



**The ability to recognize the function of human organs  
through mannequin media in class xi blind children at slbn a  
citeureup cimahi city**

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**Abstract**

Learning activities in the process must stimulate students to be active, creative and fun, which can happen by using the right teaching media. Blind children have limited vision so in providing information to them must be concrete. Likewise, in teaching materials to recognize the function of human organs, a way to convert abstract information into concrete information in teaching materials recognize the function of human organs through pen mannequin media use. This is what makes researchers interested in studying more deeply which is formulated in the title above. This study used a qualitative descriptive method where data were obtained from observation, interviews and documentation processed by inductive means. The results showed that blind children were able to recognize the types, and functions of organs in the human body (lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine). During the learning process, blind children

have difficulty in arranging organs sequentially on mannequin media, difficulty in memorizing the sequence of the layout of each organ so that in the arrangement of the mannequin/torso body cavity sometimes there are still organs that are placed out of place. The effort made by the teacher in dealing with the difficulties experienced by children is by numbering each organ according to its sequence first and the number will be released after several experiments. The atmosphere during the learning activities took place, blind children were enthusiastic in touching the mannequin media of human internal organs and gave many questions related to the teaching material. The results of this study are recommended especially to teachers to add insight in the field of teaching media.

### **Keywords**

Human organs, Mannequin media, Blind children.

### **Introduction**

Blind is someone who experiences abnormalities in vision that cause limitations in terms of visuals. According to the *Kamus Besar Bahasa Indonesia* (2016) the word blind comes from the words *tuna* and *netra*, which means *tuna* is damaged and *netra* is the eye, so *tunanetra* means damaged eye or damaged vision". Along with the times, the definition of blind has a broader meaning, namely according to international consensus there are two definitions, namely legally based on law and educational / functional for educational purposes.

Blind children are children with special needs who have visual impairments, in accordance with the definition of Garnida (2015: 6) as follows: "Children with visual impairments are children who experience visual impairment in such a way, so that they need special services in education and life".

Having perfect vision is a great gift that not everyone can feel. The function of perfect vision makes learning more complete concepts, because vision plays an important role in understanding a concept. However, for blind children, it will be difficult to recognize concepts because blind children cannot see so they have difficulty in recognizing concepts. Especially abstract, therefore in learning for them concrete media is needed that will make it easier for them to master a concept.

Concrete learning media are all tools or tangible objects used to help achieve learning objectives. One of the concrete learning media used in science learning is mannequin/torso media. Regarding the definition of mannequins according to the *Kamus Besar Bahasa Indonesia Daring Edisi Elektronik (Pusat Bahasa 2008)* is "Dolls for displaying ready-made clothes in stores". Mannequin media is not only used as a puppet display of clothes in stores but there are also other mannequins such as internal organ mannequins.

Mannequins of internal organs of the body are statues shaped like real human internal organs. Human internal organs consist of lungs, heart, liver, bile, kidneys, small spleen, stomach, pancreas, large intestine, and small intestine. Learning media using mannequins really needs to be given to blind children so that blind children can recognize the shape and function of organs in the human body.

Based on the description above, researchers are interested in conducting studies through research with the title as written above.

## **Literature review**

### **Blind Concept**

Blind is a condition in which a person experiences abnormalities in vision that result in limited visual abilities. So, visual impairment is a general term used for the condition of someone who has a visual impairment. Asrori, (2020: 83) explained the word "*Tuna*" which means damaged or lost and "*Netra*" which means eye, thus *tunanetra* (blind) is a term for individuals who experience damage or abnormalities in the eye organs".

Meanwhile, Somantri (2006: 65) explains that: "Blind people are individuals whose sense of sight (both) do not function as a channel for receiving information in daily activities like alert people". Meanwhile, according to Hidayat (2016: 8) "Blind people are those who have a central acuity of 20/200 feet or visual acuity/able to see only at a distance of 20 feet or 6 meters or less, even if using glasses, or whose visual area is narrow in such a way that the angular distance does not have more than 20 degrees"

Based on the level of abnormality, blind people are divided into two, namely totally blind and those who still have residual vision (low vision). This is in line with Somantri's opinion (2007: 66) that blind children are grouped into two types, namely Blind, said to be blind if the child is not at all able to receive light stimulation from outside (visual = 0), while *low vision* if the child is still able to receive light stimulation from outside, but the sharpening is more than 6/21, or if the child is only able to read headlines in newspapers or 6 meters or less, even with the use of glasses, or whose viewing area is narrow in such a way that the angular distance does not have more than 20 degrees.

The existence of abnormalities and limitations for them is not an obstacle to being accepted in society. Blind children are not distinguished in education. Of course, the learning process must be in accordance with the needs of the blind child.

### **Body Organs**

Organs in the body are several tissues that have a special role in the human body, each organ of the body has an important function to use. The organs of the body also work closely together to form organ systems, such as the digestive system or circulatory system.

According to Kurniasih (2018: 23) "Internal organs are collections of tissues that have a special role played in the human body. Every organ of the body has an important function to play. Organs also work closely together to form organ systems, such as the digestive system or circulatory system."

Organs in the body are several tissues that have a special role in the human body, each organ of the body has an important function to use. Organs also work closely to form organ systems, such as the digestive system or circulatory system. Organs consisting of connective tissue, namely epithelium, muscles, blood vessels, and neural networks. These five tissues are needed by the human body, for example protecting weak organs, movement in the body, responding to changes in heat, cold and so on. While the organ system is a collection of various organs that work together to perform certain functions (Setiadi, 2007: 3)

Meanwhile, the microscopic anatomical structure includes cells, tissues, such as bones, muscles, breathing, heart and blood vessels, digestion, urination, innervation, senses, skin, and reproduction (Rani et al, 2022: 20).

Body organs in this study are collections of tissues that have a function or more based on their location, organs are divided into internal organs and external organs. Organs in this body consist of lungs, heart, liver, stomach, kidneys, bile, pancreas, small spleen, large intestine, and small intestine.

### **Media**

Media is everything that can be used to convey messages or information, media is also all forms of intermediaries used to communicate.

According to the *Kamus Besar Bahasa Indonesia*, media is a means (means) of communication, intermediary, or liaison. When viewed from the origin of the word, '*Medius*' (Latin) which means 'middle', it can be concluded that the media refers to a means / tool for which to be used to present information.

Media used in seeing the ability of blind children to recognize the function of human organs through mannequin media so that blind children can recognize the forms of human organs.

### **Mannequin**

Mannequins of organs in the body are statues shaped like real human internal organs consisting of lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine.

Mannequins as a medium provide knowledge, useful for blind children to understand the organs in their bodies. In this way, awareness will be born to maintain health for the better, the more you understand the position of the organs, the functions and workings of these organs, the more you know how to maintain and care for them.

### **Research methodology**

The method used in this study is a qualitative descriptive method, where this research is expressed under reasonable circumstances. According to Sugiarto (2015: 8) "Qualitative research is a type of research whose findings are not obtained through statistical procedures or other forms of calculation and aims to

reveal symptoms holistically-contextually through collecting data from natural settings by utilizing the researcher as a key instrument".

Researchers describe events or occurrences without converting them into numbers or symbols. Researchers can find out the direct picture of the field according to the events that occurred at that time, so this method is very relevant in the research that researchers do. By using this method, researchers are expected to obtain an overview of the ability to recognize the function of human organs through mannequin media in class XI blind children at SLBN A Citeureup Bandung City.

To obtain data in accordance with the expected goals, in this study, researchers used several data collection techniques, namely interviews, observations, and documentation. By using this method, researchers are expected to obtain or know a picture of the actual conditions that occur in the field for data sampling and to determine the ability to recognize the function of human organs through mannequin media for blind children. Based on preliminary studies, it shows that this mannequin teaching model is considered effective for improving learning comprehension skills in several teaching materials, so researchers explore this mannequin media in teaching materials to recognize the function of human organs in class XI totally blind children at SLBN A Citeureup.

### **Research results**

Data obtained from the data collection process in the field is then processed with the following results:

#### **The ability to recognize human body organs through mannequin media in class XI blind children**

The ability to recognize an object for blind children, especially totally blind children, is greatly influenced by the tactile abilities possessed by children so that the abilities of a child with other children can be different. In this study there are several aspects of the ability to recognize human organs, namely recognizing the names of parts of the organs (lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine), knowing the function of body organs (lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine), knowing the shape of human organs by palpating organs, and the layout of the human organs through the medium of mannequins.

A class XI of blind children at SLBN A Citeureup has been able to recognize organs in the human body in general, consisting of the lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine.

#### **Difficulty in learning to recognize human body organs through mannequin media in class XI blind children**

When learning to recognize the function of human organs using mannequin media, several difficulties were found faced by blind children where children had

difficulty in explaining one by one the functions of human organs including the lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine. This can be seen when blind children are told to explain the function of organs in the body is still not perfect, Other difficulties experienced by children are also seen when assigned to arrange organs sequentially, ranging from the lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine. This is because some organs have a similar shape such as: liver, stomach, and kidneys which results in the arrangement of the layout of organs into mannequins upside down. There are also children who have difficulty in distinguishing organs in the stomach and kidneys, where children are reversed in guessing the organs because the shape of the two organs almost looks the same.

### **The condition when learning to recognize the function of human organs through mannequin media in class XI blind children**

The learning process in recognizing the function of human organs using mannequin media in blind children takes place conductively, namely blind children feel joy, interested, and very enthusiastic. When the learning process takes place, the teacher gives several questions to children about the understanding and function of each organ of the body. Blind children answer questions with enthusiasm even though there are some answers that are not appropriate, but it can be seen from the child's enthusiasm when answering these questions. There was an interesting question and answer and the learning atmosphere was fun.

The learning process in recognizing the function of human organs using mannequin media in blind children takes place in accordance with what is expected, namely blind children are able to recognize the types of organs of the human body, and recognize the functions of each part of the organs, although there are difficulties when rearranging the parts of human organs in a sequential way, starting from the organs lungs, heart, liver, stomach, pancreas, kidneys, bile, small spleen, large intestine, and small intestine, as well as difficulty in distinguishing some parts of the body organs due to the shape of the organs that are almost similar.

### **Teacher's effort in overcoming difficulties in recognizing the function of human organs through mannequin media in class XI blind children**

To overcome the difficulties of blind children in arranging organs in order, because some organs have a shape that is almost similar to each other, teachers try to provide learning gradually, namely blind children are advised first to remember one by one the names of the parts of the organs in order starting from the lungs, heart, liver, stomach, pancreas, kidneys, bile, The small spleen, large intestine, and small intestine, then remember the shapes of each part of the body. Teachers also try to overcome this by giving more time for blind children to feel

carefully and thoroughly the parts of the organs, especially for parts of the organs that are almost similar, namely the liver, stomach and kidneys.

### **Conclusion, implication and recommendation**

#### **Conclusion**

In general, the results of this study can be concluded that mannequin media can make it easier for blind children to recognize the function of human organs and become an effective medium for teaching materials to recognize the function of human organs. In addition, by using mannequin media, learning takes place fun for blind children.

In particular, the results of this study are concluded as follows:

#### **The ability in learning to recognize human organs through mannequin media**

Blind children of Class XI at SLBN A Citereup in learning integrated science in general are able to recognize 10 (ten) functions of the internal human organs, consisting of the lungs, heart, liver, stomach, pancreas, bile, small spleen, kidneys, small intestine, and large intestine. Blind children have also been able to connect the function of internal human organs with daily life, able to find out various causes of disruption of the work function of internal human organs that cause various diseases commonly experienced by humans in daily life.

#### **Difficulties in learning to recognize human organs using mannequin media**

Blind children have difficulty arranging organs sequentially, including the lungs, heart, liver, stomach, pancreas, bile, small spleen, kidneys, small intestine, and large intestine on mannequin media. This happens because some organs have a shape that is almost similar so that blind children are confused when placing them on mannequin media.

#### **The condition when learning to recognize the function of human organs using mannequin media**

The learning process of recognizing the function of human organs using mannequin media in blind children is fun and conducive, namely blind children are joy, interested, and enthusiastic in following the learning provided both in palpating the mannequin as a whole and feeling the parts of the human body that are taught. Blind children are also active in providing critical questions through cases that occur in daily life that are in harmony with teaching materials to recognize the function of human organs. When experiencing difficulties, blind children do not complain.

## **Teacher's effort in overcoming the difficulties in recognizing the function of human organs using mannequin media**

Teachers make various efforts to help blind children to overcome their difficulties in learning to recognize the function of human organs using mannequins. The difficulty in placing organs sequentially in the mannequins was overcome by the teacher by numbering each organ according to its sequence first and the number would be released after several experiments. Teachers also give blind children more time to feel carefully and remember the shape of organs, especially those that are almost similar.

### **Implication**

The results showed that mannequin teaching media is very important to be used in teaching materials for the function of human organs to children with total visual impairment. Through these media, blind children obtain clear information about abstract material into concrete information that is easily understood by blind children. The implications of this study are as follows:

#### **For schools**

Schools play an important role in supporting various aspects that support the implementation of improving the quality of students and educators, both providing teaching media needed by students and educators and equipping educators with supporting competencies needed in teaching and learning activities.

Learning media plays a very important role, especially for the visually impaired. Loss of visual ability results in blind people having difficulty learning abstract concepts. The availability of various teaching media will facilitate teachers and blind people in the learning process. In this case, completeness of facilities and media that are suitable for the characteristics of blind people and every teaching material is needed so that learning takes place smoothly and enjoyably so that learning objectives can be achieved.

#### **For teachers/educators**

The ability to process classroom conditions and situations must also be possessed by every teacher as a basis for controlling classroom conditions to be orderly but the learning process is still fun for children so that learning objectives can be achieved optimally. The use of teaching media is an effort to improve the quality of students in the learning experience. In this regard, teacher skills are needed to choose and use the right teaching media, in accordance with the characteristics of blind children and the material taught.



## **Recommendation**

Based on the conclusions and implications that have been stated above, researchers conveyed several recommendations in the hope that they can be taken into consideration in improving the ability to recognize the function of human organs using mannequins for blind children.

1. The principal ultimately continues to strive and support efforts to improve the competence of educators / teachers in making teaching media that are interesting and relevant to the needs of students, managing active and creative classroom conditions and situations in delivering teaching materials. This can be done through seminars, training workshops, reading books, listening to podcasts, and other relevant activities.
2. Teachers should continue to develop themselves by participating in various activities related to the use of teaching media, because blind children tend to be critical and actively ask many things related to the teaching material delivered as well as improve competence related to managing classroom conditions and situations so that children can improve their children. Know that learning is still fun. This can be done through seminars, training workshops, reading books, listening to podcasts, or from other relevant activities.
3. For future researchers who are interested in studying various teaching media for children with total blind, it is recommended to conduct research on wider subjects and areas, more diverse teaching materials, more interesting material delivery, and more complex data collection methods and techniques. For the next researcher who is interested in developing mannequin media as a teaching medium in teaching materials to know the function of human organs part of internal organs, it is recommended to choose a way of delivery that is active, creative, and not boring when generally blind children get dull easily.

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