



ความรู้ทางสรีรวิทยาของครูภาษาอังกฤษและกิจกรรมในชั้นเรียนเพื่อเพิ่มความตระหนักรู้ด้านระบบเสียง  
และการสอนโฟนิกส์ให้กับนักเรียนชั้นประถมศึกษาตอนต้นโรงเรียนนานาชาติอาร์ซี

ENGLISH TEACHERS' KNOWLEDGE OF PHONOLOGY AND CLASSROOM PRACTICES IN RAISING  
PHONOLOGICAL AWARENESS AND TEACHING PHONICS TO EARLY PRIMARY STUDENTS IN  
AN INTERNATIONAL SCHOOL

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#### บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อ 1) ประเมินความรู้ทางด้านสรีรวิทยาของครูภาษาอังกฤษโรงเรียนนานาชาติอาร์ซี 2) เพื่อสำรวจการจัดการกิจกรรมในชั้นเรียนเพื่อสร้างความตระหนักรู้ถึงระบบเสียงและการสอนโฟนิกส์ ให้กับนักเรียน กลุ่มตัวอย่างประกอบด้วยครูภาษาอังกฤษระดับชั้นประถมศึกษาปีที่ 1-3 โรงเรียนนานาชาติ จำนวน 21 คน เครื่องมือที่ใช้ได้แก่ แบบทดสอบความรู้ทางด้านสรีรวิทยาและแบบประเมินการจัดกิจกรรมในชั้นเรียนเพื่อเพิ่มความตระหนักรู้ถึงระบบเสียงและการสอนโฟนิกส์ ผลการวิจัยพบว่า ความรู้ทางด้านสรีรวิทยาของครูภาษาอังกฤษอยู่ในระดับที่น่าพอใจ ผลการสำรวจกิจกรรมในชั้นเรียนพบว่า มีการจัดกิจกรรมหลากหลายที่ช่วยในการเพิ่มความตระหนักรู้ถึงระบบเสียงและการสอนโฟนิกส์ โดยกิจกรรมที่ครูนิยมใช้มากที่สุดคือ การจัดการกับหน่วยเสียง เพื่อช่วยเพิ่มการตระหนักรู้ถึงระบบเสียงและการสอนประสมอักษรและเสียงเช่นการใช้อักษรที่จำได้ประสมเสียงให้เป็นคำ

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## Abstract

The present study aimed to 1) assess knowledge of phonology of the early primary International School English teachers; and 2) explore the classroom practices in raising phonological awareness and teaching phonics to their students. Participants were 21 English teachers who were teaching English from grade 1 to grade 3 in an International School. The research instruments included a test of teachers' knowledge of phonology and a questionnaire of teachers' classroom practices in raising students' phonological awareness and teaching phonics. The findings of the study indicated a satisfied level of the English teachers' phonological knowledge. For the classroom practices, the results revealed different types of classroom practices in raising students' phonological awareness and teaching phonics. The classroom practices the teachers most frequently implemented were the *phoneme manipulation* for raising the students' phonological awareness; and the classroom practices in teaching phonics, the practices of *introducing the fundamental blending letter-sound as blending sounds into recognizable letters of words* were reported as the most frequently conducted.

**คำสำคัญ:** ความรู้ทางด้านสรีรวิทยาของครูภาษาอังกฤษ/กิจกรรมในชั้นเรียน

**KEYWORDS:** ENGLISH TEACHERS' KNOWLEDGE OF PHONOLOGY / CLASSROOM PRACTICES

## Introduction

Phonological awareness and phonics skills have recently been focused on the young learners literacy development in language learning, especially the significant positive impact of phonological awareness and phonics skills (Camilli, Vargas, & Yurecko, 2003; National Reading Panel, 2000; Shanahan, 2005) on enhancing the early primary students' reading ability (Freebody & Anderson, 2015; Konza, 2011; McKenna & Stahl, 2015). The literacy ability to read comes from ability to recognize words in the sentences and significant sound units or phonemes, which are composed into syllables in the words. Therefore, the key basis for young learners' literacy appears to include the abilities to recognize and manipulate phonemes of the phonological awareness, and the ability to achieve interpretation of the hearing sounds with their corresponding letters onto paper of the phonics skills (Konza, 2011). Both phonological awareness and phonics skills are essential elements to develop young learners' understanding of a sentence, which can eventually lead to the success in their reading (Dahmer, 2010; Lewis, 2008; NRP, 2000; Shanahan, 2005).

Teachers' knowledge of phonology includes two main components, which were indicated in the National Reading Panel (2000). The first component is the basic terminology in phonology, which should be clearly understood and discriminated by teachers; the second one is phonological awareness, which is a broad concept comprising by three parts: 1) Phonemic awareness, the understanding of manipulating the phoneme which is the smallest unit of speaking language, like how to isolate, segment, blend or manipulate the sounds in words (e.g., /t/ is the final sound of the word "seat" ); 2) Rhythm and rhyme, the understanding to tune the sounds into English language (e.g., "seat" rime with "neat", "heat" ); 3) Onset and rime, the understanding of segmenting syllables that onset is preceding the rime (e.g., the word "mat", /m/ is the onset, /at/ is the rime) and rime can be an independent word (e.g., "on", "apple" ). As for teaching phonics, the National Reading Panel (2000) also pointed out that it should mainly focus on teaching the letter-sound correspondences with the explicit instructions and a systematic sequence to develop students' skills in realizing and interpreting from English speaking sounds into English written alphabets at the early primary level (e.g., sounds /p/ & /b/ associate with printed letters *p* & *b*). Accordingly, English teachers' classroom practices at the early primary period would implement the related pedagogical activities or tasks, which they design and use purposively in their class for achieving the teaching objectives about raising phonological awareness and teaching phonics. As mentioned above, underneath the three main parts in phonological awareness, there were six related sub-aspects of practices needed to be conducted for raising students' phonological awareness, which involved rhythm and rhyme, onset and rime, phoneme isolation, phoneme blending, phoneme segmentation, and phoneme manipulation. In regard of the classroom practices in teaching phonics, at early primary period, it should mainly focus on introducing the letter-sound correspondences (NRP, 2000). There were various practices in different sequences of teaching phonics, however, most teachers normally would choose the practices that help students to get the most useful and common phonics skills firstly. As Konza (2011) suggested, teachers should introduce the alphabetic principles as early as possible, and start teaching phonics in a systematic sequence by introducing individual sounds with the associating letters as the "Sounding out" sequence, then, by blending sounds into recognizable letters of words and decoding simple regular words into sounds in the sequence of "Saying the whole words", and teach the "Sight words reading" for the common high-frequency words (i.e., no need to be fully

decoded words) as the last sequence. Generally, the classroom practices of raising phonological awareness should be conducted in preschool or grade 1 at first as the basic requisite for the later phonics skills learning, and then both of them should be practiced together to lay a solid foundation for students' successful reading ability in the future (NRP, 2000).

Research results from different countries have presented that phonological awareness and phonics skills have substantial influence on students' reading ability. As an example, a nine-month longitudinal experiment was conducted in Hong Kong by Chow, McBride-Chang and Burgess (2005) on investigating the influence of the phonological awareness towards reading ability. The participants in the study included 227 kindergartners whose first language was Cantonese and were studying English as a second language. The results revealed a positive impact of the phonological awareness to improve the participants' reading ability. Another study from New Zealand was conducted by Carson, Gillon and Boustead (2013), which experimented on the first-grade students by comparing students' reading achievements in two reading programs: One included thirty-four students with the treatment of phonic instructions and phonological awareness-raising and the other ninety-five students attending a regular reading program. After ten weeks, the experimental group students demonstrated a great progress on reading than the control group. In Thailand, Sookmag (2013) held a remedial reading class for the poor secondary readers through using phonological awareness raising and using phonics instruction. After six weeks, the results displayed a positive effect on enhancing those poor readers on reading ability like decoding the syllable and accessing the word recognition.

As the evident research results reported about positive effects of phonological awareness-raising and phonics instructions on students' reading ability, English teachers are therefore required, as one of the requisite teachers' qualifications, to have enough knowledge of phonology and abilities to intentionally raise the phonological awareness and teach phonics skills to the students from their early young schooling age (Kamil, 2003; NRP, 2000). Guerriero (2017) suggested that a teacher, apart from the mastery of subject knowledge, should be able to apply that knowledge appropriately into their teaching practice; and their proficiency level of the subject knowledge would affect students' achievement. That is to say, English teachers should have capability of applying their subject knowledge of phonology and phonics phonological and phonic awareness, which will be

one of the critical factors resulting in students' reading achievement as well (NRP, 2000; Gillon, 2004).

Therefore, teachers' education and the relevant teaching training, as the main sources, should support enough knowledge of phonology and phonics skills for the English teachers (Moats, 2014). Whereas, in the United States, the real state of the English teachers seems diverge from the requirements, the survey conducted recently by the National Council on Teacher Quality revealed that only 15% education schools in the United States provided the pre-service teachers with the enough depth of phonological knowledge and phonics training (Walsh, Glaser & Wilcos, 2006). Consequently, the mismatch might be one of the reasons that bring students' reading difficulties from their early young age, and finally lead some students' reading ability to fail in reaching the expected level in their future study (Cheesman, et al., 2009).

Similar problems might occur when English teachers in the international schools, even most of who are native speakers, do not master the adequate knowledge of phonology or lack of the organization on the effective classroom practices in raising phonological awareness and teaching phonics to the early primary students. Since English language is as the main or only medium for students to communicate with others, and to gain and learn knowledge or content of all subjects such as Mathematics, Science or History, the reading ability is particular important for them. Moreover, many research studies found out that phonological awareness and phonics skills need to be introduced to early young learners, the earlier the better, because developing positive feeling of reading should be fostered since the very young age around preschool to grade three (Kamil, 2003; Konza, 2014; NRP, 2000). Therefore, the present study will focus on the early primary English teachers (grade 1 to 3) from an International School in Bangkok, Thailand, investigating their knowledge of phonology and classroom practices in raising phonological awareness and teaching phonics skills to their students for fostering the reading ability.

## **Objectives**

The purposes of the current study were to 1) assess the knowledge of phonology of the early primary International School English teachers; and 2) explore the classroom practices in raising phonological awareness and teaching phonics to their students.

## **Methodology**

### **Participants**

The participants of the current study were the early primary English teachers who were teaching English to students from grade 1 to grade 3 in an International School in Bangkok, Thailand. This is a typical British Curriculum school accepting students from ages 18 months to 13 year-old. The participants in the study who were purposively selected were 21 experienced teachers, including 7 females and 14 males. They were early primary teachers who normally followed and taught English to their students from grade 1 to grade 3. At the time of the study, 6 of them were in grade 1, 7 in grade 2 and 8 in grade 3. All participants were English native-speakers mostly from America, Britain and Australia.

### **Instruments**

The research instruments of this survey study contained a multiple-choice test of phonological knowledge and a five-point frequency likert scale questionnaire examining classroom practices of teachers in raising students' phonological awareness, and teaching them phonics. There were 3 parts of the research instruments: 1) participants' personal information; 2) a test of teachers' phonological knowledge; 3) a questionnaire asking about teachers' classroom practices in raising students' phonological awareness and teaching them phonics. Details of the test and the questionnaire are as follows.

1. Test of English teachers' knowledge of phonology was adapted from Cheesman, McGuire, Shankweiler and Coyne (2009). The test included fifteen multiple-choice items, which aimed to investigate the early primary English teachers' conscious understanding about the concept of phonology. The question items covered the main phonological knowledge concept of the basic terminology in phonology, rhythm and rhyme, onset and rime, phoneme isolation, phoneme blending, phoneme segmentation and phoneme manipulation.

2. The questionnaire of English teachers' classroom practices was adapted from Gillon (2004) and Konza (2014). The questionnaire included eighteen items stating the

classroom practices that English teachers normally did in raising their students' phonological awareness and teaching phonics to them. The questionnaire was a five-point frequency likert-scale from 4 (Always) to 0 (Never) for each statement according to their own class. The first six items were adapted from Gillon (2004) stating about the explicit phonological teaching tasks and practices in the main six phonological aspects to raise their students' phonological awareness. The rest of items stating about the classroom practices which representing various purposes in the 4 systematic sequences of phonics teaching were adapted from Konza (2014) for exploring the explicit and systematic teaching phonics to students at the early primary stages.

The test and the questionnaire were verified for the content validity by three English language teaching experts. According to the scores from Item-Objective Congruence tables and the experts' suggestions, some modifications of rewriting items were needed to make questionnaire easier and more familiar to the teachers, and another main modification was the classroom practices questionnaire, the range labeled in the frequency scale were changed from +2 (Always) to -2 (Never) into the current 4 (Always) to 0 (Never). The internal consistency reliability in the questionnaire was also proved by calculating Cronbah's alpha on computer, and the result was 0.637, which was acceptable in terms of the research instrument.

### **Data collection**

The data was collected during a summer break from June to August, 2016. For the participants' convenience, the test and questionnaire were built on a survey website and linked to the English teachers via their E-mail addresses. All participants could do the survey anytime online anonymously. The survey website was linked to 30 teachers, but eventually there were only 21 responses back.

### **Data analysis**

The scores which the participants received from doing the phonological knowledge test were collected to find out the participants' level of phonological knowledge. The data from the questionnaire were then analyzed quantitatively through the descriptive analysis using the statistic program on computer.

## **Results**

The objectives of the current study were: 1) to assess English teachers' knowledge of phonology; and 2) to explore their classroom practices in raising phonological awareness and teaching phonics to early primary students in an International School.

Teachers' knowledge of phonology were generally reflected from the test results (see Table 1). Teachers achieved a high total mean score 11.19 ( $SD = 1.50$ ), which revealed that the average level of all teachers' phonological knowledge was at a quite high. The highest score was 13 out of the full score 15, which meant those teachers correctly answered the majority of the questions in the test. Among 21 participating teachers, 6 of them could reach the highest score 13, which was higher than the total mean score. The results indicated that all teachers could correctly answer at least 9 questions in the test, only 3 of them got the lowest score 9, which still higher than the half score.

**Table 1: Teachers' performance in knowledge of phonology test (n=21)**

	<u>Total Mean Score</u>		<u>Maximum Score</u>		<u>Minimum Score</u>	
	<u>(full score=15)</u>		Score	n	Score	n
	<i>M</i>	<i>SD</i>				
Knowledge of Phonology Test	11.19	1.50	13	6	9	3

As reported above the participants' knowledge of phonology was quite high. Then, teachers with such high level of phonological knowledge would be explored further about their implementation of their classroom practices in raising students' phonological awareness and teaching letter-sound correspondences in phonics. The results were displayed in Table 2 and Table 3 respectively as following.

For teachers' classroom practices in raising students' phonological awareness, the 6 aspects of classroom practices were reported to be done by the participants, which included: Onset & Rime, Rhythm & Rhyme, Phoneme Isolation, Phoneme Blending, Phoneme Segmentation and Phoneme Manipulation, ranking from the highest mean frequency score to the lowest as shown in Table 2.



Table 2: The classroom practices in raising students' phonological awareness (n=21)

Rank	Practices in 6 PA aspects	Key words of statement	<u>Always</u>		<u>Often</u>		<u>Some</u>		<u>Rarely</u>		<u>Never</u>		<i>M</i> ( <i>SD</i> )
			4		3		<u>times</u>		1		0		
			n	%	n	%	n	%	n	%	n	%	
1	Phoneme Manipulation	Introducing deletion tasks at both word and syllable level (e.g. to say <i>birthday</i> without <i>day</i> or <i>part</i> without the /p/ sound = <i>art</i> )	10	47.6	7	33.4	4	19.0	-	-	-	-	3.29 (0.78)
2	Rhythm & Rhyme	Introducing rhyme recognition tasks by saying a group of rhyme words (e.g. do these words rhyme <i>car, tar, bar</i> ?)	9	42.9	4	19.0	5	23.8	3	14.3	-	-	2.90 (1.13)
3	Onset & Rime	Introducing a common rime then adding different onset to make words (e.g. use the rime /at/ with 3 onsets /m/, /k/ and /p/ to say different words <i>mat, cat, pat</i> )	3	14.3	8	38.1	9	42.9	1	4.7	-	-	2.62 (0.80)
4	Phoneme Blending	Introducing blending by combining single sounds to simple words (e.g. /d/-/o/-/g/= <i>dog</i> (pictures of a <i>dog, fog</i> , and a <i>dot</i> ))	5	23.8	4	19.0	9	42.9	3	14.3	-	-	2.52 (1.03)
5	Phoneme Segmentation	Introducing segmentation with counting out the separate phonemes in simple words (e.g. 4 sounds in the word <i>teddy</i> → /t/ /e/ /d/ /i/)	4	19.0	7	33.4	6	28.6	3	14.3	1	4.7	2.48 (1.12)
6	Phoneme Isolation	Introducing isolation by identifying the first sound in simple words (e.g. to say the initial sound the word <i>cat</i> is /k/)	4	19.0	3	14.3	7	33.4	4	19.0	3	14.3	2.05 (1.32)
Total			35	27.8	33	26.2	40	31.7	14	1.1	4	3.2	2.64 (1.09)

The most-frequent classroom practice was phoneme manipulation: “deletion tasks at both word and syllable level” (see Table 2). Teachers more than *often* ( $M = 3.29$ ) used this practice in raising students' phonological awareness. Almost half teachers (47.6%) reported they *always* practiced it in their class. The second frequently practice was the rhythm and rhyme: “saying a group of rhyme words”, which was nearly *often* ( $M = 2.90$ ) used by the teachers. The onset and rime practice: “adding different onset with a common rime to make words” was rated by the teachers as the third frequently ( $M = 2.62$ ) used practice. Then, the classroom practice of phoneme blending: “combining single sounds to simple words” was used much more than *sometimes* ( $M = 2.52$ ) as the fourth frequently practice, which was just slightly more frequently than the fifth one. Considering the fifth practice of phoneme segmentation: “counting out the separate phonemes in simple words”, teachers also conducted it in their class more than *sometimes* ( $M = 2.48$ ). Even as the least frequently used one of all these 6 practices in raising students' phonological awareness, the phoneme isolation: “identifying the first sound” was still reported to be *sometimes* ( $M =$

2.05) conducted by the teachers. Generally, all these 6 kinds of classroom practices in raising students' phonological awareness were regarded as necessary and important by the teachers, since all practices were reported to be averagely used more than *sometimes* (*Total M* = 2.63 > 2) and even every practice was reported to be conducted more than *sometimes* (*M* > 2) in their class.

For the classroom practices in teaching phonics, the results were reported in 4 systematic sequences of teaching phonics including Alphabetic understanding, Sounding out, Saying the whole and Sight words reading. All the classroom practices in teaching phonics were ranked from the highest mean frequency score to the lowest, which were shown by the following 4 teaching phonics sequences in Table 3.

Table 3: The classroom practices in teaching phonics (n=21)

Total Rank	Key words of statement	<u>Always</u>		<u>Often</u>		<u>Some times</u>		<u>Rarely</u>		<u>Never</u>		<i>M (SD)</i>
		4		3		2		1		0		
		n	%	n	%	n	%	n	%	n	%	
<i>Teaching phonics sequence 1: <u>Alphabetic understanding</u></i>												2.55* (1.06)
4	Introducing the alphabetic principle of reading from left to right with simple regular words comprising at least 2 sounds (e.g. to read the word <i>day</i> from <i>d</i> to <i>y</i> )	5	23.9	6	28.6	8	38.1	2	9.4	-		2.67 (0.96)
7	Introducing lower-case letters earlier than upper-case letters (e.g. to read the sounds /a/ and /b/ by showing the letters <i>a</i> and <i>b</i> before A and B)	5	23.9	4	19.0	8	38.1	3	14.3	1	4.7	2.43 (1.16)
<i>Teaching phonics sequence 2: <u>Sounding out (saying each individual sound out)</u></i>												2.22* (1.18)
5	Introducing individual sounds by matching with the letters in simple words firstly, then in complex words comprising more sounds components (e.g. to say the sound /æ/ and match it with the letter <i>a</i> from the 3 sound-word <i>cat</i> , then 4 sound-word <i>grass</i> )	4	19.0	8	38.1	5	23.9	4	19.0	-		2.57 (1.02)

8	Introducing individual sounds that only can be represented by one corresponding letters (e.g. the sound /p/ can be only matched with the letter <i>p</i> )	3	14.3	7	33.3	6	28.6	3	14.3	2	9.5	2.29 (1.18)
9	Introducing the six common letters that occur frequently in simple words early (e.g. to teach the six common letters: <i>s, a, t, p, i</i> and <i>n</i> firstly )	3	14.3	6	28.6	6	28.6	4	19.0	2	9.5	2.19 (1.20)
10	Introducing individual sounds which can be represented by more than one letters in different words (e.g. to say the sound /k/ and match it with the letter <i>c</i> in the word <i>coffee</i> , and also in the word <i>king</i> with letter <i>k</i> )	2	9.5	8	38.1	6	28.6	2	9.5	3	14.3	2.18 (1.21)
12	Introducing continuous sounds earlier than stop sounds as for they are easier to blend (e.g. to say the sounds /mmm/ or /aaa/, which can be prolonged )	2	9.5	5	23.9	6	28.7	4	19.0	4	19.0	1.86 (1.27)

Table 3: The classroom practices in teaching phonics (n=21)

Total Rank	Key words of statement	<u>Always</u> 4		<u>Often</u> 3		<u>Some times</u> 2		<u>Rarely</u> 1		<u>Never</u> 0		<i>M</i> ( <i>SD</i> )
		n	%	n	%	n	%	n	%	n	%	
<i>Teaching phonics sequence 3: <u>Saying the whole word</u></i>												2.76*
<i>(<u>saying each individual sound, blending sounds, decoding and pronouncing the whole words</u>)</i>												(1.01)
1	Introducing the blending skill by asking students to combine the sounds into recognizable letters of words (e.g. to combine the sounds /æ//k//t/ to be the word <i>cat</i> )	8	38.1	9	42.9	4	19.0	-	-	-	-	3.19 (0.74)
2	Introducing the consonant blending by saying the words that at least have 3 sounds and end with a consonant cluster (e.g. to read the words <i>ask</i> (VCC) or <i>lamp</i> (CVCC))	4	19.0	9	42.9	6	28.6	2	9.5	-	-	2.71 (0.90)
3	Introducing the blending skill by pronouncing the words that begin with a continuous sound (e.g. to extend the initial sound continuously in the word <i>fan</i> and say it as /fffffan/)	6	28.6	7	33.4	4	19.0	3	14.3	1	4.7	2.68 (1.19)
6	Introducing the decoding skill by presenting the words that students are usually associated the letters with the sounds (e.g. to decode the word <i>bed</i> by saying the letters <i>b</i> makes a /b/ sound, <i>e</i> makes an /e/ and <i>d</i> makes a /d/ sound )	4	19.0	6	28.7	8	38.1	2	9.5	1	4.7	2.48 (1.07)

<i>Teaching phonics sequence 4: <u>Sight words reading (sounding out the words they see)</u></i>													2.09*
													(1.33)
11	Introducing sight words reading with high-frequency words to expand students' letter-sound knowledge, after they are able to say a whole word. (e.g. to show students words like <i>my</i> , <i>is</i> , <i>he</i> , then ask them to read out the words as quick as possible)												2.09
													(1.33)
Total													2.44
													(1.14)

*Note. Numbers with \* represent the total mean frequency score of the practices in each sequence part*

The classroom practices in teaching phonics sequence 3: "Saying the whole words" were the most frequently applied, which was quite close to *Often* (Sequence  $M = 2.76$ ) among these 4 sequences. As shown in Table 3, the most frequently used practice in teaching phonics was "blending single sounds into recognizable words" in this sequence, and this blending practice was not only reported as the most frequently used classroom practice of all the 12 practices surveyed in the questionnaire, but also was the only one practice reported to be more than *often* ( $M = 3.19 > 3$ ) conducted by the teachers. The second and third practices in the sequence 3 were also about blending and both of them were quite frequently used by teachers, but the second practice "blending sounds with consonant cluster" ( $M = 2.71$ ) was slightly more frequently conducted than the third one "blending sounds with a continuous initial sound" ( $M = 2.68$ ). Even though the last practice "introducing the decoding skill with the associated sounds and letters" ( $M = 2.48$ ) in the sequence 3: "Saying the whole words" was still quite frequently practiced comparing with the total frequency of all the 12 classroom practices in teaching phonics ( $M = 2.48 > Total M = 2.44$ ).

The classroom practices which were reported to be conducted secondly included teaching phonics sequence 1: "Alphabetic understanding". The practices in this sequence were conducted more than *sometimes* (Sequence  $M = 2.55 > 2$ ). The classroom practices were composed of "introducing reading words from left to right" ( $M = 2.67$ ) and "introducing lower-case letters before upper-case" ( $M = 2.43$ ).

The classroom practices were reported to be conducted thirdly included teaching phonics sequence 2: "Sounding out", which were also reported to be more than *sometimes* (Sequence  $M = 2.22 > 2$ ) with a slightly less frequency. However, the most classroom practice in this sequence "introducing individual sounds by matching with the letters in simple words" was informed to be rated in a fifth rank of the practices ( $M = 2.57$ ), and other

3 practices in this sequence were conducted more than *sometimes* ( $M > 2$ ): “introducing individual sounds that only can be represented by one corresponding letters” ( $M = 2.29$ ); “introducing the six common letters that occur frequently in simple words early” ( $M = 2.19$ ); “introducing individual sounds which can be represented by more than one letters in different words” ( $M = 2.18$ ). The only one practice was reported to be slightly less than *sometimes* ( $M = 1.86$ ) included “introducing the continuous sounds earlier than stop sounds” in this sequence. This practice was also reported to be the least used practice of all the 12 classroom practices in teaching phonics.

Finally, the classroom practice in sequence 4: “Sight words reading” was reported to be applied *sometimes* (*Sequence*  $M = 2.09$ ), of which the classroom practice “introducing sight words reading with high-frequency words to expand students’ letter-sound knowledge” was almost the least ( $M = 2.09$ ).

As reported above, the results revealed the teachers still attached much importance to the classroom practices in teaching phonics, since the teachers generally more than *sometimes* (*Total*  $M = 2.44 > 2$ ) conducted all the kinds of the letter-sound correspondences practices in their class. The majority of the classroom practices in teaching phonics were reported to be used at least *sometimes* ( $M > 2$ ).

For both classroom practices in raising students’ phonological awareness and teaching phonics, the results above indicated that classroom practices in raising students’ phonological awareness and teaching phonics were both more than *sometimes* ( $M > 2$ ) implemented by the teachers, since the total mean frequency scores were quite close to each other. The classroom practices in raising students’ phonological awareness ( $M = 2.62$ ) was reported to be conducted therefore slight more than teaching phonics ( $M = 2.44$ ).

## Discussion

There are two objectives of the current study, and therefore the findings will be discussed about these two objectives: 1) to assess English teachers’ knowledge of phonology; and 2) to explore their classroom practices in raising phonological awareness and teaching phonics to early primary students in an International School.

Responding to the assessment of the knowledge of phonology of the early primary English teachers in an International School, the findings were all the teachers achieved a high score above 50% level, which implied that these teachers have sufficient phonological knowledge to support their implementation of classroom practices. However, the results in

this study were inconsistent with the previous research conducted by Cheeseman and others (2009). In their study, the similar phonological knowledge test was given to the early childhood teachers (i.e., teaching preschool to grade 3 students) who just graduated from the education programs as being the first-year teachers, and it was shown that only a few of them appeared to be equipped with the adequate knowledge of phonology. This can be attributed to the different participants' teaching experience. The participants in Cheeseman's study were all the novice teachers, while the ones in this study were all the experienced and in-service teachers with at least 3 years of teaching. The more experienced teachers could have more recognition of the importance in raising students' phonological awareness to enhance students' success of reading in the future. That made teachers seek more knowledge of phonology to apply to their classroom practices, whereas the novices might not have such recognition.

For exploring English teachers' classroom practices in raising phonological awareness and teaching phonics to early primary students in an International School, there are 3 main findings going to be discussed as follows.

Firstly, the finding of classroom practices in raising phonological awareness indicated that the practice in phoneme manipulation aspect was the most frequently used, which got the highest mean score among all the 6 aspects practices in the questionnaire. As many studies proved, manipulating the phonemes, which required students to add, delete or move phonemes to make new words, is the strongest predictor of students' successful reading in the future (Adams, 1994; Konza, 2011). Thus, teachers put more importance and time to practice the phoneme manipulation in order to create more opportunities of helping students to master, even though it was regarded as the most complex one for the early primary students to master and as the hardest level of learning phonemic awareness (Adams, 1994).

Then, as for the classroom practices in teaching phonics, there were 2 important findings. The first finding indicated the practices in the sequence 3: "Saying the whole words" were conducted most frequently among the 4 teaching phonics sequences, since the most crucial skills to learn phonics, such as blending, decoding, were mostly practiced in this sequence. These essential skills need to be exercised adequately to guarantee students' ability of spelling and reading in the future (Konza, 2014). Another finding indicated that the classroom practices of blending skill were frequently conducted by the teachers. The results

showed the most frequently used 3-sub-types practices were all about practicing the blending skill and the one of those 3 practices: “blending sounds into recognizable letters” was the most frequently applied among all the classroom practices in teaching phonics. This supported the pedagogical suggestion that teaching the fundamental blending skill by using the practices involving sounds and printed letters was much easier and less abstract than just teaching it orally at the early primary stages (Johnston & Watson, 2014). Thus, the classroom practices in teaching phonics were exercised a lot on blending sound-letter skills.

Finally, the findings of classroom practices in raising phonological awareness and teaching phonics revealed that majority of the practices in the current study were all frequently conducted, since the results showed most of the practices were more than *sometimes* conducted. Moreover, the total average frequency of phonological awareness-raising practices was just slightly higher than that of teaching phonics, which is consistent with the major pedagogical principle that the phonological awareness is the basic requisite for the later phonics skills learning. Therefore, developing students’ phonological awareness should start before the phonics teaching. (Adams, 1994; Johnston & Watson, 2014; Konza, 2011; NRP, 2000). Meanwhile, practices of raising phonological awareness and teaching phonics should be exercised together as frequently as possible in order to achieve the best outcomes of fostering students’ reading ability at the early primary stage (Gillon, 2004). This is one of the possible reasons that the classroom practices in raising students’ phonological awareness were slightly more frequently used than teaching phonics.

To sum up, in the current study, the early primary English teachers in an International School had sufficient knowledge of phonology which supported them to focus on implementing appropriate classroom practices in raising phonological awareness and teaching phonics for developing their students’ successful reading abilities.

### **Recommendation for Future Research**

The data in the current study was only collected from one international school with the limited participants, thus, the findings may not be generalized to other schools. The phonological awareness and phonics instructions are quite important for the early primary students’ success in reading as evidenced by many previous research studies. In the current study, even though the participants’ knowledge of phonology level was quite high as they were all experienced English native-speaker in the international school, still, for teacher

education programs or training projects, it is necessary to support enough phonological knowledge for the pre-service English teachers in order to make them succeed in conducting the relevant teaching activities. And it is reasonably believed that participating teachers' sufficient knowledge of phonology could relatively support them to choose and conduct the appropriate classroom practices for raising phonological awareness and teaching phonics skills in order to develop future successful reading ability of their young students. Hence, it is highly recommended to investigate the local early primary English teachers in other schools to see their knowledge of phonology level, and how they choose and conduct the classroom practices for raising students' phonological awareness and phonics skills to foster their students' reading ability, so that the related teaching programs or teacher training could put more attention to accordingly help the local English teachers strengthen their knowledge of phonology and the relevant implementation of the classroom practices in raising students' phonological awareness and teaching phonics skills.

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