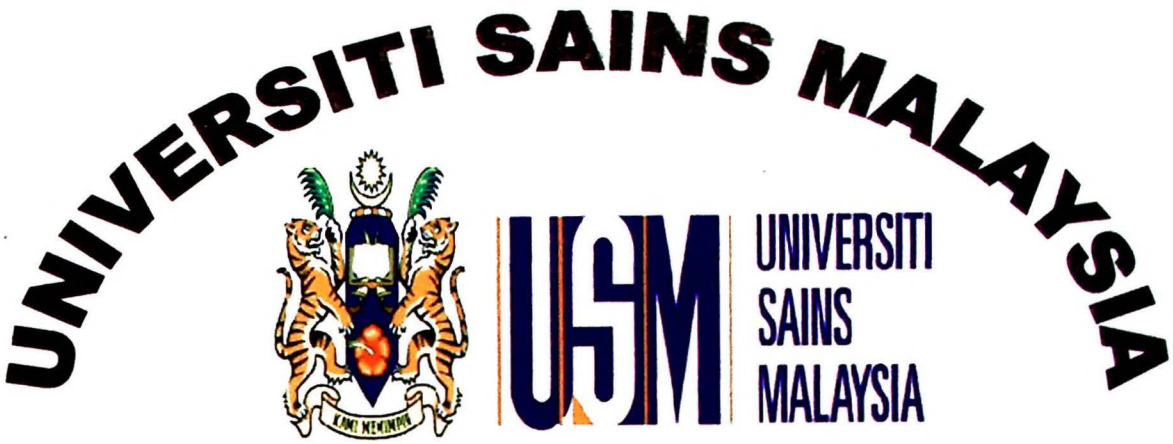


UJIAN SARINGAN KESEDARAN FONOLOGI KANAK-KANAK 6 TAHUN DI KUALA KRAI, KELANTAN

Oleh

AIMI SYAHIDAH BINTI ZULKIPLI

Disertasi yang diserahkan untuk memenuhi sebahagian daripada syarat untuk penganugerahan Ijazah Sarjana Muda Sains Kesihatan (Patologi Peruturan)

April 2011

TABLE OF CONTENTS

LIST OF FIGURES/TABLES

3

ACKNOWLEDGEMENT

Bissmillahirrahmanirrahim, Alhamdulillah. Thanks to Allah SWT, whom with His willing giving me the opportunity to complete this Final Year Project. I would like to express my deepest appreciation and gratitude to my supervisor, Puan Azlinda Abd Ghani, for her guidance and encouragement throughout completion of this study. I also would like to forward my sincere thanks to my co-supervisor, Dr. Mohd Normani Zakaria for his precious advices. In addition, thanks to my parents, my friends and my colleagues for their support, understanding and companion during completing this study.

DEFINITION OF KEY TERMS

Screening — According to Oxford Advanced Learner's Dictionary 6th ed. (2000), means 'the testing or examining of a large number of people or things for disease, faults, etc.'. It also defines as a preliminary procedure, such as a test or examination, to detect the most characteristic sign or signs of a disorder that may require further investigation (Mosby's Medical Dictionary, 2009).

Phonological — Speech sounds of a particular language; study of these sounds (Oxford, 2000). On the other hand, WordNet (2010) defines phonological as the 'component of language'.

Awareness — Defines as knowing something or knowing that something exists and is important or being interested in something (Oxford, 2000).

SCREENING PHONOLOGICAL AWARENESS AMONG 6 YEARS OLD KELANTANESE CHILDREN IN KUALA KRAI

ABSTRACT

This thesis is a crossectional study on phonological awareness skills among 6 years old Kelantanese children in Kuala Krai district. The study identify phonological awareness skills among 6 years old Kelantanese children in Kuala Krai using modified Malay Version Phonological Awareness Screening (MAPAS) test, and compare the skills between male and female of 6 years old Kelantanese children. Thus, it aims to provide a current status of phonological awareness skills among 6 years old Kelantanese children. In doing so, the result will provide a mechanism for identifying the children who are at risk for reading failure.For its framework analysis, the study used the Friedman one way ANOVA test to investigate the phonoloical awareness skills among 6 years old Kelantanese children in Kuala Krai district. For second objective, the data is analyze using the Mann-Whitney rank sum U test to analyze differences of phonological awareness skills between male and female. The study reveals that the phonological awareness skills exist among 6 years old Kelantanese. However, the skills are limited. On the other hand, there is no significant different of phonological awareness skills between male and female. It was concluded that, the late exposure, family education and economic background plays a crucial role in limited phonological awareness among the children.

UJIAN SARINGAN KESEDARAN FONOLOGI DI KALANGAN KANAK-KANAK 6 TAHUN DI KUALA KRAI, KELANTAN

ABSTRAK

Kajian ini dijalankan untuk mengkaji kemahiran kesedaran fonologi di kalangan kanak-kanak berumur 6 tahun Kelantan di daerah Kuala Krai. Objektif kajian ialah untuk mengenal pasti tahap kemahiran kesedaran fonologi dan membandingkan kemahiran kesedaran fonologi antara kanak-kanak lelaki dan perempuan menggunakan Ujian Saringan Kesedaran Fonologi Versi Bahasa Malaysia [MAPAS] yang telah diubahsuai mengikut kesesuaian populasi kajian. Kajian ini bermatlamat untuk menyediakan status terkini kemahiran kesedaran fonologi di kalangan kanak-kanak berumur 6 tahun Kelantan di daerah Kuala Krai. Justeru, kajian ini akan menyediakan satu mekanisma untuk mengenal pasti kanak-kanak yang berisiko mempunyai masalah membaca. Hasil dapatan kajian dianalisis menggunakan ujian Friedman satu hala ANOVA untuk mengenal pasti kemahiran kesedaran fonologi di kalangan kanak-kanak berumur 6 tahun di Kelantan dan ujian analisis Mann-Whitney rank sum U untuk mengenalpasti perbezaan kemahiran kesedaran fonologi antara lelaki dan perempuan.. Hasil kajian menunjukkan kemahiran kesedaran fonologi wujud di kalangan kanak-kanak berumur 6 tahun tetapi pada tahap yang terhad. Bagi objektif kedua, kajian menunjukkan tidak ada perbezaan kemahiran kesedaran fonologi antara kanak-kanak lelaki dan perempuan berumur 6 tahun Kelantan di daerah Kuala Krai. Kesimpulan, tahap kemahiran kesedaran fonologi kanak-kanak amat dipengaruhi pendedahan kepada fonologi, tahap latar belakang pendidikan keluarga dan kewangan keluarga.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Phonological awareness plays a crucial role in predicting later reading ability (Yopp & Yopp, 2009; French, Opatrny, & Cochran, 2008; Watkins & Runge, 2006; Branum-Martin & Mehta et. al., 2006; Troia, 2004; Molfese et. al., 2004; Carroll et. al., 2003; Pijper, 2003; Celek et. al., 2002; Shah, 2000). Phonological awareness is an awareness of sound structure that has smaller components; sentences, words, and syllables and can be manipulated. For an example, the sentences can be divided into words, and words into syllable, then syllables into smallest unit of spoken language, phoneme. By administering a screening on phonological awareness, the high and low oral language performers can be identified. According to Vloedgraven and Verhoeven, (2007), for the last few decades, researchers, educators and politicians paid a more attention towards early screening of phonological awareness to identify the children at risk for reading problems.

Screening is a type of low-cost an easily administered assessment to test or examine of a large number of people to find who is at risk of not progressing according to expectations or who are suspected of needing additional supplement services (Oxford dictionary, 2000). An example of screening that has been done before is by Jenkins (2007). Jenkins's study the early identification and intervention of phonological awareness in two groups of children. One group was a group of children predicted to

have pattern of reading problems and another was a group predicted that they do not have reading problems.

Screening of phonological awareness is usually done in several categories. Each of the categories has its requirement. Adams(1990), divides the screening of phonological awareness into five categories; rhyming, sound categorization, blending, segmentation, and manipulation. According to Watkins and Runge(2006), rhyming is recognizing or creating rhyming words and sound categorization that require children to decide which words start or end with the same or different sounds.

The children need to combine a string of sounds into recognizable word in blending and break apart the words into its individual sounds in segmentation. Lastly, in manipulation, the children need to delete a particular sound or substitute one sound with another. However, it is not appropriate to screen the five categories of phonological awareness; rhyming, sound categorization, blending, segmentation, and manipulation as proposed by Adams(1990) towards kindergarten children. Some of the categories still do not develop during kindergarten age as phonological awareness skills are developmental in nature. According to Naremore, Densmore & Harman(2001) in page 16, kindergarten children's phonological awareness is usually by the end of first semester are able to do syllabification and rhyming task.

Phonological awareness has different level of difficulties. Most of the previous studies found that not all of the phonological awareness tasks given, can be done by the children successfully. The results in Watkins and Runge(2006) study show that letter name recognition was the easiest task and the segmentation task was the hardest for kindergarten children. Goswami and Bryant(1990) also proposed a theory that

kindergarten children find the syllable matching task is the easiest and the rime and initial phoneme will be the hardest. However, Jenkins(2007) argues by saying rhyme production was too easy, deletion is too difficult, and segmenting is the most highly associated with prediction of reading. Therefore, the aim of this study is not to challenge this view. Rather it is the intention to screen the phonological awareness ability and assess them.

Each of the studies in the overseas uses different types of method to identify children's performance in phonological awareness. Pijper(2003), in a study of phonological awareness ability among students in English-medium school in South Africa, used Phonological Assessment Battery [PHAB] developed by Frederickson et. al. (1997) to test his subject aged 7 to 8 years old. However, in Turkey, Beceren(2010) employs a phonological test adapted from Karakelle(1998) study. The test was developed by Karakelle and reviewed by a group including two experts in Turkish, a primary teacher, a physiologist and a child development expert to make it suitable for Turkish subjects.

Some other researchers have develops their own test to meet their goals in the study. A previous study done by Lonigan and colleagues (1998) measured phonological awareness among preschool children using their own developed rhyme, alliteration, and blending task. But, in similar study done to preschool children by Badian (1998), the study used verbal memory, orthographic processing, and rapid naming to identify phonological awareness skills. There are several other tests to assess children ability in phonological awareness, such as The Test of Phonological Awareness (TOPA), The Phonological Awareness Test and Phonological Awareness Screening Battery (PALS).

In Malaysia, the teaching of phonological awareness among kindergarten is limited although phonological awareness is a basic skill to acquire literacy. The studies on phonological awareness done to the school age children at age 8 years old by Manisah(2000), found out that there was a link between phonological awareness and literacy skills. In recent study done by Sharifah Hanim (2010), 8 years old children were used as a subject to identify phonological awareness relationship and poor reading ability children among school age children. The studies found out that school age children who deficit in reading have lack of skills in phonological awareness.

Both of the studies stated above suggested that identification of phonological awareness skills should be done at earlier stage. Troia (2004), supported by proving if children have natural language and word play, as well as early exposure to print relation, the phonological awareness will emerge between the age of 2 to 4 years old or after 2 years of exposure. Therefore, in Malaysia, it was suggested that children should be assessed for their phonological awareness skills at 7 years old, during early semester of schooling since most of Malaysian children enroll into kindergarten at 5 years old.

1.2 Problem Statement

Reading and spelling is important for children to be mentioned when they entering primary school at 7 years old. According to KPM(2001), most of 4.9 million children who started schooling in Malaysia have been teach to read, spell and count at kindergarten before entering formal education. However, there are still about 290,000 school children have symptoms of specific learning disorders and 8,053 of them have learning disabilities (KPM, 2001). Usually, they are diagnosed to have learning

disabilities or dyslexia after been delayed two years behind their peers in reading and spelling performance (KPM, 2003). They will be allocated in special class and will be taught to read, spell, and count (Rohaty & Shafie, 2005). Consequently, further learning is impossible although with poor academic achievement.

A study by Liberman, et. al.(1974), has stated that most of 7 years old children were able to complete phoneme deletion test, which mean the phonological awareness begins to emerge since preschool years. In Malaysia, early identification of phonological awareness ability among preschoolers has not been administered formally. Therefore, it is difficult to identify children with learning disabilities and dyslexia at early age.

Formal education in Malaysia begins at 7 years old. The identification of learning difficulties and dyslexia were only be done if the children performance is proven 2 years delay. This means at average, children already about 9 years age by time they were identified for having learning difficulties. This is a bit too late. The identification and intervention should be done as early as possible for a child to acquire basic literacy and makes it possible for further learning. In order to prevent later reading and spelling difficulties, early screening of phonological awareness should be done before the child enter formal school.

1.3 Objectives

General objective of this study is to screen the phonological awareness skills among 6 years old Kelantanese children in Kuala Krai using modified MAPAS.

1.3.1. Specific Objectives:

1.3.1.1 To identify phonological awareness skills among 6 years old Kelantanese children.

1.3.1.2 To compare phonological awareness skills between male and female of 6 years old Kelantanese children.

1.4 Research Questions

1.4.1 What is phonological awareness skills among 6 years old Kelantanese children?

1.4.2 What is phonological awareness skills between male and female of 6 years old Kelantanese children?

1.5 Hypothesis

1.5.1 Phonological awareness skill between male and female

H□: There is no significance difference of phonological awareness skills between male and female of 6 years old Kelantanese children.

HA: There is a significant difference between phonological awareness skills of male and female of 6 years old Kelantanese children.

1.6 Significance of The Study

This study will provide a current status of phonological awareness among 6 years old Kelantanese children before they begin formal education. This skills is important in identifying children who are at risk for reading failure. The phonological awareness status among the 6 years old Kelantanese children will create an awareness whether there is in need of a more thorough and detailed assessment. It also create awareness whether there is a need of targeted intervention for improving literacy skills and reading acquisition so they do not fall behind peers. As a conclusion, phonological awareness were selected because it served as a foundation in learning to read.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definitions of Phonological Awareness

According to Naremore, Densmore & Harman (2001), phonological awareness is defined as 'an awareness of the individual sounds in spoken (not written) words that is revealed by such abilities as rhyming, isolating initial consonants of spoken words, and counting the number of syllables'(page 11). Other researchers define phonological awareness as an oral language that have smaller components such as sentences, words, syllables, and can be manipulated (Caylak, 2010; Yopp & Yopp, 2009; French, Opatrny, & Cochran, 2008; Runge &Watkins, 2006; Pijper, 2003; Branum-Martin & Mehta et al, 2006; Celek et al., 2002; Shah, 2000). A study done by Troia (2004) include that phonological awareness is a sensitivity and understanding of spoken language comprises discrete components.

2.2 Types of Phonological Awareness Subtests

Phonological awareness assessment has six subtest to implement; syllabification, rhyming, blending, sound isolation, segmentation, and deletion. Previous research with kindergarten and first grade children suggest that an assessment of phonological awareness must take accounts on children phonological awareness development. At initial stage of phonological awareness, children have rhyming skills before they

develop segmentation and blending skills (Naremore, Densmore & Harman, 2001). Molfese et al. (2004), tested preschool children with phonological processing, rhyme detection, and identifying or blending segmented words. Similarly with Lonigan and colleagues that measures preschool children phonological awareness through rhyme, alliteration and blending of words.

Other research done by Badian(1998) was focusing on the preschool contradicted to the above researcher which measures preschool phonological awareness abilities along with verbal memory, orthographic processing (visual matching), and rapid naming. Other subtest such as deletion, matching and substitution is a higher skills for preschool children. On the other hand, Chiang & Rvachew (2010) had include this subtest in their study to test preschool phonological awareness skills.

School age children have develop higher phonological awareness abilities that need more challenging and difficult tasks. Therefore, Yopp & Yopp(2009) includes matching, synthesis (blending, adding), and analysis (counting, segmenting, and deleting) of spoken language. In a study conducted by Shah(2000), there are only three types of phonological awareness subtest implemented to dyslexic children; (i) rhyme deletion, (ii) phoneme counting, and (iii) phoneme deletion. This is done to narrow down finding indicators of reading disability in dyslexic children.

2.3 Benefits of Phonological Awareness Assessment and Intervention

Phonological awareness gives tremendous advantages for children literacy. The most prominent benefit of phonological awareness is as a precursor for reading ability (Yopp & Yopp, 2009; French, Opatrny, & Cochran, 2008; Watkins & Runge, 2006;

Branum-Martin et al., 2006; Shah, 2000; Troia, 2004; Carroll, Snowling & Hulme, 2003; Celek et al., 2000). Extablishment in phonological awareness will accelerates children in learning to read ability and reduce the effects of language impairment in the future.

According to Pijper(2003), improve meet phonological awareness will also improve growth of other related aspect of reading, such as vocabulary, syntax, general knowledge, metalinguistic ability, verbal processing, as well as comprehension. Even Troia(2004) identifies phonological awareness as the more important predictor for reading than word recognition, IQ levels, family income, vocabulary knowledge, and verbal memory in his study.

Daniel(2006) stated that reading give a great impact to the society as an excellent in reading ability will contribute to academic success as it served a strong literacy skills, which then contribute to economic success. According to Castles et. al., (1999), phonological awareness skills is important in reading as it act like a key to unlock the complex process between associated spoken words with written words. By focusing on phonological awareness intervention, children will learn to understand that the sound in speech can be manipulated.

Phonological awareness skills will also benefited letter name identification among children (Runge & Watkins, 2006; Troia, 2004). Letter sound knowledge play a crucial role in pre-reading and general language abilities in young children. Carroll, Snowling & Hulme(2003), showed that letter sound knowledge also may alter the nature of a child's phonological representation, especially to the development of phoneme-based phonological representations. The significant role of phonological awareness to letter sound knowledge has been proved by Shah(2000), which reported

that dyslexic children have not performed in specific tasks of letter sound knowledge if compared to normal readers. This proved that letter-sound knowledge have strong effects of reading ability.

Spelling is one of significant and persisting consequences of achievement in phonological awareness skills. According to Pijper(2003), phonological awareness will influence an individual learning to spell by improving their knowledge of grammatical and semantic as well as orthographic.

2.4 Findings From Previous Study on Early Phonological Awareness Identification

Early screening on phonological awareness give more effect of future word identification and spelling than socioeconomic status or high vocabulary exposure. Jenkins(2010) identifies joining of phonological awareness and letter knowledge will results in reading which emerged 1 to 2 years later, after elementary years. Therefore, this evidence support the benefit of early phonological awareness identification, appropriately at kindergarten ages. However, Torgesen, Burgess, Wagner, & Rashotte (1996), argues by stated that early screening at young age such as preschool years will resulted in fail to detect reading and learning disbility. Therefore, they recommended to screen on phonological awareness later at first grade to have a guarantied outcome. Runge & Watkins(2006) suggested that to ensure proper develoment of phonological awareness skills, teachers should also involving the asessment of beginner readers.

2.5 Conclusions of Literature Review

Based on literature review, it is proved that phonological awareness gives tremendous benefits to children. If the screening is implemented at early age, the identification of early reading problem may reduce severity of learning difficulties in later age.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The data will be collected is numerical and the research design used in this study is cross-sectional study. There two types of data in this study. Data will be analysed using Friedmann one-way ANOVA test for phonological awareness among 6 years old Kelantanese children, and Mann-Whitney rank sum U test to compare mean average score of phonological awareness of male and female 6 years old Kelantanese children in Kuala Krai.

3.2 Study Location

This study was carried out at three kindergartens in Kuala Krai, Kelantan. The kindergartens were choosed base on their location at rural area, low income and family education background.

3.3 Inform Consents From Teachers and Parents

3.3.1 Consent Form From Teachers

Consent form was given to teachers at three kindergartens in Kuala Krai, Kelantan to get their permissions to do screening test to the kindergartens children. After three days, the forms were collected. All the three kindergartens allowed the

reseracher to screen their students. On the same day, the informations about 6 years old kindergartens children were obtained.

3.3.2 Consent Form For Parents

Consent forms were given to selected parents who have 6 years old children to get their permission to do screening test. All 40 parents that were given the forms allowed their children to be screened.

3.4 Research Instrument

The modified Malay Phonological Awareess Screening (MAPAS) was used to screen the phonological awareness skills among participants. The MAPAS test was modified to in kindergarten children and appropriate for Kelantanese population. The subtest used were Initial Sound- Different Items, Ending Sound-Different Items, and Letter Sounds Items subtests.

3.5 Subjects

The subjects of the study were 6 years old native Kelantanese Malay speaker childrens (20 males and 20 females for whom participant consent received). The age of the subjects were determined by their chronological age (mean age 6.0 – 6.2) at the time they were screened. Both groups did not suspected to have medical illness. hearing and visual problems as reported by their parents and teachers. The subjects also were reported by parents to have normal mental illness, physical and language development. The students were excluded if they failed one of the inclusion criterias stated.

3.6 Procedure

The screening process began when the researcher takes 4 to 5 participants to test using modified MAPAS in a well lighted, quiet, and free from distraction room. The childrens will be sitted at the table. The participants were arranged in seating where they could not easily copy each other answers. When the students still able to see other children answer, researher demonstrated how the sheet could be used to cover each row after the answer have been marked. Children must bring their own materials; a pencil, and an eraser before the test began. Extra sharpened pencils were available all the time to avoid distraction in the middle of the test. Then researcher will distributed the modified MAPAS answer sheets. Then researcher sitted in front of the children. Researcher asked the children take out a pencil and an eraser. The children must listen to the answer and they ticked the correct box of picture in the sheets.

The specific instructions for administering each of the two subtest; Initial Sound-Different Items subtest and Ending Sound-Different Ites subtest are provided in order to be easily administered. The reseracher will ask the children to turn into their booklet. Then, they will see a picture (eg. an elephant) at the top of the page. Then, the researcher will ask them to put their fingers on the the picture (eg. a snail) at the left side of the page. The researcher will explain each of four pictures in the row and ask the children to mark that has initial or last sound that different than the other three.

For letter sounds, the researcher will ask the children to turn the page in their booklet. Then, they will see a picture (eg. an elephant) at the top of the page. Then, the researcher will ask them to put their fingers on the the picture (eg. a snail) at the left side of the page. The researcher will ask the children to look at the four boxes of the

pictures and alert to the sound that will be produce by reseracher. Researcher swill say a letter sound and ask the children to mark the box with the letter that makes the sound.

3.7 Ethical Consideration

Consent was obtained from the ethical committee of School of Health Sciences before the study was conducted. All subjects were given explaination that their involvement in this study was on voluntary basis. All data that were obtained from the subjects will be keep for academic research purposes only. The subjects were informed that the study will not give any harm to them since there is no invasive procedure involved.

The consent forms from teachers and parents were also obtained. The forms were written in Bahasa Malaysia language based on socio-demography informations such as age, sex, medical history and language used at home.

3.8 Data Analysis

Scores for each subtests will be computed to analyse the phonological awareness skills among 6 years old Kelantanese children through descrptive test. The descriptive values for each subtests are expressed as means, standard deviation, frequencies, and percentages. The statistical significance of differences between mean average score of male and female are tested by Independent T-test. *P*- values less 0.05 will be interpreted as significant. Statistical Package for the Social Science for Windows (SPSS, version 12) software to analysis the collected data.

CHAPTER 4

RESULTS

4.1 Introduction

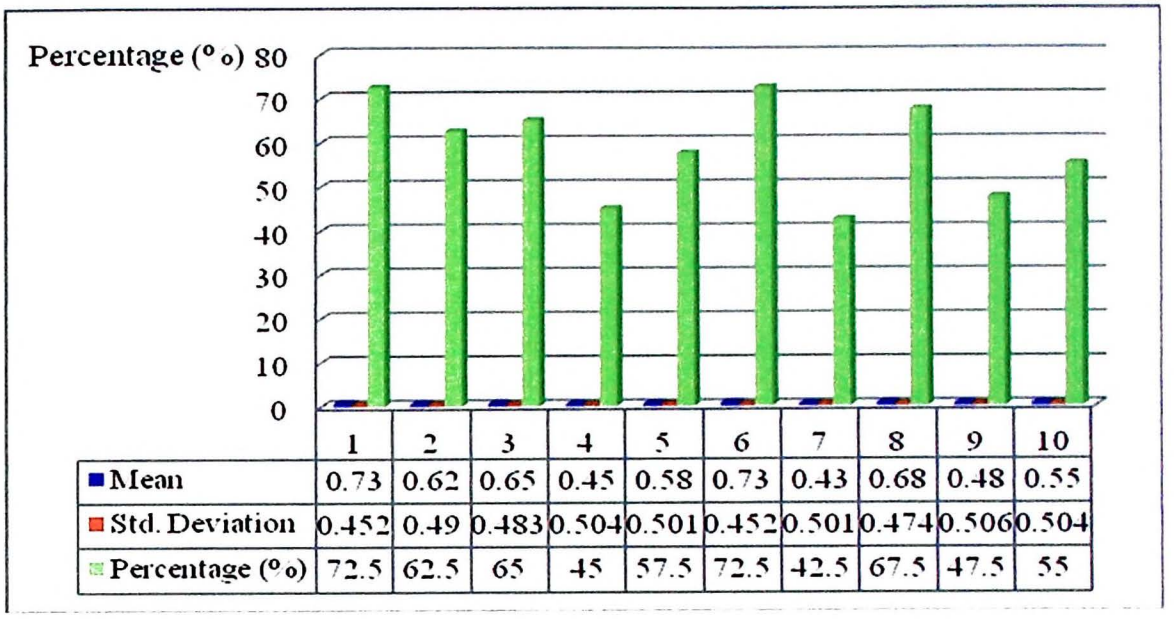
This chapter will present the results for data analysis. The data will be used to identify phonological awareness skills and to analyze differences of mean score between male and female among 6 years old Kelantanese children.

In this chapter, the phonological awareness skills among 6 years old Kelantanese children is considered by examining the skills using Initial Sound- Same Items test, Ending Sound-Same test, and Letter Sounds test. Each subtests have 10 items that corresponds to specific phoneme. The various units identified in this chapter are referred as high, middle and low scores. The specific location of this units in the detailed data analysis presented.

4.2 Phonological Awareness Skills Among 6 years Old Kelantanese Children

The Friedman one-way ANOVA test was conducted to investigate the phonological awareness skills among 6 years old Kelantanese. This test was choosen due to data distributions deviate from normality.

4.2. 1 Phonological Awareness Skills for Initial Sound-Different Items Subtest



	1	2	3	4	5	6	7	8	9	10
Mean	0.73	0.62	0.65	0.45	0.58	0.73	0.43	0.68	0.48	0.55
Std. Deviation	0.452	0.49	0.483	0.504	0.501	0.452	0.501	0.474	0.506	0.504
Percentage (%)	72.5	62.5	65	45	57.5	72.5	42.5	67.5	47.5	55

Figure 1: Initial Sound-Different Items Subtest Scores

Different scores were observed for each of the items. The highest scores were dominated by Item 1 and Item 6 ($M = 0.73$, $SD = 0.452$). The middle score was Item 10 ($M = 0.55$, $SD = 0.504$). The lowest score was Item 7 which was only 42.5% ($M = 0.43$, $SD = 0.501$). The table 4.3 followed is average score for the all the items in Initial Sound-Different Items subtest.

Table 1 : Overall Initial Sound-Different Items Subtest Mean & Standard Deviation

Subtest	Mean	Std. Deviation
Initial Sound-Different Items	5.8750	2.70979

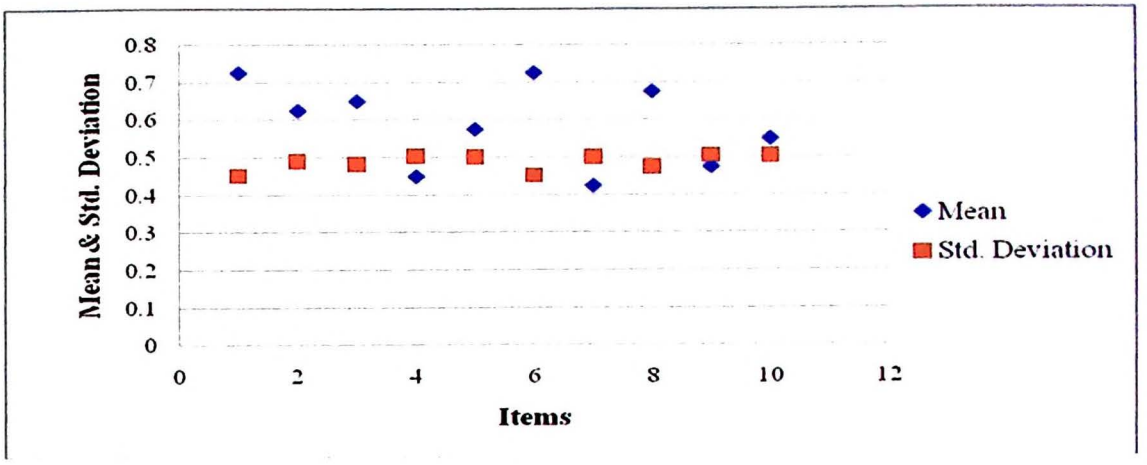
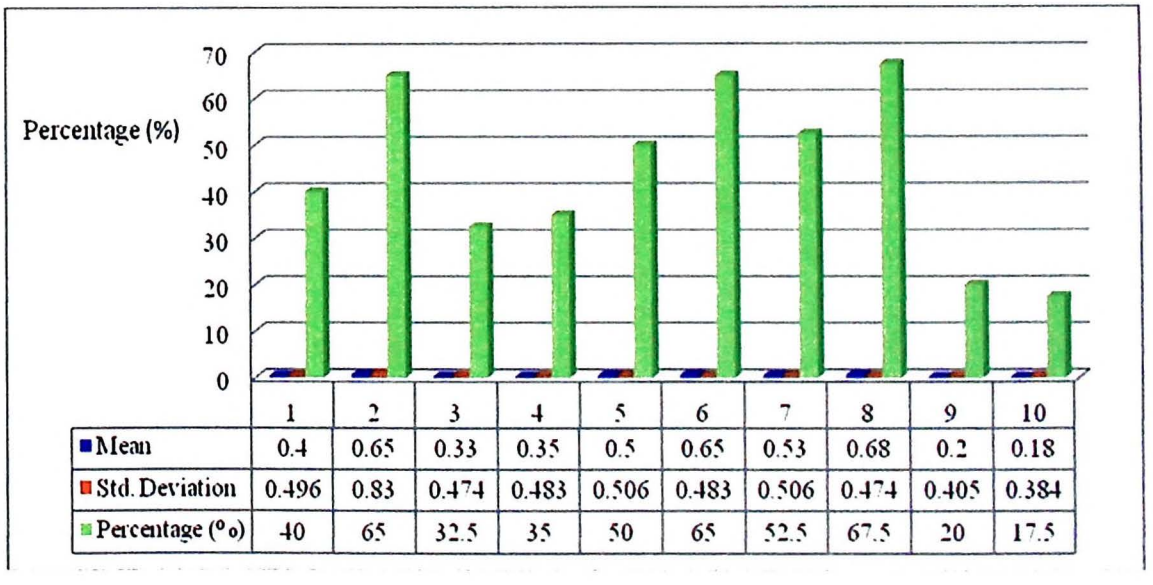


Figure 2 : Scatter Plot of Initial Sound-Different Items Subtests

Based on the overall Initial Sounds-Different Items subtest scores, $M = 5.88$, $SD = 2.71$. Therefore, the range of normal phonological awareness skills among 6 years old Kelantanese children for Initial Sound-Different Items subtest is between 3.17 to 8.59.

4.2.2 Phonological Awareness Skills for Ending Sound-Different Items Subtest



	1	2	3	4	5	6	7	8	9	10
Mean	0.4	0.65	0.33	0.35	0.5	0.65	0.53	0.68	0.2	0.18
Std. Deviation	0.496	0.83	0.474	0.483	0.506	0.483	0.506	0.474	0.405	0.384
Percentage (%)	40	65	32.5	35	50	65	52.5	67.5	20	17.5

Figure 3: Ending Sound-Different Items Subtest Scores

Different scores were observed for each of the items. The highest scores was showed by Item 8 ($M = 0.68$, $SD = 0.474$). The middle score was Item 5 ($M = 0.50$, $SD = 0.506$). The lowest score was Item 10 which was only 17.5% ($M = 0.18$, $SD = 0.384$). Below is the average of score for the all items in Ending Sound-Different Items subtest.

Table 2 : Overall Ending Sound-Different Items Mean & Standard Deviation

Subtest	Mean	Std. Deviation
Ending Sounds-Different Items	4.4500	1.83904

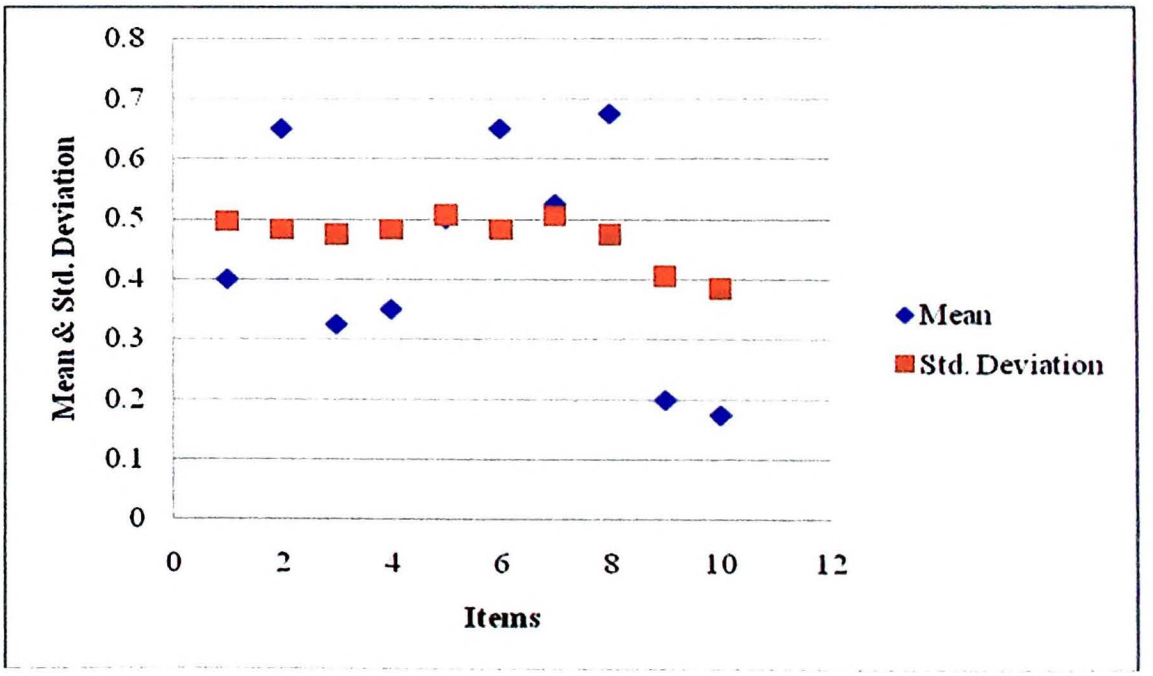
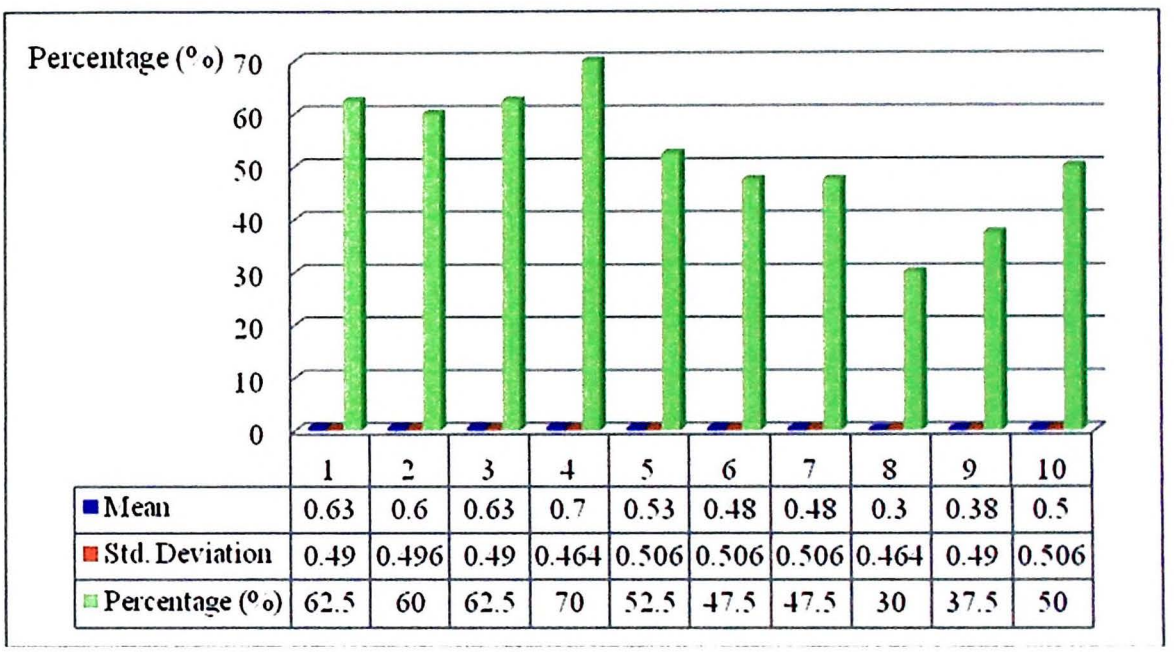


Figure 4: Scatter Plot of Ending Sound-Different Items Subtest

Based on the average scores for Ending Sounds-Different Items, the scores showed, M = 4.45, SD = 1.84. Therefore, the range of normal phonological awareness skills among 6 years old Kelantanese children for Ending Sound-Different Items subtest is between 2.61 to 6.29.

4.2.3 Phonological Awareness Skills for Letter Sounds Subtest



	1	2	3	4	5	6	7	8	9	10
Mean	0.63	0.6	0.63	0.7	0.53	0.48	0.48	0.3	0.38	0.5
Std. Deviation	0.49	0.496	0.49	0.464	0.506	0.506	0.506	0.464	0.49	0.506
Percentage (%)	62.5	60	62.5	70	52.5	47.5	47.5	30	37.5	50

Figure 5 : Letter Sounds Items Subtest Scores

Different scores were observed for each of the items. The highest scores was showed by Item 4 (M = 0.70, SD = 0.464). The middle score was Item 5 (M = 0.53, SD = 0.506). The lowest score was Item 8 which was only 30% of the children scored right (M = 0.30, SD = 0.464). Below is the average of score for the all items in Letter Sounds Items subtest.

Table 3 : Overall Letter Sounds Items Mean & Standard Deviation

Subtest	Mean	Std. Deviation
Letter Sounds Items	5.2000	3.09010

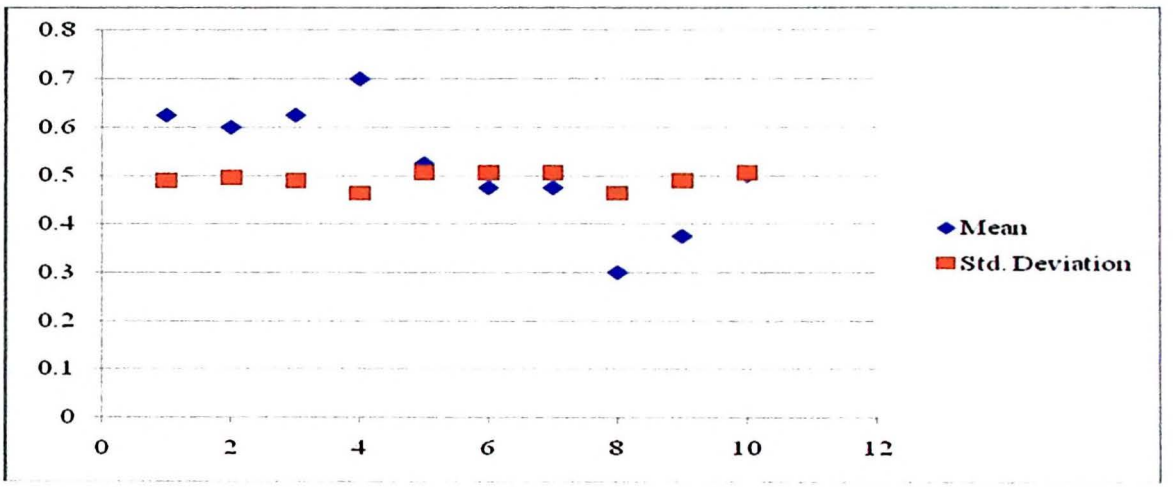


Figure 6: Scatter Plot of Letter Sounds Items Subtest

Based on the average scores for Letter Sounds Items subtest, the scores showed, M = 5.20, SD = 3.09. Therefore, the range of normal phonological awareness skills among 6 years old Kelantanese children for Letter Sounds Items subtest is between 2.11 to 8.29.

4.2.4 Phonological Awareness Skills In Initial Sound-Different Items, Ending Sound-Different Items, & Letter Sounds

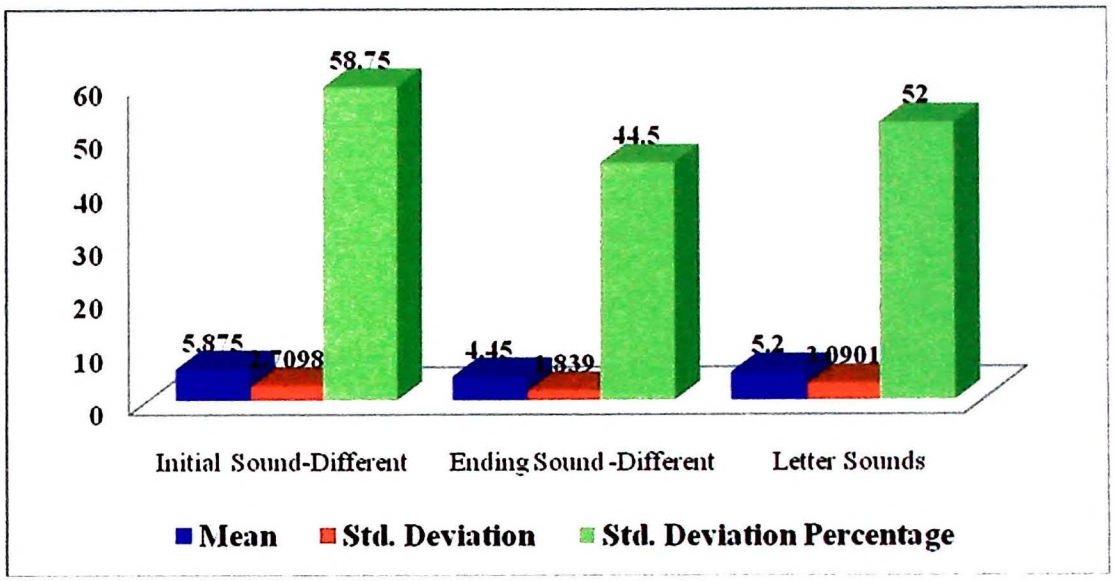


Figure 7: Comparison Between Initial Sound-Different Items, Ending Sound Different Items, & Letter Sounds Items Subtests

The highest percentage score was dominated by Initial Sound-Different Items subtest which is 58.75% (M = 5.87, SD = 3.090). This was followed by Letter Sounds subtest which is 44.50% (M = 4.45, SD = 1.839). The lowest percentage score was Ending Sound-Different Items subtest which is 44.50% (M = 4.45, SD = 1.839). Therefore, their range of normal are between 2.11 until 8.59 as shown by Figure 8.

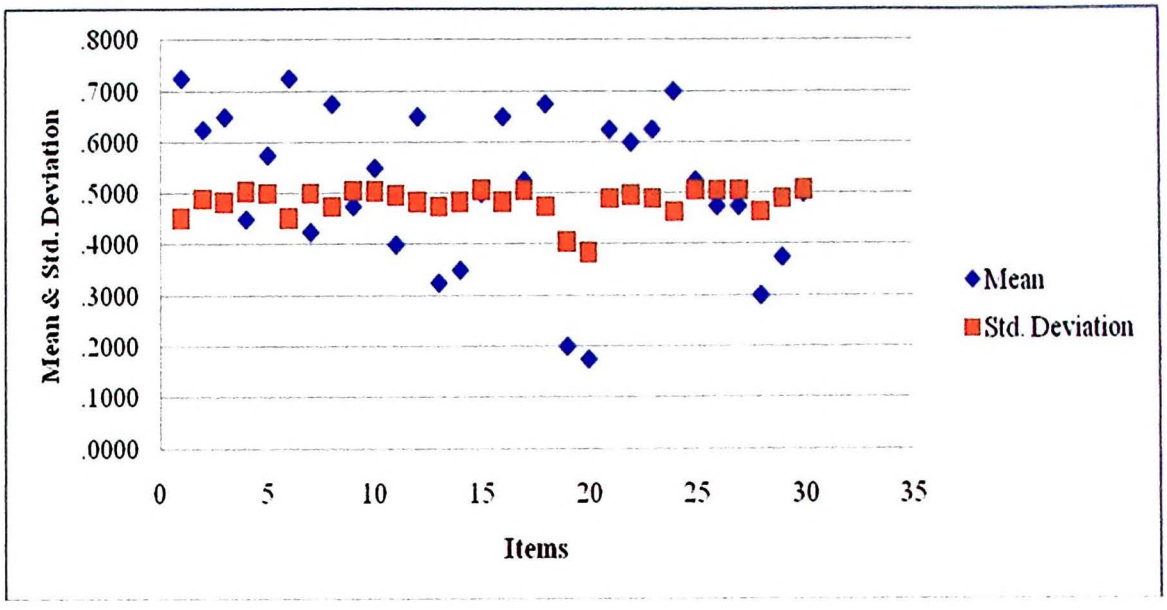


Figure 8: Scatter Plot of Initial Sound-Different, Ending Sound-Different & Letter Sounds.

4.3 Phonological Awareness Skills Between Male and Female of 6 years old Kelantanese Children

The Mann-Whitney rank sum U test was done to analyze the data when the distributions of two samples deviate significantly from normal. The mean, standard deviations and p-value for each of the phonological awareness subtests at each point of testing are shown in the table followed.

4.3.1 Initial Sound-Different Subtest

The following data relate to the Initial Sound-Different Items subtest that was completed by equal number of 6 years old Kelantanese children; 20 male and 20 female. The data was investigate the patterns of phonological awareness at Initial Sound-Different among male and female of 6 years old Kelantanese children.