CHAPTER I

INTRODUCTION

1.1. BACKGROUND OF STUDY

Psycholinguistics, as its name suggests, is a field of study that lies at the intersection of two broader disciplines: psychology and linguistics. Linguistics, in general, is concerned with the abstract study of the language. It analyzes and compares aspects of languages, such as sounds, syntax, and lexicon. It examines similarities and differences among languages, and tries to trace their evolutionary development. Psychology, on the other hand, is uniquely concerned with behavior and with the conditions under which it is learned. Cognitive psychologists have primary focus on the manner in which humans acquire, interpret, organize, store, retrieve, and employ knowledge. They are also particularly interested in the manner in which language is developed and used (Smith, 1973:1-2).

Many psychologists have turned their attention from the question of how grammatical structure is learned and perceived to how the information that sentence contain is expressed, stored and comprehended. As a consequence, whereas psycholinguistics was initially primary concerned with linguistics question, there is a growing tendency now for the linguistic enterprise to turn to cognitive matters. With this redirection of emphasis has come a greater attention to reading (Smith, 1973:4-5).

Reading processes operate on symbols to produce new symbols, the new information. Because the reading processes operate on symbols rather than on

physical materials, they are called **information processes** (Just and Carpenter, 1987: 4).

Swerling and Sternberg (cited in Santrock, 1998: 334-335) propose a **developmental information-processing model of reading**. The model involves five sequences like the table below.

PHASE	Normal Age of Achievement
Visual cue recognition	Preschool, kindergarten
Phonetic cue recognition	Kindergarten, first grade
Automatic word recognition	Between first and second grade
Strategic reading	Middle to late elementary school years
Proficient adult reading	Adolescence, adulthood

Table 1.1 A Developmental Information-Processing Model of Reading

Normal reading acquisition begins with a phase of paired-associate learning, in which children do not make use of letter-sound correspondences. In this early phase of learning to read, children use salient visual cues to recognize words, such as colors or distinctive logos. For example, children can recognize the MacDonald's restaurant because of the sign on the basis of the red and yellow colors. But, they cannot recognize the letters if they were printed in a plain black letters on a piece of white paper. Visual cue recognition characterizes many preschool children who are just starting to recognize words (Santrock, 1998: 334).

Egeland (cited in Reed, 1992: 18) also has used colour as a visual cue in teaching reading to prekindergarten children. He made an experiment on how to

distinguish between confusable letter pairs *R-P, Y-V, G-C, Q-O, M-N,* and *K-X.* One letter of each pair was presented at the top of a card with six letters below it, three of which matched the sample letter and three of which were the comparison letter. The children were asked to select those letters that exactly matched the sample letter.

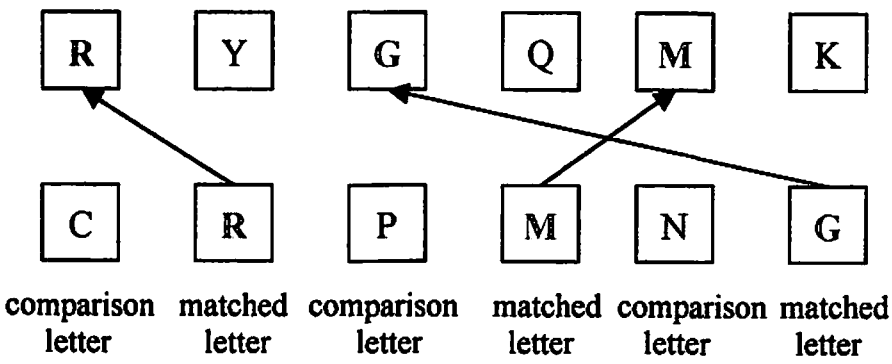

Figure 1.1. An example of the trainings by Egeland

One group of children received a training procedure in which the distinctive feature of the letter was initially highlighted in red—for example, the stem of the *R* in the *R-P* discrimination. During the training session, the distinctive feature was gradually changed to black to match the rest of the letter. Another group of children viewed only black letters. They received feed back about which of their choices were correct, but they were not told about the distinctive features of the letters. Both groups were given two tests—an immediate test at the end of the training session and a delayed test one week later. The "distinctive features" group made significantly fewer errors on both tests, even though the features were not highlighted during the tests. They also made fewer errors during the training sessions (Reed, 1992: 18).

According to the theory of beginning reading process proposed by Swerling and Sternberg (cited in Santrock, 1998:334-335) and the experiment by Egeland (cited in Reed, 1992:18), we can conclude that visual cue (color in this case) gives great contribution to reading acquisition, especially in discriminating or recognizing letters. Therefore, the writer would like to apply these theories to teach children reading Quran.

In this present study, there is an additional aspect. The children in the theory proposed by Swerling and Sternberg (cited in Santrock, 1998: 334-335) and in the experiment by Egeland (cited in Reed, 1992: 18) were only trained on *visual process* in the beginning process of reading acquisition. Children in my experiment did not only try to recognize letters, but also included *speech process* to make phonemic discrimination and letter-sound correspondence. This addition was taken after considering the reality in Indonesia. When prekindergarten and kindergarten children learn to read Quran at the first time, they directly try to recognize letters, discriminate phonemes, and associate letter with sound. With this experiment, the writer could observe whether the common method (without colour) had been optimal or we might increase the result of the children's learning with colour method.

The writer would like to apply the two previous theories to teaching Quran for some reasons. First, in our country it is rare to find any theories or experiments in psycholinguistics about reading Quran acquisition. Arabic is used as a foreign language, for Islamic ritual matters. Quran is very familiar to our society, but still there is little research about it. Second, there are many books, theories, or

experiments about reading acquisition in first language, but we hardly find any in foreign language, especially one that has different orthographic code. Therefore, this study will hopefully give contribution to development of psycholinguistics. Third, the writer also would like to participate in Islam development. With this study, we could increase the quality of Islamic education in Indonesia.

The writer prefers to choose prekindergarten and kindergarten children in my study because they have unique characteristics, different from adults. Teaching them needs creativity and understanding of their world in order that they can enjoy the learning activity. Besides, with relationship to Quran, reading Quran usually has been started since childhood. So, Indonesian children can directly get an advantage from this study.

1.2 STATEMENT OF PROBLEM

1. Does color as visual cue influence prekindergarten and kindergarten children in letter level of early Quran reading acquisition?

1.3 OBJECTIVE OF THE STUDY

1. To find out whether color as visual cue influences or helps prekindergarten and kindergarten children in letter level of early Quran reading acquisition

1.4 SCOPE AND LIMITATION

This study deals with early Quran reading acquisition in letter level only. Therefore, it does not concern the process of being able to read words.

1.5 SIGNIFICANCE OF THE STUDY

With topic of colour as visual cue, the writer would like to contribute some ideas in psycholinguistics, especially about reading acquisition. Hopefully, the result of this study is also important for field of psychology, i.e cognition. Reading process in this study relates directly to cognitive processes (pattern recognition and sensation).

This study could be useful for parents to support their children's success in learning to read Quran. It would also be expected to give teachers an alternative method of teaching children reading Quran. Not for Quran only, hopefully the result of this study could be applied to the teaching of other languages. It may be used to teach children reading other languages which have different orthographic code, for instance, Javanese, Japanese, or Chinese (the new trend in Indonesia).

1.6 THEORETICAL FRAMEWORK

1.6.1 DECODING AS THE PROCESS OF BEGINNING READING

Decoding is a step of beginning reading, primarily focusing on the process of extracting information from the orthographic code. In this stage, written language is a code that beginning readers must crack. They require understanding how symbols relate to sounds. They must be able to decompose a word into smaller units, retrieve similar units and their associated sounds, and then synthesize the result (Just and Carpenter, 1987: 327). Here is the speech process and visual process in decoding, from letter level to word level. It is a summary of theory proposed by Just and Carpenter (1987: 342-346).

VISUAL PROCESSES IN READING ACQUISITION

1. **Recognizing Letters**

   Word decoding involves discriminating letters from each other and identifying letters and letter clusters. They discriminate similar letters such as *m n, Q O, E F*, and *P R*.

2. **Encoding Units Larger Than Single Letters**

   Beginning readers initially pay primary attention to the letter at the beginning of a word. Therefore, sometimes they make mistake in decoding words beginning with the same letter and look similar such as *mouse* and *house*. Only later, as they become more proficient, they attend to other aspects of the word, including its internal letters.

SPEECH PROCESS IN READING ACQUISITION

1. **Phonemic Segmentation**

   It requires ability to segment an auditory word into phonemes.

2. **Phonemic Discrimination**

   It requires ability to discriminate phonemes from each other, for example, bilabial phonemes *b* and *p*.

3. **Associating and Retrieving Sounds**

   Beginning readers learn to associate a sound with a letter, phoneme /b/ with letter *b* for instance.

4. **Blending**

   They retrieve the sounds of several individual phonemes or syllables and combine them into a continuous sound that constitutes a single word.

With this description, we get a better understanding of decoding process. In letter level of decoding stage, **visual process** requires ability to recognize letters or discriminate letters and **speech process** involves ability to make phonemic segmentation, phonemic discrimination, and letter-sound correspondence.

1.6.2 PATTERN RECOGNITION

Our Long Term Memory (LTM) contains descriptions of many kinds of patterns. When we see or hear a pattern, we form a description of it and compare the description against the description stored in our LTM. We are able to recognize the pattern if its description closely matches one description stored in LTM (Reed, 1992:15).

There are three models explaining pattern recognition based on information-processing approach. They are *template matching, feature analysis,* and *prototype formation.* Each of the various theories seems to lay hold of only one aspect without integration. Quite the contrary is true. Each theory is essentially correct, but each needs support from the others. Thus, the many theories of form perception (pattern recognition) are complementary rather than antagonistic. Form perception is a complicated affair, and at present, no single comprehensive theory has been developed to account for all components of form perception (Solso, 1995:116-117).

In letter level of decoding stage, children initially may find the similar letters confusing. So the most appropriate theory in this study is *feature theory.*

This notion holds that patterns recognition occurs after incoming stimuli have been analyzed according to their simple features (Solso, 1995: 91). **Feature theory** is convenient for describing perceptual learning and one best discussion of this theory is found in Eleanor Gibson's *Principles of Perceptual Learning and Development* (cited in Reed, 1992: 18).

The theory proposed in Gibson's book is that perceptual learning occurs through the discovery of features that distinguish one pattern from another. Children learn to identify an object by being able to identify differences between it and other objects. For example, when first confronted with letter *E* and *F*, a child might not be aware of how the two differ. The lowest horizontal line is a distinctive feature for distinguishing between an *E* and *F*; that is, it enables us to distinguish one pattern from the other (Reed, 1992: 18).

Perceptual learning can be facilitated by a learning procedure that highlights the distinctive feature. An effective method for emphasizing a distinctive feature is initially to make it a different colour from the rest of the pattern and gradually change it back to the original colour (Reed, 1992: 18). Egeland (cited in Reed, 1992: 18) used this procedure to teach prekindergarten children how to distinguish between confusable letter pairs *R-P*, *Y-V*, *G-C*, *M-N*, and *K-X*. The description of Egeland's experiment has been explained in the background of study (page 2-3).

Emphasizing the distinctive features produces two benefits. First, It enables the children to learn the distinctive features, so they could continue to differentiate letters after the distinctive features were no longer highlighted.

Second, it enables them to learn the features without making many errors during the training sessions. Failure and frustration that many children experience in the early stages of reading (letter discrimination) can impair their interest in later classroom reading (Reed, 1992: 18-19).

1.6.3 SENSATION

Process of gathering information about our surroundings is known as **sensation**. We gather that information from our senses—eye, ear, skin, nose and tongue. After that, **perception** occurs. Perception is defined as the process of organizing and interpreting incoming sensory data (sensations) to develop an awareness of surrounding and self (Davidoff, 1987: 127).

1.6.3.1 VISIBLE LIGHT AND ITS HUE

Visible light varies in wavelengths from 400 to 700 nanometres; lights more than 700 and less than 400 are invisible. Visible light is actually just one small part of a spectrum of electromagnetic energy of various wavelengths. These wavelengths vary from those of cosmic rays, which are only a few trillionths of an inch long, to some radio waves that extend for many miles. Radar, microwaves, and X-rays are also forms of electromagnetic energy (Rathus, 1986:81).

The wavelength of visible light determines its colours, its hue. The wavelength for red is longer than that for orange, and so on through the spectrum (Rathus, 1986:81).

Colour Name	Wavelength (nm)
Violet	450
Blue	470
Cyan	495
Green	510
Yellow-Green	560
Yellow	575
Orange	600
Red	660

Table 1.2 Wavelength of visible light and its hue.
Source: Coren et all, 1994:147

Objects appear to be coloured because they reflect to our eyes only selected wavelengths of light. Consider a common object, such as an apple with white light falling on it. It appears to be red. White light, such as sunlight, is a combination of all wavelengths. Since the light stimulus that reaches our eyes produce the sensation of red, all of the wavelengths except the longer (red-appearing) ones must have been absorbed by the surface of the apple. Coloured objects or surfaces contain pigments that selectively absorb some wavelengths of light, while the rest are reflected and thus reach our eyes. It is this selective "subtraction" of some wavelengths from the incoming light that gives an object its colour. If a surface does not absorb any of the wavelengths reaching it but reflects them all uniformly, it appears white, rather than colored (Coren, et all, 1994:148).

1.6.3.2 BIOLOGICAL FOUNDATION OF VISION

Structure of the Eye

Rathus in his book *Essentials of Psychology* (1986:84-86) gives a brief explanation about the structure of our eyes, which is analogous with a camera. As with a film or television camera, light enters through a narrow opening and is projected onto a sensitive surface. Light first passes through the transparent **cornea**. The amount of light that passes is determined by the size of opening in the muscle called **iris**. The opening in the iris is called the **pupil**. Pupil size adjusts automatically to the amount of light. The more intense the light, the smaller the opening. We must also adjust the amount of light allowed into a camera according to its brightness (Rathus, 1984: 84).

Once light passes through the iris, it encounters the **lens**. The lens adjusts or accommodates to the image by changing its thickness. Changes in thickness permit projection of a clear image of the object onto the retina. If we hold a finger at arm's length, then slowly bring it toward our nose, we will feel tension in the eye as the thickness of lens accommodates to keep the retinal image in focus (Haber & Hershenson cited in Rathus, 1986:85).

The retina is like the film or image surface of the camera. Just like film that is sensitive to light (photosensitive), the retina consists of photosensitive cells, or **photoreceptors**, called ***rods*** and ***cones***. The retina (Figure 1.3) contains several layers of cells: the rods and cones, **bipolar cells**, and **ganglion cells**. Light travels past the ganglion cells and bipolar cells and stimulates the rods and cones. The rods and cones then send neural messages through the bipolar cells to ganglion cell. The axons of ganglion cells constitute the **optic nerve**. The optic

nerve conducts the sensory input to the brain and, eventually, the visual area of occipital lobe (Rathus, 1986:85).

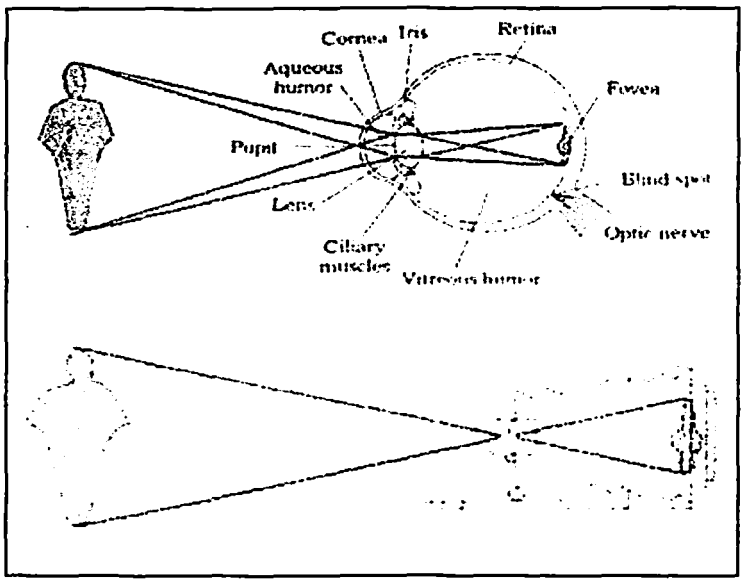

Figure 1.2 The Human Eye, a camera, and a Projected Image. Light enters both the eye and the camera through a relatively narrow opening and is projected onto a light sensitive surface. *Source: Rathus, 1986: 84*

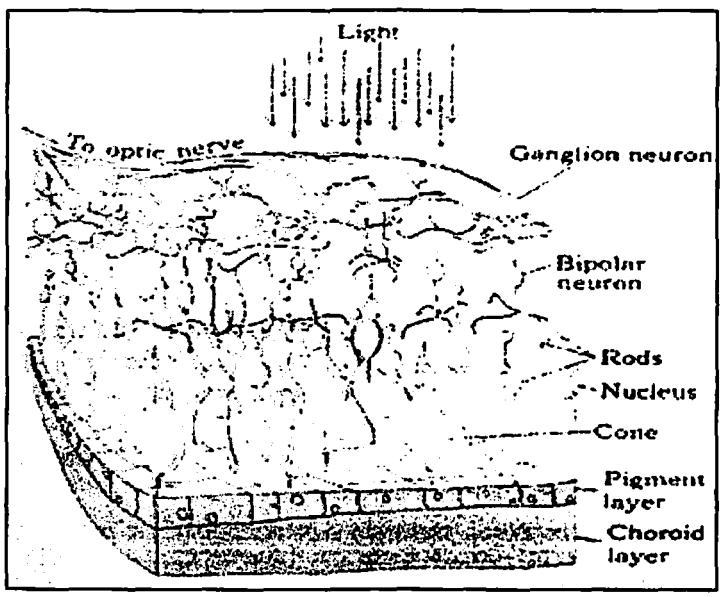

Figure 1.3 The retina of the Human Eye. *Source: Rathus, 1986:85*

The **fovea** is the most sensitive area of retina (see Figure 1.2). The **blind spot**, by contrast, is insensitive to visual stimulation. The blind spot is the part of the retina where the axons of ganglion cells congregate to form the optic nerve.

Rods and Cones

Rods and Cones are the photoreceptors in the retina (Figure 1.3). Over 100 millions rods and six millions cones are distributed across the retina. The fovea contains cones only. Cones then become more sparsely distributed from the fovea toward the lens. Rods, by contrast, are absent at the fovea but distributed more densely toward the lens (Rathus, 1986:85).

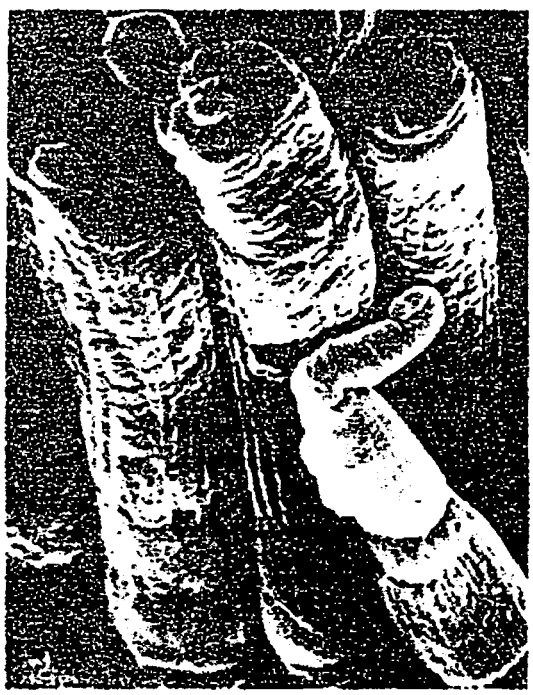

Figure 1.4 A Much (Much!) Enlargared Photograph of Several Rods and a Cone. Cones are usually upright fellows. However, the cone at the bottom right of this picture has been bent by the photographic process. Only Cones provide sensations of color.
Source: Rathus, 1986:86

Rods are sensitive to intensity of light only. They allow us to see in "black and white". Cones provide color vision. If we are a camera buff, we know that black-and-white films are generally "faster", or more responsive to light, than color film. In the same way, rods are more sensitive than cones to light. Therefore,

under dim illumination, as during nighttime, objects appear to lose their colours (Rathus, 1986:85).

1.6.3.3 COLOUR PERCEPTION

Colours as sensory data that are perceived by our eyes could lead us to some perceptions. Therefore, certain colours are supposed to have meaning. Red is stimulating, suggesting activity and assertiveness. Blue is just the opposite, creating a mood of calm, tranquility, and inner peace (Gerard, Aaronson, in Mc Mahon, 1986:134).Yellow supposedly creates a strong emotions response, sometimes generating a mystical feeling or feeling of explosion, even a subjective increase in the humidity and heat, all depending on who is viewing the colour (Aaronson in Mc Mahon, 1986: 134). The implication might be important. People prefer to take blue capsules and have been known to avoid other colours. even when the medicine is important. So, certain colours create certain moods (Mc Mahon and Mc Mahon, 1986:134).

1.6.3.4 ATTENTION AND CHARACTERS OF CHILDREN

During every waking moment, enormous of stimuli compete for our attention. Ordinarily, people and other animals focus on a mere trickle of impressions. We call this selective openness to a small of impinging sensory phenomena **attention**. There are some factors attracting attention. One of them is interest (Davidoff, 1987: 129).

Attentional processes are fundamental importance in human thinking, for attentional determines the source of that will be considered in any task or problem. When attentional processes are operating at their best, the individual picks up aspects of the stimulus environment that have optimal utility for the task at hand, and as a result task performance is more efficient and economical (Gibson and Rader cited in Berk, 1989: 281).

Control

As children get older, they become better able to consciously and deliberately focus their attention on just those aspects of a situation that are relevant to their task goals (Lane and Pearson cited in Berk, 1989: 281). Higgins and Turnure (cited in Berk, 1989: 281-282) presented preschool and second-and sixth–grade children with visual discriminating task. They found that younger children need more supportive situation to focus their attention.

Letters, words, or sentences printed in dual colours or more are supposed to be more interesting. Colour as visual cues can attract children attention. This attention will lead them to concentrate and help them focusing their attention.

Planfulness

Studies of children's visual scanning also reveal more planful, efficient, task-directed pickup of information with age. By carefully tracking their eye movements, Vurpillot (cited in Berk, 1989: 283) studied how children scan pairs of stimuli, such as the houses depicted in Figure 1.5 below, to determine if they are the same or different. Preschool children based their judgement on only a

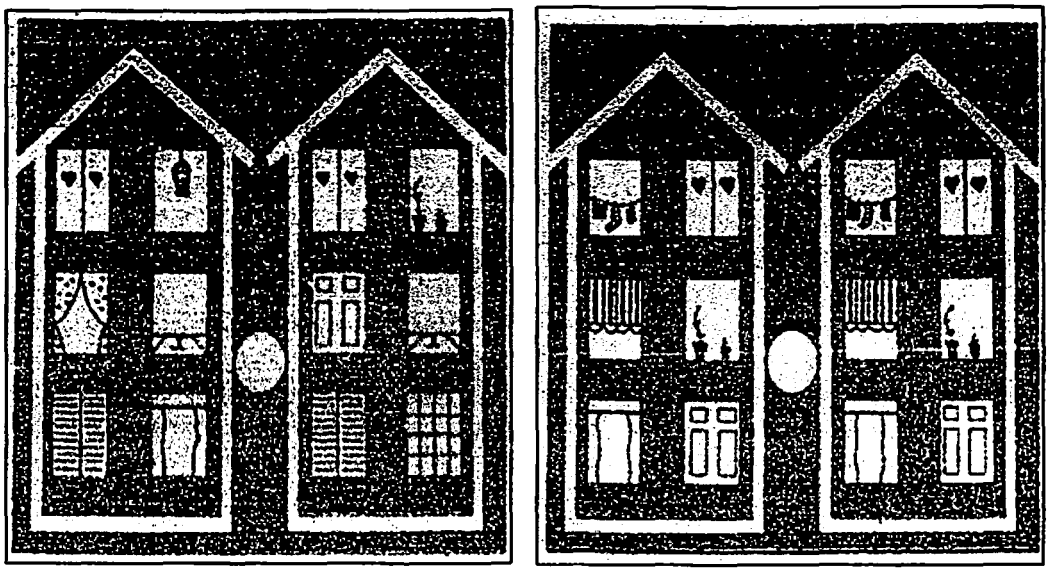

Figure 1.5 Children determine whether the pairs of houses are the same or different in a research by Vurpillot

limited portions of the available information; they did not examine all features of the stimuli, and those they did examine were not studied systematically. As a result, preschool frequently judged pairs of houses that were different to be the same. In contrast, 6-to-9-year-olds used comprehensive strategy of comparing the details of the houses windows to window.

Colour as visual cue is supposed to help children to be planful and efficient in learning Quran. Colour gives information to children: the pairs that look similar are different. Thus, they will not be confused to differentiate those letters.

Attention and Colour Perception

Children like to concentrate on anything attracting their attention, especially to their vision. Therefore, children toys are always made in various colours to get their interest to play with. With interesting colours, children are

motivated to be active. This study applies this perception to teach them reading Quran. With colour as visual cue, children are motivated to study and enjoy the activity. The experimenter chooses red colour because it is the most eye-catching colour. Besides, perception of red colour is stimulating, suggesting activity and assertiveness. Therefore, red colour is the most appropriate choice according to children's character and goal of learning activity.

1.7 METHOD OF THE STUDY

1.7.1 DEFINITION OF KEY TERMS

1. **Information processes**

   An approach in cognitive psychology attempting to identify what happens during acquisition, storage, retrieval, and use of information.

2. **Developmental information-processing model of reading**

   A model of reading Quran acquisition process proposed by Louise Spear-Swerling and Robert J.

3. **Visual Cue Recognition**

   A phase of paired-associate learning by using salient visual cues to recognize words, such as colour or distinctive logos.

4. **Decoding**

   A step of beginning reading, primarily focusing on the process of extracting information from the orthographic code.

5. **Visual process**

   A part of decoding. It tries to recognize letters and encode words.

6. **Speech process**

   A part of decoding. It requires ability to discriminate phonemes, associate sound with letter, and combine phonemes into a continuous sound that constitute a single word.

7. **Letter level**

   A level in which a learner is able to recognize letters and make sound letter correspondences.

8. **Word level**

   A higher level in which a learner is able to encode word and pronounce it.

9. **Pattern recognition/Form perception**

   A cognitive process to form a description of a pattern and compare the description against the description stored in our Long Term Memory.

10. **Feature theory**

    A notion holding that pattern perception is a higher-order processing of information that is preceded by a step in which complex stimuli are identified according to their simplier features.

11. **Distinctive feature**

    A feature that makes one pattern different from other similar patterns.

12. **Sensation**

    The process of gathering information about our surrounding from our senses.

13. **Perception**

    The process of organizing and interpreting incoming stimuli sensory data (sensation) to develop an awareness of surrounding and self

14. Rods

The photoreceptors in retina. They are sensitive to light only and allow us to see in "black and white".

15. Cones

The photoreceptors in retina. They provide colour vision.

16. Colour perception

The perception in perceiving colours as sensory data, so that, certain colours are supposed to have meaning.

17. Attention

A selective openness to a small of impinging sensory phenomena

1.7.2 RESEARCH DESIGN

This study is a qualitative study that will describe the influence of colour as visual cue to early reading Quran acquisition, especially in letter level. There are two groups in this study: group A receives colour treatment, while group B (the control group) does not. By comparing the descriptions of learning activities of the two groups, some differences between them will be found. Then, the influence of colour visual cue to early reading Quran acquisition can be explained.

The source of data in qualitative study does not depend on the number of sample (Nawawi and Martini, 1994: 183). Anyone who is considered appropriate to give information can be chosen as source of data. This study takes 6 children as the respondents.

In a study in which we try to find difference between two groups, there should be equality between them before giving treatment. Giving requirements to respondents creates the equality in this study. The requirements are:

1. The respondents are 4 to 6 years olds
2. They have never learnt to read Quran before
3. They are not color blind

1.7.3 LOCATION OF THE STUDY

This study took place in TK Islam Rachmatullah and TPA Baitur Ridlwan in Surabaya City.

1.7.4 TECHNIQUE OF DATA COLLECTION

Data collection is a process of gaining data for research. Since data must be valid, an appropriate method of data collection is needed in order to get the result which can support the objective of the study. Data in this study is obtained from observation and result of respondents' tests. Observation is needed to describe the influence of colour as visual cue in the situation of learning activity. The test will inform us about the final condition of the two groups. The test is scored from the right responds produced by respondents.

The research followed the following procedures:

1. Grouping Respondents With Equal Condition

The researcher tried to equalize the respondents' conditions before the training by giving requirements as the respondents. Then, with ordinal pairing

according to their ages, they were allocated in control group and experimental group.

2. Training

The respondents got training according to which group they belonged. Group A received training with colour as visual cue but group B got training without it.

The experiment attempted to examine the influence of colour as visual cue in 9 letters, not all Arabic letters. They were introduced in sets in which each consists of 2 to 4 similar letters. There were 2 to 3 letters in one session. They also learnt a vowel sign (ـَ) /a/ . The sets of the letters are:

- /b/ ب /n/ ن /t/ ت /θ/ ث
- /ʤ/ ج /ħ/ ح /kh/ خ
- /d/ د /dz/ ذ

According to Gibson (1969 in Reed, 1992: 19), each set in this colour treatment should be highly confusable: the letters have very limited different features. This reason leads the experimenter to choose these letters and arrange them in sets based on their basic shapes.

The nine letters are predicted to be perceptual confusion. Letter (ب) /b/, (ن) /n/, (ت) /t/, (ث) /θ/ have the similar basic shape. Letter (ب) /b/ and (ن) /n/ are highly confusable because they differ only in the position of the dot. Letter (ن) /n/, (ت) /t/ and (ث) /θ/ have similar position of the dots, but in different number, so they are also highly confusable. Letter (ج) /ʤ/, (ح) /h/, (خ) /kh/ look similar. Letter (ح) /h/ does not have any dots, while letter (ج)

/ ʤ / and (خ) /kh/ have a dot, but in different position. And the last set, (د) /d/ and (ذ) /dz/, the first does not have a dot but the later does.

3. Giving Test

After the four-day training, the test was carried out. The explanation about the material and the scoring system of the test has been explained in the part of Instruments and Measurement (1.7.6).

1.7.5 INSTRUMENTS AND MEASUREMENT

The main instrument in this study was the training book. Although one group got material with colour stimulus but the other did not, the materials for them were the same.

Other instrument was test tool. Physically, a test is a group of questions that have to be answered or assignments that have to be fulfilled by subjects. Based on the answers of those questions or the process and the result of the subject in doing those assignments, we can get information about certain psychological aspect, (Azwar, 1996:2)

Measurement is a process of giving scores to objects or event, based on certain rules (Kerlinger, 1990: 687). Traditionally, test tool is made to measure differences between individuals, or reactions of the same individuals in different conditions (Anastasi, 1997:2).

A test can be designed in any forms and types (Azwar, 1996:4). A researcher himself can design a test which is appropriate to the objective of the study. This research used cards to give test. This instrument was similar with

Egeland's tests. However, it was the combination of 2 activities—visual test and speech test. So, the respondents were not asked to match the letters only, but they also had to pronounce the letters they had matched and the other comparison letters. From the right responds—matching the letters and pronouncing the letters—they were scored.

The score ranges from 0 to 28. As explained in the previous paragraph, there were visual and speech activities. Highest score for visual test is 10 and for speech test is 18. There are 2 parts in the test—part I and part II. The part I consists of visual test and speech test, but part II only has visual test. The visual test of part I differs from the part II in the existence of vowel sign. There is a vowel sign on each letter in part I, but not in part II. Highest scores for part I is 23 and for part II is 5.

Part IA : - Visually discriminate the position of the dot: بَ / نَ , جَ / خَ

Highest score: 2

- Pronounce letters: بَ , نَ , جَ , خَ , ثَ , دَ

Highest score: 6

Part IB : - Visually discriminate the number of dots: ثَ / تَ / نَ

Highest score: 1

- Visually recognize absence of the dot: حَ / خَ , دَ / ذَ

Highest score: 2

- Pronounce other letters: نَ , تَ , ثَ , حَ , خَ , دَ , ذَ

Highest score: 7

Part IC : - Pronounce letters: بَ , جَ , تَ , حَ , ذَ

Highest score: 5

Part IIA : - Visually discriminate position of the dot: ن / ب , خ / ج

Highest score: 2

Part IIB : - Visually discriminate number of the dots: ن / ت / ث

Highest score: 1

- Visually recognize absence of the dot: ح / ج , د / ذ

Highest score: 2

The other instruments are Sony cassette recorder type TCM-459V, some cassettes and a small hidden mike connected to the cassette recorder. These instruments were used to record the learning activities.

1.7.6 TECHNIQUE OF DATA ANALYSIS

The writer analyzed the data with the following steps:

1. *Describing the data of the two groups during training session and the test.*

   The data are presented in tables. The description of the learning activity consists of ability in visual discrimination, mistakes in associating sound with letter, their pronunciation and how children enjoy the learning activities (their responses). Besides the total scores, the writer also shows the respondents' scores in visual and speech test.

2. *Comparing data.*

   The writer compared and analyzed the data on four aspects—visual process, speech process, decoding, and motivation.

3. *Drawing conclusion.*

After comparing the data, some differences were found and then conclusion about the influence of colour as visual cue to early reading Quran acquisition could be obtained.

CHAPTER II

GENERAL DESCRIPTION OF OBJECT OF TEH STUDY