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Final Thesis Cover Sheet

Name of student	YANG YILIAN
SID	
Name of tutor	Dr. WONG Ming Har, Ruth
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Signature:	
Date:	10/5/2017

THE EFFECTIVENESS OF PHONICS IN STUDENTS' ENGLISH VOCABULARY READING IN PRIMARY ESL CLASS

Abstract

The present study evaluated the effects of Read Write Inc. Phonics, which is a program based on synthetic phonics, on first grade students' English vocabulary reading in Hong Kong context, and discussed implications of teaching phonics to primary students. The study adopted a single case study involving a pre- and post-test design. Students were asked to read 20 pseudowords, including 61 sounds in total in each test. Paired-samples t-tests were used to compare students' performance before and after the phonics instruction. The results showed a significant increase in vocabulary reading accuracy from pre-test (M = 11.1, SD = 9.9) to post-test (M = 38.6, SD = 8.69) and thus suggested a significantly large, positive effect of synthetic phonics instruction on vocabulary reading (d = 2.90). The researcher further noted that teachers should also pay attention to the development of students' three skills, namely, blending, decoding and analogy skills when teaching phonics to primary students.

Keywords: phonics, synthetic phonics instruction, English vocabulary learning, Hong Kong ESL learners

Introduction and Background

It is globally recognized that English has a high priority in students learning. Phonics as one of the crucial elements in learning English has been discussed widely in literatures over time. Throughout the 1970s and 1980s there was a heated discussion about whether phonics should be added into students' early reading curriculum. There is abundant evidence showing that reading interventions should be effectively applied in the beginning stages of reading development and the significance of phonics has been acknowledged by different researchers.

In Hong Kong, the EDB has developed relevant resource packages for teaching phonics that can be employed in primary schools, while the actual implementation in everyday teaching is very limited because of the extreme workload and teachers' lack of relevant and professional knowledge. Even though most of the primary schools in Hong Kong have chosen the textbook including some relevant phonics knowledge for students' references, teachers may pay little attention to teaching the phonics knowledge. It is mentioned in the English curriculum guide (primary 1-6) published by EDB that one of the useful strategies of developing students' reading skills is directing students' attention to the letter-sound relationships of words (EDB, 2004). However, the effectiveness of phonics in improving students' English vocabulary reading skills in Hong Kong context has not been broadly confirmed. Therefore, it is insightful to examine the practice of phonics in Hong Kong English classrooms.

This study investigated the effectiveness of synthetic phonics in students' English vocabulary reading skills in the short term, especially focusing on their abilities to figure out the correspondences between graphemes (letters) and phonemes (sounds) and how to apply the knowledge to decode unfamiliar words.

Significance of the Study

The current study is of particular significance because it examines the effectiveness of Read Write Inc. Phonics (RWI), which is based on synthetic phonics, in first grade students' English vocabulary reading in the teaching context in Hong Kong. While several other studies have examined the impact of phonics instructions on students' reading (Adams, 1990; Anderson et al., 1985; Chall, 1967; Ehri et al., 2001), no studies (to the author's knowledge) have examined especially the impact of RWI on Hong Kong students' ability to read.

According to the Oxford Path website (Oxford Path, 2012), RWI has been adopted as a part of the curriculum in many Hong Kong local and international schools. Therefore, this study may redound to the benefit of these schools because these schools can justify whether or not the implementation of RWI is beneficial based on the findings. For other schools that have not adopted RWI yet or have not implemented any phonics instructions, this study can provide references for them to reconsider their curriculum. The findings may also help primary school teachers or

education practitioners to better understand the importance of phonics and reflect on the methods of teaching phonics to students in Hong Kong.

Literature Review

English as a second language (ESL) and English vocabulary learning

The language situation in Hong Kong can be described as "trilingual", which refers to three official spoken languages: Cantonese, English and Mandarin (Setter, Chan, & Wong, 2010). Although English is one of the official languages in Hong Kong, most of schools, especially local schools, prefer using Cantonese as the medium of instruction except for English lessons. As a result, English can still be viewed as a second language in Hong Kong. Alonso (2011) made a point that one of the greatest challenges for ESL learners was to eliminate "foreign accent" in their English pronunciation. There is no doubt that phonics is one of the useful tools for improving English pronunciation. Apart from pronunciation, ESL learners also face many difficulties such as vocabulary, writing and reading. In the last fifty years, the status of vocabulary has been relatively low, which results in the neglect of vocabulary teaching for ESL learners (Celce-Murcia, 1991). However, the place of vocabulary in the language learning process has been restored to prominence in the early decades of this century (Alonso, 2011). Several series of research (e.g., Seal, 1991; Carter, 2012) have indicated that vocabulary is an important part in English learning worthy of effort and investigation. English vocabulary learning includes reading (word

pronunciation) and writing (word spelling). As a consequence, developing ESL learners' vocabulary reading skill is crucial.

The importance of reading and its five areas

The question about how to develop children's reading ability with the most appropriate teaching method has been fiercely debated down through the ages because reading is regarded as one of the most significant skills of learning for children (Stuart, 2006). It is pointed out many times in literatures that reading failure begins during the early years of schooling (Ehri, 1998; Juel, 1988, 1996; Pikulski& Chard, 2005). Therefore, in children's early ages, they are encouraged to equip themselves with a strong basis in five reading areas, namely, (a) phonemic awareness, (b) phonics, (c) reading fluency, (d) vocabulary, and (e) comprehension (National Reading Panel, 2000). Each area of reading has strong connections with one another, and they weigh equally in the success of reading. Moreover, reading also includes reading pseudowords, because it is able to assess children's ability to pronounce unknown written words (Ehri, Nunes, Stahl & Willows, 2001). In this study, however, the focus was only to investigate the connection between phonics and vocabulary. Participants were asked to read pseudowords as a means of assessing their vocabulary reading ability.

Phonics instruction and its impact on reading

Phonics instruction is a teaching method that highlights the letter-sound correspondences in language and is a type of reading instruction used in the early stage of reading development (Rasinski&Padak, 2001). Simply put, the primary focus of phonics instruction is to help children to better understand how letters are linked to sounds and how to draw on this knowledge in their reading. Several researchers (e.g., Adams, 1990; Ball & Blachman, 1988; Torgeson et al., 1999) have shown that based on theories of psycholinguistics, cognitive development, child development and learning disabilities, phonology, including phonemic awareness and phonics, is vital in the beginning stages of reading and in developing beginning literacy competence. Children may easily suffer in word recognition, reading comprehension, and fluency when they grow up if phonological skills have not been acquired in their early ages (Chall, 1996). Suggate (2010) also suggested that phonetic-decoding interventions, including phonics, showed a significant effect in kindergarten and Grade one. Although the benefits of phonics in reading are recognized in many literatures, in the current study, efforts were made to evaluate the effectiveness of synthetic phonics instruction in particular.

Characteristics of synthetic phonics

Research has shown that teaching phonics systematically includes several different approaches (e.g., Aukerman, 1971, 1984; Harris & Hodges, 1995). Synthetic phonics is one of these approaches. For this approach, students are taught to identify and

understand the relationship between an individual letter (e.g. “a” or “e”) or letter combination (e.g. “ai” or “ar”) and its corresponding sound (National Reading Panel, 2000). Synthetic phonics adopts a part-to-whole approach as its core. The part-to-whole approach focuses on teaching students to convert graphemes (letters) into phonemes (sounds) first and then blend the sounds into a recognizable word (Ehri, Nunes, Stahl, & Willows, 2001). For instance, when pronouncing a word, children will be taught to recognize sounds of each letter first and then blend all the sounds into that word. Basically, synthetic phonics instruction puts emphasis on each sound in every word. The synthetic phonics instruction used in this study is Read Write Inc. Phonics (RWI), developed by Ruth Miskin. Over 25% of UK’s primary schools have adopted it as a part of the curriculum (Oxford University Press, 2017). In Hong Kong, a few local and international schools also have been implementing this phonics instruction (Oxford Path, 2012). Hence, investigating the effectiveness of RWI in the teaching context in Hong Kong is a worthwhile direction.

Past studies on teaching phonics systematically

Alonso (2011) stated that reading skill development was highly related to phonological skills. Evidence of the association between phonological awareness and reading comes from studies that have found that children’s reading skill can be predicted by different degrees of phonological awareness (e.g. Bryant, MacLean, Bradley, and Crossland, 1990). To better develop phonological skills, phonics instruction is of great help. Several studies have shown that systematic and explicit

are two general characteristics of phonics instruction because these kinds of phonics instruction have greatest benefits with most children (Chall & Popp, 1996; NRP, 2000; NICHD, 2001). Also, the effectiveness of systematic phonics instruction has been evaluated. One of the most popular studies was conducted by Jeanne Chall (1967), who put great effort in reviewing early reading instructions comprehensively. Her basic finding was that early and systematic phonics instruction was crucial in helping children to perform better in reading than later or less systematic phonics instruction. Similarly, the National Reading Panel (NRP) (2000) has revealed that teaching phonics systematically and explicitly makes a bigger contribution to reading development than alternative programs providing unsystematic or no phonics instructions. NRP (2000) and Ehri, Nunes, Stahl & Willows (2001) both conducted a meta-analysis and agreed on the conclusion that systematic phonics instruction was effective whether it was taught individually, or in small groups, or as classes. Although the advantages of teaching phonics systematically have been proved many times in different literatures, the current study examined the effectiveness of synthetic phonics specifically in ESL learners' vocabulary reading skill and the findings may help Hong Kong schools to better implement their curriculum.

Research Questions

Consistent with previous studies, it was expected that phonics instructions would show positive effect on improving children's reading skill. In addition to this hypothesis, the following research questions are formulated.

1. What is the effectiveness of synthetic phonics in first grade students' English vocabulary reading in Hong Kong context?
2. What are the implications of teaching phonics to primary students in Hong Kong?

Methods

Participants

33 Grade one students in a Hong Kong local primary school who were studying in their first semester were initially invited to participate in the current study. Since all the students invited were under 18 years old, oral assent was obtained directly from them and informed consent was obtained from their parents or guardians before the study. The study was designed on the premise that students to be recruited should have no experience in learning phonics in any formal ways, such as having relevant courses in kindergartens. Therefore, in the consent form, a question was included for parents or guardians to indicate whether their children met the requirement of this study. Only students whose parents or guardians indicated "no previous experience in learning phonics" were eligible for the study. As a result, two of the total 33 students could not meet the requirement and thus were excluded in this study. In the end, a sample of 31 participants was obtained.

Procedures

This study lasted for three months in time, beginning with an observation in the second week of the semester. Without notifying participants, the researcher observed

participants' performances in their English lessons (especially focusing on vocabulary students used and their pronunciation) and homework to have a brief idea of the English vocabulary they had mastered. Combined with the observation, a discussion with their English teacher was made in order to have a basic idea of the participants' current English vocabulary level and vocabulary reading skills. The English teacher told the researcher that most students had more or less the same vocabulary level, except that two or three students who had a little advantage over others in terms of vocabulary. Through observation and discussion, students' English vocabulary level was found to be basic and limited. The vocabulary students mastered is mostly some simple vocabulary with not more than three syllables in each word, such as "map", "paper" and "balloon", which was consistent with that assumed by the researcher. Therefore, there were no special needs to change the design of the teaching plans and test questions.

Secondly, all participants were arranged for a one-on-one pre-test session with the researcher. The duration of each session was around ten minutes. A short instruction for participants was given at the beginning of the pre-test. Participants were told to read aloud the words on the list and to try their best to pronounce every sound even if they had no idea how to correctly pronounce. To help participants to understand, the researcher gave them a simple example with the word "map" that they learnt before. To ease participants' anxiety and clarify the scoring method of the task, students were told, if they could only pronounce a part of the word, for example "m" sound in the

word “map”, they should do so because it still earned them partial scores. They were also informed and reassured that they should not worry about whether or not they could pronounce the words on the list because their performance on this task would not impact their English course grades. All the pre-test data were collected in two weeks. The performance of the participants was assessed through the method that each of the word was scored according to its sounds. For example, for the word “map”, it contains three scores for ‘m’, ‘a’, and ‘p’.

After the pre-test, a short-term teaching took place according to the teaching plans prepared before. The teaching contents were based on Read Write Inc. Phonics (RWI), which is an integrated English language program based on synthetic phonics. For each RWI lesson, the teacher will first teach the sounds (normally two or three sounds for one lesson) and then read a story including the target sounds. By reading the story, students are guided to apply the knowledge to pronounce unfamiliar words by themselves. Participants had at least one RWI lesson each week delivered by their English teacher and the duration of the teaching period was two months.

Finally, post-test was provided after the teaching period. The content and arrangement of the post-test were the same as pre-test. Besides, the marking criteria were the same as the pre-test to guarantee that both tests were consistent.

Measures

The Phonics Test contains 20 pseudowords, 61 sounds in total (Appendix 1). Pseudowords are defined as a pronounceable combination of letters that do not exist in a real language (according to dictionaries) but do have all the characteristics of a known real word (Cardenas, 2009). The major application of pseudowords is using as a test instrument in reading to test phonics knowledge (Harris & Hodges, 1995). By using pseudowords in phonics tests, the unwanted situation can be greatly avoided where students may draw on memory of known vocabulary to pronounce it rather than rely on their knowledge of phonics (Cardenas, 2009). In RWI program, individual sounds are called as "speed sounds". As long as one letter or a combination of multiple letters represents only one sound, it is counted as a speed sound. For example, "f" in "fair" is a speed sound and "air" is also a speed sound despite the composition of three letters because it represents only an individual sound. The design of the pseudowords in this study is based on the different word structures. For instance, "mot" includes three speed sounds constructed with one vowel sound in between (i.e., "m", "o", "t"); other sample items include "shoy" (i.e., with two speed sounds constructed with compound letters "sh" and "oy"), "sleed" (i.e., with four speed sounds "s", "l", "ee" constructed with compound vowel letters and "d"), "fripe" with four sounds (i.e., "f", "r", "i-e" "p") and "digh" with two sounds (i.e., "d", "igh").

Of all 61 sounds, 54 are sounds that students were expected to have learned by the end of the teaching period. Therefore, from the differences of scores in pre-test and post-test of the 54 sounds, the effect of learning can be measured. While for the rest seven sounds, first, students were not expected to improve on these sounds because they never learned that through the phonics instruction; second, students' ability to generalize what they learnt in those 54 sounds and to make analogies would be measured.

Data Analysis and Results

The scores of the pseudoword reading tasks were coded by the researcher from the word level to the sound level. A correct pronunciation of a sound was coded as "1" and an incorrect response was coded as "0". Ultimately, it created as score range from 0 to 61. The following data analyses were carried out using IBM SPSS v21 statistical software.

As for total scores on the pseudoword reading task, on average, students pronounced 11.1 sounds correct (*SD* = 9.9) in the Pre-test (PreTotal) and 38.6 sounds correct (*SD* = 8.69) in the Post-test (PostTotal), out of the total 61 sounds. In terms of sounds students have learned in the teaching period, it was indicated that the total scores of learned sounds gained in post-test (PostLearned) (*M* = 37.8, *SD* = 8.72) were higher than the total scores of learned sounds gained in pre-test (PreLearned) (*M* = 11, *SD* = 9.75). Regarding to the sounds students have never learned during the teaching period,

the average scores they gained for that in pre-test (PreNotLearned) were 0.129 (*SD* = 0.472), which were less than in post-test (*M* = 0.774, *SD* = 0.844). The overall trajectory of improvement was graphed in Figure 1a through 1c.

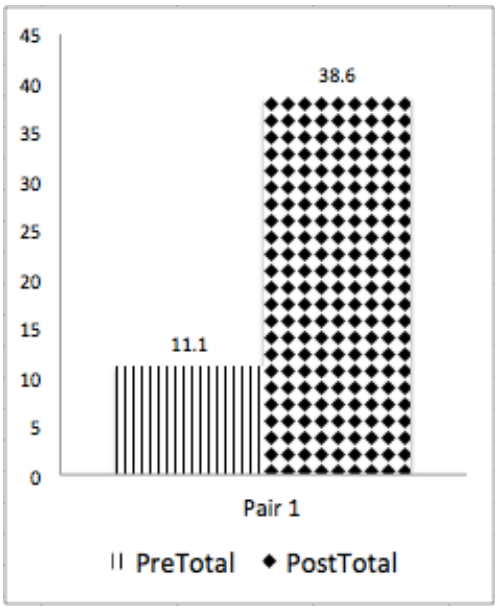

FIGURE 1a.*Comparison between PreTotal scores and PostTotal scores*

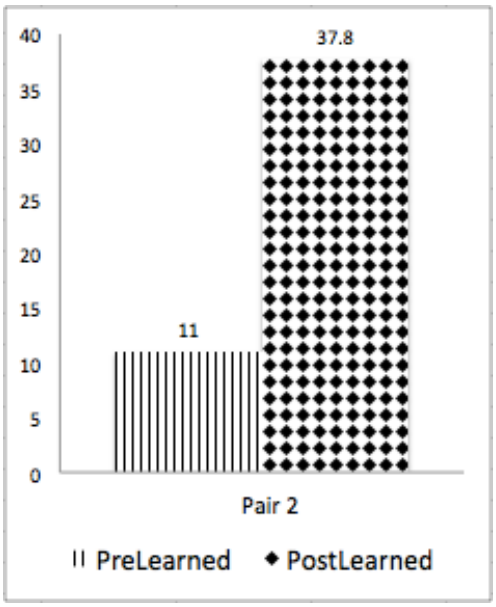

FIGURE 1b. *Comparison between PreLearned scores and PostLearned scores*

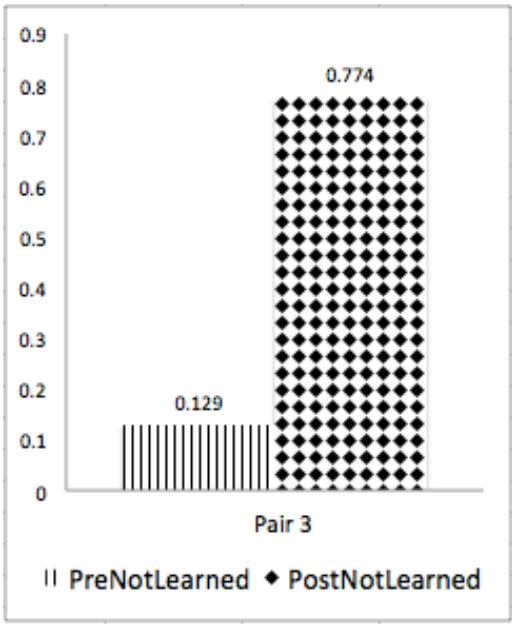

FIGURE 1C. *Comparison between PreNotLearned scores and PostNotLearned scores*

TABLE 1

Paired-samples t-test

		t	*df*	*p*	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PreTotal - PostTotal	-14.614	30	.000*	-31.28798	-23.61525
Pair 2	PreLearned - PostLearned	-14.220	30	.000*	-30.65633	-22.95657
Pair 3	PreNotLearned - PostNotLearned	-5.064	30	.000*	-.90537	-.38496

Note. *$p < .05$

To see if the score difference between pre-test and post-test (i.e., improvement) was statistically significant, a paired-samples t-test was carried out, comparing scores between three different pre- and post-test pairs, which are 1) the total scores, 2) the

scores of learned-sounds, and 3) the scores of sounds that students have not learned. Through the pairwise comparison, a significant difference was found in the first pair ($t(30) = -14.614$, $p < .05$), in the second pair ($t(30) = -14.220$, $p < .05$), and in the third pair ($t(30) = -5.064$, $p < .05$) at $\alpha = .05$ level, suggesting the improvement from pre-test to post-test was statistically significant. The corresponding 95% confidence interval of the difference for the each pair of comparison is [-31.288, -23.615] for the total scores, [-30.656, -22.957] for scores of sounds that were learned, and [-0.905, -0.385] for scores of sounds that were not learned.

Effect size was used to analyze effects of synthetic phonics instruction and the size of difference between each pair. The effect size of the first pair was statistically greater than zero and large in size ($d_1 = 2.90$). As for the second pair, there was a similar large effect size ($d_2 = 2.91$). For the final pair, the effect size was still large but was less in magnitude ($d_3 = 0.95$). This pattern made sense because students were expected to improve more on sounds they learned than those they didn't learn.

TABLE 2

Correlations between pre-test scores and post-test scores

		N	Pearson's *r*	*p*
Pair 1	PreTotal&PostTotal	31	.373	.038*
Pair 2	PreLearned&PostLearned	31	.332	.068
Pair 3	PreNotLearned&PostNotLearned	31	.545	.002*

Note. *$p < .05$

There was a statistically significant, positive correlation of pre-test scores and post-test scores for all pairs (*Pearson's* r_1= .373, *Pearson's* r_3= .545, *p*s < .05) except for the second pair (*Pearson's* r_2= .332, p = .068). Interestingly, the pre-test scores of sounds that were not learned were not correlated significantly with its post-test counterpart. The potential explanation of this unexpected correlation would be discussed in Discussion section.

TABLE 3

Regression of PreTotal on PostNotLearned

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	*p*
		b	Std. Error	Beta		
1	(Constant)	.267	.199		1.340	.191
	PreTotal	.045	.013	.531	3.376	.002*

Note. a. Dependent Variable: PostNotLearned. *p< .05

A simple linear regression test was carried out to see if there was any significant relationship between PreTotal scores and PostNotLearned scores. The regression model was significant, suggesting PreTotal was a reliable predictor of PostNotLearned (b = 0.045, *S.E.* = .013, R^2 = .282, p < .05). Therefore, 28.2 percent of total variance in PostNotLearned can be accounted for by PreTotal.

Discussion

The results of the study supported the hypothesis that there was a significant learning effect on students' English vocabulary reading with the help of phonics instructions.

This study replicated previous studies (please refer to Ehri, Nunes, Stahl & Willows (2001) for a meta-analysis) which demonstrated that systematic phonics instruction has greater effect on improving students' ability to read than either non-systematic or no phonics instruction. In their meta-analysis, Ehri and colleagues (2001) concluded with a preference for general systematic phonics instruction. In the current study, by using RWI, the effect of a program designed based on synthetic phonics was confirmed among first graders. This finding, to some extent, consolidated the previous findings because synthetic phonics program is one of the approaches to teach phonics systematically. Furthermore, Chally's (1967) review suggested that phonics instruction is especially beneficial for vocabulary reading in the early grades. Similarly, in this study, participants were recruited from a first grade classroom. The findings of this study showed that first graders made a significant improvement of vocabulary reading only through a short-term learning, which supported Chally's assertion (1967). In addition, Ehri and colleagues (2001) stated in their meta-analysis that phonics instruction was beneficial at all levels, whether it was implemented to individual students, smalls groups or the whole class. In this study, phonics was effectively taught through classroom teaching, which again supported Ehri and colleagues' findings (2001).

Based on the regression of pre-test scores on post-test unlearned-item scores, it can be implied that if students show low baseline ability, they may have difficulty acquiring new sounds naturally without teaching. Conversely, students who show high baseline

ability may have higher phonological awareness and thus it helps them to acquire new sounds through exploring regularities between words by themselves or through other methods. Hence, catering for learner differences is as a big challenge when teaching phonics to primary students, as it is in any aspects of teaching. Teachers should pay close attention to those who have low baseline abilities. Apart from teaching sounds, teachers also need to guide students to figure out the regularities between letters and sounds and teach them how to apply the knowledge to read new words.

There are three essential skills teachers should also teach to students that may help to improve students' abilities to read. The first one is blending skill. RWI uses a part-to-whole approach that teaches students how to blend sounds into a recognizable word (e.g., blend each sound "m"- "a"- "p" into the word "map") (Ehri, Nunes, Stahl & Willows, 2001). Blending sounds into words is a fundamental step of reading. Therefore, teaching phonics is not only to teach students how to pronounce sounds but also to teach them blending skill that can help them to pronounce unfamiliar words. Second, acquiring decoding skill is also an important learning objective. Decoding skill allows students to draw on their prior knowledge of letter-sound relationships and then pronounce the new word accurately. Developing children's decoding skills in their early years is a crucial teaching task because decoding skills have an obvious impact on long-term success of young readers (Adams, 1990; Chall, 1996; Stahl, et al., 1998). As Juel (1996) stated, young learners would easily dislike reading once they failed to grasp and understand decoding skill. Thus, attention and

efforts should also be devoted to helping teachers improve phonics teaching so that students can learn in an engaging way and benefit from that. The last skill should be taught is analogy skill. Teachers should teach students the strategy of reading new words by making analogy with learnt words (Ehri, Nunes, Stahl & Willows, 2001). For example, reading a new word "stay" can be learned by making analogy with a learnt word "play". All in all, teaching phonics is indeed found to be of significant importance in improving primary school students' vocabulary reading skill. These are important educational implications that guide education practitioners to further refine the current teaching practices and pedagogy.

Although this study confirmed my research questions and led to several other important implications, this study is not flawless. A few limitations should be recognized. First and foremost, the design of the study prevents the researcher from making a causal conclusion. This study only recruited a class of students as a single case study. Ideally, students should be recruited from multiple classrooms and then randomly assigned to phonics instruction group or the control group (no phonics instruction). Based on such a design, group differences in performance of vocabulary reading is more likely to be attributable to the phonics instructions. Second, the non-significant correlation between pre-test and post-test learned-sounds scores indicated that to some extent, students' errors are random. This might be caused by the situation that some students could pronounce a sound correctly in pre-test but failed to pronounce that exactly same sound in post-test. Several possible reasons may

be able to explain this situation. One possibility is that students might be guessing how to pronounce the sounds in pre-test and they accidentally made a correct guess but might fail to guess correctly in post-test. Another possible reason is that the post-test took place at nearly the end of the semester so students may pay less attention to study because of the coming Christmas holiday. Hence, it was possible that students may attend post-test half-heartedly in spite of efforts to keep them from dropping out of the post-test. Lastly, another aspect of limitation is the presence of a possible confounder. The tests included many similar-looking alphabets, such as “m” and “n”, “b” and “d”. It cannot be ruled out that some of the first grade students still had difficulty in identifying these similar-looking alphabets, which results in the incorrectness of pronunciation.

There is much interest in further evaluating the effectiveness of phonics instructions beyond the current study. Chally’s (1996) findings supported that early phonics instructions have greater impact on reading, while some of the researchers (e.g., Stahl & Miller, 1989) argued that kindergarten children were too young to have phonics instructions. As a result, the researcher suggests collecting more data on Hong Kong kindergarten students so that the question that whether kindergarten students in the current context are too young to have phonics instructions can be addressed in the future. For similar purpose, future research should also involve primary students in higher grades (e.g. third grade or sixth grade) to investigate whether late phonics instruction still have impact on students’ English vocabulary reading. By comparing

results of kindergarten students, primary students from higher grades and the current findings, the question that which grade level is the most appropriate for beginning of phonics instruction in Hong Kong context could be resolved. Furthermore, Ehri and colleagues (2001) concluded that systematic phonics instructions have great effect on improving students' vocabulary reading. Since the phonics program used in this study is RWI (based on synthetic phonics), which is only one of the approaches of systematic phonics, more efforts should be encouraged for future research to examine the effectiveness of other approaches (e.g. analytic phonics, embedded phonics, analogy phonics and onset-rime phonics) in improving vocabulary reading. Besides, comparison of the effectiveness of each approach is essential and critical so that the most suitable phonics approach for Hong Kong students can be found and thus maximizing benefits.

Conclusion

This study examined the effectiveness of synthetic phonics instruction on vocabulary reading for ESL learners in Hong Kong. Findings supported the hypothesis that synthetic phonics had a significantly large effect on improving vocabulary reading. Besides, it was found that students with low baseline ability might have difficulty acquiring new sounds naturally without teaching. Hence, catering for learner differences is a crucial task in phonics teaching. Three skills involving blending, decoding and analogy skills were highly suggested to develop when teaching phonics to primary students. The current study may help Hong Kong schools, English teachers

and education practitioners to better evaluate the importance of phonics in improving students' vocabulary reading skill and reflect on the implementation of phonics program.

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Appendix 1

Pseudowords reading worksheet

Participant's Number: _____

Test Date: _____

✓ **Read aloud the following pseudowords**

1.	mot	2.	nib
3.	zash	4.	spuf
5.	flek	6.	weg
7.	crub	8.	hoch
9.	vox	10.	rath
11.	jux	12.	quink
13.	skay	14.	sleed
15.	fripe	16.	raim
17.	ture	18.	jair
19.	shoy	20.	digh