

# The Use of Pop-Up Book Media for Children with Tunagrahita in Handling Language Disorders

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#### **ABSTRACT**

This research is entitled "The Use of Pop-up Book Media for Children with Tunagrahita in Handling Language Disorders. Language disorders in children with tunagrahita arise due to low IQ (Intelligenci Quotient). The purpose of the study was to explain the application of media and evaluate the use of pop-up book media for children with tunagrahita in dealing with language disorders. This research uses descriptive qualitative research using psycholinguistic studies. The data in this study are words and sentences expressed by children with deafblindness with the help of pop-up book media, while the data source is children with deafblindness in SLB (Sekolah Luar Biasa) Negeri Terpadu Bireuen junior high school level. The data collection technique used in the study was the technique of simak libat cakap, recording technique, and recording technique. The data analysis technique used is the pairing technique with the sorting power of the determining element and the comparative linking technique of equalizing and differentiating. Checking the validity of the data in this study used triangulation techniques, namely triangulation of sources, methods, and techniques. Based on the results of the research, it is found that the use of pop-up book media in dealing with language disorders of children with disabilities is very influential. The results showed that pop-up book media in dealing with language disorders in junior high school level of SLB Negeri Terpadu Bireuen.

Kata kunci: Pop-up Book Media, Language Disorders, Tunagrahita

#### 1. Introduction

Language plays an important role in human social life, both adults and children. Children are the future of the nation, and the state of the nation in the future depends on the personality of children at present. The better the character and language skills of children, the better the future of the nation, particularly in terms of language.

Based on the opinion of Kushartanti, et al. (2009: 5) language is a tool used by humans to interact and work together, as a group of humans consists of men, women, old, and young, who use language when communicating for their various needs. Language is an essential communication tool that cannot be separated from our lives. It is a reflection of self, and through language, can show their origin, understanding, education, and even nature. When it comes to children, language is used to convey their desires and experiences to the people around them through words and movements.

In Indonesian, there are four language skills:listening, speaking, reading, and writing. However, of the four language skills, speaking is the most prominent. Speaking is a skill that aims to convey opinions, emotional conditions, and express feelings.

In acquiring language, children may experience language disorders, especially those with abnormalities in brain and speech functions, which can lead to difficulties in language. Language disorders are commonly referred to as speech disorders. Speech and language disorders are among the most common causes of developmental disorders in children. A language disorder is an impairment in communication, such as muteness, stuttering, or other language disorders. Language disorders in children are serious and must be addressed because they can impact the mastery of other language



skills. Therefore, in this study, one of the learning media for children with disabilities was tested, namely pop-up book media. The use of pop-up book media can stimulate the imagination of children with tunagrahita, making it will be easier to pronounce words and sentences. However, but keep in mind that some of these people are also difficult in pronouncing words and sentences, due to the influence of their thinking speed in remembering or mastering the correct vocabulary.

Based on the above statement, the researcher is interested in examining the research title "The Use of Pop-Up Book Media for Children with Tunagrahita in Handling Language Disorders", because he wants to know the use of pop-up book media in handling language disorders for children with tunagrahita. The main goal of this study is to explain the effectiveness of pop-up book media in dealing with language disorders in children with deafblindness. If the initial analysis of this research determines that pop-up book media is suitable for helping children with deafblindness learn, the research will proceed to the next stage, which is to evaluate the effectiveness of pop-up book media in helping children with deafblindness who have language disorders.

# 2. Literature Review and Hypothesis

#### 2.1 Psycholinguistics

Psycholinguistics is the study of the relationship between psychology and language, which includes the understanding, production, and acquisition. Without language, a person cannot have social interactions with the surrounding community (Anggini & Santosa, 2022). Furthermore, psycholinguistics combines linguistic and psychological elements to understand how language is understood and how language is produced (Rakimahwati et al., 2021).

In today's rapidly changing world, the significance of accurate weather forecasts cannot be overstated. Psycholinguistics is the study of the relationship between psychology and language, which includes language understanding, production, and acquisition (Anggini & Santosa, 2022). One important aspect of psycholinguistics is language acquisition (Rakimahwati et al., 2021). In this study, the language acquisition of children aged 2 years and 5 months is influenced by the first language, often referred to as mother tongue. Psycholinguistics studies how children learn and master language, as well as the factors that influence the process. In addition, psycholinguistics also studies how language is understood by humans. Psycholinguistics studies how people process and interpret the language they hear or read. In this context, psycholinguistics involves understanding the cognitive processes that occur in language processing. Psycholinguistics also involves the study of language production, how humans produce sentences and utterances in the language they speak. Additionally, psycholinguistics is interested in the process of language acquisition.

### 2.2 Language Disorders

In the field of language acquisition and development, there are various challenges that individuals may face. One specific area of concern is the occurrence of language disorders. Language disorders refer to difficulties in language development and communication that affect an individual's ability to understand, comprehend, and express themselves effectively.

These disorders can manifest in various ways, such as grammar errors, phonological errors, pronunciation difficulties, imitations, repetitions, corrections, asking questions for clarification, and even laziness in learning. Research on language disorders has been conducted extensively to understand their causes, effects, and possible interventions. One significant area of research in language disorders is the impact of dementia, specifically Alzheimer's disease, on language and thinking abilities. (Behl et al., 2021)

Language (speech) disorders are one of the most common causes of developmental disorders, including in children. Communication to convey thoughts, feelings, and emotions. So that they cannot form normal social and communication relationships. (Ferawati, 2017: 214). Meanwhile,



Masitoh (2019:47) argues that language disorders are often referred to as disorders of speech and expressive language development. Language disorders are one type of communication disorder, where someone experiences a disorder in the symbolic process, so that someone is unable to change the concept of understanding into symbols that can be understood by others.

#### 2.3 Causes of Language Disorders:

There are multiple causes of language disorders, which can range from developmental issues to acquired conditions. One of the main causes of language disorders is developmental issues. Developmental language disorders occur when there is a delay or disruption in the typical progression of language skills during childhood. These developmental issues can be attributed to various factors, including genetic predisposition, neurological abnormalities, and environmental influences. According to sources, some primary language disorders occur without any obvious cause and are classified into different categories such as expressive language disorder, mixed receptiveexpressive language disorder, phonological disorder, stuttering, and communication disorder not otherwise specified (Newbury & Monaco, 2010). Additionally, language disorders can also be caused by acquired conditions. Acquired language disorders, also known as acquired aphasia, occur as a result of brain damage or injury later in life. This can be due to a variety of factors, such as stroke, traumatic brain injury, Alzheimer's disease, and other neurological conditions. These acquired conditions can result in a loss or impairment of language skills, including difficulties with speech production, comprehension, and verbal expression. Furthermore, language disorders can be associated with other developmental or global conditions. For example, individuals with autism spectrum disorder, intellectual disability, cerebral palsy, or developmental apraxia of speech may experience language difficulties. In conclusion, the causes of language disorders are diverse and can be attributed to both developmental and acquired conditions. The causes of language disorders are diverse and can be attributed to both developmental and acquired conditions.

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Indah (2017:103-106) states that in children, these disorders can be generally classified as follows:

- 1) Language impairment caused by, articulation problems, voice disorders, fluency problems, aphasia due to incomplete brain development, language delay, hearing loss, or developmental disabilities that may be caused by environmental factors.
- 2) Hearing loss, both partial and total, types are, a) Conductive hearing loss, caused by a disease that disrupts the function of the outer and middle ear, and that the patient must use a hearing aid. b) Hearing loss due to damage to sensory cells in the ear that convey sound stimuli. The patient has difficulty responding to any sound despite using a hearing aid. c) Complex hearing loss due to dysfunction of the outer, middle, and inner ear. d) Central hearing loss is caused by nerve or brain tissue.
- 3) Condition-specific impairments include:
- 4) a) Learning disabilities that may cause or result from language impairment. b) Cerebral palsy, also known as cerebral palsy. c) Mental retardation or retardation. d) Cleft lip.



This is in line with Yulianda's opinion (2019:42) that there are several causes of language disorders, including hearing loss, speech organ disorders, mental retardation, genetic or chromosomal abnormalities, autism, functional delays, receptive aphasia, and environmental deprivation (economic status, quiet environment, and parental attitudes).

# 2.4 Pop-Up Book Guide

## 2.4.1 Utilizing Pop-Up Book Media in Education.

Pop-up books are a unique form of media that can be effectively utilized in educational settings (Putri & Noviani, 2021). These books have three-dimensional elements that come to life when the pages are opened, capturing the attention and interest of readers. In the context of education, pop-up book media can be a valuable tool for fostering children's interest in reading. Not only do these books provide an interactive and engaging reading experience, but they also offer a wide range of thematic content that can be integrated into various educational subjects. Research has shown that the use of pop-up book media can improve language skills and attitudes towards learning. According to Oktaviarini, pop-up books are designed to create surprises on every page, resulting in a sense of admiration when each page is opened. Moreover, pop-up book media has been proven to enhance student learning outcomes (Oktaviani et al., 2020). Research conducted by Oktaviarini has shown that students' enthusiasm and interest in learning can be increased when pop-up book media is used as a teaching material. This unique form of media adds an element of excitement and novelty to the learning process, capturing students' attention and making the educational content more memorable. Furthermore, pop-up book media is not only beneficial for early childhood education but can also be utilized in various academic disciplines (Putri & Yaswinda, 2022).

Bluemel and Taylor in Sylvia, et al. (2015: 1198) which reads, "pop-up book as " a book that offers the potential for motion and interaction through the use of paper mechanisms such as folds, scrolls, slides, tabs, or wheels". Dzuanda in Sylvia, et al. (2015: 1198) explains that pop-up books are books with movable parts, 3-dimensional elements, and a more interesting story impression when the page is opened.

## 2.4.2Pop-Up Book Study for Children with Disabilities

In recent years, there has been growing interest in utilizing pop-up books as a learning tool for children with disabilities. These interactive and visually stimulating books have shown promise in enhancing language skills, promoting engagement, and facilitating learning for children with diverse abilities.

One study conducted by researchers focused on developing language skills and promoting an attitude to argue in early childhood through the use of pop-up media in the form of stories (Kustiawan & Yafie, 2021). The researchers highlight that pop-up books are a unique learning medium with interesting looks and themes, incorporating three-dimensional elements to enhance the reading experience. The incorporation of three-dimensional elements in pop-up books not only captures the attention and interest of children with disabilities but also provides a multisensory experience that can enhance their understanding and retention of the content. Another advantage of pop-up books for children with disabilities is that they contain beautiful and authentic illustrations. These authentic images can have a positive impact on students, helping them to better connect with the content and engage in the learning process. Furthermore, the use of pop-up books in the learning process can provide new and meaningful learning experiences for children with disabilities (Ardika et al., 2022). Unlike traditional books, pop-up books offer a dynamic and interactive reading experience that can captivate and motivate children with disabilities to actively participate in the learning process.



#### 2.4.3 Advantages and Disadvantages of Pop-Up Book Media

Pop-up book media, which incorporates three-dimensional elements into traditional printed books, has both advantages and disadvantages. One advantage of pop-up book media is that it enhances the reading experience by adding a visual and interactive element. When students open the pages of a pop-up book, they are greeted with pop-up structures and moving parts that engage their senses and capture their attention. This adds a sense of excitement and curiosity to the learning process, increasing students' enthusiasm and interest in the material being taught. Additionally, the use of pop-up book media has been shown to improve language skills and foster an attitude of argumentation in early childhood (Kustiawan & Yafie, 2021). On the other hand, there are some disadvantages associated with using pop-up book media as a learning tool. One disadvantage is that pop-up book media can be delicate and prone to damage. The intricate paper mechanisms used in pop-up books can easily get bent, torn, or misaligned, leading to a decreased lifespan and functionality of the book.

Bluemel and Taylor in Cahyani (2020: 80) in their research on the benefits of using pop-up book media, among others:

- 1) Can increase children's curiosity and interest in reading.
- 2) Can quickly adjust to their environment, develop adapt.
- 3) Helps children develop skills, and the ability to think.
- 4) Can enrich children's vocabulary. Although still be at an early age, this media can be useful in generating a sense of independence and developing their ability to understand meaning.

Dzuanda, in Sylvia, et al (2015: 1198) explains that each product has its own advantages and disadvantages. Likewise, pop-up book media has a disadvantage is the level of product durability. When viewed from the material made of paper, the durability of the product is certainly reduced. Media with paper materials are usually more easily damaged, for example, torn, wet, and folded. Then when viewed from the advantages, namely:

- 1) This pop-up book media is easy to carry.
- 2) It has dimensions that differ from books in general when the book is used.
- 3) Stimulates the imagination of its users.
- 4) This pop-up media can invite user interactivity, both personally and in groups. These advantages make pop-up books an attractive option for users.

#### 3. Research and Methodology

The data used in this study is the language expressed in the learning process with the help of pop-up book media, in the form of words and sentences of children with tunagrahita. While the source of data in this study is children with tunagrahita in SLB Negeri Terpadu Bireuen junior high school level, totaling 8 people.

Data is presented using qualitative data analysis techniques. This technique aims to explain how the process occurs directly by means of data collection that shows the details of the data under study. The deeper the data, the better the quality of the research data. In this study, what was analyzed was language disorders in children with tunagrahita with the help of pop-up book media. Data collection was carried out using observation methods, followed by technique and accompanied by recording and note-taking techniques. The method of data analysis in this study uses psycholinguistic studies and translational methods through comparing similarities and differences.

The observation method, specifically utilizing recording and note-taking techniques, is essential for gathering accurate and detailed data in research. The recording technique involves the use of audio or video devices to document observations in real-time, ensuring that no details are missed and allowing for later analysis. In addition, (Astuti, 2018) explains that note-taking is another important aspect of the



observation method because it allows researchers to write down important information from observations. Apparent in the recorded data. These techniques greatly enhance the validity and reliability of the collected, data by providing a comprehensive and objective account of the observed phenomenon.

#### 4. Result and Discussion

Based on research that has been conducted during interactions with children at the junior high school level of SLB Negeri Terpadu Bireuen, some data were found that showed language disorders. This language disorder occurs during the learning process. The disorder is expected to be overcome with the help of Pop-up Book media. The results of this study found 31 data points, but only 10 were analyzed and are summarized as follows:

(1) Context: This conversation took place on Wednesday, May 11, 2023, a grade 2 junior high school student with mild impairment who did not match the picture with what he said.

Teacher : We start with Riski, what are the pictures here?

M. Riski Aulia : Fish, turtle, tree.

Teacher : Tree? Which one is the tree?

M. Riski Aulia : (shows the picture of seaweed)

Teacher : Besides the word tree, this plant that lives in the sea?

M. Riski Aulia : (thinking)
Teacher : Grass la...?

M. Riski Aulia : Sea

Teacher : Try repeating it. What is it called?

M. Riski Aulia : Seaweed

(2) Context: This conversation took place on Wednesday, when a student with disabilities was confusing animals with clouds.

Teacher : Are there any other pictures here?

Asrul : Mountain Teacher : Yes, then?

Asrul : Animals (pointing to the cloud picture)

Teacher : Which animal?

Teacher : Animals are animals. This one is white, some are

black. It is called clouds!

Asrul : Oiya awan

Teacher : What is this picture?

Asrul : Clouds

(3) Context: This conversation took place on Wednesday, a grade 3 junior high school student with a disability was having difficulty pronouncing the letter (R) in the prefix of the word "house".

Teacher : Come on, Fardan, name the pictures that are here!

Fardan : Tree, grass, flower, umah. Teacher : Try repeating

what this is!

Fardan : Umah

Teacher : This is called a house with the letter "R". Try reading "ru....

Fardan : Yu

Teacher : Ru...mah.Fardan : Yumah Teacher : Okay, it's okay. You'll study it again later!

(4) Context: This conversation took place on Wednesday, when a student with a disability was having difficulty pronouncing the letter (R) at the end of the word "fence".

Teacher : What is this picture? It's usually opened by the security guard at the



front.
Fardan : (thinking)
Teacher : Pa...
Fardan : Gai

Teacher : Try repeating it!

Fardan : Pagai

Teacher : Yes, but read pa...garr, use the letter r instead of i, okay?

Fardan : (nodding)

# (5) Context: This conversation took place on Wednesday, when a student with mild impairment in grade 2 of junior high school confused seaweed with weeds.

Teacher : Fais what is this picture? (pointing to a picture of a cow)

Muhammad Fais : Leumo (mentioned in Aceh)
Teacher : What about in Indonesian?

Muhammad Fais : Cow

Teacher : Anything else?

Muhammad Fais : Chicken, tree, seaweed
Teacher : Which one is seaweed?
Muhammad Fais : (pointing to the weeds)

Teacher : This is fais grass li...ar is the name, look outside! nah

This is the grass that cows eat, so this is a picture?

Muhammad Fais : Wild grass

# (6) Context: This conversation took place on Wednesday, when a grade 3 student with severe disabilities had difficulty distinguishing between pictures of flowers and grass.

Teacher : Taqwin, what is this picture?

Aksanul Taqwin : Birds
Teacher : What else?
Aksanul Taqwin : Clouds, flowers

Teacher : Which one is the flower?
Aksanul Taqwin : (pointing to the picture of grass)
Teacher : What's growing on that page?

Aksanul Taqwin : Grass

Teacher : Now this is also the same as the one outside, the name?

Aksanul Taqwin : Grass

# (7) Context: This conversation took place on Wednesday, a student with severe disabilities confused a picture of a rock with a picture of a mountain and had a long thought process.

Teacher : Name them one by one!

Aksanul Taqwin : Mountain, tree, tree, mountain

Teacher : Which one is the picture of the mountain?
Aksanul Taqwin : (pointing to the picture of the stone)

Teacher : Let's see, it's small, right? If the mountain is like this, it's big, so this is

it. What picture?

Teacher : Ba... Aksanul Taqwin : Tu

Teacher : Try again! Aksanul Taqwin : Stone

Teacher : Which one is the picture shows a rock?
Aksanul Tagwin : (pointing to the picture of the stone)

# (8) Context: This conversation occurred on a Wednesday, a grade 3 student of a junior high school with severe disabilities was struggling with his thought process.

Teacher : Muakhir, are there any other pictures here?

Muakhir : Home Teacher : What else?



Muakhir : (thinking)

Teacher : What is this picture?

Teacher : Po...phon Muakhir : Hon

Teacher : Try to follow me! Tree.

Muakhir : Trees

(9) Context: This conversation took place on Wednesday, a student with severe intellectual disability had difficulty in thinking, which made him only say the word (Ut) instead of "sea".

Teacher : Try your end!

Muakhir : Fish, turtle

Teacher : Anything else?

Teacher : What is this one?

Muakhir : (thinking)

Teacher : Draw the grass la...

Muakhir : Ut

Teacher : Try repeating it!

Muakhir : Seaweed

Teacher : Show me which one is the seaweed!

Muakhir : (pointing to the seaweed picture)

(10) Context: This conversation took place on Friday, May 13, 2023, a 3rd grade junior high school student with a disability was having difficulty answering questions by his teacher.

Teacher : Okay, Asrul, what else is there?

Asrul : (thinking)
Teacher : This?
Asrul : (thinking)
Teacher : Rum...
Asrul : (thinking)
Teacher : What grass?
Asrul : Seaweed

Based on the research data above, the next step is to discuss the results of the research that have been conducted on interactions at the Integrated State SLB Bireuen. Researchers found some data that showed language disorders. The discussion in question is a description or explanation of the data that has been presented above, namely based on language disorders in the words and sentences of children with tunagrahita. The following discussion will address the topic at hand.

### The use of pop-up book media in Handling Language Disorders of tunagrahita children.

In context (1), Muhammad Riski Aulia in the thinking process is considered good, because when the teacher asks a question, he can answer it, although he needs a little help from the teacher. This is because his memory is still weak, as in the picture of "seaweed". Muhammad Riski Aulia is considered a good speaker because he does not stutter or experience any interference when describing the pictures in the pop-up book media. Moreover, he is also considered good at determining the images.

Context (5) Muhammad Fais's fluency in thinking is considered good, even though he experiences a slight stutter when determining the images in the media. In terms of speech fluency, Muhammad Fais is considered very good. This is because he does not require assistance and experiences no interference during his pronunciation. However, when viewed in terms of determining image suitability, he is still considered less precise in distinguishing the image, so that there is a little help from the teacher, such as in his speech, "seaweed" but shows "weeds", this happens because of interference in his thought process and lack of checking the truth, but by using pop-up book media these deficiencies can be overcome, if repetition is done in the process of showing the picture.

In moderate-level tunagrahita children in contexts (2) and (10) Asrul has poor fluency of thought



and still has difficulty remembering words or sentences. Asrul's speaking fluency is considered quite good, despite abnormalities in his speech organs, such as a short tongue, which results in difficulty pronouncing words. Furthermore, Asrul's ability to remember pictures is considered acking, s evidenced by his mistaking a picture of "animals," for a picture of "clouds.". However, when taught using pop-up book media, Asrul became more enthusiastic about showing pictures. In context (10) Asrul was asked by his teacher to mention another picture; apparently, he knew that it was "grass,", it was just difficult to express.

In contexts (3) and (4), Fardan's fluency of thought was rated as poor due to difficulty remembering things when asked by his teacher. The fluency of speech is also considered poor because he has difficulty pronouncing the letter (r), so there is an initial omission of letters such as in the word "house," pronounced "umah." Sometimes the letter (r) is pronounced as the letter (y) such as "yumah.". "Fence" is pronounced "pagai.", likely due to a lisp or nervous system damage. Meanwhile, Fardan's ability to identify pictures is onsidered quite good, despite difficulty distinguishing some pictures. Repeating are difficult for him to distinguish. Repeating and relearn with pop-up media has been helpful for him.

Aksanul Taqwin's fluency of thought is considered ery lacking in seen in contexts (6) and (7). Many of his words and utterances are still incorrect, requiring significant help from his teacher. Aksanul Taqwin's speech fluency was rated as good because he could answer without nterruptions, he has a small voice disorder. However, he was still very hesitant when answering. The appropriateness of determining pictures is considered lacking because he has difficulty distinguishing between the pictures of a "flower" and "grass", and between the pictures of a "mountain" and "stone" due to his belownormal memory. However, with the use of pop-up media in the learning process, Aksanul Taqwin began to remember the lessons he had learned more frequently.

Contexts (8) and (9) Muakhir's fluency in thinking is considered lacking due to difficulties in remembering, which that he needs a lot of help from his teacher. Fluency in speech was also rated as lacking due to low memory ability, which in the omission of syllables in words such as "tree" being pronounced as "hon", and "seaweed" connected with the syllable "ut" without repeating from the beginning of the word. The appropriateness of determining the picture on the pop-up media is considered quite good, because he is able to show the picture, although with stammering and a little help from his teacher.

The use of pop-up book media has been proven to be effective in addressing language disorders in Tunagrahita children during the learning process. Language disorders in Tunagrahita children present unique challenges in the learning process. These children often struggle with language acquisition, comprehension, and expression. According to several research results, the use of pop-up book media has shown positive outcomes in various aspects of language development for Tunagrahita children. Pop-up books are more engaging and captivating for Tunagrahita children as they can visualize concepts in three-dimensional images (Kustiawan & Yafie, 2021).

Their stories demonstrate that all the participants agree that pop-up books are a very effective medium for learning language in many aspects of skills, such as writing, reading, listening, and storytelling (Arifatin, 2022). The use of pop-up book media has been found to enrich the vocabularies of Tunagrahita children, exposing them to new words and helping them improve their language skills. Moreover, pop-up books provide authentic images that simulate real-life conditions, making the learning experience more immersive and interesting for Tunagrahita children. The unique characteristics of pop-up books make them a valuable tool in addressing language disorders in Tunagrahita children. Research has shown that the use of pop-up book media is effective in addressing language disorders in Tunagrahita children during the learning process.

#### 5. Conclussion

The use of pop-up book media has shown promise in aiding the language development of children with Tunagrahita (intellectual disabilities) who have language disorders. By incorporating visual and interactive elements, pop-up book media provides a multisensory learning experience that can enhance



the language skills of children with intellectual disabilities.

Moreover, pop-up books have the advantage of visualizing concepts in lessons as three-dimensional images (Kustiawan & Yafie, 2021). This visual representation can be particularly beneficial for children with disabilities, as it allows them to better understand abstract ideas and make connections between concepts. For example, a pop-up book on animals can provide children with disabilities the opportunity to see and touch the three-dimensional representations of different animals, fostering their understanding of the diversity and characteristics of animals in a more tangible and interactive way. In addition to enhancing language skills and promoting engagement, pop-up books can also facilitate the development of an attitude to have an opinion in children with disabilities. By using pop-up books as a medium for storytelling, children with disabilities can actively participate in the narrative and make their own interpretations and judgments about the story and its themes. Furthermore, the utilization of pop-up book media for children with disabilities can promote inclusivity and create a more accessible learning environment. By integrating pop-up books into educational settings, children with disabilities can have equal opportunities to engage in stimulating and enriching reading experiences. Pop-up books provide a multisensory experience that can enhance children's understanding and retention of content. The utilization of pop-up book media for children with disabilities presents numerous advantages and benefits.

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#### 7. References

- Anggini, W Y., & Santosa, P P P. (2022). Speech Production in Special Needs Children (Down Syndrome): A Psycholinguistic Study at SLB Mekar Sari 1 Cibinong. <a href="https://scite.ai/reports/10.37010/lit.v4i2.855">https://scite.ai/reports/10.37010/lit.v4i2.855</a>.
- Ardika, N.P., Margunayasa, I.G., & Yudiana, K. (2022). *QR Code Assisted Pop-Up Book for Grade Two Elementary Schools*. <a href="https://scite.ai/reports/10.23887/jisd.v6i4.46505">https://scite.ai/reports/10.23887/jisd.v6i4.46505</a>.
- Astuti, N. dan Zulaeha, I. (2018). Violation of the Principle of Cooperation in Humorous Speech in the Ini Talkshow Event. *Seloka: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, 7(3). Retrieved from https://journal.unnes.ac.id/sju/index.php/seloka/article/view/28521.
- Behl, T., Kaur, G., Sehgal, A., Singh, S., Bhatia, S., Al-Harrasi, A., Zengin, G., Bungau, S., Munteanu, M., Brisc, M C., Andronie-Cioara, F L., & Brisc, C. (2021). *Elucidating the Multi-Targeted Role of Nutraceuticals: A Complementary Therapy to Starve Neurodegenerative Diseases.* https://scite.ai/reports/10.3390/ijms22084045.
- Cahyani, Devi Dwi. (2020). Penggunaan Media Pop-Up Book dalam Menanamkan Pendidikan Moral pada Anak Usia Dini. *JCMS*, *5*(1). https://journal.unesa.ac.id/index.php/jcms/article/view/11883.
- Ferawati, (2017). Gangguan Berbahasa Arab Bagi Anak Autis dan Alguran sebagai Terapi Pengobatan. Yogyakarta: Universitas Ahmad Dahlan.
- Indah, Rohmani Nur. (2017). Gangguan Berbahasa Kajian Pengantar. (Online) Ebook. Malang: UIN-MALIKI Press.
- Kushartanti, dkk. (2009). Pesona Bahasa. Jakarta: Gramedia Pustaka Utama.
- Kustiawan, U., & Yafie, E. (2021). The Effect of Storytelling Assisted by Pop-Up Media to improve



- language development skills and Attitude of Opinion. https://scite.ai/reports/10.37870/jogie.v11i18.271.
- Rakimahwati, R., Ismet, S., & Roza, D. (2021). Studi pengembangan Psikolinguistik Anak dengan Game Interaktif Berbasis Role Playdi Taman Kanak-kanak Fadhillah Amal 3 Kota Padang. https://scite.ai/reports/10.31004/obsesi.v6i3.934
- Kapa, L L., & Erikson, J A. (2019). Variability of Executive Function Performance in Preschoolers with Developmental Language Disorder. <a href="https://scite.ai/reports/10.1055/s-0039-1692723">https://scite.ai/reports/10.1055/s-0039-1692723</a>.
- Masitoh. (2019). Gangguan Bahasa dalam Perkembangan Bicara Anak. *Jurnal Elsa*, 17(1). <a href="https://jurnal.umko.ac.id/index.php/elsa/article/view/105">https://jurnal.umko.ac.id/index.php/elsa/article/view/105</a>.
- Newbury, D F., & Monaco, A P. (2010). Genetic Advances in the Study of Speech and Language Disorders. <a href="https://scite.ai/reports/10.1016/j.neuron.2010.10.001">https://scite.ai/reports/10.1016/j.neuron.2010.10.001</a>.
- Oktaviani, Y., Ismaya, E A., & Widianto, E. (2020). The Implementation of Think Pair Share Assisted with Pop Up Media Increases Students' Outcomes. https://scite.ai/reports/10.23887/jisd.v4i3.27145.
- Putri, E B P., & Noviani, E O. (2021). Comparison of Educational Media with Video and Pop-Up Book Towards Knowledge of Balanced Nutrition Guidelines in Elementary School Students. <a href="https://scite.ai/reports/10.33086/cej.v3i2.2426">https://scite.ai/reports/10.33086/cej.v3i2.2426</a>.
- Putri, V M., & Yaswinda, Y. (2022). Developing Scientific Based Pop-Up Media for Children Speaking Skill Development. <a href="https://scite.ai/reports/10.2991/assehr.k.220602.053">https://scite.ai/reports/10.2991/assehr.k.220602.053</a>.
- Sylvia, dkk. (2015). Pengaruh Penggunaan Media Pop-up Book terhadap Keterampilan Menulis Narasi Siswa Sekolah Dasar. *JPGSD*, *3*(2). <a href="https://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/15523">https://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/15523</a>.
- Yulianda, A. (2019). Faktor-Faktor yang Mempengaruhi Keterlambatan Berbicara Pada Anak. BAHASTRA: Jurnal Pendidikan Bahasa dan Sastra Indonesia, 3(2). https://jurnal.uisu.ac.id/index.php/Bahastra/article/view/1137.