phonics skills (Below et al., 2010). In addition, in the case of this study, reading approach used in teaching six-year-old reading is not a determinant in gender superiority.

Table 4 presents the comparison between the male and female subjects for the post-test of the whole word read scores. The mean for the male group is 5.50 with 2.59 standard deviation and the mean for female group is 3.93 with 3.71 standard deviation. The significant value for Levene’s test for equality of variances is .065 which is slightly larger than .05, which means that the assumption of equal variances has not been violated. Hence, the t value taken is 1.156 and the degree of freedom is 23. The significant value (2-tailed),

$p = .260$. This means that there is no significant difference between the male and female subjects in the treatment group after the intervention.

Table 4 Independent-Sample T-test for the male and female subjects in the treatment group for whole word read post-test

Group	N	Mean	SD	t	P
Male	10	5.50	2.59		
Female	15	3.93	3.71	1.156	.260

In the light of this study, the synthetic phonics method does not differentiate the children’s ability in reading words. This is in contrast with the findings by Johnston and Watson (2005) who mentioned that males performed better in their word reading ability as compared to female when the synthetic phonics method is used as the approach in reading. The finding on the subjects’ ability to blend sounds and produced words from the sounds blended has shown that male or female superiority does not exist in this study.

CONCLUSION

Male or female superiority in lower level reading skills do not prevail in this current study which involved six-year-old children. The result of this study has discovered that both genders show no difference in terms of their skills to associate sounds to the alphabets as well as blending those sounds together to form words. The findings from this study are consistent with other studies that showed there are no differences between male and female children in their ability in lower level skills specifically in associating sound and alphabets as well as reading words using a phonics approach (Chia & Kee, 2013; Dodd & Carr, 2003). Hence, for early learners of English, focus can be made on the lower level skills in reading rather than focusing on the higher level skills. Furthermore, there are no gender issues in terms of ability to master the lower level skills among the early learners of English.

However, it contradicts with Johnston and Watson (2005) findings which favour males over females on word reading using the same phonics method. There is also little evidence to advocate that there are gender differences in the reading process at pre-school level. The National Reading Panel (2000) reported that no gender differences were found for 114 five-year-old children in early decoding skills.

This paper provides a further understanding of the gender factor in teaching lower level skills reading especially on the association of the sounds and letters and, the blending of these sounds among young non-native English Language learners. The findings from this study show that there are no significant differences between six-year-old male and female English Language learners in their ability to associate sounds with their letters as well as blending those sounds through the use of synthetic phonics approach. Hence, teachers should focus more on the suitable approaches to be used in early reading rather than focusing on the gender factor in teaching reading. However, there are other factors which this study does not look at especially those relating to the children’s attitude towards reading and their cognitive ability. Finally, the findings of this study suggest that gender difference is not a factor in determining children’s ability to associate sounds to their letters and to blend these sounds.

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