

## USE OF ILLUSTRATIONS IN THE COMMUNICATION GUIDEBOOK FOR DOWN SYNDROME CHILDREN

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**Abstrak:** Kemampuan berbicara dan berbicara adalah kemampuan awal yang harus dimiliki anak sebagai aset untuk dapat berinteraksi dan berkomunikasi serta anak-anak dengan sindrom Down. Kurangnya kesadaran orang tua dan kurangnya buku teks yang sesuai untuk anak-anak sindrom Down sering menjadi hambatan terhadap perkembangan anak-anak sindrom Down. Pembelajaran komunikasi dengan metode yang tepat adalah substansial menuju keberhasilan pola pengajaran untuk anak-anak dengan sindrom Down, termasuk penggunaan ilustrasi dalam buku panduan komunikasi. Penelitian ini menggunakan pendekatan penelitian kualitatif dengan metode penelitian studi deskriptif, sedangkan instrumen yang digunakan dalam pengumpulan data adalah dengan wawancara, observasi, dan dokumentasi. Teknik yang digunakan adalah wawancara mendalam, observasi non-partisipatif, dan studi kepustakaan. Penelitian deskripsi kualitatif ini menjelaskan tentang penggunaan ilustrasi pada buku panduan komunikasi anak down syndrome. Peneliti melakukan riset dalam setting yang alamiah dan membiarkan peristiwa yang diteliti mengalir tanpa mengontrol obyek yang diteliti hanya melalui pendekatan interpretif (subjektif). Hasil penelitian ini diharapkan dapat bermanfaat bagi orang tua, guru dan anak-anak dengan sindrom Down dalam pengajaran tentang komunikasi.

**Kata kunci:** ilustrasi, buku panduan komunikasi, down syndrome

**Abstract:** *The ability to speak and speaking are the initial ability that children must have as asset to be able to interact and communicate as well as the children with Down syndrome. Lack of parent's awareness and lack of appropriate textbooks for Down syndrome children are often become the obstacle towards the development of Down syndrome children. Communication learning with the right method is substantial towards the success of teaching patterns for the children with Down syndrome, including the use of illustrations in communication guide books. In this research, descriptive research method approach was used, supported by data collection instruments namely interviews, observation, and documentation. Within the interview, the in-depth interview was used, non-participative observation, and literature studies. Qualitative description involves the process of conceptualization and generates the formation of classification schemes. This descriptive qualitative*

*research described the use of illustrations in the communication handbook for Down syndrome children. The researcher conducted research in a natural setting and let the events to be examined to flow without controlling the object being examined merely through an interpretive (subjective) approach. The results of this study are expected to be beneficial for parents, teachers and children with Down syndrome's teaching about communication.*

**Keywords:** *illustration, communication guidebook, down syndrome*

**Profil singkat penulis:** Marina Wardaya merupakan dosen di Universitas Ciputra jurusan Visual Communication Design. Bidang penelitian yang dialami adalah buku anak dan penerbitan.

## **INTRODUCTION**

According to Basic Health Research data of the Ministry of Health, there were 0.12 percent of people with Down syndrome in 2010. That number kept increasing in Indonesia and it became 0.13 percent in 2013. The recent number of Down syndrome people has not been certainly mapped of how many is the total nowadays, since there is no specific research that studies the number of people with Down syndrome in Indonesia. However, based on data in 2010 (kompas.com, accessed on March 26, 2018) throughout the world the number of people with Down syndrome was around 8 million and 300,000 of them were in Indonesia.

People with Down Syndrome are often ostracized in their play environment. Their developmental delay made peers 'reluctant' to play with them. They also often get discriminatory behavior because of the different abilities they have. Exempt actions taken by the social environment against people with Down syndrome can be said as a form of discrimination. Discrimination in this case is one form of action that violates human rights (Law No. 39 of 1999 concerning Human Rights). People with Down syndrome have the right to be treated the same as other children who do not have Down syndrome. Children with Down syndrome are often the center of attention of those around them. Distinctive physical appearance, makes people always look at them when they are in a public place. Whether it's looking with a

cynical or condescending look, or surprised because physically they have a unique stature and different from most people. Difficulties in interacting with others are especially experienced by people with Down syndrome children. Children with Down syndrome will learn more slowly than others. Children with Down syndrome have difficulties in learning to speak and pick up on contact signals from other people. So, at this stage parents should be more extra to teach their children to interact with others.

Before the availability of genetic testing, Down syndrome is diagnosed based on certain physical characteristics. However, not all people with Down syndrome have same characteristics, yet their characteristics are vary from one person to another. Babies with Down syndrome usually have low muscle tone and poor reflexes. The joint is looser than normal. The skull is rather short and wide and slightly smaller, and the back of the head is flatter, than usual. Fontanella (or "soft point"), the structure of the baby's head, which is usually approached the age of 2 years, is usually larger and closer than a baby who grows normally. Newborns with Down syndrome often have extra skin on the back of their neck. As children age, the neck often appears shorter and wider than usual. When the child gets older, the neck often appear shorter and wider than usual.

Down syndrome also affects one's ability to think, reason, understand, and socialize. The effects range from mild to moderate. Children with Down syndrome often need more time to achieve important goals such as crawling, walking, and talking. Some also have problems with behavior. They may not pay attention well, or they can become obsessive about a number of things. That's because it's more difficult for them to control their impulses, connect with others, and manage their feelings when they feel frustrated. Generally children with Down syndrome have limited capability in terms of communication, behavior patterns, and social interactions. Communication

plays an important role in human life. Most communication activities occur in situations of interpersonal communication. Interpersonal communication has various benefits. Through interpersonal communication, a person can know him/herself and others, can learn more about outside world, can establish more meaningful relationships, and so on.

Down Syndrome was first introduced in 1866 by Dr. John Langdon Down through the publication of his writings in England which explained a number of children with the same general picture but different from other normal children. Because it has relatively short body features, a smaller head, a flat nose resembling a Mongoloid, people with Down syndrome are often also referred to as Mongolism.

Down syndrome is a genetic disorder caused by excess copies of chromosome 21 or termed trisomy. Normally, the human body has billions of cells which have central genetic information on the chromosome. Most human body cells contain 23 pairs of chromosomes (total of 46 chromosomes). In the case of Down syndrome, chromosome number 21, the number is not a pair as in general but three. As a result of the excessive chromosome number 21, the occurrence of metabolic system shock in the cell which results in the appearance of Down syndrome (Jacob & Sikora, 2016)..

As adults, people with Down syndrome can learn to decide many things themselves. Yet it will likely need help with more complex problems such as birth control or managing money. Some might go to college. While others will need more daily care. Down syndrome children also need communication in everyday life as well as other normal children. Communication is required to hold interactions with its environment. One form of communication is speaking. According to Munggaran (Maryamatussalamah et al., 2013), speaking is the ability to pronounce the articulation of sounds or words to express, to state, as well as to convey thoughts, ideas and feelings. Speaking

is a motoric activity in which the movements of mouth, tongue, throat and respiratory tract produce sounds in the form of words.

In the case of Down syndrome children, the physical characteristics that present, specifically speaking instruments can affect the communicating process of Down syndrome children. The tongue size, the thickness of the lips, the narrowness of nasal cavity, and the imperfect position of jaw affect prominent articulation disorders. These disorders cover several things, namely sound changes and sound omission which will be perceived when down syndrome children pronouncing vowel sounds, consonant, or semi vowel.

The speaking and speech ability is the initial ability that children must have as asset to be able to interact and communicate. Speech delay is often associated with developmental disorders, behavioral disorders, oral motoric disorders and other functional disorders, when various disorders which occur almost simultaneously are not addressed properly, it will interfere with the children's growth and development in the future

Down syndrome children experience almost all developmental disorder which is associated with speech delay, they tend to talk through their behavior, act as they want that frequently affect their friends or people nearby are having trouble when they behave since their lack of understanding about what children want.

According to Mac Donald who works with more than 100 parents who have Down syndrome children, said that, they generally do not understand how their children develop language. Parents thought that the language will come naturally over time, such as hair and height, and generally they do not understand that there are many things children need to do before they speak. They have slight understanding of which their child's language comes from

their daily interactions with them and lack of awareness to what children need to do before they talk as a habitually and socially.

According to Selikowit, children with Down syndrome and normal children basically have the same goal in the task of development, namely achieving independence. However, the development of Down syndrome children is slower than normal children. So we need a therapy to increase the independence of children with Down syndrome. Parental participation is needed. Doman revealed that 15% of parents who knew their child had Down syndrome would return home and did not do a therapy program. As many as 35% of parents are determined to join the Intensive Care Program. As many as 50% of parents will return home, diagnose their children, design a program for their children and implement the program with different levels of frequency, intensity and duration in hopes of getting results commensurate with the program.

Programs created by parents who rely on previous experience using conventional methods often show little progress. Therefore, by helping to create a program for the house model of fine motor skills in children with Down syndrome is expected to help determine what daily activities we can introduce first. The ability of daily living skills aims to enable children to help themselves (self help), live independently in routine daily life such as eating, drinking, bathing, going to the toilet, wearing and removing clothes, socks and others. Daily living skills also aim to enable children to perform school tasks related to fine motor development including preprinting, printing, drawing, coloring, cutting and writing.

The appropriate learning pattern is essential for children with Down syndrome. Similarly, the learning method must be specific and adjusted to their needs. With the intellectual abilities that are below average, a special method is needed so that they have better understanding to the lessons

given. One of the alternatives learning media to improve the ability of children with Down syndrome is by visual media or books by using illustrations, one of which is a communication guidebook which uses illustrations.

Based on the aforementioned description the researcher conducted a research on Use of illustrations in the Communication Guide book for Down Syndrome Children. The purpose of this research was to find out how to use illustrations in communication guidebook for children with Down syndrome.

### **RESEARCH METHODS**

In this research, descriptive research design was used since researchers wanted to describe the use of illustrations in communication learning and improving speaking skills towards children and teenagers with Down syndrome. In this research, descriptive research method approach was used, supported by data collection instruments namely interviews, observation, and documentation conducted at the let's speak up training held by the Yayasan Peduli Sindroma Down (YAPEDI) and the community of remaja sindroma down during September 2017 to April 2018 in Jakarta. Within the interview, the in-depth interview was used, non-participative observation, and literature studies.



Figure 1. Documentation of let's speak up training held by the Yayasan Peduli Sindroma Down (YAPEDI).

Qualitative description involves the process of conceptualization and generates the formation of classification schemes. This descriptive qualitative research describes the use of illustrations in the communication handbook for Down syndrome children. The researcher conducted research in a natural setting and let the events to be examined to flow without controlling the object being examined merely through an interpretive (subjective) approach.

The type of data in this study was depth interview namely qualitative data which is data in the form of words or verbal statements, opinions, facts, attributes in use this communication handbook in let's speak up training.

The data source was obtained from primary data: which obtained from the results of the answers given by the interviewees. The primary data in the field can be done in for of in-depth interviews and observation. The interviews were recorded using a digital recording device to make it easier for researchers to get all recorded answers from the informants. The secondary data: data by conducting literature studies such as books, journals, internet sites, media reports and other scientific sources relevant to research problems namely social interactions with social environment.

The data source was obtained from primary data: which obtained from the results of the answers given by the interviewees. The primary data namely statements, interpretation, activities and observations made by the trainer, the facilitator of let's speak up training when using this handbook. The secondary data: were data obtained from experts, literature, libraries, bulletins, internet which is directly related to information about the use of illustrations in the communication guidebook for Down syndrome children which were the object in this research and forming the research reports.

## **DISCUSSION**



From the data characteristics, Down syndrome children have physical and intellectual weakness, therefore the right learning media is needed so that the learning process can be achieved. Learning media is a medium for teaching and learning. Everything that can be used to stimulate thoughts, feelings, attention, and abilities or skills of learner therefore it able to encourage the learning process.

According to Briggs learning media is a physical medium to convey content or learning materials such as: books, films, videos, and so on. Visual-based media (image or illustration) plays a very important role in the learning process. Visual media can facilitate comprehension and strengthen memory. Visuals can also enhance interest and can provide a connection between the content of subject matter and the real world. In order to be more effective, visuals are placed in the meaningful contexts and students must interact with the visuals (images). to ensure the occurrence of information processes.

Several common principles which is necessary to be known for effective use of visual-based media are as follows; Try to use visual as simply as possible by using images of line, cartons, charts, and diagrams. Realistic images must be used carefully since the images are very detailed, with realism are difficult to be processed and learnt and frequently interfere with students' attention to observe what should be considered. Visual is used to emphasize target information (which contains text) therefore, learning can be carried out properly. Use the chart to illustrate the overall material outline before presenting unit by unit by unit of the lessons to be used. Repeat the visual presentation and involve the audience to improve memory. Use images to describe differences in concepts, for instances by displaying visualized concepts side by side. Visuals which is intended to communicate specific ideas will be effective if (1) the number of objects in the visual that will be correctly interpreted should be limited, (2) the number of separate actions, the

important point is their messages must be interpreted correctly, (3) each intended objects and actions are portrayed realistically therefore, no multiple interpretations will occur. Elements of the message in the visual must be highlighted and easily distinguished from the background elements to simplify information processing. The success of using visual-based media depends on the quality and effectivity of those visual materials and graphics.

Visual communication as a process of delivering and receiving messages from communicators to communicants by using visual symbols (visual images) is a human's daily activity. The learning system is essentially an objective-oriented communication process. Visual communication should be done considering the learning message concerning about concrete matter which occurs or happens in real life. Active involvement in understanding visual messages is an activity of observing and does not simply watching.

Visual illustration has a very strategic role in learning because it is a form of visual communication that is simple, effective and efficient. Therefore, in making this guidebook, it needs to be carefully designed so that it is not merely a supporter of verbal communication. The design elements in this manual must be adapted to the needs and weaknesses of the physical and intelligence characteristics of a child with Down syndrome. In making the guidebook the object described must be clear with the size of the illustration large enough, the objects are depicted clearly. In one page, the images are not too full and crowded. The illustrations used are able to attract the reading interest of children with Down syndrome. The illustrations must also be able to explain the purpose of learning. For text or captions that may accompany the illustrations must be written properly and adequately.

Likewise in choosing colors for this book, colors have the ability to communicate many things to someone. People often use colors to show emotional mood, taste, political affiliation, and maybe even their religious

beliefs: The ability of colors to create impressions, is able to cause certain effects. Psychologically described by J.L Linschoten and Drs. Mansyur about color as follows: "The colors are not a symptom that can only be observed only, the color affects behavior, plays an important role in aesthetic judgments and also determines whether we like things or not."

In the communication guide for children with Down syndrome the types of fonts and font sizes are very important because there is a tendency in children with Down Syndrome to experience vision problems. Therefore, in making communication guide books for children with Down syndrome the Delius font was used. Typography is a part of design related to language. Letters are the most basic things in communicating. In letters. it must be considered the size, weight, distance, and type of the letter. These things are often known as legibility. Legibility is often misinterpreted and ignored by designers. Legibility is the achievement in controlling the quality and attributes of typography that make typography readable. These attributes or embellishments must be made in such a way that the typography can still be read well. However, legibility cannot be explained scientifically, because people's opinions about one type of font differs from one another.



Figure 2. Example of the book contents

Source: Marina, 2015

The first design attempted to create this guidebook when it was tested, it indicates that the training participants had difficulty to read since the fonts were not large enough and the font placement was below the image. After evaluating the test results and the feedback from the trainers and facilitators of let 'speak up, therefore, the layout design and font were changed.

The picture is made larger with a separate layout with writing. This allows the down syndrome children to be more comfortable while reading the guidebook. The selected font that had been used in design is changed to a font type that has a simpler form. In this way, children with Down syndrome become interested in reading the guidebook by themselves.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ  
abcdefghijklm  
nopqrstuvwxyz  
0123456789!?!#

Figure 3. Delius font type

Source: Marina, 2015

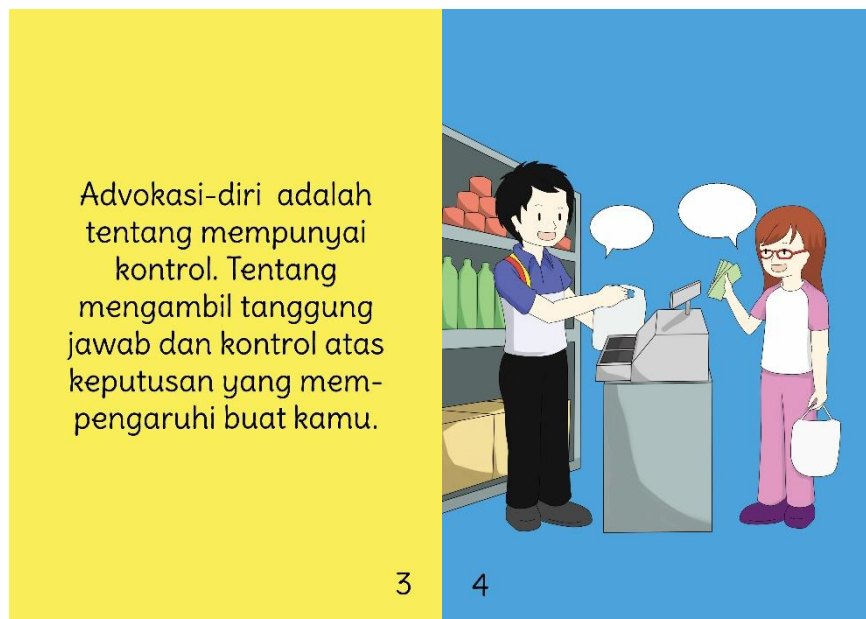


Figure 4. Example of the book contents

Source: Marina, 2015

### CLOSING STATEMENT

Down syndrome children are frequently experience communication difficulties as well as having difficulty in maintaining focus, following instructions, lacking interest in reading and relationships with others. Therefore, it is very difficult to perform learning towards Down syndrome children because of the lack of parent's awareness concerning the importance of qualified education for children with Down syndrome. In addition, the absence of learning books which specifically for Indonesian-speaking children with Down syndrome.

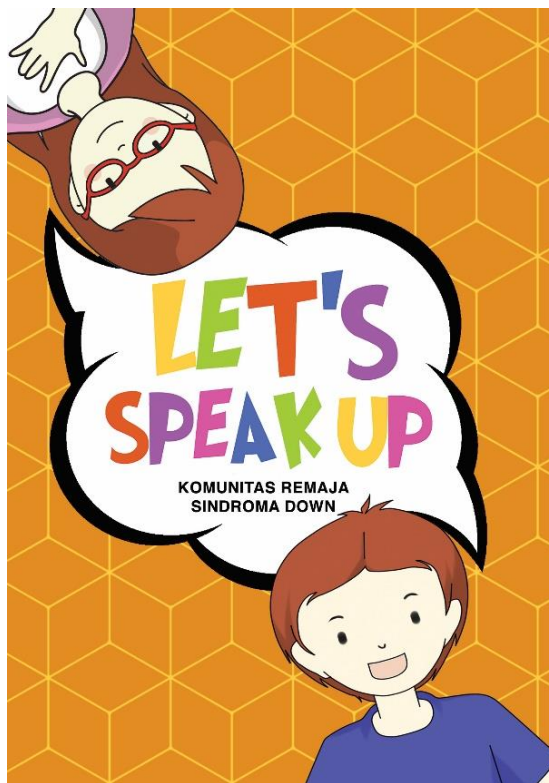


Figure 5. The book cover

Source: Marina, 2015



Figure 6. The book, Product Dimensions: 5,83 x 8,27 inches

Source: Marina, 2015

In the production of communication guidebook, the process has to pay attention to the characteristics of Down syndrome children. To get better understanding, the book uses visual illustrations. Visual illustration has a very strategic role in learning since it is a simple, effective and efficient form of visual communication. Therefore the creating process needs to be carefully designed, not to be simply as a learning supporter but can actually be used and understood by Down syndrome children and teachers or parents.

This book has been tested and used to children and teenager with Down syndrome in the let's speak up trainings held by Yayasan Peduli Sindroma Down (YAPEDI) and remaja sindroma down community during September 2017 to April 2018 in Jakarta. The material in this book is appropriate with the directions from the let's 'speak up trainers and facilitators and is considered good and appropriate with their needs. This book can also be used by parents independently.

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