

Training Design of Visual Perception Program for Teachers in SD Kebon Maen Depok Community

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Abstract: *Learning difficulties are the difference between achievement and children's intellectual capacity. Learning difficulties turned out to be related to the problem of developing visual perception, potential intelligence actually had no problems. Learning difficulties can manifest in the form of perceptual disturbances that result in children often failing to read or count, because there are difficulties recognizing certain symbols. Students who do not have readiness for perception in following the learning process experience problems that will disrupt their learning activities. The failure of students in completing the task was eventually considered by some teachers to be due to the intelligence that children have. Lack of teacher's knowledge of visual perception ability often makes teachers have difficulty distinguishing children from learning difficulties caused by impaired visual perception with children with low intelligence abilities. For this reason, training is given to teachers to reduce the risk of mistakenly handling children who have learning difficulties by using teacher training methods through visual perception which is able to increase teacher's knowledge in understanding visual perceptual difficulties in students at SD kebonmaenDepok.*

Keywords: Visual Perception, Training Teacher

1. Introduction

The phenomenon that occurs in the world of education today is the frequent discovery of intelligent students with learning achievements that are not optimal. The student can often move and lack concentration during the learning process so that he fails to absorb the information conveyed by the teacher to him. Some other students have intelligence above average but have difficulty reading and counting. There are also students who can read fluently but do not understand the reading. The description of students above is the characteristics of children with learning difficulties (Smith & Strick, 1997: 4-5).

Learning difficulties are the difference between achievement with children's intellectual capacity (Vallet, 1969: 3) means that children with learning difficulties have adequate ability to learn, but have obstacles in the learning process so that they have difficulty in dealing with school lessons by learning generally.

Visual perception is a cognitive component that contributes to giving meaning to something that is seen. Visual perception involves the mental ability to manage visual information needed to solve problems and to respond to environmental demands (Kurtz, 2006). Visual perception is the process of someone recognizing, discriminating, interpreting or giving meaning to stimuli or objects around them visually (Abianti, Alsa & Pudjibudojo, 2000). Thus it can be understood that visual perception is a very important component in the child's learning process.

Mykelebust (1968: 359) defines perception of perception as an inability to identify, discriminate and interpret sensation. Specifically, perception refers to the operation of the brain which involves understanding and organizing physical elements from stimuli. Sensation is an electrical impulse that occurs when an environmental stimulus activates sensory receptor cells that are spread throughout the body. Cognitively children must have the ability in terms of motor visual coordination, understanding the figure and

background, constancy of forms, recognition of positions, and spatial relations. Motorically, the child must be able to sit for a long time, skillfully using hands for writing activities. Socially and emotionally the child must be comfortable separated from the home environment, parents and receive authority from the teacher and associate with peers.

Students who do not have readiness for perception in following the learning process experience problems that will disrupt their learning activities. Students will find it difficult to recognize the shape of objects such as rectangles, cubes in pictures, understand the shape and background such as the form of numbers or symbol letters. So that the readiness of perception is very important to be the basis of a child to be able to successfully undergo the learning process at the primary level. The failure of students in completing the task is ultimately considered by some teachers to be due to low intelligence. Lack of teacher's knowledge of visual perception ability often makes teachers have difficulty distinguishing children from learning difficulties caused by impaired visual perception with children with low intelligence abilities.

2. Definition of Perception

Perception comes from the English term "Perception" meaning the response or direct acceptance of something; the power to understand or respond to something; the process of someone knowing some things through their senses. By definition perception can be interpreted as the process of understanding and interpreting sensory information or the ability of the intellect to extract the meaning and information received by various senses. Solsoet. Al (2007: 75) says that perception involves high levels of cognition in interpreting sensory information. Thus to understand the process of perception must first be understood what is called sensing (sensory or sensory). There are four types of perceptions according to learners in Mulyono 2013; (1) Visual perception, which includes, spatial relations, visual discrimination, discrimination of form and background,

visual closure, and object recognition (object recognition) }
(2) auditory perceptions which include phonological awareness, auditory discrimination, auditory memory, auditory order and auditory combination, (3) kinesthetic perception (motion), and (4) tactile perception (touching).

3. Visual Perception

Visual perception is the process of someone recognizing, discriminating, interpreting or giving meaning to stimuli or objects around them visually (Abianti, Alsa&Pudjibudojo, 2000). Thus it can be understood that visual perception is a very important component in the child's learning process. According to Pinel (1977) visual perception is a high-level process related to integrating, recognizing and interpreting complex excitatory stimuli derived from visual stimuli. The research of Abianti, Alsa&Pudjibudojo (2000) on the study of the relationship between visual perception and reading achievement in school in grade II elementary students revealed by Marianne Frostig's developmental test of visual perception "with reading achievement in elementary school shows the results that there is a relationship between visual perception and reading achievement. Thus if a child has a good visual perception, the reading performance will tend to be good too.

4. Visual Perception Factors

Visual perception is the ability to understand or interpret everything that is seen. Learner (in Mulyono, 2013). Visual perception includes the following abilities: a. Spatial relations refers to the perception of the position of various objects in space. The dimensions of this visual function imply the perception of the place of an object or symbol (picture, letter or number) and the spatial relationship that merges with its surroundings. In reading words must be seen as a separate whole surrounded by space, the ability of spatial relations is an important part in learning mathematics b. Visual discrimination refers to the ability to distinguish an object in space. Skill of pairing images, shapes or the same words is a form of task of visual discrimination. c. Discrimination of forms and settings refers to the ability to distinguish an object from the background that surrounds it. d. Visual closure refers to the ability to remember and identify an object, even though the object does not show it as a whole. e. A good reader can read the sentence in full even though some are covered. f. Object recognition refers to the ability to recognize the nature of various objects when viewing them. Includes various geometric, animal, letter, number or word shapes. The following is the author of combining the study of Twentymann (2005) and Kurtz (2006) about images that are often used to explain aspects of general problems from visual perception:

a) Visual attention

Visual attention is the readiness and readiness of children to actively learn using visual stimuli. This condition requires conscious effort to concentrate and maintain what is seen, using eye muscles to focus on visual stimulus. Visual attention also requires children to be able to distinguish nonessential (which can be ignored) visual cytimulus and to choose relevant stimuli to be considered for motor activities. Children with visual attention problems will experience failure to pay

attention to relevant details to guide the learning process or behavior.

b) Visual closure

Visual closure is the ability to imagine the entire object when part of the object is closed or lost. This ability makes children able to provide appropriate assessment of general information and is only partially presented. This ability is a basic ability for fluency and speed of reading and spelling. Reading itself is a good experience to develop visual closure skills and even if possible visual closure activities must also be developed in the introduction of letters, words and phrases because it is a very important basic ability to attend school.

c) Visual form constancy

Visual form constancy is the ability to recognize the fact that an object remains the same despite changes in size, direction, orientation, and distance (seen in different conditions). This ability allows the child to recognize that an object is recognized, for example: a car that is seen at a certain distance is in fact larger than what appears. Furthermore, this ability allows the child as a beginner reader to recognize the letter "A" quickly, even though it is displayed in the form of uppercase or lowercase letters, block letters or continuous letters, as well as different font shapes and sizes.

d) Visual discrimination

Visual discrimination is the ability to identify differences and similarities in shape, size, orientation, color, symbol, object, and pattern based on prominent characteristics. This capability also allows children to interpret and use visual information quickly, accurately, and accordingly. Examples of recognizing and reading the letters b, d, p, and q. Children with visual discrimination problems will experience difficulties: a) match objects, such as numbers, letters, symbols, words; b) recognize differences between shapes, sizes, colors, letters, words, and objects; c) recognize letters and numbers; d) when writing or reading in reverse letters / numbers (eg b is read / written, u read / written n); e) the use of punctuation marks (eg not giving a punctuation point at the end of a sentence, a comma to separate sentences, wrongly giving an exclamation point / questioning the sentence); f) proper use of uppercase letters; g) give attention; h) put something in its place (not messy).

e) Visual memory and visual sequential memory

Visual memory is the ability to remember what has been seen and recall the object, shape, symbol. Sequential memory is the ability to recall sequences of images such as letters, shapes, numbers, symbols and objects.

f) Visual motory integration

Visual-motor integration is the ability to integrate visual information with fine motor movement. This ability allows the child to anticipate hand position to catch the ball, coordinate eyes and hands quickly when writing letters / words. This ability underlies the process of learning to button clothes, using: scissors, pencils, various kinds of games and school.

g) Visual-spatial perception

Visual-spatial perception is the ability of children to recognize the orientation and position of objects and the orientation of children with their environment. Children with visual spatial relationships problems will have

difficulty: a) understanding instructions, for example: write names on the top of the paper; b) dressing, wearing clothes upside down or not being able to use the upper and lower parts; c) properly arrange equipment, such as putting a spoon and fork; d) start working on tasks, especially mathematical problems or diagrams; e) name the diagram; f) often twist letters, numbers, and words.

h) Visual ground perception figures

Visual ground perception figures are the ability to identify appropriate visual information from the background containing objects and images that are not appropriate or disturbing. Thus the visual ground perception figure is the ability to filter out inappropriate information and be able to concentrate on the main stimulus. Visual ability of ground perception figures is a prerequisite for visual discrimination ability.

5. Characteristics of Visual Perception Disorders

Some symptoms indicate the presence of visual perception disabilities (Smith, C & Strick, L 1999), namely:

Children who experience visual perception disorder will show some behaviors in writing tasks such as:

- a) Don't like or avoid writing
- b) Delay in learning to write
- c) Tasks are not finished, lots of lines out and deletes
- d) Difficulty remembering shapes, letters and numbers
- e) Often letters or numbers are exchanged
- f) Setting uneven distances between letters and words
- g) Ignore or eliminate letters from words and words from sentences
- h) Not careful in imitating or imitating
- i) Weak in spelling
- j) Cannot see for yourself the error of his work in preparing schemes / sketches and organizing writing assignments

Children who experience visual perception disorder will show some behaviors in reading assignments, such as:

- a) Confused in seeing similar letters (b and d, p and q).
- b) Difficulty in recognizing and remembering the appearance of a word, but can voice words phonetically.
- c) Often losing some letters when reading
- d) Confused to see similar words
- e) Reverse words while reading
- f) Having problems finding letters in words, or finding words in sentences
- g) Weak in remembering printed words (sequences, illustrations, diagrams etc.)
- h) Weak in understanding the main ideas / thoughts or themes

6. Understanding Remedial Programs

Vallet in his book explained that a remedial program is a program specifically made for children who experience learning barriers (Vallet, 1969). Remedial form is a special form of learning given to students when the student shows a performance that is not in accordance with the normative standards expected (Vitriani Sumarlis et al, 2014). Thus it can be concluded that the remedial program is a program

that is made individually for a child who experiences obstacles in the learning process, in order to provide the right learning experience to the child so that the potential available to the child can be developed.

7. Remedial Forms

According to Vallet (1969: 30) there are various forms of remedial programs as follows:

- a) Special classes: given to students who do not function well in regular classes
- b) Groups have difficulty learning: in this program students continue to attend classes in the regular class but get a special schedule for individual remedials or small groups outside the regular class
- c) Special consultation with teachers; in this program special consultation is given to teachers related to children's learning difficulties and special education programs that need to be given to children
- d) Giving instructions at home / hospital; in this program students cannot function in the school setting so the lessons are given at home or at the hospital.

8. Factors in Remedial Programs

Remedial programs given to children to be effective, according to Smith, C & Strick, L (199: 157) the program needs to cover the following three basic things:

- a) Programs must teach and encourage basic abilities
Remedial program to accommodate the right learning in accordance with the level of the child's basic abilities and sufficient opportunities to train the mastery of new material there is a consultant in learning.
- b) Programs must help students learn the right learning strategies.

A good remedial program must teach students to study independently. They need to be taught to organize the task of organizing time. Effective learning habits methods for improving memory, problem solving strategies and decision making abilities.

9. Steps for Remedial Program Design

Remedial design steps according to Myers and Hammil (1987) are as follows:

- a) Identification of difficulties, meaning that before making a programme-critical, we need to make sure students do have learning difficulties
- b) Assessment of Education, after students are identified as having certain difficulties in the learning process, it is necessary to continue with an assessment of the aspects of difficulties experienced by students by teachers and psychologists by using several methods such as observation, interviews, checklists and psychological tests.
- c) Discussion of parents, after obtaining clear data from children's difficulties and influencing aspects, it is necessary to have discussions with parents to provide understanding about the difficulties experienced by children and explore aspects of the child's development from birth to the age of the child as supporting data analysis. Some alternative remedial programs that will be

- given to children can be delivered to request commitment and joint parent support to help children in the learning process
- d) Designing a remedial program, based on data obtained from educational assessments. The teacher makes a remedial program based on aspects to be developed.

10. Definition of Training

According to Silberman (2010), training is a method to improve human performance. Every person's ability to do work is limited by a lack of knowledge or skills, it makes sense to bridge the gap by providing the required teaching. The training is intended to provide training participants with the information needed to develop themselves in various fields related to work and to obtain technical, administrative, and behavioral experiences and skills needed to improve performance and work (Kratcoski & Das, 2007)

Steps in Training Source: American Society for Training and Development (ASTD)

Explanation of the chart above as follows:

a. Analysis (Analysis)

The process in the analysis is about the training design process related to who, what, where, when, why, and for whom the training is conducted. Including the process of needs analysis, setting training objectives, characteristics of training participants, delivery systems in training, resources and constraints that will be faced in training.

b. Design (Design)

Training design is the planning stage in training. The things that need to be done in this process are: developing learning objectives, identifying the stages of learning needed, developing tests to demonstrate mastery of tasks that must be trained, registering expected behavior of participants, and developing the structure and sequence of training.

c. Development (Development)

Development is the stage in training equipment and training materials and developing based on learning objectives. These stages include the development of learning management planning, equipment used in training (instructor guides, schedules, training modules, audio visual equipment), training methods, materials for evaluation programs (evaluation plans, test kits, questionnaires, checklist sheets) and training documentation (documentation of trainer records and process of running training, list of instructions, training material).

d. Implementation (Implementation)

Implementation is the stage during which training is given and evaluated.

e. Evaluation

Evaluation is the process that is running from the development and improvement of learning materials based on evaluation during training and the implementation process.

11. Population and Sampling

The population in the subject group must have characteristics or characteristics that distinguish with other subject groups (Azwar, 2005). The characteristics of the group are the KebonMaen Community Elementary School Teachers and the priority of the teacher in the school.

While the sample is an individual part of the population to be studied. Data retrieval using purposive sampling technique which means choosing a group of subjects based on the characteristics, characteristics or characteristics of the population that have been known previously (Azwar, 2005). In order for the training to run well and the training can be received well by the participants, the trainees are limited to 20 teachers. The effect of the number of participants is not too much in a training, especially to create an atmosphere of effective learning for fellow participants (Kroehnert, 1995).

This research is one type of experimental research that uses pre-experimental design research design. According to Leedy and Ormrod (2005), pre-experimental design is a type of research where it is not possible to show cause and effect relationships because the independent variables do not vary and the experimental and control groups do not consist of individuals who are equal or randomly selected. Pre-experimental design is considered not to have been a truly experimental design because there are still external variables that influence the formation of the dependent variable.

This study used one group of research subjects, without the control group. Leedy and Ormrod (2005) say that this design uses one group that has one pre-experimental evaluation, then is given a particular treatment or treatment, and then evaluated after the treatment is given. In one group pre test post test design, there is at least a change that occurs, but cannot be ruled out that the changes that occur are due to other factors (Leedy and Ormrod, 2005).

12. Research Data Analysis

Training results evaluation techniques with pre test and post test statistical tests using Wilcoxon test. Evaluation of the results of the remedial program design training on visual perception ability was given to the teacher at the beginning before the training was conducted (pre-test) and after the completion of the training (post-test). The difference in scores from the results of the pre-test and post-test shows that there is a change because of participating in visual perception development training. If the statistical test obtained a probability greater than 0.05, it can be concluded that there was no increase in the knowledge and understanding of participants before and after attending the training. And if the probability is less than 0.05, it can be concluded that there is an increase in participants' knowledge and understanding before and after attending the training.

Training program evaluation techniques are carried out by giving participants a list of statements consisting of 7 statements. Where participants give a rating of enough, or less. The statement contains the participant's assessment of the process of training activities. Participants give an

assessment of the training material, the ability to understand the trainer's explanation, whether the material is in accordance with the participants' needs, whether the slide show in the form of power points can help participants in understanding the material, whether the games provided are fun, and whether classroom facilities support the process training activities. Then the answers of each participant are recapitulated and grouped based on good, sufficient, and lacking judgments in each statement. From the recap, it can be concluded that the training program provides benefits for participants.

13. Conclusion

This research was conducted to find out whether visual perception training can improve teachers' knowledge in identifying, analyzing and designing remediation programs for children with learning difficulties. Prior to the training, participants were asked to fill out a pre-test sheet to find out the participants' knowledge about the design of remedial programs, visual perception difficulties before being given training. Then after the training ended, the participants were again asked to fill in the post-test sheet. The score of each participant was obtained from the number of correct answers in answering 15 questions about the choice of yes and no answers regarding the design of remedial programs with visual perception difficulties. The forms and questions in the pre-test and post-test are the same in order to compare the results. The highest score is 15 and the lowest score is 0. Then, the score is divided into 1 and 0. The pre-test and post-test data are then processed using statistical techniques namely Wilcoxon test using SPSS 21.00 for windows and obtained the significance value of the difference in scores between pre-test and post-test is asymp. sig (2-tailed) 0.001 which is <0.05 means that H₀ is rejected, so it can be concluded that there is a difference between knowledge about designing remediation programs for learning difficulties before and after training. This is supported by an increase in the average value (means), where the mean pre-test is 7.75 while the mean post-test is 10.70. The difference in training participants' knowledge is also seen from the difference between the mean pre-test and the mean post-test of 2.95 points which means that there is an increase in participants' knowledge.

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