



PHONEMIC AWARENESS AMONG RURAL PRIMARY SCHOOL ENGLISH LANGUAGE TEACHERS IN SARAWAK



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ABSTRACT

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Reading is an important skill that needs to be developed from young among children. In supporting them to read, they will first need to learn to decode which involves understanding the alphabetic principle of the written word which is that letters characterise sounds or phonemes. Developing phonemic awareness requires explicit teaching that is systematic and thus, teachers play an important role. This study thus, uncovers the knowledge of phonemic awareness of rural primary school teachers of English as a Second Language (ESL) and their related instructional practices. Data were collected through a semi-structured questionnaire which was completed by five ESL teachers from a rural primary school in Sarawak. The findings revealed that the teachers had limited knowledge of phonemic awareness. Although two of them reported focussing their instructional approaches to develop their students' phonemic awareness, their self-assessment of this knowledge was low. This limited knowledge would not only affect the design of their instructional practices but also impede the reading success of young ESL learners.

Contribution/ Originality: This study contributes to the existing literature on the role of teachers and their knowledge of phonemic awareness to support the development of ESL reading among young learners.

1. INTRODUCTION

The concerted view in the literature related to reading is that it concerns comprehending text (Clarke, Snowling, Truelove, & Hulme, 2010; Gaskins, 2011; Hjetland et al., 2019) which involves understanding or making meaning from the text. However, to be able to understand a text, a reader needs to first decode (Castles, Rastle, & Nation, 2018; Gough & Tunmer, 1986; Hoover & Gough, 1990; Quinn, Wagner, Petscher, & Lopez, 2015). According to Henry (2010) decoding involves “the skills and knowledge by which a reader translates printed words into speech...the ability to pronounce words sub vocally in silent reading or vocally in oral reading” (p. 3). For readers to decode, they would need to first understand the alphabetic principle of the written word which is that letters characterise sounds or phonemes. A phoneme is the smallest unit of sound that can change the meaning of a word, thus distinguishing a word from another (Delahunty & Garvey, 2010; Henry, 2010; Moats, 2010). Learning

to decode is thus important in the process of learning to read to support reading comprehension (Castles et al., 2018). One main implication of this view of reading posits that young children need to be supported to decode to enable them to read (Ehri, 2005; Gaskins, 2011; Goswami, 2005; Goswami., 2006). For children whose first language is not English, learning to decode is difficult due to the complexity of the English sound system (phonology) and the written language (ortography) (Goswami, 2008).

As such, learning to decode means children need to have phonological awareness which is foundational for them to learn how to spell and read (Caravolas, Volin, & Hulme, 2005; Melby-Lervåg, Lyster, & Hulme, 2012; O'Brien, Mohamed, Yussof, & Ng, 2019). Phonological awareness concerns knowledge of the spoken language which is composed of sound segments (Ehri et al., 2001; Sénéchal, Ouellette, & Young, 2004). This awareness translates as learners having the ability to manipulate the sounds in spoken words and break them down into their smaller parts — syllables, onset rime, and phonemes (Moats, 2010; Nicholson, 2007). Phonological awareness can be distinguished as consisting of large segments comprising of syllables and words and smaller segments at the level of phoneme or discrete speech sound (Anthony, Lonigan, Driscoll, Phillips, & Burgess, 2003; Ziegler & Goswami, 2005) which is also referred to as phonemic awareness (Ouellette & Haley, 2013) and implicit (word and syllable sound patterns) and explicit (manipulation at the phoneme level) awareness (Geudens & Sandra, 2003; Stanovich, 1992). While phonological awareness at the larger implicit segment awareness can be gained through minimal teaching, smaller explicit segment awareness can be more difficult for children to grasp and usually requires more explicit teaching (Gillon, 2004; Mraz, Padak, & Rasinski, 2008; Pressley, 2006).

Phonemic awareness thus requires instructional support to enable children to learn to read. This responsibility of providing instructional support for such young learners of English as a second language (ESL) to decode reading texts within the context of the primary school classroom is often the responsibility of the English language teacher (Merga & Mason, 2019). In Malaysia which is the context of this study, phonemic awareness is taught at Year One to develop ESL learners' reading skills at primary school (Ministry of Education Malaysia, 2015). However, providing phonemic awareness to learners to support them to decode so that learners understand a reading text can be a challenge in the larger context of rural Malaysia particularly in rural Sarawak (Anthony & Said, 2019; Gon & Yunus, 2019). This is mainly due to the functional role of ESL (Johnson & Tweedie, 2010) combined with low literacy rate among the wider community due to attitude and reading habits (Samsuddin, Mohamed Shaffril, Bolong, & Mohamed, 2019).

This study therefore aimed to discover the knowledge of phonemic awareness of rural primary school ESL teachers teaching young learners to read in rural schools. As the context of this research is in one rural primary school in Sarawak, Malaysia, this study determined the teachers' knowledge of phonemic awareness and the instructional activities in the reading classroom.

2. LITERATURE REVIEW

2.1. Phonemic Awareness

Providing explicit instruction in phonemic awareness has been regarded as an effective form of intervention to support the learning of reading especially among young children (Ehri et al., 2001; Scholin & Burns, 2012; Suggate, 2016). As a smaller segment of phonological awareness, phonemic awareness can be defined as “the set of skills that enables the thinking about language as separate and distinct from word meaning” (Keeseey, Konrad, & Joseph, 2015). The skills enable learners to divide words into constituent sounds and combine the sounds to form new words (Yeong & Liow, 2012). Kardaleska and Karovska Ristovska (2018) observed that when phonemic awareness skills have been developed, children are able to break apart words that are longer to sound them out during reading. Phonemic awareness is thus a very important skill for children to have to enable them to read and the explicit instruction provided supports them to learn to read in an easier and more certain manner compared to children who have not been explicitly exposed to this skill (Kardaleska & Karovska Ristovska, 2018; Ouellette & Haley, 2013;

Spear-Swerling, 2015). Nevertheless, many students regardless of family background enter the first grade lacking phonemic awareness skills and are likely to be unable to cope with reading throughout their time at school (Keesey et al., 2015).

Studies have indicated that a high level of phonemic awareness among young learners results in them becoming successful readers (Carlson, Jenkins, Li, & Brownell, 2013; Johnston, McGeown, & Watson, 2012; Lonigan, Purpura, Wilson, Walker, & Clancy-Menchetti, 2013). This finding is particularly evident in research studies investigating the contexts of ESL preschool (Liu, Yeung, Lin, & Wong, 2017; Yeung, Liu, & Lin, 2017; Yeung, Siegel, & Chan, 2013) and learners with reading disabilities (De Groot, Van den Bos, Van der Meulen, & Minnaert, 2017; Jamaludin, Alias, Mohd Khir, DeWitt, & Kenayathula, 2016; Rack, 2017).

In the context of ESL primary school which is the focus of study, Pretorius and Spaul (2016) investigated the relationship between reading comprehension and fluency involving 1772 Grade Five ESL learners in 213 rural schools in nine provinces in South Africa. The data for this study were based on scores obtained from a 2013 larger national level survey on written reading comprehension test and from an oral reading fluency test which was administered. The data which were analysed based on size, significance, and uniformity of the relationship further confirmed the findings of the Progress in International Reading Literacy Study (PIRLS) on comprehension problems and poor reading fluency among fifth graders in South African primary schools. The findings are believed to be due to the severe lack of classroom instruction to support learners to decode texts meaningfully which is an important aspect of phonemic awareness. Further, Le Roux, Geertsema, Jordaan, and Prinsloo (2017) conducted a study investigating phonemic awareness among ESL learners between eight and ten years old in South Africa. This quasi-experimental study involving pre-test–post-test design revealed that phonemic awareness was an important predictor for successful literacy attainment especially at the early stages of school. The ESL learners were found to be most at risk for their lack of phonemic awareness due to the differences in the phonetic repertoire between their first and second languages which negatively affected their reading ability. In another study conducted in a rural primary school in Sarawak, Malaysia, Anthony and Said (2019) examined the impact of using synthetic phonics on the phonemic awareness of 20 seven-year old ESL students through classroom intervention. Data for this action research project were collected through pre-test, treatment, and post-test which were adapted to the students' level of ESL proficiency. The findings indicated that the use of the synthetic phonics resulted in positive outcomes not only in the students' recognition of the 42 phonemes in English but also increased their confidence to read and sound out the words in English. Also, post-test scores recorded an increase in their ability to read in English. One important implication from this study is the need for systematic classroom instruction in raising phonemic awareness among ESL learners. These studies underscore not only the importance of phonemic awareness but also the need for explicit systematic instruction to support the learning of reading among ESL primary school learners. Teachers therefore, play an important role in developing phonemic awareness among young ESL learners through explicit classroom instruction. This role entails that ESL teachers have the knowledge of phonemics which will be addressed in the following section.

2.2. Teacher Knowledge

To ensure students' achievement and success in learning to read, teachers need to provide instructional activities that are effective (International Reading Association, 2003; Snow, Burns, & Griffin, 1998; Snow, Burns, & Griffin, 2005; Talili & Pedroza, 2015; Zhao, Joshi, Dixon, & Huang, 2016). Effective instruction is informed by teachers' content knowledge (Shulman, 1987; Shulman, 1986) and this knowledge consists of knowledge that only language teachers would possess (Richards, 2008; Richards, 2010). Richards (2008); Richards (2010) identified six domains of language teachers' content knowledge - theories of teaching, teaching skills, communication skills, subject matter knowledge, pedagogical reasoning and decision making, and contextual knowledge, and such domains inform the pedagogical approaches teachers need to adopt as part of their instructional activities. The

combined knowledge of both content and pedagogy are crucial to ensure effective instructional strategies that support ESL learners to read.

In supporting young ESL learners to read, primary school teachers need to have the basic content knowledge of language constructs such as phonological and phonemic awareness, [Binks-Cantrell, Washburn, Joshi, and Hougen \(2012\)](#) which is regarded as subject-matter knowledge. Knowledge of such basic constructs is essential to ensure learners learn to decode fluently and accurately to enable them to comprehend a reading text successfully ([Bae, Yin, & Joshi, 2019](#)). A lack of this subject-matter knowledge would result in teachers being unable to design and implement the required instructional activities and assess their students' reading ability accurately especially among struggling and/or young learners ([Binks-Cantrell et al., 2012](#)). Consequently, teachers would misinterpret the results of students' assessment, adopt inaccurate instructional approaches or risk not teaching at all, and give inadequate or incorrect feedback to students' errors ([Brady et al., 2009](#); [Piasta, Connor, Fishman, & Morrison, 2009](#)). This lack of knowledge is described as the *Peter effect* – teachers who do not know the subject matter cannot be expected to teach it [Applegate and Applegate \(2004\)](#); [Binks-Cantrell et al. \(2012\)](#); [Talili and Pedroza \(2015\)](#) and in this case, teachers' who lack or do not have knowledge of phonemic awareness cannot be expected to design and deliver instructional activities that can support their learners' to decode so as to understand a reading text.

Research have highlighted the correlation between teacher's subject-matter knowledge and the achievement of students in general ([Ball, Thames, & Phelps, 2008](#); [Hattie, 2009](#)) as well as for reading ([Berninger & Wolf, 2009](#); [Washburn, Joshi, & Cantrell, 2011](#)) and the relationship between teachers' knowledge of phonemic awareness and their instructional practices in supporting learners' reading ([Keeseey et al., 2015](#); [Mather, Bos, & Babur, 2001](#)). [Cunningham, Perry, Stanovich, and Stanovich \(2004\)](#) conducted a study investigating the subject-matter knowledge of 722 kindergarten to third grade teachers from 48 elementary schools in an urban area in northern California. The focus of the teacher subject-matter knowledge was in the areas of children's literature, phonological and phonic awareness. The findings revealed that the teachers not only lacked knowledge of children's book title, but also "knew relatively little about phonemic awareness" ([Cunningham et al., 2004](#)) which is fundamental to teaching reading. [Zhao et al. \(2016\)](#) investigated the knowledge of 630 elementary school Chinese teachers of English as a Foreign Language (EFL) in one developed city in southern China, using a Reading Teacher Knowledge Survey. The findings indicated that while they self-perceived to be highly able to teach vocabulary, they reported low self-perceived ability to teach reading to struggling readers. They were less able to demonstrate explicit knowledge of basic language constructs especially phonemic awareness. Further, other research studies do indicate that EFL teachers are inadequately prepared to teach phonetic awareness due to the lack of knowledge in this subject matter and this limitation affects the instructional activities teachers could provide to support their students to decode so as to comprehend reading texts ([Goldfus, 2012](#); [Lee, 2014](#); [Talili & Pedroza, 2015](#)).

Nevertheless, research studies have shown that teachers who have knowledge of phonemic awareness are able to support their learners to decode through classroom instructional activities. [Bae et al. \(2019\)](#) explored the knowledge of 73 Chinese EFL teachers from seven public schools across four provinces in northern China and 39 Korean teachers of EFL from four public schools in Seoul through the Reading Teacher Knowledge Survey to assess their implicit and explicit knowledge on phonemic awareness. The results of this study indicated that both the Chinese and Korean teachers' knowledge of phonemic awareness was implicit rather than explicit and as such perceived themselves to be confident in teaching phonemic awareness. [Apani and Nor \(2019\)](#) examined the views of 38 teachers concerning phonological awareness to teach on an English literacy programme for primary school children in Johor Bahru, Malaysia, using a survey, interview and test results. The findings showed that the teachers had adequate level of phonological awareness, were able to deliver it through instructional activities despite experiencing challenges related to large class size, syllabus demands, and learners' first language interference, and believed in the benefits of the awareness to support their students' reading. Other studies on teacher knowledge of phonemic awareness have indicated that teachers who have this knowledge used it in their pedagogical delivery to

implement instructional activities that encouraged communication and active participation in the classroom to support students' learning of reading (Yee & Samad, 2019). Teachers with knowledge of phonemic awareness were also reported to have more confidence in supporting their students to learn how to read (Nicholson, 2007).

This selection of studies investigating teachers' knowledge of phonemic awareness and their instructional practices in supporting learners' reading underscores three main points. First, phonemic awareness is part of subject-matter knowledge that only language teachers would possess and having such knowledge is crucial to support ESL learners to decode so as to comprehend the text. Teachers who lack this subject-matter knowledge therefore, cannot be expected to teach learners to decode. Second, research investigating teachers' knowledge of phonemic awareness have underlined the relationship between their knowledge of phonemic awareness and the ability to design instructional activities and assessments to support learners to decode to enable them to read. However, not all teachers have this knowledge despite being trained as ESL teachers. Third, most studies investigating teachers' knowledge of phonemic awareness tends to be drawn from urban schools and this tendency highlights the need to also explore teachers in the rural areas.

3. RESEARCH AIM AND OBJECTIVES

The main aim of this study is to discover the knowledge of phonemic awareness of rural primary school ESL teachers and whether this knowledge was used in teaching reading at one rural school in Sarawak, Malaysia. This aim is addressed by the following research questions.

- What is rural primary school teachers' knowledge of phonemic awareness?
- Do teachers develop phonemic awareness among their learners through classroom instructional methods?

4. METHODOLOGY

4.1. Context

This study was conducted as part of a university-funded small research grant. Ethical approval was obtained from the Ministry of Education and the State Education Department. The research involved the participation of one rural school in the Bau District in the state of Sarawak, Malaysia. The school had a total population of 184 students across Year One to Year Six, and 22 teachers. The medium of instruction is Malay, the national language, and Bidayuh is the commonly spoken language among the population of the school and the immediate community. English is taught as a subject based on the Primary School Standards-Based Curriculum which is also known officially as *Kurikulum Standard Sekolah Rendah* (KSSR). This school had a total of six ESL teachers who taught the subject across all years as was typical in many primary schools in the state.

4.2. Data Collection

The research instrument used in this study was a semi-structured questionnaire with closed and open-ended items consisting of both quantitative and qualitative items. It elicited the teachers' knowledge of phonemic awareness, their view of its importance in learning to read, and if they taught it, what instructional approaches were used to develop it among the learners in their respective ESL classrooms. The instrument consisted of three main sections. The first section gathered demographic information such as gender, age, academic qualifications, teaching experience, and current and previous levels taught. The second section elicited the teacher's definition of phonemic awareness and whether they emphasised it when teaching reading in their classrooms. If they responded in the affirmative, they were asked to describe their teaching and assessment approaches, and if their response was negative, they were asked to explain and describe their approaches in teaching reading in their classroom. Examining the teachers' definition of phonemic awareness was important as it would determine their interpretation and analysis of subsequent responses provided. In this section, the teachers were also asked to describe their current knowledge or skill level with teaching and providing students with structured practice in phonemic awareness

(Cunningham et al., 2004) or otherwise and the source of such knowledge. The final section consisted of three items which involved defining a phoneme from a list of five options (a single letter, a single speech sound, a single unit of meaning, a grapheme, not sure), counting the number of phonemes in a list of eight words (straight, box, cat, know, grass, sea, thank, racing) and identifying the third phoneme in eight different words (education, tough, chalk, witch, stood, prayer, higher, explain) (Cunningham et al., 2004; Nicholson, 2007). The selection of words was based on Standard British Received Pronunciation which is taught according to the National Curriculum (KSSR). This section consisted of boxes corresponding to numbers which required respondents to tick one box for a number that indicated a correct option.

This research instrument was made available in print and distributed to be completed by the ESL teachers from the school during their visit to the university. Five teachers volunteered to participate in this study and attended a face-to-face meeting as a group with two researchers. During this meeting, the researchers explained the purpose of the questionnaire, stressed the need for voluntary participation, assured the teachers of the confidentiality of their responses, and emphasised the importance of responding honestly to the items in the survey. The researchers also welcomed any questions and concerns from the teachers. Then, the printed copies of the survey were distributed to each teacher to be completed in writing. During this session, the two researchers remained in the room with the teachers to respond to any queries or issues they experienced with regards to the items in the questionnaire. The teachers took approximately 1.5 - 2 hours to complete it. At the end of this session, all completed responses were collected to be analysed. Data derived from the quantitative items were analysed descriptively while data from the qualitative items were coded and organised into categories, and main themes that addressed the research questions identified for this study.

5. FINDINGS

5.1. Participant Demographics

The five teachers who participated in the survey consisted of two males and three females. The average age was approximately 47. The years of teaching ranged from 9 to 32 years while the years of teaching at the school ranged from 1 to 26 years. In terms of academic qualifications, three teachers reported having a degree, while one teacher has a teaching diploma, and another teacher has a teaching certificate.

5.2. Knowledge of Phonemic Awareness

In section three of the survey, the teachers provided their definition of phonemic awareness in their own words. In analysing their written responses, key concepts used in their individual definitions were compared against the key concepts used in the definition in this study based on Keesey et al. (2015) and Yeong and Liow (2012). Key concepts in defining phonemic awareness from Kessey et al and Yeong and Liow are as follows:

- Smaller segment of phonological awareness.
- Set of skills.
- Divide words into constituent sounds.
- Combine sounds to form new words.

Definitions by the teachers that include words or phrases which were synonymous to the key concepts were also accepted. The definition of phonemic awareness as offered by each teacher is shown in Table 1.

The definition provided by T1 and T4 could be considered closest to the description used in this study to describe phonemic awareness. Their individual definition matched all the four key concepts used in the definition provided in this study. The key concepts were “a subset of/part of phonological awareness” which reflected the key concept of “smaller segment of phonological awareness” and “hear, identify and manipulate phonemes” which reflected the “set of skills” involved to “divide words into constituent sounds” and “combine sounds to form new words” as used in the definition provided in this study. This finding suggests that the two teachers were able to

define phonemic awareness. However, the definition provided by T2, and T3, did not reflect any of the key concepts identified indicating that they were not able to define phonemic awareness. As for T5's definition, it only matched one key concept from the definition used in this study that is "smaller segment of phonological awareness" and indicated that this teacher's definition of phonemic awareness was insufficient.

Table-1. Definition of phonemic awareness by teacher participants.

Teacher	Definition of phonemic awareness by teachers
T1	a subset of phonological awareness in which listeners are able to hear, identify and manipulate phonemes, the smallest units of sound that helps differentiate units of meaning
T2	correct way on how to pronounce words/syllables
T3	pronounce the word in a correct way with proper sound
T4	it is a part of phonological awareness which enables learners to hear, identify, and manipulate phonemes, in short it is related to sounds
T5	a subset of phonological awareness

The teachers' responses to section four which consisted of multiple-choice options for each item were analysed descriptively. As for defining a phoneme from a multiple-choice list, all five teachers correctly identified it as a single speech sound. However, analyses of their responses to the counting of the number of phonemes in a list of eight words, and identifying the third phoneme in eight different words which were scored, revealed interesting insights.

Each response for the counting of the number of phonemes in a list of eight words (straight, box, cat, know, grass, sea, thank, racing) was scored 1 point for a correct response and 0 for an incorrect response. Table 2 shows the correct response to the number of phonemes for each word and score.

Table-2. Correct response to the number of phonemes for each word and score.

List of words	No of phonemes	Scores
straight	5	1
box	4	1
cat	3	1
know	2	1
grass	4	1
sea	2	1
thank	4	1
racing	5	1

The scores obtained by each teacher for the counting of the number of phonemes in a list of eight words (straight, box, cat, know, grass, sea, thank, racing) are shown in Table 3.

Table-3. Scores obtained by teachers for the counting of the number of phonemes.

Teacher	Scores obtained								Total scores
	straight	box	cat	know	grass	sea	thank	racing	
T1	0	0	1	0	0	0	0	0	1
T2	0	0	0	0	0	0	0	0	0
T3	0	0	0	1	0	1	0	0	2
T4	0	0	0	0	0	0	0	0	0
T5	0	0	0	1	0	0	0	0	1

The results of the phoneme counting item indicated that all teachers were unable to indicate correctly the number of phoneme for every word in the list. T3 could correctly identify the words "know" and "sea" as consisting of two phonemes to score a total of two points. T5 was able to count the two phonemes for the word "know" and scored one point while T1 counted three phonemes for the word "cat" to score one point. The remaining teachers (T2, T3, and T4) were unable to indicate the correct number of phonemes for all eight words.

As for identifying the third phoneme in eight different words (education, tough, chalk, witch, stood, prayer, higher, explain), each correct response was scored 1 point while incorrect responses obtained 0 point. Table 4 shows the correct responses for identifying the third phoneme in eight different words and score.

Table-4. Correct response responses for identifying the third phoneme and score.

List of words	Third phoneme	Scores
education	<i>u</i>	1
tough	<i>gh (f)</i>	1
chalk	<i>k</i>	1
witch	<i>tch (ch)</i>	1
stood	<i>oo</i>	1
prayer	<i>ay</i>	1
higher	<i>er</i>	1
explain	<i>s (x = /k/ /s/)</i>	1

The scores obtained by each teacher for identifying the third phoneme in eight different words (education, tough, chalk, witch, stood, prayer, higher, explain) are shown in Table 5.

Table-5. Scores obtained by teachers for identifying the third phoneme.

Teacher	Scores obtained								Total scores
	Education	Tough	Chalk	Witch	Stood	Prayer	Higher	Explain	
T1	0	0	0	0	0	0	0	0	0
T2	0	1	0	1	1	0	1	0	3
T3	0	1	0	1	0	0	1	0	2
T4	0	1	0	0	0	0	0	0	1
T5	0	0	0	0	0	0	0	0	0

Similar to the phoneme counting results, none of the teachers were able to identify the third phoneme in each of the eight words listed correctly. The highest total scores was recorded by T2 who accurately identified the third phoneme in three words which are “witch”, “stood”, and “higher” to score a total of three points. T3 scored a total of two points for correctly identifying the third phoneme in two words are “witch” and “higher” while T4 scored a total of one point for being able to accurately identify the third phoneme for the word “tough”. T1 and T5 were not able to identify the third phoneme in all eight words.

In summary, three of the five teachers were not able to provide a definition of phonemic awareness that included the key concepts. However, all five teachers were able to identify the definition of a phoneme as a single speech sound but achieved low overall scores for phoneme counting and identifying the third phoneme in a list of words. The outcomes suggest that they lacked knowledge of phonemic awareness.

5.3. Teaching Reading in the Classroom

The teachers’ views were also obtained with regards to whether they emphasised phonemic awareness in their instructional methods when teaching reading in their respective classrooms. For this item, the teachers were given Yes or No option followed by a column for an explanation of their classroom instructional methods in either circumstance. They were also asked to indicate their current knowledge or skill level with teaching using the instructional methods they had described and the basis for such knowledge.

T1 and T5 responded “Yes” indicating that they emphasised phonemic awareness in their reading classroom. T2, T3, and T4 responded “No” as they emphasised other aspects in their classroom instructional practices.

For T1, who defined phonemic awareness adequately, the instructional method of playing was used to develop the students’ phonemic awareness in the classroom. This method was regarded as effective and necessary especially when teaching Year 1 learners at the primary school. T1 who had been teaching English at primary school for 18

years and was teaching Year One learners at the time, observed that the use of play in the classroom enabled learners to learn how to manipulate phonemes effectively as it allowed focus on the sound and letters. In describing the approach used in the classroom, T1 reported, ...to enable my pupils to manipulate phonemes, I often got them to play by getting them to jump while practising the sounds of speech and also use play-doh where they can form things that they can then name. Then, I focus on the sound used for the name of the things they make and get them to see the letters that make the sound.

For T5 the instructional method used to develop students' phonemic awareness in the reading classroom was practice activities. As an ESL teacher who had been teaching at primary school for 18 years, T5 considered the development of phonemic awareness an important aspect to enable students to read successfully. In this teacher's Year Two classroom, phonemic awareness was developed through repeated practice involving the use of simple words leading on to more complex ones to enable the learners to focus on the sounds made by the words. T5 described the approach as follows.

I often get my pupils to see a simple word and get them to repeat the sound after I have done it, then I progress to more complex words and do the same. During this time, I get the students to concentrate on the sounds that a letter or combination of letters make to enable them to manipulate the speech sound. Then, I get them to say it over and over again.

As for the T2, T3, and T4, they reported not emphasising phonemic awareness when teaching reading in their classroom. T2 who had been teaching English at primary school for 30 years was of the view that phonemic awareness is a skill to be taught to students at preschool and Year 1. As this teacher was currently teaching Year Three at the time, the teaching of phonemic awareness was not the focus as the students have already been exposed to it as a basic skill. At Year Three, T2 taught reading by focussing on word or phrase stress and on the meaning of words or phrases in a reading text. This approach was considered necessary as at this level, reading comprehension was important. In sharing this view T2 explained.

Phonemic awareness is something taught at preschool level and Year One. At Year Three, that is not our focus. When I teach reading, I emphasise more on stresses and meanings of words/phrases and content of text. Students need to understand the text.

T3 reported that phonemic awareness was not used in teaching reading in the Year Five classroom as it was not a requirement. For T3 who had been teaching English for nine years, chunk reading was the main instructional method used in teaching reading in the classroom. Reading texts were broken into manageable parts to help students' comprehension. In addition, this teacher emphasised on pronunciation of words, spelling test, and reading aloud in the reading classroom. There was also the need to ensure students completed the requirements of a reading program known as NILAM which was designed by the Ministry of Education to encourage students to read extensively. T3 described the classroom instructional practices as follows.

I use chunk reading a lot in my Year Five class as our focus is on text comprehension, which is important at this level, not phonemic awareness. They also need to know pronunciation of words and how to spell as I give them spelling tests. Also read aloud. We also have NILAM so I focus on getting them to understand the text they read.

As for T4, emphasis on phonemic awareness was not necessary particularly when teaching at a later stage of primary school. According to this teacher who had been teaching English for 27 years and was teaching Year Six at the time, the focus at this stage was on comprehending reading texts. As such, it was important to provide students with reading texts and exercises that assessed their comprehension. The students also needed to learn how to write the answers and respond orally to show their comprehension of the text. Such instructional approaches were common in Year Six classes as it was crucial to prepare them for the Primary School Evaluation Test (UPSR). For this teacher.

Emphasis is more on the understanding or comprehending text contents and answering/give responses to questions either orally or in written form. So, phonemic awareness is not the focus here as the learners are at the latest stage of primary school which is an important year with public exam (UPSR).

The teachers were also asked to describe their current knowledge or skill level with teaching and providing their students with structured practice in phonemic awareness. T1 reported having very minimal knowledge or skills in providing students with structured practice in phonemic awareness. For this teacher who holds a teaching diploma and degree, knowledge on phonemic awareness was mainly derived from the teacher education programmes completed at teacher training college and university. T1 also cited having gained this knowledge through English language teacher development programme (ELTDP). T5 reported having very minimal knowledge or skills as well. This teacher's knowledge of phonemic awareness was obtained from a diploma in teacher education at a teacher training college.

The teachers who emphasised aspects other than phonemic awareness when teaching reading in their classrooms also reported on their level of current knowledge or skill, and described the source of knowledge for their approaches. T2 stated having very minimal level knowledge or skill in the instructional approaches taken and that this knowledge was obtained from a diploma in teacher education at a teacher training college. For T3, the level of knowledge or skill for instructional approaches used in the reading classroom was described as minimal as well. This teacher derived this knowledge from a postgraduate diploma in education programme. T4 reported having proficient knowledge or skills in using the approaches described in the reading classroom. This knowledge was obtained from a diploma and degree level teacher education programme.

Overall, two teachers reported using instructional methods that emphasised the development of phonemic awareness when teaching reading in their Year One and Year Two classrooms. However, they described their knowledge or skills in providing students with structured practice in phonemic awareness as being at a very minimal. While the knowledge of phonemic awareness was obtained from their teacher education training, for T1, the ELTDP was also a source of knowledge. Three teachers did not consider developing phonemic awareness as relevant to their classroom contexts as it was a basic skill for their current context. For them, instructional methods that emphasised reading comprehension were important. While two teachers reported having minimal knowledge or skills in the instructional methods used, one teacher described it as being at a proficient level. All three teachers derived their knowledge of the instructional methods used in the classroom from their teacher education programmes.

6. DISCUSSION

The findings from this study revealed that the rural primary school teachers lack knowledge of phonemic awareness. While only two teachers were able to define phonemic awareness based on key concepts, the other three teachers' definition were not within the scope. However, all teachers were able to identify what a phoneme is correctly from a list of options provided but were not able to score on the counting of the number of phonemes in all the list of eight words and identifying the third phoneme in all eight different words. This incompatibility is possibly due to the teachers being able to identify correctly what a phoneme is because a list of options was available which would have provided them with the opportunity to use an elimination approach to identify the correct option. However, despite identifying the correct option, they were unable to apply this knowledge in the counting and identifying tasks which suggests a discrepancy between declarative knowledge and procedural knowledge. Therefore, their knowledge of phonemic awareness could be described as limited.

Knowledge of phonemic awareness is essential as it is part of teachers' content knowledge (Shulman, 1987; Shulman, 1986). It concerns the body of knowledge that only ESL teachers would possess (Richards, 2008; Richards, 2010) and can be categorised as subject-matter knowledge. Without such knowledge, teachers would not be able to design instructional activities that could support their learners to decode fluently and accurately to

develop their reading comprehension (Bae et al., 2019). Learning to decode is crucial especially for young learners whose first language is not English due to the complexity of the language (Goswami, 2008; Le Roux et al., 2017) as in the case of this rural school where the medium of instruction and language of the community is not English. The lack of phonemic awareness knowledge among the teachers in this study resonates with the literature on *Peter effect* – teachers who do not know the subject matter cannot be expected to teach it Applegate and Applegate (2004); Binks-Cantrell et al. (2012); Talili and Pedroza (2015).

Two teachers reported emphasising the development of phonemic awareness in their instructional methods when teaching reading in their Year One and Year Two classrooms. The teachers' description of the instructional activities reflected this emphasis. However, it is interesting to note that they self-rated their knowledge or skills in providing students with structured practice in phonemic awareness as limited. The incongruence between the teachers' self-reported classroom instructional activities and self-rated competence has two implications. First, they may not be able to recognise good instructional practices. Second, their classroom practices are simply routines that they carry out on a daily basis based on recommendation from the prescribed curriculum.

This finding on the teachers' instructional activities highlights the discussions in the related literature on the relationship between teachers' knowledge of phonemic awareness and their instructional practices in supporting learners' reading (Keesey et al., 2015; Mather et al., 2001; Washburn et al., 2011). Teachers who consider themselves as being able to teach a particular knowledge or skill have reported low self-perceived ability to teach it to their learners (Zhao et al., 2016). This incongruence is possibly due to a lack of adequate preparation which also reflects a lack of knowledge in the subject matter (Goldfus, 2012; Lee, 2014; Talili & Pedroza, 2015) and this limited knowledge results in a lack of confidence which is crucial to support learners to learn how to read (Bae et al., 2019; Nicholson, 2007).

Knowledge of phonemic awareness is therefore, crucial for teachers as it would give them the confidence to design and implement classroom activities that could support their ESL learners to read successfully. The lack in this knowledge however, would result in teachers adopting inaccurate instructional approaches that would affect how they assessed and interpreted students' reading ability or a lack of it and provided feedback to students' errors (Binks-Cantrell et al., 2012; Brady et al., 2009; Piasta et al., 2009).

7. CONCLUSION

This study explored five primary school ESL teachers' knowledge of phonemic awareness and their instructional practices to develop it among their learners at one rural school in Sarawak, Malaysia. Data were collected through the use of a semi-structured questionnaire that consisted of closed and open-ended items. The printed survey was administered at a face-to-face meeting and was completed by all teachers.

Two important outcomes can be derived from the findings of this study. First, the teachers lacked knowledge of phonemic awareness as evident in the contrast between their declarative and procedural knowledge. Second, there was a discrepancy between their self-report of classroom instructional activities to develop phonemic awareness to teach reading and their self-rated competence of this knowledge. Teachers play an important role to develop phonetic awareness among learners as it involves explicit teaching. This role is only possible when teachers have sufficient knowledge of phonemic awareness to be able to teach it systematically with confidence. Therefore, it is "critical that teachers are familiar with the concept of phonemic awareness and that they know that there is a body of evidence pointing to a significant relation between phonemic awareness and reading acquisition. This cannot be ignored" (International Reading Association, 1998, "What does this mean for classroom practice?" section).

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