

Requirements Need to be Fulfilled in Learning Children with Multiple Disabilities Visually Impairment

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Abstract—This study aims to identify various needs that need to be fulfilled and developed in learning in order to optimize the learning abilities of children with multiple disabilities, especially children with Multi Disabilities Visually Impaired (MDVI). This research is a descriptive study using a qualitative approach that naturally suits the actual condition of the child. The subjects of this study were 3 principals, 9 teachers and 9 children with MDVI and 9 children with MDVI parents. Data collection techniques using participant observation, in-depth interviews and document analysis. Data analysis activities were carried out with qualitative descriptive analysis of flow models from Miles and Huberman (2009). The results showed that there were various learning needs that needed to be fulfilled and developed in optimizing the learning abilities of children with MDVI including performance at school, tactual ability, gravity insecurity, muscle development, bilateral coordination, motor development planning, gross motor coordination, motor coordination smooth, residual vision, listening, smell, and taste skills.

Keywords—needs, learning, children with multiple disabilities visually impairment "MDVI"

I. INTRODUCTION

The term children with special needs with various types of abnormalities is very familiar in the academic and general community, such as children with visual impairments, hearing impairment, intellectual barriers, motoric barriers, emotional and social barriers, autism and slow learner. However, children with more than one disorder are not well known by the community, for example: children with visual and hearing impairments, even intellectuals, children with hearing, motor and intellectual disabilities. Every child God created is different from each other, not all children are created perfectly.

Some of them are born with obstacles, limitations or disabilities, both physically, mentally and psychologically, socially and intellectually. Laypeople often refer to them as children or person with impairment. Another term for children / people with disabilities is children with special needs. Children with special needs are children who need special education and services to develop all the potential they have [1]

There is a possibility that children with special needs experience barriers or disabilities, more than one such as physical barriers (physical impairment), emotional or behavioral barriers, vision (visual impairment), communication barriers, hearing impairments (deaf), learning difficulties, and / or mental barriers / intellectual (mental retardation). Children who experience more than one obstacle or disability, they are known as double handicapped children and / or children with multiple disabilities names. The teacher needs to understand how to address these problems. Teenage children are almost always experiencing multiple disabilities which include physical problems. They usually behave differently in contrast to the behavior of normal children or other children with disabilities.

Emphasizing that a child belonging to multiple disabilities children is a child who needs practice in terms of basic skills, for example in moving from one place to another without assistance, in communicating with others, in controlling stomach functions and urinary contents and eating alone [2], [3], [4]. Behind the shortcomings that young multiple disabilities children have, they also have a lot of strength that is quite a lot, such as friendly and warm conditions, hard-heartedness, determination, humor, and fun [2], [5] Therefore, as parents, educators, caregivers who provide stimulation, opportunity, facilitation and assistance intensively begin with the strength of the child. Hence, requirement need to be fulfilled in learning children with Multiple Disabilities Visual Impairment (MDVI).

The context of this research problem were (1) How are the problems faced by parents and teachers in accompanying learning MDVI children?, (2) How learning needs need to be fulfilled in developing the learning abilities of MDVI children? These problems can be observed in class situation or family environment.

This research is important because its will be theoretical benefits: to add to the repertoire of knowledge the special education of children with special needs area, especially assessment of learning needs for children with multiple

disabilities visual impairment (MDVI). Practical benefit for teachers will be finding learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children

The research is still rarely done, both research on the development of the ability of children with multiple disabilities visually impairment, adjustment of parents with children who are multiple disabilities visually impairment, as well as the influence of parental adjustments to the development of the ability of multiple disabilities visually impairment. In fact, this research is important to do considering the number of children who experience disability, including children with multiple disabilities visually impairment, is increasingly growing. There is no data that shows a precise estimate of the number of children with multiple disabilities visually impairment in Indonesia. Hence, that it very important to identify and describe the problems faced by parents and teachers in assisting the learning of MDVI children; and finding learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children.

Steps will the researcher take to try and fill this gap or improve the situation were (1) Identify and describe the problems faced by parents and teachers in assisting the learning of MDVI children; (2) Finding learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children.

This study limited to a specific area that is finding learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children

The rest of this paper is organized as follow: Section II describes the literature review. Section III describes the material and proposed methodology. Section IV presents the obtained results and following by discussion. Finally Section V concludes this work.

II. LITERATURE REVIEW

Children with double handicap and / or children with multiple disabilities are children who have a combination or combination of two or more disorders / disabilities in terms of physical, mental, psychological and social, thus requiring educational, psychological, medical, social, and vocational services beyond the services already available to children with a single disorder, so that they can still develop their abilities as optimal as possible to participate in society [6],[1].

Some combinations of disabilities which include double handicap and/or multiple disabilities include deafblind, visual and physically handicapped, visual and mentally retarded, hearing and physically handicapped, hearing and mentally retarded, physical and mentally retarded, visual-hearing and physical handicapped, visual-physical and mentally retarded, and others. In this study, the discussion will focus on children who are double handicapped or children with multiple handicapped with visual barriers "Multiple Disabilities Visual Impairment" (MDVI), namely children with multiple impairments with one combination of disabilities in the form of visual impairment (blind)[1].

For children who are multiple disabilities visually impairment, the research is still rarely done, both research on the development of the ability of children with multiple disabilities visually impairment, adjustment of parents with children who are multiple disabilities visually impairment, as well as the influence of parental adjustments to the development of the ability of multiple handicap visually impairment [2], [3] & [4]. In fact, this research is important to do considering the number of children who experience disability, including children with multiple disabilities visually impairment, is increasingly growing. There is no data that shows a precise estimate of the number of children with multiple disabilities visually impairment in Indonesia. Data obtained from the Central Bureau of Statistics, in the Ministry of Social Affairs[7] and the Directorate of Special Education (2006) show that the number of visual impairment children in Indonesia reaches around 309,146 people, while the number of children experiencing multiple disabilities in Indonesia reaches 450 people [7],[6]. This number continues to increase from year to year.

The role of the teacher was obtained by the researcher from the results of the interview in giving an overview of the development of the ability of the child to have a blunt complex in eight aspects of development (cognitive, language and communication, social, gross motoric, fine motoric, mobility-orientation, visual, self-help)[8],[9]. This picture is obtained by assessing children. Characteristics of students' disabilities are different from each other, but they both experience the disability of being deafblind. From the results of this study it is known that the three subject teachers have carried out all three roles (instructor, manager, and counselor) in helping the development of the ability of the child with a multiple disability visually impaired.

Differences in the characteristics of students in the three subjects make the implementation of roles different. In carrying out its roles, the three subjects carried out different methods from most teachers such as carrying out coercive strategies to teach sign language, applying herbal remedies and gluten and casein diets to deal with epilepsy and emotional disturbances, as well as individual application for students who were angry / tantrum [10]. Hence, far there are still limitations in various research results that focus on children who experience MDVI and need to identify needs in their learning.

The results of Husen showed a difference between baseline phase 1 (A-1) and baseline phase 2 (A-2), subjects experienced an increase in serial skills using stacking exercises. The increase obtained is 12 points or around 80% for the first subject from the starting point of 3 or around 20% and 14 points or about 93.3% for the second subject from the initial 5 point or around 33.3% [11].

From the results of these studies, it was concluded that "the use of stacking exercises can improve the skills of serialization on students with double handicap in SLB Negeri B Cicendo Bandung, Indonesia". The implication is that stacking exercises can be used as an alternative by practitioners, teachers, and therapists in improving serial skills. Other research shows that

the communication skills of deafblind students expressively are more visible than receptive when they relate to teachers and peers [9],[10]. The obstacle experienced by the teacher when doing learning for children with deafblind is the use of symbols to interpret an abstract concept and the passive characteristics possessed by children often make learning not work well from two directions.

The school program for deafblind children includes schools implementing concrete media use and sign language to communicate with their students, assessments that have not been formally conducted on an ongoing basis at the beginning of the semester to form Individualized Educational Program, Individual Curriculum and Education Plans [12]. Communication development is carried out flexibly according to students' conditions and abilities. Program evaluation is carried out at the end of the semester and regularly every two months the school holds a case-conference to discuss problems that students and teachers may face during teaching [1],[10].

From the description and research roadmap above, the formulation of the problem that will be answered in this study are as follows: (1) What are the problems faced by parents and teachers in accompanying learning MDVI children? (2) What learning needs need to be fulfilled in developing the learning abilities of MDVI children? This study aims to: (1) Identify and describe the problems faced by parents and teachers in assisting the learning of MDVI children; (2) Finding learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children.

III. MATERIAL & METODOLOGY

This section presents the data used and the proposed methodology.

A. Data

The subjects of this study were 3 principals, 9 teachers and 9 MDVI children and 9 MDVI children parents. Data collection in this study was carried out with participant observation techniques, in-depth interviews and document analysis. Data analysis activities were carried out in two stages, namely during and after data collection. Against the data obtained was carried out a qualitative descriptive analysis of the flow model [11].

B. Method

This type of research is descriptive research with a qualitative approach. Research that investigates the status of a group of people, an object, a condition, a system of thought, or a class, events in the present. The aim: to photograph or make a description, description or painting systematically, factually and accurately about the facts, traits and relationships between the phenomena being investigated [13]. The setting of this study is SLB A Yaketunis Yogyakarta, SLB Daya Ananda Kalasan Yogyakarta and SLB Ganda Hellen Keller Yogyakarta. This research was carried out within a period of seven months, starting from March to September 2017.

IV. RESULTS AND DISCUSSION

This section presents the results obtained and following by discussion.

A. Results

Problems faced by parents, teachers, and principals in accompanying MDVI children learning based on literature studies and in-depth interviews show the following results: MDVI children lack communication or can not communicate with others at all, their motor and physical development are late differently from children with special needs another [2], [3].

They often exhibit strange and non-purposeful behavior, lack self-help skills, rarely construct and behave constructively, tend to forget skills that have been mastered, have problems in generalizing skills that children have, need many tools, for example: pictures and symbols. Teachers have difficulty in supervising children with double handicap and / or children with multiple disabilities because they have their own nature, their learning styles need to be contextual, educators are required to provide detailed learning, for example: showing what bananas are, from shapes, colors, trees, leaves, and fruit stem to how to use it. Learning evaluation models must be adapted to the diversity of multiple obstacles, requiring very detailed instructions or notifications. MDVI children have limitations in new concepts and experiences, limitations in interacting with the environment, limitations in orientation and mobility.

Based on partisipation observation and in-depth interviews show the following results, MDVI children have the need for concrete experience, the need for experience integrating, the need to do and work in learning, the need to speak must be confronted and not back to the other person, the need for a sitting position should be in the middle of the class so that they have the opportunity to easily listen to the teacher's voice. If the MDVI child is only one deaf ear needs to put the child's position so that a good ear is close to the teacher. Pay attention to the child's posture, if the child often shakes his head to listen, learning needs of reading skills, motor skills, and other skills needs are the same as normal children in general [16].

In Medical terms it should be noted: having special disorders such as diabetes or having had surgery, other problems such as having to take medication and so on, how to move and the ability to travel. Children go to school using transportation tools, tools and so on. [5] This relates to the environment that needs to be prepared. Communication development: children experience abnormalities in communication, and communication tools used (verbal, written, gestured) and body language. Self-care: Children are less able to take care of themselves in their daily activities. The position of the child in using aids, sitting position in receiving lessons, rest time, toilet time, and eating and still need help. In this case physical therapists are needed

Aspects of MDVI children's condition that requirement need to be fulfilled and developed in optimizing the learning abilities of MDVI children are as follows in the Table I:

TABLE I. ASPECTS OF MDVI CHILDREN'S CONDITION THAT REQUIREMENT NEED TO BE FULFILLED AND DEVELOPED IN OPTIMIZING THE LEARNING ABILITIES OF CHILDREN WITH MULTIPLE DISABILITIES VISUALY IMPAIRMENT (MDVI)

Performance at school
a. Lost a place when reading print or Braille
b. Requires backup letters or words when reading print or Braille
c. Having trouble labeling right and left
d. Having trouble remembering what he read
e. Being easily disturbed by the environment
f. Become irregular if the routine changes
g. Have problems in concentration or remembering directions
h. Having difficulty generalizing skills
Touch / Touch
a. Do not like to be touched and respond to touch as if it is painful or unpleasant
b. Don't like new and different textures in touching
c. Do not like if the hair is washed and combed
d. Don't like it if face is washed
e. Avoid certain food textures
f. Don't like going barefoot
g. Avoid using hands
h. Do not like when nails are cut and cleaned
i. Do not like finger paint, sand etc.
j. Do not like touches that are very light but can tolerate touch
k. Prefer touch rather than rough touch
l. Prefer certain fabrics or types
m. Prefer long sleeve clothes
n. Prefer to bathe in the bath more than flush
o. Isolate yourself from other students
p. Don't like being in a crowd
q. Having trouble in line
r. Overreacting
s. React excessively when touched suddenly
t. Having trouble sleeping because he can't be comfortable
u. Like pinching, biting or injuring himself or others
v. Accidentally hit his head when walking
w. Often seem unaware of cuts, bruises, etc., until brought to his attention
x. Scratching a place after being touched by someone else
y. Have a hard time
z. Identify objects with touch
Gravity insecurity (earth's attraction)
a. Being anxious or trying to keep his feet on the ground during activities that require his feet to move from the ground.
b. Having unnatural fear / failure at height
c. Don't like doing head upside down / down
d. Avoid jumping down from a higher surface to the lower one
e. Move slowly and stiffly
f. Shaking feet when walking
g. Don't like walking on uneven surfaces
Muscle Development
a. Having a bad position or sitting position
b. Looks weaker than normal activity
c. Ask for help easily
d. Feeling heavier than it looks
e. Keep your mouth open during activities
f. Have flat feet
Bilateral coordination
a. Avoiding using one side of his body seems unaware
b. Having difficulty using both hands together

c. Change hand preferences for different activities
d. Having difficulty with rhythm or rejecting patterns
e. Having no hand skills is clearly dominant
e. Avoid crossing the midline of the body by hand
Motor development planning
a. Having difficulty knowing how to move his body to achieve a motoric task method is given to complete the task
b. Have a tendency to always try to complete motoric tasks in the same way, rather than trying different things.
Coarse/gross motor coordination
a. Accidents often or prone to falls
b. His movements seemed clumsy
c. Often falls on a trip, or crashes into objects
d. Don't like trying new movement activities
e. Having learning difficulties in new movement activities
f. Avoid sports learning activities, even simple ones like walking or running
g. Having difficulty catching
h. Having difficulty dressing
g. Tired easily
h. Having trouble jumping, jumping up and down
i. Moving slowly / slowly, intentionally
Fine motor coordination
a. Having weaknesses in holding activities
b. Hold objects too tight / tight
c. Manipulate small objects with difficulty
d. Have a hand movement kick
e. Having trouble using a pencil
f. Having problems with cutting with scissors
g. It is difficult to move the tongue or mouth to work by hand
h. Having trouble tie clothes while working
Hearing / hearing skills
a. Having a diagnosed hearing loss
b. Don't like loud sounds
c. Having a repetitive direction appears not to listen or in prayer to pay attention to what is said to him
d. Being disturbed by voices
e. Showing confusion about direction
f. Speak in a loud or soft voice
g. Often want to make loud noises
h. Lost some voice in conversation
i. Respond negatively to unexpected / sudden sounds
j. Have a fear of certain sounds
l. Having a delay in speech development
j. Have a fear of certain sounds
k. Being disturbed by background noise, such as coolers, fluorescent lights, fans, sound heaters, etc.
l. Having a delay in speech development
Smell / smell skills
a. Very dislike of certain smells
b. Use smell as a way to explore new objects
c. Want a certain smell
d. Having difficulty distinguishing smell
e. Ignoring the stiff or strong smell
Feeling / picking skills
a. Exploring objects by placing in his mouth
b. Want certain foods
c. Don't like certain flavor foods or textures

Problems faced by parents, teachers, principals in accompanying children's learning with MDVI conditions based on literature studies and in-depth interviews show the following results: lack of communication or not being able to communicate with others. Motor and physical development are late different from other children. Show strange and non-purposeful behavior, lack in self-help skills, rarely behave and interact constructively, tend to forget skills that have been mastered, have problems in generalizing skills that children have, need many tools, for example: pictures and symbols; Having difficulty in supervising young children because of their own nature, their learning styles are contextual, educators are required to teach in detail, for example: showing what bananas are, from shapes, colors, trees, leaves, etc. fruit sticks to how to use them.

Learning evaluation models must be adapted to their diversity, require very detailed instructions or notifications, limitations in new concepts and experiences, limitations in interacting with the environment, limitations in orientation and mobility, the need for concrete experiences, the need for integrated experiences, needs to do and work in learning, Needs when speaking must deal with not back to the other person; Needs to sit and be in the middle of the front of the class so that they have the opportunity to easily listen to the teacher's voice. Pay attention to the child's posture, often the child shakes his head to listen, the need to learn reading skills, motor skill, other skills needs are the same as normal children in general,

B. Discussion

The results of identification of problems faced by parents / caregivers, teachers, and principals were 29 items of statement. MDVI children are children who have the least availability of school facilities or rarely glimpsed by the government to provide education services because of the limitations and conditions of children who are considered the most severe are the types of children who experience double handicap and / or multiple disabilities. Each group of abnormalities certainly has its own difficulties in identifying it, finding potential that can be developed, discovering what is, what is not yet in itself and what is needed by it, including educational needs.

The results of the assessment can help decide about problem solving in student learning and if the problem is identified it can be done [1]. The learning program for MDVI children is integrated with the classroom program, which is with other normal children.

Children with special needs require education plans / programs that are individualized "*Individualized Educational Plans*" or often referred to as IEPs. The purpose of the identification and assessment is as a basis for developing the IEP. IEP is an individualized educational design to regulate behavior, self-skills training, medical service needs, and parental training needs in handling children with special needs, as well as family counseling to support and resolve problems between parents and children [14]. In this case, of course the teacher does not work alone. The ability to socialize and interact with experts in running the program is needed. MDVI is more

heterogeneous than children who only experience one type of disorder in terms of special needs services needed, including education [8].

Children with special needs have typical problems compared to other normal children. The teacher needs to understand how to address these problems. Double handicap children and / or fathers are almost always experiencing multiple disabilities covering physical problems. They usually behave differently in contrast to the behavior of normal children or other special needs children. There are a lot of possibilities for double handicap children and / or children multiple disabilities with a combination of different disabilities, conditions of multiple disabilities are well known by educators, such as a combination of visual impairment people with hearing loss, between visual impairment people with severe behavioral problems, autism, and behavioral disorders, hearing and a combination of deafness and blindness.

Emphasis is that a child who is classified as double handicap and or multiple disabilities is a child who needs training in terms of basic skills, for example in moving from one place to another without assistance, in communicating with other people, in controlling stomach and bladder functions and eat alone [15], [16], [9]. Behind the shortcomings that young double handicap children have, they also have a lot of strength that is quite a lot, such as friendly and warm conditions, hard-heartedness, determination, humor, and fun [17]. Therefore, as parents, educators, caregivers who provide stimulation, opportunity, facilitation and assistance intensively need to start with the strength of the child.

V. CONCLUSION

Based on the results of the study it can be concluded several things as follows: (1) The results of identification and describing the problems faced by parents / caregivers and teachers in assisting learning of MDVI children identified various problems to determine their learning needs; (2) Findings of learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children including school performance, touch / touch, gravity insecurity, muscle development, bilateral coordination, motor planning, gross motor coordination, fine motor coordination, residual vision, listening skills / listening, skill to smell, and listening feeling / taste.

A. Suggestion

The suggestions are given as follow: (1) Parents / caregivers and teachers need to assist learning MDVI children more so that their learning needs are met and learning abilities can be optimized; (2) Parents / caregivers and teachers need to pay attention to learning needs that need to be fulfilled and developed in optimizing the learning abilities of MDVI children, including school performance, touch / touch, gravity insecurity, muscle development, bilateral coordination, motor planning, gross motor coordination, fine motor coordination, residual vision, listening / listening skills, smell skills, and sense of feeling / taste.

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