COGNITIVE SCIENCES AND HUMAN DEVELOPMENT

Reading Skills in English using Jolly Phonics at a Chinese Primary School

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ABSTRACT

This study investigates the viability of using a phonics programme for Primary One students who are studying at a National Type Chinese School in Sarawak, Malaysia. Jolly Phonics is a Synthetic Phonics Programme that is used to address common reading problems. In this study, Primary One students who learn Mandarin as their main language in school, while learning English and Malay Languages at the same time. The phonics consists of teaching reading with five skills, namely learning the letter sounds, letter formation, blending, segmenting and tricky words. 39 students participated in the study. Two groups were formed to compare performances between those who used the phonic programme and those who attended the regular English classes. Data was collected on pre and post-test achievements for both the experimental and control group. Findings revealed that the phonics programme did not significantly impact the students' reading ability when compared with performances of those who attended regular lessons which used existing methods of teaching reading skills for English language learning at the Chinese medium school.

Keywords: Night reading ability; non-native English language learners; phonics; Chinese school; foreign language learning

INTRODUCTION

In a multiracial, multicultural and multi languages environment, many Malaysian students still perceive English as a foreign language or at times, an alien language, especially to those living in the rural area where the functional use of English is literally non-existent. English is commonly taught as the second language after Malay Language in all the *Sekolah Kebangsaan* (National School). However, in vernacular schools such as the *Sekolah Jenis Kebangsaan Cina* (National Type Chinese School) and *Sekolah Jenis Kebangsaan Tamil* (National Type Tamil

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School), English is learned as a third language, after their mother tongue and the Malay Language. Consequently, the learning time for English in National Type Schools is limited. One of the reasons is that the medium of instruction in National Type Schools is not English, and students learn other subjects such as Mathematics and Science in either Mandarin in Chinese Schools, or Tamil in the Tamil Schools. Hence, the opportunities to listen, read and use English are somewhat constrained to the hours allocated for English as a subject.

According to the National Research Council (NRC), most reading problems can be prevented by introducing effective teaching methods and intervention in the preschool or primary lower grades (Snow, Burns, & Griffin, 1998). NRC also advocated that in order to read well, students need to understand how sounds are represented by print and they are able to apply the knowledge to spell and read words. The fundamental skill for literacy is the ability to segment the words into the phonemes. In the case of National Type Chinese school students in Malaysia to acquire English, interventions must be taken to solve the reading problems of beginning readers. Reading is a cognitive process to decode symbols in order to construct meaning. Learning to read is not the same as learning to speak. Common reading problems at the elementary age reading problems are identified as follows:

– does not always recognize start or end sounds
– guesses, mispronounces or skips words while reading
– forget words even right after being helped
– cannot spell
– resists reading
– extra reading support or tutoring is not helping
– reading is behind compared to other subject

Typically, exposure to a target language will allow children to acquire and produce speech. According to Shaywitz (2003), spoken language learning is a natural process in the human brain but, learning to read for children does not naturally emerge (Bald, 2007). Reading skills need to be taught explicitly.

In Lim and Varghese's (2013) study on Malaysian English classrooms, they found that the National Chinese Type schools tended to teach reading through reading aloud, repetition, heavy dependence on textbooks and close alignment with the coveted Primary Six National Examination (UPSR). Consequently, the methods of teaching are tedious and exam oriented. It is quite similar to methods used decades ago, as reported by Gregg (1954). In his study, he found that the most common activities in teaching reading include reading a text, answering teacher questions, reading aloud from the book and using a workbook provided. These were described as heavily used activities, and are still being practised in many classrooms today.

There are numerous ongoing debates on the best way to teach reading in early age (Hiebert & Pearson; 1999, Pearson, 2001). According to Pearson (2001), the two most competing methods of teaching elementary readers through the ages are the literature-based (whole language) approach and the controlled vocabulary (phonics) approach. There are also suggestions to teach phonics skills in isolation (Soiferman, 2016). Smith (1971) and Goodman (1987) asserted that

children depend more on the meaning of language than on the graphic information from the text while reading. In relation to this study, to acquire English Language, students need to practice reading to develop their phonemic awareness, phonics, fluency, vocabulary, and comprehension (Cimmiyotti (2013). Phonemic awareness is the realization that phonemes are the elementary units of spoken words.

Controlled vocabulary approach is frequently related to graded reading series called "basal readers" (Reyhner, 2008). It emphasizes the sounds of the alphabetic letters, commonly referred to as the phonics approach. Phonics is defined as the association of letters or letter groups with the sound they represent. It is a system of teaching reading with alphabetic principle, which the central component is made up of the correspondences between letters or groups of letters and their pronunciations (Adams, 1994). Johnston and Watson (2005) claimed that the two major approaches to teach children reading with the alphabetic principle are the analytic and synthetic phonics. Systematic phonics instruction in teaching reading has been increasingly recognised by English-speaking countries such as England and the United States (Wyse & Goswami, 2008). When Sue Lloyd and Christopher Jolly created a fun and child-centred synthetic phonic programme in 1989 for beginner readers to develop reading skills, the programme was well received, due to the needs of that time. Actions and multi-sensory methods were used to motivate children to learn reading. There are five skills taught in Jolly Phonics include learning the letter sounds, learning the letter formation, blending, identifying the sounds in words (segmenting), and finally, learning tricky words. Jolly Phonics is said to be a fast track strategy in enhancing Primary One students' reading skills (Ekpo, Udosen, Afangideh, Ekukinam, & Ikorok, 2007).

In Johnston and Watson's (2005) seven-year study of the effects of synthetic phonics teaching on reading and spelling attainment, their results concluded that the synthetic phonic programme was so far the best approach in developing literacy skills. The study was carried out on about 300 children. They found that children at the end of Primary 7, made gains six fold, advancing between 7 months to three years and 6 months in reading age. The gain in spelling was recorded at 4.5 fold, with 7 months to 1 year 9 months ahead of the participants' chronological age. The result was outstanding in comparison to earlier studies, as the effects of training programmes normally washed out instead of increasing. (Ehri et al, 2001). Due to the positive outcomes reported in these studies which have looked at the use of phonics to teaching reading skills in English, this study intends to test the viability of using Jolly Phonics to teach reading among Chinese medium primary one students.

METHODS

This study employs a quasi-experimental approach to investigate the causal effects of an intervention on a selected student group, without random placement. In this study, random assignment is not possible because the student group selected for the study was already placed in two separate classrooms.

Participants

39 Primary One students who were attending a National Type Chinese School in the city of Kuching participated in the study. They were enrolled in a sub-urban school, where the school population consisted of a majority ethnic Chinese (59%) with (41%) minority of Bumiputras (Dayak and Malays). The participants were enrolled in two Primary One classes, 21 from one class (which were assigned as the experimental group) and another 18 from second class (which were assigned as the control group). Both groups represented the entire Primary One student population in the selected school. All participants came from non-English speaking families. In school, they attended seven English Language lessons per week, 30 minutes per lesson. They have had minimal exposure to English language, and the level of English they were exposed to were mainly provided during lesson time. They spoke their own dialects at home, such as Hokkien, Hakka, Foochow for the Chinese ethnics. The Malay Iban and Bidayuh ethnic students spoke their native languages at home. In school, no other subject they learned was taught using English. National Type Chinese Schools in Malaysia would commonly encouraged the use of Mandarin to communicate academically and socially. All content knowledge subjects were taught in Mandarin.

The Burt Word Recognition Test 1974 Revised was used as the research instrument. It consists of 110 selected words printed in isolation, and in group of tens, with different sizes of the same font. The instrument is presented in an increasing order of difficulty. Students were instructed to read out the stimulus words. If the student pronounced ten consecutive words wrongly, the test was stopped. The amount of correctly read words was counted, and the reading age of the student would be determined using a reading age table prescribed by the Jolly Phonics method. Similar to other standardized reading tests, effort was made to ensure that no teaching was tailored to the Burt Word Recognition Test. None of the words used in the test were taught purposely in any class session prior and during the test.

Every participant was tested using the Burt Word Recognition Test, in a quiet area, and a distance was kept from other participants. A digital recorder was used to record the pronunciations articulated by each participant while taking the reading test. For classification purposes, every audio file was named after every participant's name and the group they belonged to. During the test, students were instructed to start reading the items in the Burt Word Recognition test, from the top, left to the right. There was no hint given when the participants hesitated to read. Every participant was given a few seconds to think before each articulation. If they could not read a word, they were instructed to read the subsequent word in the reading test. Students were allowed to read at their own speed. Self-corrections were counted as correct answers. The words that students pronounced correctly were recorded. The test was ended for each participant when he or she reached 10 continuous errors. The number of words read correctly was counted as the raw score. Using a chart prescribed by the Jolly Phonics approach, the raw score was then converted into a Reading Age (the reading ability of a student). The reading age was assigned in the units of years and months.

There are 42 sounds of English language introduced in Jolly Phonics. The sounds are

categorized into seven groups, beginning with sounds which form most words in English Language (Wernham and Lloyd, 2010). There are six sounds from each group as shown below:

1. s, a, t, i, p, n
2. ck, e, h, r, m, d
3. g, o, u, l, f, b
4. ai, j, oa, ie, ee, or,
5. z, w, ng, v, oo, oo
6. y, x, ch, sh, th, th
7. qu, ou, oi, ue, er, ar

Some of the sounds are represented by two letters, a diagraph. There is a gesture and a song associated to each sound. The sounds are associated to the most common spelling as well. In this way, students learn graphemes sequentially as they learn the sounds.

For the control group, teaching is implemented without using any supplementary materials. There is no restriction placed on how the English Language teacher teaches English language reading for the control group. The teacher mostly used the prescribed text book to teach reading. In the experiment, the teacher used reading aloud, repetitions, and comprehension checks to enable the learning of new words and sounds.

Table 2: Mean Score for Experimental Group and Control Group

	Mean score		Increment
	Pre-test	**Post-test**	
Experimental Group	6.26	6.43	0.17
Control Group	6.02	6.23	0.23

Student	**Pre-test (Reading age)**	**Post-test (Reading age)**	Student	**Pre-test (Reading age)**	**Post-test (Reading age)**
1	5.5	5.6	1	5.5	5.9
2	6.2	6.1	2	5.3	5.5
3	6.6	6.9	3	6.2	6.5
4	6.4	6.5	4	6.2	6.5
5	6.2	6.5	5	6.0	6.1
6	7.0	7.0	6	6.5	6.9
7	5.7	5.7	7	6.3	6.5
8	6.1	6.5	8	7.3	7.7
9	6.5	6.5	9	6.4	6.4
10	6.0	6.1	10	6.1	6.2
11	6.1	6.3	11	6.5	6.5
12	6.5	7.0	12	5.6	5.9
13	6.1	6.0	13	5.4	5.7
14	5.9	6.2	14	6.0	6.1
15	6.0	6.0	15	6.0	6.2
16	6.5	6.8	16	5.7	5.9
17	6.0	6.0	17	5.4	5.7
18	6.1	6.5	18	5.9	5.9
19	6.3	6.6			
20	6.9	7.6			
21	6.9	6.8			

Procedure

In the first phase of data collection, all the 39 students in Primary One were tested with The Burt Word Recognition Test Revised 1974 followed by the proper test instructions. The pre-test reading age score of each student were determined. The test started in early September 2017 and lasted for a week. In the treatment phase, the teaching of reading lessons with Jolly Phonic Programme was carried out for the experimental group. The teaching reading instructions integrated Jolly Phonic skills, namely, learning the letter sound, letter formation, blending, segmenting, and tricky words. Seven lessons were

carried out to teach the seven groups of letter sounds together with the letter formation skills. During the lessons, blending and segmenting skills were introduced. Tricky words were displayed in the class as posters. Students read those words together once before every English lessons started. They can also read on their own during their free time. The tricky words poster are changed or updated every week with new words. It took two months to complete the lessons of 7 groups of sounds in Jolly Phonics. After two months, the participants from experimental and control group were tested again with The Burt Word Recognition Test using the same rules and regulation as the pre-test.

Findings

Data from the testing revealed the reading age scores of the pre-test and post-test measurements, and consequently it was tested using a normality test. Because the population size was less than 100, therefore, the Shapiro-Wilks test (n<5) was chosen as the normality test. Normality was assumed, therefore, a parametric test was conducted to analyse the data. The paired sample t-test and an independent-group t-test were carried out.

Table 1 shows the pre- and post-test reading ages of participants in the study.

The results also illustrated an unexpected non-effect of Jolly Phonics approach on the experimental group.

For the experimental group, the lowest reading age before they were taught using Jolly Phonics lessons was 5 years 5 months. The highest reading age score was recorded at 7 years. After completing the Jolly Phonics lessons, the lowest reading age score is measured at 5 years and 6 months, whereas the highest reading age achieved was 7 years 6 months. Table 2 shows a small increment of

Table 3: The Burt's Reading Test Analysis of Students

Experimental Group			Control Group		
Reading Age	***Before Experiment* Number of students**	***After Experiment* Number of students**	**Reading Age**	***Before Experiment* Number of students**	***After Experiment* Number of students**
5.3 -5.11	3	2	5.3 -5.11	7	7
6.0 – 6.11	17	16	6.0 – 6.11	10	10
7.0 – 7.11	1	3	7.0 – 7.11	1	1

Table 4: Paired Sample Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2 tailed)
Pair 1	preJolly - postJolly	-.17619	.21887	.04776	-.27582	-.07656	-3.689	20	.001

0.17 in terms of reading age, after the participants learned using Jolly Phonics. The individual increment of reading age ranged from 0 to 6 months. In comparison, for the control group, the lowest reading age for pre-test was measured at 5 years 3 months and the highest score was at 7 years and 3 months. After two months of learning reading without using Jolly Phonics, the lowest reading age score was recorded at 5 years 3 months and the highest achieved 7 years 7 months. The mean score for the pre-test and post-test are 6.02 and 6.03 respectively. It showed an increment of 0.21, higher than that of the experimental group. The individual increment of reading age ranged from 0 to 4 months.

Findings also showed that after the Jolly Phonics lessons, the number of participants whose reading age was ranging from 5.3 to 5.11 had decreased from three participants to only two participants. The participants with the reading age range from 6.0 to 6.11 also saw a decrease, from 17 to 16 participants. Whereas the participants who were classified in the range of 7 years and above had been increased from one to three. Table 3 presents improvement in the reading age of the participants. The table also shows the number of participants who were able to improve in their reading skills after completing the Jolly Phonics lessons.

Table 4 presents results of the paired sample t-test result; the probability value 0.001 was recorded less than the alpha value of 0.5, indicating a significant reading age difference

Table 5: Tests of Normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
preControl	.111	18	.200*	.941	18	.305
postControl	.187	18	.096	.896	18	.048

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

between the pre and post Jolly Phonics Programme. The analysis illustrates how Jolly Phonics programme have improved the students' reading age score, $t(21) = -3.689$, $p < 0.05$.

Because the size of the population was less than 100, the Shapiro-Wilk test was conducted as the normality test.

The Shapiro-Wilk significance level for pre-test was recorded at 0.305, and 0.048 for post-test data. The significance level of post-test results was slightly lower than 0.05, but the Kolmogorov-Smirnov significance level for the post-test data was recorded at 0.096, a greater value than 0.005. Therefore, these values validated an assumption that the data was normal.

The Levene's test showed a probability greater than 0.05, indicating that the population variances were relatively equal. The two-tail significance for the post reading age score indicated $p>0.05$; hence, the difference was not significant. The analysis revealed that there was no significant reading age differences between the post-test reading age scores for the experiment group (with Jolly) and the control group (without Jolly). It also was clear that both teaching reading methods, with or without Jolly Phonics approach, did improve the participants' reading ages and that their differences in choice of reading method was not significant.

CONCLUSION

The data concluded that both teaching reading methods, either with or without Jolly Phonics approach, improved the reading age of the year one students who participated in the study. The degree of improvement for both methods showed no significant difference. The findings illustrated that both methods were just as notable in enhancing the Chinese non-English native speaking students' reading ability in English language. Both teaching reading methods were proven to have benefited the students in reading development.

The findings from the current study were not in congruence with a similar study in Nigeria. Ekpo et.al (2007) carried out a similar study on the children' reading ability in Akwa Ibom State, and he found that Jolly Phonics was effective in enhancing the students' reading ability. The experimental group in Ekpo's study gained 3 to 29 months reading age in The Burt Word Recognition Test 1974 Revised. However, the study was done over a period of 9 months. In comparison, the current study only used the Jolly Phonics programmes for two months, and although shorter in terms of implementation time, the

Table 6: Independent Sample Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
postRA	Equal variances assumed	.001	.977	1.318	37	.195	.21032	.15952	-.11290	.53354
	Equal variances not assumed			1.312	35.224	.198	.21032	.16036	-.11516	.53579

reading age of the participants showed an increase, ranging between one to seven months. Foxcroft and Chapple (2007), who also claimed that the synthetic phonics based approach (such as Jolly Phonics) made a remarkable improvement in children's reading ability, because the phonics programme provided a variety of reading experiences. Callinan and Zee (2010) compared two methods of synthetic phonics instruction (Jolly Phonics and THRASS) for learning how to read, and their results revealed the Jolly Phonics instructions had made greater gain in both word and non-word reading tasks after a year of experimentation. Schagen (2007) also found a positive impact of using Jolly Phonics programme, after one year of Jolly Phonics instruction in primary schools of Hyderabad, India.

The current study showed that in a period of two months, the phonics programme did not affect reading skills among Chinese medium students, when compared with the conventional English language lessons taught at the school. In theory, the phonics emphasis on the Jolly Phonics programme leaned toward the learning of whole word approach, and teachers would usually start by focusing on meaningful linguistic units such as texts and sentences. Consequently, students would get to the simplest unit (letters) progressively. Jolly Phonics approach is designed to enable students to comprehend and increase their motivation to read (Ruiz, 2014). In alignment with the notion, Goodman (1987) asserted that as children acquire a repertoire of whole words, they begin to read familiar words and phrases. It is believed that the Jolly Phonics programme enables them to handle unfamiliar parts in familiar uses anywhere. Skills such as word recognition or phonics are taught within the text but not taught in isolation. Comprehension is the main emphasis in the acquisition of reading skills in English.

To conclude, the study has revealed that conventional teaching methods such as reading aloud was just as effective as a focused phonics approach to learning reading. It interestingly illustrated that even for a group of students who have limited opportunities to listen, read and use English language, their performance did not show any significant difference between the convential learning method and Jolly Phonics approach.

Further research should employ a longer experimentation period to enable a more comprehensive experimentation of the reading methods. Findings from a bigger scale study would be useful for teachers and students of Chinese schools in Malaysia, to enable a more effective decision making on pedagogical options, resources and variations.

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