

Faculty of Cognitive Sciences and Human Development

IDENTIFICATION OF DYSLEXIC CHILDREN AMONG POOR LEARNERS IN PRIMARY SCHOOLS: A PRELIMINARY QUALITATIVE RESEARCH

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Hakmilik Fakulti

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This project is submitted in partial fulfilment of the requirements for the degree of Bachelor of Science with Honours (Cognitive Science)

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ABSTRACT

Dyslexic Children in Malaysia are significantly unidentified and this prohibits early intervention for many children and families who might benefit from services such as professional advice and special education class. Researchers have sought to identify dyslexics from a pool of slow learners and learning disabled children. This qualitative research aims to observe the learning difficulties of slow learners and learning disabled children in reading and then come out with a brief description of their reading ability and performance in overall. Besides, the students who are at risk of dyslexia is also identified based on the literature review and the researcher's observation. The performance in reading of the possible dyslexic is described individually. The assessment for reading ability in this study emphasizes on early phonetic awareness, alphabet recognition, word recognition, reading of words, reading of sentences and copying and contextual reading. Implications of these findings and areas of future research are discussed.

ABSTRAK

Kanak-kanak Dyslexic masih belum dikenalpasti oleh pakar doktor kanak-kanak tempatan secara sah di Malaysia. Ini telah menghalang kanak-kanak daripada menerima bantuan dan perkhidmatan pada peringkat awal dalam pembelajaran. Dalam kajian ini, pengkaji berusaha untuk mengenalpasti kanak-kanak yang berkemungkinan adalah dyslexic dalam kumpulan kanak-kanak yang disahkan bermasalah dalam pembelajaran (Slow learner). Kajian ini adalah kajian kualitatif yang bertujuan untuk memerhatikan masalah pembelajaran kanak-kanak yang telah telibat dalam aspek kemahiran membaca. Seterusnya, pengkaji memberi penjelasan untuk kemahiran membaca dan persembahan bagi kanak-kanak tersebut secara keseluruhan. Selain itu, pengkaji mengenalpasti kanak-kanak yang berkemungkinan ialah dyslexic berpandukan kepada kajian lepas dan permerhatian yang telah dibuat oleh pengkaji. Keputusan bagi permerhatian pengkaji untuk kanak-kanak yang berkemungkinan ialah dyslexic pula dijelaskan secara individu. Dalam kajian ini, kebolehan bertutur, mengenalpasti huruf dan perkataan, membaca berpandukan kepada perkataan dan ayat, menyalin semula ayat dan permahaman telah dikaji. Isu-isu berkaitan dengan keputusan kajian ini dan kajian pada masa hadapan juga dibincangkan dalam kertas kajian ini.

CHAPTER ONE INTRODUCTION

1.0 Introduction

This chapter discusses the background of this study, the problem statement, objectives of the research, conceptual framework, significance of the research, definition of terms and the limitations of the research.

1.1 Background of study

Learning is a lifelong activity that human beings carry out for knowledge acquisition. Nevertheless, reading is a very important skill that enables one to gain information in written format, whether it is reading a road sign or a user manual about the instructions of using a new product. Besides that, reading skill is important for people to equip themselves with wider knowledge in order to survive in this challenging environment. The lack of such competence is a great handicap in today's society.

Nowadays, most people are highly educated but not everyone knows about learning difficulties such as dyslexia. Dyslexia brings about agony, suffering, grief and mental abuse to the people affected. It is a learning disorder marked by impairment of the ability to recognize and comprehend written words. In order to learn, reading is an important skill that one should possess. However, people who are suffering from dyslexic might have difficulties in reading, writing, spoken language, spelling, and mathematics as well affecting his or her learning processes. Everyone has different learning difficulties as strengths and weaknesses differ individually (Pollock & Waller, 2000).

According to Stewart (1997, cited in Ott, 1997), dyslexic children may seem similar with their peers; healthy, active and intelligent but what makes them difference is that they may not perform well in dealing with written words. Sometimes, the people around them even their family members do not understand why they are poor in such aspect. Consequently, dyslexic children always take the blame for not listening, not paying attention and not concentrating. They may simply be marked as stupid for unable to follow simple instructions that seem very easy for others. This form of labeling hurts the children's feelings and causes them to think negatively about themselves. They might think that they are useless, worthless, and stupid because they are unable to recognize simple words or cannot write precisely and neatly. The brighter the child, the more frustrated he will become.

Dyslexic person always face difficulties in applying for jobs due to their learning disability. The tociety should give them a fair chance. Probably accept them for who they are and for the things that they can do. Society rebuffs them because they do not know how to deal people with dyslexia. It is therefore vital for people to understand what actually is dyslexia and dyslexics' difficulties. This is especially important for the person who is affected by dyslexia. They should be given support from the society.

1.2 Statement of the Problem

The Ministry of Education of Malaysia began to notice that dyslexia is a problem that can affect students' performance since 1980an (L. Rahmah, personal communication, February 17, 2004). However, a dyslexic child has not yet been identified in Malaysia due to the lack of instrumentation and proper screening tests. According to L. Rahmah (personal communication, February 17, 2004), an officer of Special Education Unit in Sarawak Education Department; Malaysia will formally start a dyslexic program in June year 2004 in several selected schools. However, before this dyslexic program can be carried out, most of the schools in Malaysia will use a standardize method in teaching and there are very few schools offer special educational provisions for exceptional children. Dyslexic children who are not detected will be placed in the same class with normal students and this is inappropriate for the dyslexic students because they are unable to catch up the lessons like their peers.

In fact, a large majority of people still do not know about dyslexia. Public awareness of dyslexia is low. Children who perform very poorly in schools are assumed to be stupid and dumb by their teachers, peers and parents. The problem is that sometimes children who were blamed for being stupid and lazy might have negative thinking of themselves. They might decide to stop schooling at a young age. Therefore, it is important for a dyslexic child to be identified and addressed as soon as possible. If this goes unrecognized and the teaching is inappropriate, it may cause the failure for the dyslexic children to gain competence in literacy. Besides, it is necessary for more people to understand the difficulties of dyslexic student and they need different teaching method. Since this is a small research, the researcher identified children with possible dyslexia among slow learners and learning disabled children of focusing on their reading difficulties at the primary school level.

1.3 Objectives of this Research

The general objective of this preliminary qualitative research is to identify possible dyslexic children in reading problem among slow learners and learning disabled children at the primary school level.

The specific objectives of this research include the following:

- To identify possible dyslexic children from a pool of slow learner in primary school based on the literature review
- To study how dyslexics distort written information
- To assess their reading difficulties

1.4 Significance of this research

Although research on dyslexia is not new, studies of specific reading disability caused by dyslexia are limited. Reading is one of the most important and basic skills in knowledge acquisition processes. All primary schools emphasize on student's reading ability. Difficulties in reading are often the main point to indicate which child is recognized as having particular needs in his or her learning.

Besides that, this study is significant to increase public awareness of dyslexia. Public need to know more about reading difficulties that causes dyslexia so that they can identify if they or their children have the similar problem. The lack of awareness resulted in members of the public, parents, and teacher to ignore some of the important factors that cause poor performance in reading. Besides, it is a must for them to acquire professional advice from the related organization that deal with dyslexia such as Malaysia Dyslexia Association. The earlier help is given, the better the chance of success in minimizing the effects of dyslexia.

The outcome of the research will contribute to those who face similar reading problem as a reference.

1.5 Definition of Terms

1.5.1 Dyslexia

Dyslexia is a learning difficulty marked by impairment of the ability to recognize and comprehend written words. It is a form of word blindness which involves problems with reading, spelling, writing and other aspects of language (Ott, 1997).

1.5.2 Slow Learner

A slow learner is a learner who learns with abnormally slow progression and needs extra help in learning.

1.5.3 Genetic

A genetic disease is a family illness that has been passed on from the patients' parents. A person with a disability may inherit in family and affecting or affected by gene.

1.5.4 Disability

Disability is any limitation or inability to perform an activity in the manner or within the range considered normal for human beings.

1.5.5 Handicap

Handicap is the disadvantage for an individual that results in disability, limiting the fulfillment of a role that is normal for that individual.

1.5.6 Primary school

Primary school is a school for children aged in the range from six to twelve. The curriculum guidelines are focusing on mastery of the 3Rs including Reading, wRiting, and aRithmetic.

1.5.7 Exceptional Class

Exceptional class is a class provides special educational for children who require special needs in learning.

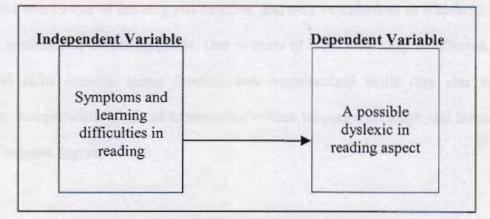
1.5.8 Multi-sensory teaching

The teaching method that involves the use of five senses of human beings such as eyes, ears, hands and lips simultaneously. It uses all the pathways to the brain in order to enhance student's memory of what has been learned.

1.6 Limitation

Due to time constraints, there are some limitations in this research. The scope of this research is limited to reading problem of dyslexic children. There are other related issues that were ignored by the researcher such as writing, spelling and mathematic.

This is a small research that involves only 23 children who are slow learners and learning disabled from four primary schools in Kuching and Sibu. The finding of the research could be a reference for preliminary identification of dyslexia. It may not be sufficient to identify dyslexia for sure.



1.7 Conceptual Framework

Figure 1.1 Conceptual Framework of the Research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter comprises the literature review on dyslexia, slow learners, learning disability. Besides, literatures on the reading skill and other related issues are also reviewed to support this study.

2.1 Dyslexia

2.1.1 Introduction of Dyslexia

Dyslexia can be a reason for a child's reading difficulty. There are a number of different definitions and explanations of dyslexia.

Bender (1992) stated that dyslexia is a term originally defined as a specific malfunction in the brain which leads to confusion in perception of letters or words. British Dyslexia Association's definition of dyslexia in 1996 is stated as below (Ott, 1997)

"Dyslexia is a complex neurological condition which is constitutional in origin. The symptoms may affect many areas of learning and function, and may be described as a specific difficulty in reading, spelling and written language. One or more of these areas may be affected. Numeracy, notational skills (music), motor function and organizational skills may also be involved. However, it is particularly related to mastering written language, although oral language may be affected to some degree." The definition of dyslexia from the International Dyslexia Association is "a learning disability characterized by problems in expressive or receptive, oral or written language" (Lerner, 2000).

According to Pollock and Waller (2000), dyslexia refers to "difficulty with words read, words spelt, words pronounced, words written, and association of meanings with words." People with dyslexia sometimes are labeled as having "word blindness" (Fawcus, 2000). They find it difficult to deal with textual materials. They have problem in recognizing letters and words and interpreting information that is presented in print form (Lerner, 2000).

According to Hynd (1992, cited in Lerner, 2000), there are four general agreements of dyslexia:

- Dyslexia has a biological basis and is due to a congenital neurological condition.
- > Dyslexic problems persist into adolescence and adulthood.
- > Dyslexia has different perceptual, cognitive, and language dimensions.
- Dyslexia leads to difficulties in many areas of life as the individual matures.

People with dyslexic learn at their own level and pace and their difference is personal. Each of them has individual strengths and weaknesses. The difficulties that they faced include late reading, poor spelling, and poor paper work (Ott, 1997). Besides, some of them also have problems with concentration, perception, direction, memory, verbal skills, abstract reasoning, hand-eye coordination, and social work (Livni, 2002).

Dyslexics are always considered to be lazy, dumb, class clowns, unmotivated, misfits, or individual with low intelligence (Ott, 1997). However, dyslexia is not the result of low

intelligence. According to International Dyslexia Association (1998, cited in Lerner, 2000), many dyslexics are creative and are gifted in art, architecture, electronic, mechanics, music, or drama. These misunderstandings lead to rejection, isolation, inferiority complex, discouragement, and low self-esteem among dyslexics. Gans, Kenny and Ghany (2003) found that dyslexic children with ages 7 to 18 had lower global self-worth and lower perceived competence if compared with their peers who were not dyslexics.

The causes for dyslexia are neurobiological and genetic (Shaywitz & Shaywitz, 1998, cited in Lerner, 2000). Dyslexics are abnormal in their brain structure and brain function compare with brains of normal people. Research shows that individuals inherit the genetic links for dyslexia. On the other hand, dyslexia is not a disease and it is incurable (International Dyslexia Association, 1998, cited in Lerner, 2000).

According to Ott (1997), dyslexics will have significantly fewer problems in learning with appropriate teaching than do dyslexia children who are not identified or assisted. Dyslexic children can usually succeed as others once they are diagnosed, provided with professional help, and given attention at home and in school (Livni, 2002).

Dyslexic children display more than one of the following characteristics (Ryden, 1997):

- > Hyperactive
- Need less sleep compare to their peers
- Easily distracted
- Untidy and disorganized
- Poor motor co-ordination

- Prone to depression
 - > A loner

It is important to differentiate between poor readers with dyslexia and slow learners in poor reading skills. This is because teachers can adapt appropriate teaching strategies for both dyslexics and slow learners that suit them. According to Lerner (2000), the definition of dyslexia and the criteria used to assess the condition are the main points to identify children with dyslexia. For example, the criteria for dyslexia can be discrepancy between learning aptitude and achievement in school.

2.1.2 Dyslexic Syndrome

Dyslexia is a syndrome with a wide range of reading and non-reading symptoms (Ott, 1997). There is a discrepancy between intelligence and basic literacy skills (Fawcus, 2000). According to Ott (1997), the dyslexics' performance is inconsistent. They do not always make the same mistake when reading, writing and spelling. Levinson (2003) found that "some dyslexics have severe reading, spelling and speech difficulties while others have major problems with only mathematics, memory and concentration." In other words, different dyslexic children have different combination of symptoms.

2.1.2.1 Dyslexic Syndrome in Reading

The following are the symptoms of dyslexia in reading (Levinson, 2003; Fawcus, 2000):

- Poor memory of letters, words, or numbers.
- > A tendency to skip over letters, words, and sentences.
- > Poor, slow, and fatiguing reading ability.
- Reversals of letters such as 'n' and 'u', words such as 'saw' and 'was', and numbers such as '6' and '9' or '27' and '72'.
- Letter and word blurring, doubling, movement, scrambling, omission, insertion, and size change. (Refer to Section 2.4.3)
- Poor concentration, distractibility, light sensitivity (photophobia), tunnel vision, delayed visual and phonetic processing.

2.1.2.2 Dyslexic Syndrome in Other Aspect

The following are other symptoms of dyslexia (Fawcus, 2000):

Writing

- Cannot write neatly, handwriting is difficult to read.
- The handwriting is poorly angulated, not straight on lined paper with no spacing and letter-sequencing.

Spelling, Math, Memory, and Grammar

Weak short term memory for spelling, grammar, mathematics, names, dates, and lists, or sequences such as the alphabet, the days of the week and months of the year, and directions.

Speech

- > Difficulty in processing language quickly.
- Speech disorders such as slurring, stuttering, minor articulation errors, poor word recall, and auditory-input and motor-output speech lags.

Direction

Confusion between right and left and related directional uncertainty.

Time

Delay in learning in telling the time.

Concentration and Activity

Impaired concentration, distractibility or hyperactivity.

Balance and Coordination

Difficulties with balance and fine motor coordination functions. For example, walking, running, skipping, hopping, tying shoelaces, and buttoning buttons.

Self-esteem

> Feeling stupid, inferior, worthless, ugly and incompetent.

Phobias and Related Mood

- > Fear of the dark, height, getting lost, going to school, and crowds.
- Avoidance of various balance, coordination, sports, and motion-related activities such as flying and using stairs or escalators.
- Unstable mood or depression.

Psychosomatics

Difficulties with headaches, nausea, dizziness, vomiting, motion sickness, abdominal complaints, excessive sweating, and bed-wetting.

2.2 Slow Learner

2.2.1 Introduction to Slow Learner

According to Murdoch (1999), a slow learner is a student "who fails to reach the average achievement of the majority of students in his or her age group" or student who is slow either learn new material or retain previously taught material. Tsur (n.d.) stated that slow learners are children who fall behind in their school work; they might be backward, educationally subnormal or less able in learning. Slow learners are not considered to be learning disabled children but they experience many of the same learning difficulties as learning disabled students (Murdoch, 1999).

Slow learners learn slower in all areas compare with their peers. They can make progress but in a slow speed. However, Dr. Lowenstein (n.d., cited in Murdoch, 1999) notes that slow learners may be slow in reading and arithmetic, but not necessarily slow in operating machine tools or social activities. They may also be adept in peer play activities, work, or sports. Besides, Lowenstein

(n.d., cited in Murdoch, 1999) found that "the measured intelligence of a true slow learner is about 75% to 90% of the average child and they tend to read approximately one year later than the majority of children."

2.2.2 Characteristics of Slow Learner

Slow learners display more than one of the following characteristics (Murdoch, 1999; Tsur, n.d.):

- Possesses common sense and adequate memory
- Normal in physical growth and development
- Has difficulty to grasp concepts and easily confused, need extra explanations of subject matter
- Tends to be slow in intellectual matters but not necessarily slow in artistic, mechanical, or social activities.
- Unable to complete daily class work, need constant extra help
- Functions at ability but significantly below grade level
- > Has a poor interpersonal relationship.
- Has difficulty following multi-step directions, need specially clear, step by step, repeated instructions
- Lives in the present and does not have long range goals
- Scores consistently low on achievement tests
- Has a poor self-image
- Works on all tasks slowly and in poor quality
- Masters skills slowly; some skills may not be mastered at all

- Lack of concentration, easily distracted
- Has reading difficulties, do not absorb information
- Lack basic knowledge or skills

2.3 Learning disabled

2.3.1 Introduction to Learning Disabled

According to Lerner (2000), definition of learning disabilities states that those who are leaning disabled have a disorder in one or more of the basic psychological processes that leads to learning difficulties specifically in speaking, listening, writing, reading and mathematics.

According to Bender (1992), learning disabled children are children who have difficulty in certain field of academic or behavioral functioning that is not related to any other handicap conditions. Such children may perform well in certain academic areas but poorly in others. The problems faced by each learning disabled children are different. For example, some learning disabled children have disabilities in mathematics while others excel in mathematics.

2.3.2 The Characteristics of Learning Disabled Children

There is a variety of characteristics one can find in learning disabled children. However, every learning disabled children is unique and will display only some of the following common characteristics. (Lerner, 2000)

- Lack of attention easily distracted or have poor concentration ability
- Poor motor abilities difficulties with gross and fine motor coordination

- Oral language difficulties have problem in listening, language development, speaking, and vocabulary development
- Reading difficulties unable to decode words, poor word recognition skills and reading comprehension
- Written language difficulties poor writing
- Mathematics difficulties have difficulties in quantitative thinking, time, space and calculation
- > Poor social skills poor interpersonal relationships
- Failure to manipulate their own learning
- > Has problems in information processing due to psychological process deficits

2.4 Reading

Reading is "recognizing letters that make words", "sounding out a sequence of sounds to make words", and "identifying words and understanding what the author is trying to say" (Guerin & Maier, 1983, cited in Witt et al., 1997). According to Ott (1997), reading is the decoding of symbols on the page in order to make sense.

Reading is the one of the most important skills that children must acquire in schools. This is because one must learn to read to be able to read to learn. According to McLoughlin & Lewis (1990), reading is one of the most critical basic skills acquired particularly in elementary schools since students are expected to use their reading skills to gain knowledge at the secondary level. The implication of this is that the child who is a poor reader will usually also be a poor learner.

2.4.1 The Development of Reading

According to Witt et al. (1997), pre-reading, decoding and comprehension are the three general stages for a person to learn to read.

The pre-reading stage occurs between birth and the time a child can recognize and decode words. It is a stage where a child learns about the letter order, letter orientation, word detail, matching sounds and blending sounds before he moves on to the decoding stage (Witt, Elliott, Daly III, Gresham & Kramer, 1997).

The decoding stage is also known as the "learning to read" stage that occurs during the first three or four years of school. It involves refinement of sound blending skills and the acquisition of rules concerning word structure like silent-letter conventions, vowel conventions and syllabification (Witt, Elliott, Daly III, Gresham & Kramer, 1997).

The comprehension stage is the stage when learners read to learn. It is the stage where a child can extract meaning from what is read (Witt, Elliott, Daly III, Gresham & Kramer, 1997).

2.4.2 Recognizing Dyslexics with Reading Difficulty

According to Ryden (1997), dyslexics might have different combinations of the following characteristics in reading:

- Poor concentration or inaccuracy in reading.
- Put letters or figures wrongly and to reverse their order. For example, reverse 'b' for 'd', '6' for '9', 'raw' for 'war', and '16' for '61'.

- Reading a word correctly but unable to recognize it further down the page.
- > Able to answer questions orally but have problems in writing down the answer.
- Spelling the same word in several different ways without recognizing the correct spelling.
- Difficulty in copying written work.

2.4.3 The ways dyslexics distort written information

Ryden (1997) found that dyslexics may distort written work in several ways, which include concept reversal, vertical disorientation, lateral disorientation, fading, mirror image, omitting letters or words or key words, and inversions.

2.4.3.1 Concept Reversal

Dyslexics perceive the meaning of a word or phrase as its exact opposite meaning. For example, dyslexic will perceive 'grand' as 'small', and 'will been' as 'has been'.

For a dyslexic, an original text like

"Nearly ten days passed before the girl was able to explain what had happened to her" might become

"Almost ten years passed since the girl was unable to explain what will happen to her"

2.4.3.2 Vertical Disorientation

Vertical Disorientation is the way dyslexics misplace letters or whole words in the line above or below the exact line in a given paragraphs.

For example, given a paragraph:

"May and Lillian are best friends. Besides, they live in a neighborhood too. Every day, they go to school by bus together." A dyslexic might interpret it as:

> "Mag andilalian Ero dest fria ty. osites, bhel liye isa tLghoyther doe. bvert bye dhny go do thol bv bns toghooher"

2.4.3.3 Lateral Disorientation

Lateral Disorientation is the way dyslexic misplace parts of words or whole words in a given paragraphs. Sometimes, the letters appearing in reverse order in the same line.

For example, given a paragraph:

"May and Lillian are best friends. Besides, they live in a neighborhood too. Every day, they go to school by bus together." A dyslexic might interpret it as:

> "yand Mare est liye bLilends. laia friare. Besin, athey borneightooday. scheryE dog, eyth toge l by busther"

2.4.3.4 Fading

A dyslexic may also distorts written work by "fading" where the first few letters seem clear to him while other letters seem fade to him.

For example, given a text:

"Nelson is an undergraduate student of University Malaysia Sarawak."

A dyslexic might read it as:

"Nel on is an un rgraduate tudent of iver ty la sia Sa awak."

2.4.3.5 Mirror Image

There are also dyslexics who read texts or paragraphs as a mirror image of the original text, where the text is reversed completely.

For example, given a text:

"Nelson is an undergraduate student of University Malaysia Sarawak."

A dyslexic might read it as:

"Nelson is an undergraduate student of University Malaysia Sarawak."

2.4.3.6 Omitting letters

Dyslexic omits letters in a given text randomly.

For example, dyslexic might read a text like

"In the Christmas party, everyone was singing and dancing to celebrate this joyful occasion." as

"In th Chistms prty, evryne ws singg nd dacng to celebte ths jful ocsion."

2.4.3.7 Omitting words

Instead of omitting letters, a dyslexic may also omit words in a given text or a paragraph but leave only the key words like the ones sent as message as by telegraph.

For example, given a text:

"In the Christmas party, everyone was singing and dancing to celebrate this joyful occasion."

A dyslexic might read it as:

"Christmas party, everyone singing dancing celebrate occasion."

2.4.3.8 Omitting key words

A dyslexic may also omit only the key words or main ideas in a given text or paragraph.

For example, given a text

"Denku is an undergraduate transfer student of University Malaysia Sarawak from Korea."

A dyslexic might read it as

"Denku is an student of University from."

2.4.3.9 Inversions

A dyslexic distorts written work by inverting when he reads a text or paragraph as an upside down image of the original text.

For example, given a text

"In the Christmas party, everyone was singing and dancing to celebrate this joyful

occasion."

A dyslexic might read it as

this joyful occasion." "In the Christmas party, everyone was singing and dancing to celebrate

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the research design, participants of the research, research instrument, data collection and data analysis used in this study.

3.1 Research Design

This study is a qualitative research. Qualitative research is applied to obtain a more holistic picture or accurate description of what goes on in the children who are slow learners in reading at the primary level. Research is carried out through ethnographic study and case study. Ethnographic study involves documenting the everyday experiences of the subjects by observing and interviewing them while case study is a detailed study of one or more subjects (Songan, 2003). The researcher spends time with the subjects in order to learn their characteristics and reading strategies through observation in the classroom. Meanwhile, the researcher studies both the subjects' reading ability and difficulties individually by using some simple reading test.

3.2 Research Venue

This research is carried out in four government primary schools in Kuching and Sibu in Sarawak. The primary schools include Sekolah Kebangsaaan Tabuan Ulu and Sekolah Kebangsaan Laksamana in Kuching, Sekolah Rendah Kebangsaan Perbandaran Sibu No.4 and Sekolah Kebangsaan. Jalan Deshon in Sibu.

3.3 Participant

Convenience sampling is used in this research because the population of students with learning difficulty is small. The respondents for this research are 23 primary students who were identified as slow learners with learning difficulties or learning disabled children. Out of the 23 respondents, 17 were male participants and 6 were female participants.

School	Sekolah Kebangsaan Tabuan Ulu	Sekolah Kebangsaan Laksamana	Sekolah Rendah Kebangsaan Perbandaran Sibu No.4	Sekolah Kebangsaan Jalan Deshon Sibu	
No. of Participants	6	4	9	4	

Table 3.1 Number of Participants from 4 Primary Schools

3.4 Research Instruments

The research instruments used in this study included pen, note book, a recordable walkman and some reading materials. The researcher took notes while doing observation. While interviewing, a tape recorder was used to enable the researcher to re-listen and transcribe all or part of the recordings.

The reading materials included the small reading cards and some reading text that is suitable to test the participants' reading ability. The materials were either researcher's self-developed or provided by the teacher.

In order to establish the validity, the reading materials were shown to the class teacher for confirmation through discussions before they were used.

3.5 Assessment of reading ability

The assessment task used in this study is adapted from the assessment task used by Morris et al. (2003) in their longitudinal study on the development of learning to read in kindergarten and first grade readers in a rural, mountain county in western North Carolina. The assessment tasks have been modified in order to suit the academic level of the participants with the help of class teachers.

3.5.1 Alphabet knowledge

Each participant was asked to name the uppercase form of 26 alphabet letters as the researcher pointed to them in disorder. Later, the child was asked to name the lowercase form too. The child was also asked to write any letter of the 26 letters. (Refer to Appendix B)

3.5.2 Sentence copying

The participant was given some sentences and asked to copy them. The paper was examined to determine the participant's reading difficulties. (Refer to Appendix B)

3.5.3 Concept of word in text

The child's concept of word in text was assessed in two different contexts. In the sentence reading task, the child finger-point read some short sentences. The researcher read the sentence and pointed to each word read. The participants were asked for full attention and then tried to finger-

point read the same sentence. After the child's finger-point reading attempt, the researcher immediately pointed to a target word in the sentence and asked the participant to read.

In the second task, the researcher used picture to help the child memorize one or two sentences. The sentences were practiced orally until the child could recite them perfectly. Next, the researcher brought out a printed version of the sentences without pictures. The researcher finger-pointed and read the sentences and then asked the participant to read together. This was repeated several times and the participant was asked to finger-point read the sentences of print himself. The participant's finger-pointing accuracy for each line is examined. Then the researcher tested the participant's ability of word identification by pointing to a single word in the sentences and asked the participant to read it aloud. (Refer to Appendix B)

3.5.4 Word recognition

The children attempted to read 5 simple words that they have learnt. The researcher pointed to one word and allowed the children to respond in 5 seconds, and then moved to the next word in the list. The researcher stopped the test when the participant made three continuous errors. (Refer to Appendix B)

3.5.5 Contextual reading

In the contextual reading task, the participant asked to read aloud short sentences to the recordable walkman. As the participant read aloud, the researcher kept a running record of errors

made and time needed to complete the sentences. The researcher also asked the participant some comprehension questions after that. (Refer to Appendix B)

3.6 Data Collection

The qualitative research was conducted after the researcher has required the permission from both the schools' headmasters and the parents of the participants.

The researcher spent several days to attend the classes with the participants. The researcher observed each participant's reading strategies and characteristics. Notes are taken during observation. The face-to-face interview was also carried out individually with the participant and the interview was recorded in cassettes.

3.7 Data Analysis

After carrying out the observation and interview, the researcher conducted a descriptive analysis based on the information obtained from the observation. The subjects' characteristics and their performance in reading are described. These include how subjects learn, what they can do well and what they do not.

CHAPTER FOUR FINDINGS AND DISCUSSIONS

4.0 Introduction

This chapter presents the findings and discussions of the study in detail. It begins with the discussions on the background of the participants followed by common characteristics possessed by participants. Next, the specific characteristics in reading (independent variable) of the possible dyslexic (dependent variable) were described based on the research findings. The researcher makes the analysis based on the literature review in chapter two.

4.1 Background of the Respondents

Out of 23 participants, 17 of them were identified as slow learner and the rest were identified as learning disabled children by pediatricians in the local clinic or Clinic Based Rehabilitation Centre. On average, majority of participants studied in the exceptional class for two years. They belonged to the age group of 9 to 15 years old. Every one of the participants has their own learning difficulties. Their level of academic is difference. However, most of them were in kindergarten and primary one. The highest academic level among them is primary two.

4.2 Class for Exceptional Children

In Kuching and Sibu, there are very few schools that offer special educational class to exceptional children. For instance, there are only three elementary schools in Sibu, which provide special

education classes. Besides, that special classroom for exceptional children was insufficient and lack of teaching equipment for them.

Most of the special education classes consist of students who were affected by Autism, Down's syndrome, Learning Disabled, Slow Learner, Hyperactive, and Cerebral Palsy. A specific class for slow learner or a class for learning disabled children is not available. All of them were combined in one class based on their academic level.

Commonly, more than three teachers were needed to control a big class that consists of children with different needs. The teachers give the instruction or works that suits the exceptional children's personal academic level. There is no more particular curriculum specifications required to be achieved for exceptional class. The class's teacher emphasizes the students' personal progress in learning. The teachers identify each student's areas of strength and capitalize on those areas to increase opportunities for success.

4.3 Participants' Performance in Reading

The researcher attended the class with the participants and observed them individually for about one week. The researcher found that the pool of slow learners and learning disabled children share some similar characteristics and learning difficulties. They mastered the reading skills slowly.

4.3.1 Letter Recognition

For those children whose academic level is primary one and above, letter recognition was not a significant problem to them. They could recognize all the uppercase and lowercase of 26 letters.

When the researcher asked the participants to write some of the letters, they managed to get the right answer. However, children at kindergarten level could not recognize most of the letters. They could read the letters correctly only if the letters are arranged in order. When the researcher asked them to recognize the letters randomly, they just guess wildly.

4.3.2 Word Recognition and Reading

Word recognition was a difficult task for the participants. It was hard for them to recognize a new word. Most of them could recognize the words that were familiar for them. For example, they could recognize word like 'boy', 'apple', and 'pencil'. When the participants were asked to recognize a new taught word, they usually looked at the initial letter and then guessed wildly. Most of the time, they were slow to respond.

For those at the lower academic level, they could read words by relying on pictures. However, they were unable to recognize the same word without pictures. The participants could say the names of the object in their surrounding like objects at home and classroom. However, they did not recognize them in written words. Some of the examples are pencil, dustbin and broom.

4.3.3 Sentence Reading

In sentence reading, only a few of the participants especially those in primary two were able to read short and simple sentences after a lot of practices. They were able to do finger-pointing reading very well. However, they had to rely on pictures cues and sometimes may not read correctly. They read very slowly at an average time of about 13 seconds.

For those who could not recognize words, sentence reading was difficult for them. Moreover, they had difficulty in comprehension. They did not know what they had read; they read word by word by following the teacher just like parrots talking. Some of them looked at the initial letter and guessed wildly similar to what they did in word recognition.

4.3.4 Sentence Copying

Majority of the 23 respondents could copy sentences but only a few of them could keep their place on the line and write neatly.

4.3.5 Memory Status

Slow learners and learning disabled children commonly have poor memory. They could hardly remember when taught a new though the item taught was at the kindergarten level. A few of the slow learners and learning disabled children could not recognize the 26 alphabets completely. On the other hand, for those who were in primary two, it was difficulty for them to remember a new vocabulary. They could remember new words for a while but forget the next day. Sometimes, they may take more than one week to remember new items by repeating those words.

4.3.6 Concentration

Both the slow learners and learning disabled children have low level of concentration. They could only focus on one task like listening to the teacher for a very short period. They were easily distracted while studying by people or things around them. They preferred to focus on things that they were interested. Some of the students were dreamers in the class. Due to their lack of concentration, they do not work well with repetitive task like copying long sentences.

4.3.7 Phonetic Processing

Some of them had problem in pronunciations and speaking. They could not pronounce properly and clearly in word reading and even in speaking.

4.3.8 Other Advantages and Disadvantages of Participants in Class

The participants may have good performance in art and mathematic. Some of the children could draw well or do simple mathematic questions that do not deal with problem statements.

Most of the participants had difficulties in completing daily class work. They needed more time to complete their work. They also had difficulty in following multi-step directions and work on all tasks slowly. They constantly needed extra help and clear explanation to absorb information.

Besides, some of the children are easily influenced by their mood in the learning process. When he was in a good mood, he was obedient and willing to follow the teacher's instruction. Otherwise, he would ignore all the instruction given by teachers and immersed in his own world. A minority of the respondents showed no interest in learning and this restricts their progression in learning.

4.4 Individual Reading Performance of participants who is Possible Dyslexic

There were 4 children out of 23 respondents were identified as possible dyslexic children by the researcher based on researcher's literature review. The following are the personal details and descriptions of the possible dyslexic. Due to protection of the respondents' confidentiality, the name is not their real name.

4.4.1 Steve

Steve is 12 years old and he is in primary 2. He is diagnosed as a slow learner. He has been in the special class since year 2001. Before that, he has been studying with other normal students in a normal class until his slowness in academic progress was noticed. According to David, his class teacher; his academic level is at the kindergarten level before he entered the special class.

He was good in recognizing alphabets and numbers but slow in reading. He could follow the instructions very well. However, he had the tendency to skip over words in sentence reading especially long sentences. For example, when he was given a text "*There is an ant on the apple*", he read "*There is a on the apple*". This shows that he tends to omit letters or words in reading.

Besides omitting letters, Steve also showed a tendency to reverse letters' order in words reading. For example, he read '*foot*' as '*of*' and '*name*' as '*man*'. He also confused words like '*of*', '*for*', and '*from*'. Moreover, he had a poor memory. He can read words and sentences quite clearly but was very forgetful. He forgot easily what he has learned. Nevertheless, he could remember vocabulary that he is interested well. For example, he could say clearly the vehicle's name like car, helicopter, lorry and even the brand names of cars such as *Proton Saga*. Steve was a dreamer in class too. He always seems immersed in his own world. He usually lacks concentration and followed his mood in learning. He showed more interest in what is new for him. Instead of reading, he likes drawing and coloring very much. He draws anytime he wants.

4.4.2 Ahmad

Another student, Ahmad, is 10 years old and he is in primary 1. He is diagnosed as a slow learner. He has been in the special class since year 2002. Before that, he was studying in a normal class. According to Sim, his class teacher; his academic level is at the kindergarten level before he entered the exceptional class.

From the observation made, the researcher found that he was quite good in recognizing alphabets and numbers but sometimes confused letters such as 'g' and 'q' and numbers such as '6' and '9'. He was poor in reading both words and sentences. Without the picture cue, he memorized only five words which are book, pencil, eraser, ruler and pen verbally. He could not spell any words and he could not read well independently any words and any simple sentences. He could not do finger-point reading.

What he could do well is to read by following the teacher word by word like parrots talking. Most of the time, he did not know what he had read. At the same time, he could not read accurately. Ahmad sometimes had a tendency to reverse letters or the order of letters in words reading. For example, he read '*for*' as '*of*' and '*dog*' as '*boq*'.

In sentences copying, he had the tendency to skip over letters or words and double letters in a sentence. For example, when he was asked by the researcher to copy a text

"Secondly, there was insufficient

market for recycled materials."

He copied it as the following without clear spacing between words

"Ssconddl6thresqsficint markettorth rrraterilR".

This shows that he tends to distort written work in several ways which include vertical disorientation, fading, omitting letters or words. Ahmad does not like to write. In fact, he could only write his first name; still consists of some spelling mistake. Sometimes, the teacher has to force him to write.

Ahmad's poor memory is one of the most significant problems that prevent him for learning to read. He forgot what he has learned very quickly. Nevertheless, he can remember what he is interested in very well. According to his class teacher, he could remember the list of television programs completely and correctly.

Ahmad also had poor concentration. He is easily distracted by people or things around him. He followed his mood in learning too. However, he did well in what he is interested in such as drawing.

4.4.3 Samuel

Samuel entered the exceptional class when he was 7. He was identified as a slow learner too and he is now 10 years old and in primary 1.

He is slow in reading. He could recognize most of the alphabets but gets 'm' and 'n' mixed up. He could write his name but one letter backwards and reversed the order of two letters. It was difficult for him to learn how to read. He could read only simple words like 'I' and 'boy' that he has practiced a lot. He was poor in reading sentences. Samuel did well in finger-pointing reading and read sentences by following the teacher word-by-word. However, he did not read accurately and phonetically; for '*ant*' he read '*at*', for '*strong*' he read '*ston*'. He did not pronounce 'r' and 'T' sounds correctly. His reading comprehension was poor as he did not know what he had read most of the time.

The researcher failed to ask him to copy sentences. This is because the request was rejected by him. Like other slow learners, Samuel is forgetful too. He could not remember what he has learned. Besides, he was nervous and constantly distracted. His class teachers complained about his inability to concentrate on tasks for any length of time. He had an uncontrollable emotion and liked to shout in the class. His behavior in class is a problem as he could not sit still.

4.4.4 Brian

Brian is 14 years old and his academic level is still at the kindergarten level. He is diagnosed as slow learner. He entered the exceptional class in year 2003. Before that, he was studying in a normal class but then stopped schooling for three years before he entered the exceptional class.

He could not recognize most of the alphabet and always confused letters such as 'E', 'F', 'N', 'W', 'b', 'd', 'p', 'q', 'g', 'u' and 'n'. He was also confused with the numbers between '6' and '9', and '2' and '5'. He was very poor and slow in reading. He had speech problems and it is difficult for him to read even if he were to follow the teacher word-by-word. His teacher gave him only writing work. Due to this problem, the researcher was unable to do any assessment in reading. He was asked to recognize letters and copy sentences instead.

During the letter recognition exercise, the researcher found that he could read the first 5 letters in order for sure. However, he became unsure for the rest of the letters. When the researcher asked him to write some letters randomly, he wrote ' \mathcal{A} ', for 'k', 'u' for 'n', 'p' for 'b', 'd' for 'b'. This shows that he tends to distort the letters in several possible ways which include mirror image and inversion.

In sentence copying, he was slow and faced difficulty in writing. He could hardly control his motor skills and sometimes his handwriting was difficult to read. Nevertheless, he likes to write a lot. Besides, he had the tendency to omit, double and reverse letters in sentence copying. For example, he copied 'uuqrstoop' for 'understood' and 'harqwrkng' for 'hardworking'. Another example is when he was asked by the researcher to copy a text:

"High Level Committee on Management."

he copied it as the following without clear spacing between words

"HHgnLąpttMagant".

This shows that he tends to distort written work in several possible ways which include fading, omitting letters or words.

Moreover, he had poor memory and he could not remember what has been taught. Besides, he is also lacking the concentration although he is quiet in class.

4.5 Discussions

4.5.1 The Specific Characteristics in Reading of Possible Dyslexic Children in the Study

These four children differ in their personalities and intelligence, their social skills, interests, and family backgrounds, but they were alike in being extremely poor spellers, and in having difficulty with reading. Steve, academically the best of the three, could read, though reading is hard work for him. Brian could not read at all, while Ahmad and Samuel could read only a few words. These four children were all possible dyslexic.

Four of them had problems with phonological awareness. They had difficulties with sounds of the letter when reading and this lead to inaccuracy in their pronunciation in reading. Besides, there was unevenness and variability in their performance. They did not constantly make the same mistakes when reading. Sometimes, they read the exactly same word differently when they saw the word on different line or page.

They might be bright orally but did not come up to the same standard on paper. For example, Ahmad could say the objects' name around him but he could not recognize the written word. Besides, they had a tendency to skip letters or words in reading. In sentence copying, they tended to distort written work in several possible ways which include vertical disorientation, fading, omitting letters or words, mirror image and inversion as well.

4.5.2 Differences between Slow Learner and Possible Dyslexic Children

Slow learners had fewer problems in recognizing alphabets compared to dyslexic children. Slow learners did not distort written work and they could copy sentences correctly while dyslexic children could not. Besides, slow learners did not reverse the letters or letters' order in reading while dyslexic children did. This showed that the failure in reading of possible dyslexics is mostly because they faced problem in decoding the written work whereas the poor comprehension ability is the main problem in reading for slow learner.

4.5.3 The Role of Parents in Identify Dyslexic

Families are often the first one to raise concerns about their child's educational development. Concerns raised by the majority of families are warranted and therefore it is critical to identify dyslexics as early as possible.

It can be difficult for parents to learn that their child is not developing as expected. Some parents might refuse to accept the fact that their children are exceptional children. They might reject to send their children to exceptional class with the beliefs that extra practice in mainstream class will "cure" the problem. Actually, they add to the problem and delay the development of positive strategies to help the child.

Parents and teachers need to work together as a team to provide the highest possible educational experience for children with learning difficulties. It is important to reassure those families and provide information about development milestones and their children's development. Parents and teachers should meets to evaluate the children's progress and to discuss possible strategies to help the learner. Parents should be willing to work with their children at home to help them in learning. Parents can use the same strategies and assistive devices that are used at school. Most importantly, parents need to be aware of and to promote their children's areas of strength in order to help their children maintain a positive attitude toward learning.

4.5.4 Teaching Reading to Slow Learners

Classroom teachers are continually struggling to find successful strategies to assist slow learners. Teaching the slow learner to read is a great challenge for teachers at every education level and it becomes increasingly more difficult in upper elementary level and beyond.

It is the responsibility of each classroom teacher to meet the needs of all students. Therefore, it is important for teachers to assess firstly the learning style of each child. It will help the teachers to know whether the slow learner is an auditory, visual or kinesthetic learner when selecting appropriate teaching method to assist the learner. On the other hands, Chasty, cited in Ott(1997), stated that teacher should teach the way the student learn instead of student learn the way their teach. If the student did not make much progress, the teacher should change his or her teaching method or strategies.

4.5.4.1 Multi-Sensory Teaching

Multi-sensory teaching is a teaching method that prompts the student to learn using eyes, ears, mouth, muscles and fingers simultaneously. According to Augur (1985, cited in Ott, 1997), it enables the student to learn the names, sound and shape of all phonograms. This helps to enhance student's memory in learning.

The example of multi-sensory teaching in learning:

In learning an alphabet like 'b', the student simultaneously learns that the letter have names, sounds and shapes. Besides, student also learns within the sense of feeling in interpreting what the letter look like when he writes it.

To learn a new word, the student first hears the teacher's voice saying its sound. Then he hears his own voice repeating it. He is asked to concentrate on what his mouth is doing. When writing the word, he moves his hand and then looks at what he has written before reading it.

CHAPTER FIVE

CONCLUSION AND RECOMENDATIONS

5.0 Introduction

This chapter would summarize and conclude all of the findings in this study. It also includes the recommendations for educator and the future research.

5.1 Conclusion

The main objective of this study is to identify possible dyslexic children in a pool of slow learner in primary school and to study how dyslexics distort written information. This study is carried out in 2 primary schools in Kuching and 2 primary schools in Sibu. 23 respondents which were identified as slow learner or learning disabled children were involved in this study.

As a whole, the majority of the respondents in this study share similar characteristics and performance in reading. This implies that most of the people thought that dyslexic children, slow learner, and learning disabled children are the same. However, significant differences were found in order to distinguish dyslexic children from the pool of slow learner and learning disabled.

This research also found that dyslexics might be identified based on the way the children deal with written work in reading. These include concept reversal, vertical disorientation, lateral disorientation, fading, mirror image, omitting letters or words or key words, and inversions.

5.2 Recommendations

5.2.1 Recommendation For The Educator

The findings of this study showed that it is possible to identify dyslexic children from the slow learners based on the way they distort the written word in reading. This means that the teachers can try to make preliminary identification of dyslexia for those children who have similar characteristics but have not clinical identified. The earlier a dyslexic is identified, the greater the chance of him or her making good progress especially for those in the normal class. This prevents them from wasting time to study with teaching method that is not effective for them.

In Malaysia, the awareness of the public about dyslexia is low and a standard screening test for dyslexic is not available yet. Nevertheless, a formal program for dyslexic will be started in Malaysia in the coming June 2004 for primary school. It would be good news for those dyslexic children who have not identified in the normal class.

Currently, there are only a few of people know about dyslexia and most of them are taking part in educational work. For the public, dyslexia might be a new scientific term that they still do not know. To overcome this problem, it is important for the Ministry of Education in Malaysia to ensure proper promotion or advertisement to be done in order to evoke the public awareness of dyslexia.

Since there are also teachers who do not know about dyslexia, it is necessary for the teachers of both mainstream and exceptional class to be sent for attending relevant training course. This helps to equip the teachers for accepting dyslexic children at any time. Awareness that there are certain teaching methods and practical approaches which are effective for such children is essential.

5.2.1.1 Teaching Strategies for Teachers

The following are some suggestions for teaching dyslexic children:

- I. Children need to learn to sit still and listen to teachers.
- II. Learn new words with the help of pictures. Children look at the pictures and discuss what they see.
- III. Teaching using television programs. This is because animated teaching materials are more effective to grab children's attentions.
- IV. Convert reading materials into songs to enhance children's memory by repeating.
- V. Teaching using games of matching, recognizing shapes, jigsaw puzzles and cross-word puzzle.
- VI. Ask children to differentiate between words or to find words that have same beginnings or endings such as *pen* and *men*.

5.2.2 Recommendation For Future Research

This study makes early identification for dyslexic children in Kuching and Sibu since a standard screening test for dyslexia is not yet available in Malaysia until June 2004. As this study focus only on reading aspect, future research could be conducted for an in-depth study to study dyslexic in more aspects which include spelling, writing, speaking and mathematics.

Future research could also focus on finding out the relationship between the levels of dyslexia with their level of learning difficulties. Other future research could also include the validation study on the effectiveness of the future screening test as a tool to identify dyslexic children.

In order to contribute to a better understanding of dyslexic children, the different learning style of dyslexic could also to be studied and then come out with suggestions for teaching. Besides, it would also be interesting to study dyslexic and come out with a set of guidelines and criteria in choosing reading tests to access for dyslexia.

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APPENDICES

Appendix A

Focus of Observation

Gender:

Age:

Problem Diagnosis:

Academic Level:

Year Enter Special Class:

- 1. Poor, slow reading
 - Finger point does he/she find difficult to keep his place on the line?

2. Reversals

- > Reversals of letters such as b and d or u and n
- Reversals of words such as saw and was
- > Reversals of numbers such as 6 and 9 or 61 and 16
- 3. Tendency to skip over or scramble letters, words or sentences.
 - > Letter and word doubling
 - Letter and word omission
 - Letter and word insertion
 - Letter and word substitution

- 4. Reading Ability
 - > Letter recognition
 - > Words reading
 - Sentences reading
 - Does he/she rely on pictures and contextual clues?
 - Does he/she really recognize a word on a flash card or he/she gets clue by recognize the initial letter?
 - > Does he/she look at the initial letter and guess wildly?
 - > Does he/she confuse words like of and for?
 - Has he/she understood what he has read?
- 5. Concentration status
 - > Does he/she give attention in learning?
- 6. Delayed Visual
 - > What he/she sees actually?
 - Can he/she read consistently from left to right?
- 7. Phonetic Processing phonological
 - > Can he/she read or pronounce correctly?
 - > Auditory recall for letter-sounds
- 8. Memory status
 - > Easy to forget

- Has he/she memorized the text from a previous occasion or from hearing others in the class?
- 9. Attitude in class
 - > Dreamer?
 - > Hardworking?
 - > Obedient?
 - > Others

10. Other reading problem & example:

> Is he/she relaxed, anxious, confident or unwilling to read?

11. His/Her strengths and weaknesses (what he does well and what he does not?)

Appendix B

Material Used To Assess Reading

1. Alphabet knowledge

Each participant was asked to name the uppercase and lowercase form of 26 alphabet letters as the researcher pointed to them in disorder. The child was also asked to write any letter of the 26 letters.

A	B	C	D	E	F	G	H	Ι	J
K	L	M	N	0	Р	Q	R	S	Т
U	V	W	X	Y	Z				1.2.2.

Uppercase Form of 26 Alphabets

a	b	c	d	e	f	g	h	i	j
k	n le	m	n	0	р	q	r	S	t
U	v	w	x	у	Z.				

Lowercase Form of 26 Alphabets

2. Sentence copying

The participant was given some of the following sentences to copy.

a) Secondly, there was insufficient market for recycled

materials.

- b) Tom sees a tiger.
- c) I have an orange and a banana.
- d) High Level Committee on Management.

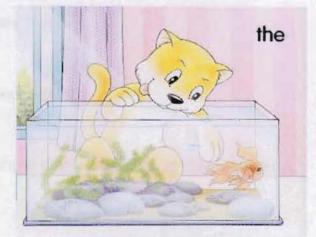
3. Concept of word in text

The participant finger-point reads some of the following short sentences.

- a) Alice is reading a book.
- b) Tom sees a tiger.
- c) An insect has six legs.
- d) There is an ant on the apple.

Sentences with picture used in second task are shown below.





The cat wants the fish.

Source: Chiang, (2003), Little Grammar Books.

The print versions of the sentences without pictures are as below.

I have an orange and a banana.

The cat wants the fish.

4. Word recognition

5 simple words that used are apple, ant, pencil, boy and book.

5. Contextual reading

Short sentences used and the comprehension questions asked are the following.

- a) Tom sees a tiger. (What does Tom see?)
- b) An insect has six legs. (How many legs does an insect have?)
- c) John has two pencils. (What does John have?)

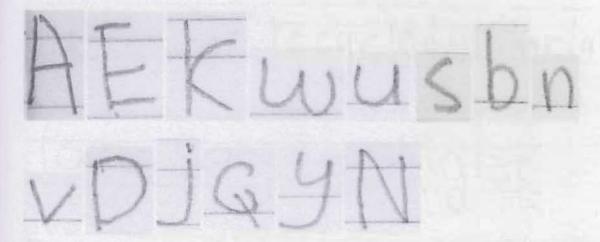
Appendix C

Participants' works

Slow Learners and Learning Disabled Children's works:

1. Alphabet knowledge

The following are participants' work when asked to write any letter of the 26 alphabet letters.



2. Sentence copying

Participants' work in sentences copying.

Secondly there was insufficient market for recyled materials secondly there was insufficient market for recycled Mater 1915

secondly, there was insufficient market for recycles materials. secondly there was insufficient Market for recycled Materials. Tom sees a tiger -have an orange and a banana. pm See atiger I have an ornge and a banana.

3. Concept of word in text

The participant finger-point reads some of the following short sentences.

- a) Alice is reading a book.
- b) Tom sees a tiger.
- c) An insect has six legs.
- d) There is an ant on the apple.
- e) I have an orange and a banana.
- f) The cat wants the fish.

After the child's finger-point reading attempt, the researcher immediately pointed to a target word in the sentence randomly and asked the participant to read. For example, the underlined word could be target words.

4. Word recognition

Most of the participants could recognize apple, pencil and boy. However, some of them could not read accurately. They read **apple** as "aper", "apale"; **ant** as "an", "ank' and **pencil** as "pensil". If the participant could not recognize a word, he just kept quiet or guessed wildly. For example, he read **boy** as "ball".

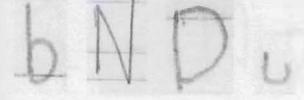
5. Contextual reading

Steve could not read the sentences by his own. They could not memorize the whole sentence and they read very slowly. They did not understand the sentences at all, thus they could not answer the comprehension questions.

Steve's performance and works

1. Alphabet knowledge

The following are his work when asked to write 'b', 'N', 'D' and 'u'.



2. Sentence copying

His work in sentences copying:

Hap

3. Concept of word in text

For "There is <u>an</u> ant on the <u>apple</u>", he read "There is a on the apple". He could not read the target words 'an' but he could read 'apple'.

4. Word recognition

He could recognize apple, pencil and boy and read accurately. When he could not recognize a word, he just kept quiet. The researcher gave him extra words to read, they included *foot*, *frog*, *cat* and *name*. He read '*foot*' and '*frog*' as '*of*' and '*name*' as '*man*'.

5. Contextual reading

He could not read the sentence by his own. He read by following the researcher word-by-word. He did not understand the sentences, thus he could not answer the comprehension questions.

Ahmad's performance and works

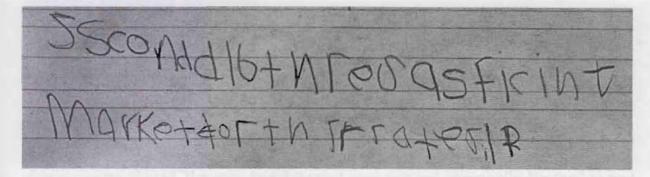
1. Alphabet knowledge

The following are his work when asked to write 'G', 'd', 'n', 'H' and '9'.



2. Sentence copying

His work in sentence copying:



3. Concept of word in text

He could not do finger-point reading. He only read by following the teacher word by word without concept of word. He failed to give response when asked to read the target word.

4. Word recognition

He could not recognize all the words shown to him because he could not remember them. He just kept quite or guessed wildly by producing sounds such as 'bo', 'ah...', 'er'. The researcher gave him some extra words to read, they included *for*, *of*, *from* and *dog*. He read '*for*' as '*of*' and '*dog*' as '*bog*'.

5. Contextual reading

He could not read the sentence by his own. He read by following the researcher word-by-word. He did not understand the sentences, thus he could not answer the comprehension questions.

Samuel's performance and works

1. Alphabet knowledge

The following are his work when asked to write 'b', 'H', and 'm'.



2. Concept of word in text

He could do finger-pointing reading. He only read by following the teacher word by word without concept of word. However, he did not read accurately and phonetically. For 'ant' he read 'at' in the sentences 'There is an ant on the apple'. Besides that, he read 'reg' for 'legs' in the sentences 'An insect has six legs'. He confused between sounds of 'r' and 'l'. He failed to give response when asked to read the target word.

3. Word recognition

He could not recognize all the words shown to him because he could not remember them. He just stared at the words and kept quite.

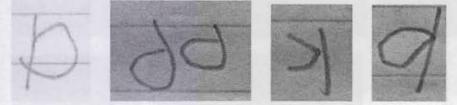
4. Contextual reading

He could not read the sentence by his own. He read by following the researcher word-by-word. He did not understand the sentences, thus he failed to answer the comprehension questions.

Brian's performance and works

1. Alphabet knowledge

The following are his work when asked to write 'p', 'b', 'k' and '9'.



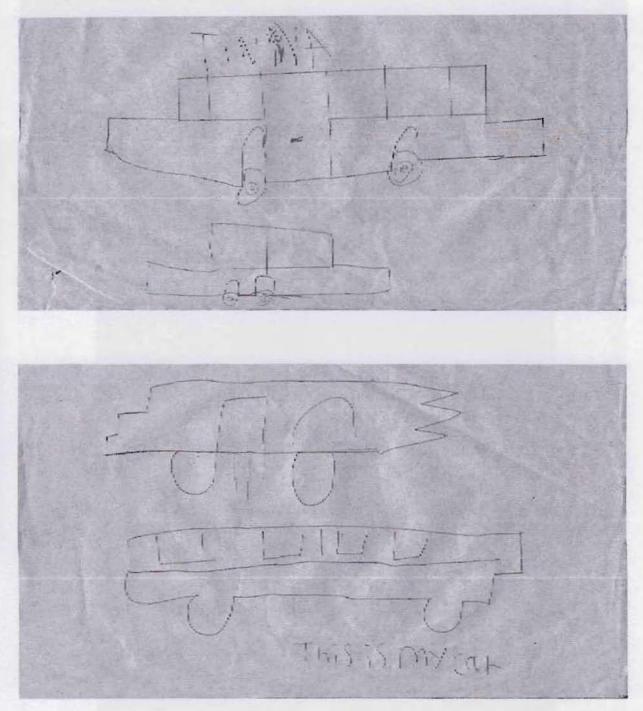
2. Sentence copying

His work in sentence copying:

3. Other writing works



Participants' drawing

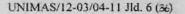




Appendix D

Approval Letters

Fakulti Sains Kognitif dan Pembangunan Manusia Faculty of Cognitive Science and Human Development



26 Februari 2004

Pengarah Pendidikan Sarawak Sekotor Pengurusan Sekolah Jabatan Pendidikan Negeri Sarawak Kuching (u.p : Unit Pendidikan Khas)

Tuan/puan

Permohonan Menjalankan Kajian

Dengan ini disahkan bahawa saudara/i Lau Siew Ching adalah pelajar tahun 3, Fakulti Sains Kognitif dan Pembangunan Manusia, Universiti Malaysia Sarawak (UNIMAS) dan sedang mengikuti Program Sarjana Muda Sains Kepujian (Sains Kognitif). Beliau diperlukan menjalankan kajian dan menyiapkan projek penyelidikan untuk memenuhi syarat bergraduat bagi program di atas.

Maklumat lanjut tentang pelajar dan tajuk kajian adalah seperti berikut:

Nama	: Lau Siew Ching	
No Matrik	: 6698	
Tajuk Tesis	: "Reading Difficulties of Dyslexia Children in Primary Schools".	
Penyelia	: Cik Julia Lee Ai Cheng	
Perhubungan	: 082-671000 samb. #7273	
Email	: aclee@fcs.unimas.my	

Schubungan itu, sukacita kiranya pihak tuan/puan dapat memberikan kerjasama kepada pelajar tersebut bagi membolehkan beliau mendapatkan maklumat yang diperlukan di Sekolah Rendah Bahagian Kuching, Sarawak . Pihak UNIMAS menjamin bahawa segala maklumat yang diperolehi akan hanya digunakan untuk tujuan akademik semata-mata dan dijamin akan kerahsiaannya.





UNIVERSITI MALAYSIA SARAWAK

94300 Kota Samarahan Sarawak Malaysia Tel + 60.82 671000 Fax + 60.82 672**a**&/ Sekian, di atas segala pertolongan dan kerjasama yang diberikan oleh pihak tuan/puan, kami dahului ucapan terima kasih.

Sekian.

Yang benar

Julia Lee Ai Cheng Penyelia b,p Dekan Fakulti Sains Kognitif dan Pembangunan Manusia

s.k - Timbalan Dekan (Prasiswazah dan Pemajuan Pelajar), FSKPM - Penolong Pendaftar, FSKPM

1.2 KH 2

Fakulti Sains Kognitif dan Pembangunan Manusia Faculty of Cognitive Science and Human Development



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94300 Kota Samarahan Sarawak Malaysia Tel + 60 82 671000 Fax + 60 82 672284

UNIMAS/12-03/04-11 Jld. 6 (32)

17 Februari 2004

Pengarah Pendidikan Sarawak Sekotor Pengurusan Sekolah Jabatan Pendidikan Negeri Sarawak Kuching (u.p : Unit Pendidikan Khas)

Tuan/puan

Permohonan Menjalankan Kajian

Dengan ini disahkan bahawa saudara/i Lau Siew Ching adalah pelajar tahun 3, Fakulti Sains Kognitif dan Pembangunan Manusia, Universiti Malaysia Sarawak (UNIMAS) dan sedang mengikuti Program Sarjana Muda Sains Kepujian (Sains Kognitif). Beliau diperlukan menjalankan kajian dan menyiapkan projek penyelidikan untuk memenuhi syarat bergraduat bagi program di atas.

Maklumat lanjut tentang pelajar dan tajuk kajian adalah seperti berikut:

Nama No Matrik	: Lau Siew Ching : 6698	
Tajuk Tesis	: "Reading Difficulties of Dyslexia Children in Primary Schools in Sibu ".	1
Penyelia	: Cik Julia Lee Ai Cheng	
Perhubungan	: 082-671000 samb. #7273	
Email	: aclee@fcs.unimas.my	

Sehubungan itu, sukacita kiranya pihak tuan/puan dapat memberikan kerjasama kepada pelajar tersebut bagi membolehkan beliau mendapatkan maklumat yang diperlukan di Sekolah Rendah Bahagian Sibu, Sarawak . Pihak UNIMAS menjamin bahawa segala maklumat yang diperolehi akan hanya digunakan untuk tujuan akademik semata-mata dan dijamin akan kerahsiaannya.



Sekian, di atas segala pertolongan dan kerjasama yang diberikan oleh pihak tuan/puan, kami dahului ucapan terima kasih.

Sekian.

Yang benar

Julia Lee Ai Cheng Penyelia b.p Dekan Fakulti Sains Kognitif dan Pembangunan Manusia

s.k

Pegawai Jabatan Kemas, Bahagian Sibu
Timbalan Dekan (Prasiswazah dan Pemajuan Pelajar), FSKPM
Penolong Pendaftar, FSKPM



JABATAN PENDIDIKAN NEGERI SARAWAK BANGUNAN TUN DATUK PATINGGI,

TUANKU HAJI BUJANG. JALAN SIMPANG TIGA, 93604 KUCHING, SARAWAK.

Telefon: 082-243201 Fax : 082-252907 Kawat : PENDIDIKAN

Ruj. Kami : JP/PK/1664/Mald.2 (90)

Tarikh : 01 Mac 2004

Cik Lau Siew Ching, (No.Matrik: 6698) Universiti Malaysia Sarawak, 943000 Kota Samarahan

Tuan,

SENARAI NAMA SEKOLAH UNTUK MENJALANKAN KAJIAN

Dengan segala hormatnya surat tuan bil: UNIMAS/12-03/04-11 Jld.6 (36) bertarikh 26 Februari 2004 adalah dirujuk.

2. Sehubungan itu, dimaklumkan pihak kami tiada halangan untuk puan menjalankan kajian bagi memenuhi syarat tesis puan yang bertajuk. "*Reading Difficulties of Dyslexia Children In Primary Schools*" di beberapa buah sekolah rendah seperti senarai di bawah di Bahagian Kuching.

Bil:	Nama Sekolah	Alamat		
1.	SK Semerah Padi, Kuching	Jalan Depo, Kuching		
2	SK Astana, Kuching	Jalan Bako, Kuching		
3.	SK Laksamana, Kuching	Jalan Stampin Barat, Kuching		
4	SK Tabuan Ulu, Kuching	Jalan Foochow No 1, Kuching		
5. SK Combined, Kuching		Jalan Eastern Park, Kuching		

Sekian, Harap Maklum

" BERKHIDMAT UNTUK NEGARA "

Saya yang menurut perintah,

DR HAIL BIN DOLHAN | Sektor Pengurusah Sekolah b.p. Pengarah Pendidikan, Sarawak

s k: Pegawai Pendidikan Bahagian Kuching

Hil. And meret rasmi 2004 010304

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