

A Reading Prerequisite Program to Improve Beginning Reading Ability of Dyslexia Students

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Abstract: Learning difficulties in the aspects of reading, writing or spelling (dyslexia) are cases that are often encountered and require special programmed treatment to optimize children's abilities in accordance with their age development. The purpose of this study is to describe the program aimed at one of the second grade students at SDN 195 Isola who has dyslexia and his reading ability is at the pre-requisite stage so that the researcher formulates a program that focuses on the reading aspect. The research method used is descriptive qualitative through in-depth observation, interviews, assessment and documentation studies to explore what students need. The research results obtained are a hypothetical program formulation consisting of rationale, objectives, materials, strategies, and evaluations that have been validated so that it is feasible to be a guide in implementing learning to improve students' pre-requisite reading skills.

Keywords: Learning program; Reading prerequisites; students with dyslexia.

INTRODUCTION

Reading is a complex process involving physical and mental abilities that give meaning or understand certain patterns to be interpreted through the written picture. Abidin, Mulyati, & Yunansah, (2021). reports that reading can affect three important aspects, namely improving thinking skills, honing writing skills, and increasing one's knowledge. This illustrates that the reading aspect is related to other abilities such as cognitive, which is supported by the opinion of Kamhi & Catts in Rochyadi (2010) which states that learning to read also requires linguistic and cognitive abilities. For example, readers must have the ability to decode, recognize sight words, and associate what is read with the knowledge they have (Mather & Wendling, 2011). Of course, these abilities become the basis or prerequisites that need to be mastered by someone when they want to improve their reading skills. One way is through assessment to find out students' abilities as said by Hernawati et.al, 2023 assessment instruments that need to be implemented at the research stage, with this, this research must go through the assessment process first.

As is well known, some people experience problems in reading, writing, and spelling or commonly known as dyslexia. Dyslexia is a form of difficulty learning to read and write (Haifa et al., 2022; Murni, 2017), especially learning to spell correctly and express thoughts in writing, utilizing normal school opportunities and not showing retardation in other subjects, (Sudarji, 2017). Of course, this has a big impact on a person's life, especially in the academic aspect because it will make it difficult for someone to complete tasks related to reading. Snowling in Thasliyah, Lasmi, & Wiguna (2022) suggests that there are dyslexia sufferers, children are slow to learn to translate words and generalize new words that they have never seen before. An old clinical observation brought out a hypothesis that dyslexia is caused by problems at the level of phonological representation. The hypothesis observed difficulties in auditory sequencing, auditory discrimination, and relating auditory symbols to visual symbol sequences. Many studies have detailed auditory problems in dyslexia, narrowing down the deficit to one that affects the sound structure (phonology) of speech. Problems with phonology lead to difficulties in learning the orthography-phonology mapping, poor verbal short-term memory, problems in word

retrieval, picture naming, and other difficulties that include problems learning new spoken words.

Based on field findings in one of the regular schools in Bandung City, namely SDN 195 Isola, it was found that one of the second-grade students had impaired reading, writing, or spelling skills (dyslexia) so that the development of reading skills mastered did not reach the same development as their peers. When reviewed, a child's reading ability at the second-grade level should already be at the beginning reading stage. However, this student is at a very low stage of reading ability where the prerequisite aspects of reading itself have not been fulfilled. The impact of the problems that arise at school or at home is a sense of inferiority because they feel unable to compete with their peers, irritability, and avoiding questions or work related to reading. In addition, there needs to be special attention given by schools or educators and parents in providing reading instruction because of children's different abilities. Therefore, students need attention and assistance to be able to develop their reading skills through the formulation of programs through in-depth analysis so that they can provide appropriate services according to their needs and determine what steps need to be taken next.

METHOD

The research method used is descriptive qualitative. Presentation of data in the form of descriptions obtained from the results of assessments, observations, interviews and documentation studies, as said by Ali (1982) explaining that descriptive research methods are used to solve and answer problems that occur in the present. This research was conducted in one of the schools in the city of Bandung, namely SDN 195 Isola Bandung with the subject of one second grade student who had problems in reading, writing, spelling (dyslexia). In order to obtain data or information from these sources, researchers conducted documentation studies, observations, interviews and assessments that focused on reading skills in depth by involving educational practitioners and families who then analyzed the data, the validity of the data could be accounted for. (1) Observation was carried out in a week which was carried out three times for 60 minutes at each meeting and the researcher made notes while observing. (2) Interviews, which are open-ended questions, are addressed to class teachers and parents regarding student learning motivation, current student abilities, and learning methods used. (3) assessment was conducted by giving a series of tests focusing on the reading aspect, starting from giving tests based on the current grade level and then continuing to be lowered until it reaches the limit of the child's ability. (4) documentation study centered on the assessment and validation process with experts to obtain a hypothetical program that suits the child's current needs.

RESULT AND DISCUSSION

Result

This research has the goal of developing a program that can improve the reading prerequisite skills of dyslexic students according to their needs. The data needed in developing the program are factual conditions as a description of how the reading learning process received by students before the program is made, analysis of assessment results to find out specifically what students need in reading learning as a reference in making the program. The data obtained from the research results are then described and grouped systematically based on the focus of the problem and the research subject to make it easier for readers to understand this research. Furthermore, the results of this study will be described as follows:

Factual Conditions of Students' Reading Learning Based on Teacher and Parent Interview Results

Based on the results of interviews with teachers, it is known that there is no special treatment given to children even though they know they are not able to read well and their abilities are below the average of their peers. This is because it is difficult for the teacher to give special attention due to the large number of students in the class (24 people), the learning method used is also the syllable method which is used classically and its effectiveness on students' needs has not been known. Of course, this delay has an impact on other aspects such as the emergence of low self-esteem and irritability. The child's strategy in working on class problems also tends to guess because they cannot read the questions that have been given. Meanwhile, the results of interviews with parents unearthed information that children have good learning motivation when at home as evidenced by their willingness to do assignments and participate in additional learning outside the classroom well. Children tend to be afraid of making mistakes and cry easily when facing difficult conditions. The reading learning method applied by parents, namely the syllable method, harmonizes with the learning provided by the teacher at school.

Analysis of Assessment Results as a Basis for Formulating a Reading Prerequisite Program

Table 1. Analysis of Assessment Results

Aspect	Sub-aspect	Ability	Inability	Needs
Reading prerequisites	Phonology	-	Not yet able to read in the pre-reading sub-aspects of deleting syllables, deleting phonemes, and deleting rhymes	Development of pre-reading skills in the sub-aspects of deleting syllables, deleting phonemes, and deleting rhymes
	Morphology	-	Not yet able to read in the sub-aspects of root words, signals, decomposition, and deviation	Development of pre-reading skills in the sub-aspects of root words, signals, decomposition, and deviation.
	Orthography	Able to answer some questions in the receptive coding sub-aspect	Not yet proficient in expressive coding sub-aspects	Development of pre-reading skills in the expressive coding sub-aspect.
	Auditory Awareness	Able to answer in the semantics sub-aspect	Not able to answer in morpheme, syntax, and some phoneme sub-aspects.	Development of prerequisite reading skills in morpheme, syntax, and some phoneme sub-aspects.
	Visual Awareness	Able to answer and understand in visual discrimination,	Not yet capable of visual spatial in the right and left	Practice in recognizing right and left

figure ground, visual closure, visual spatial, and visual memory.	directions.	directions.
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The results of the above assessment show that the prerequisite aspects of reading have not been fully mastered by students so that learning to read in children needs to start from the basics so that researchers decide to create a program that starts from the prerequisite stage of reading for students as an advanced modality for children to master more difficult reading stages. According to Busro, (2016), pre-reading activities are teaching activities carried out before students carry out reading activities. In pre-reading activities, the teacher directs the activation of students' schemata related to the reading topic. Activating students' schemata can be done in various ways, with initial review, meaning mapping, anticipation guidelines, writing before reading, and creative drama.

A Hypothetical Program for Dyslexia Students Focused on Prerequisite Stages of Reading (Phonology and Morphology)

Based on the results of the assessment above, researchers formulated a reading prerequisite program that prioritizes two aspects, namely phonology and morphology, this is considered based on the mastery of the lowest aspects and considering the limited research time so that researchers limit the program, of course in the future this program can continue to be developed in line with student needs:

Table 2. A Hypothetical Program for Dyslexia Students

Rationale	Aspect	Sub Aspect	Overview of teaching materials	Method	Media	Evaluation
Not yet able to read in the pre-reading sub-aspects of deleting syllables, deleting phonemes	Phonology	<ul style="list-style-type: none"> ● Removal ● Segmentation ● Blending ● Substitution ● Addition 	Questions on the sub-aspects of deletion, segmentation, mixing, substitution, addition that will be taught are divided into several stages starting from phonemes, syllables, words in a sentence.	Phonics	Audio, Smartphone	Verbal test
Development of pre-reading skills in the sub aspects of root words, signals, decomposition, and deviation	Morphology	<ul style="list-style-type: none"> ● Root word ● Signal ● Decomposition ● Derivation 	<p>- Questions in the "base word" sub-aspect contain questions that require students to say what the base word sounds like in words that have affixes.</p> <p>- Questions on the "signal" sub-aspect contain questions that require students to connect words with the right affixes or add words to form a sentence.</p> <p>- Questions on the "decomposition" sub-aspect contain questions that require students to name the correct word from a word with inappropriate affixes.</p>			

- Questions on the "Derivation" sub-aspect contain questions that require students to add affixes to words that do not have affixes to form the right sentence.

The phonology aspect contains several sub-aspects of deletion, where this deletion is the deletion of phoneme parts (for example: deletion of the letter "F" from the word "Fire"), syllable deletion (for example: deletion of the syllable "ok" in the word "Book"), and word deletion (for example: deletion of the word "table" in "dining table") and then questioning the sound of the word after the phoneme, syllable or word is removed. While segmentation is the separation of sounds, if the separation of the sound of the phoneme part (example: separation of the sound of the word "j-u-s"), separation of syllables (example: separation of the sound "flo-er"), separation of the word "Play-Ball") then ask how many sounds are heard by students. The blending sub-aspect is the combination of sounds to form words or sentences, for example in mixing phonemes (the combination of the word "a-pel"), mixing syllables (for example: mixing the word "bo-ok"), mixing words (for example: mixing the word "dinning-table") and then asking what it sounds like after being combined. Sub-aspects of substitution in phonemes (e.g. substitution of the letter "E" by the letter "A" in the word "fire"), in syllables (e.g. substitution of the syllable "foo" by "fee" in the word "foot"), substitution of words (e.g. substitution of the word "box" by "round" in "round table") and asking what it sounds like after substitution. Sub-aspects of addition in phonemes (e.g. the word "and" when the ending is added with the letter "a"), in syllables (e.g. the word "thorn" when the ending is "an"), and in words (e.g. the word "chair" when the word "wheel" is added) and asking what it sounds like after the addition. Another aspect that is loaded is morphology which contains the basic word (example: the basic word of "reading" is?), signal (example: my sister is ... rope) then ask students what the right conjunction is, decomposition (example: my sister makes sweetener in the morning) then asks students what word is right to replace the word sweetener, derivation (my brother is riding a bicycle with his friend in the field) then asks students what affixes are right to complete the word bicycle to form a sentence that is comfortable to use.

Based on the available evidence, it can be concluded that the problem of delayed mastery of reading skills that are not in line with the ability of students' age is that they have not mastered the prerequisite reading skills, where if the prerequisite skills are low, the ability to read early or advanced as an advanced stage of learning will also be low. This happens in line with several references which reveal that phonological awareness is a prerequisite in reading skills because the sound foundation is the main key to understanding the relationship with the written symbol. According to Dewi in Rochyadi, E (2010) pre-requisite aspects of reading ability include auditory perception consisting of phonemes, morphemes, symbols, syntax. From the results of his research, the results of auditory perception tend to get high scores on reading skills tests, on the contrary, they get low scores on linguistic awareness, which is also low in reading skills, where linguistic awareness has a strong relationship in reading. The main function of pre-reading activities is to provide initial knowledge related to the aspects of reading to be understood, train students to know the purpose of reading, provide motivation and confidence. Prereading activities are a bridge to link a variety of knowledge that has a connection with the reading content. Another factor that supports optimal program implementation is the method used, where the method chosen in implementing this program is the phonics method. Explained

by Nopriyanti, (2012), the phonics method emphasizes words through the process of listening to letter sounds. At first, children are invited to recognize letter sounds and then the letters become syllables and words. To introduce the sounds of various letters, usually associate the letters with the first letters of various names of objects that are already known by children such as a with a picture of a chicken. In addition, as explained by Hindle 2007 (in Saragih & Widayat 2020), this phonics method is considered effective for improving reading skills, especially the ability to combine letters into a meaningful word. The purpose of this phonics method is to make children understand that there is a systematic and predictable relationship between written words and spoken sounds. (Phajane 2014 in Saragih & Widayat 2020).

Discussion

This research has clear objectives by carrying out several stages such as in the initial stage an assessment will be carried out as the main process to determine the abilities and needs of students as a factual basis for determining the program as what will be done next such as determining a factual program derived from real assessment results then given an action that will affect learning outcomes.

Factual Conditions of Student Reading Learning Based on Teacher and Parent Interview Results

Based on the results of teacher and parent interviews, it is said that children have high motivation in learning, so it will be the basic capital for training students' prerequisite skills as said by Amunga, Were, & Ashioya, (2020). Motivation is the impetus that a person must do something, because the child's motivation is very large in learning so that it will make learning more developed. Encouragement from the surrounding environment is also very influential so that it will further make learning increase as has been said by Fuad (1986) that the family environment is the first and main aspect in influencing child development. Children spend more time in the family environment, so families have a lot of roles in shaping children's attitudes and behavior and providing real examples to children.

Analysis of Assessment Results as a Basis for Formulating a Reading Prerequisite Program

Reading prerequisites as a modality for more difficult reading stages that require students to understand what is meant in the reading. From the encouragement of parents and a good environment and students who have high motivation in learning with the results of the above assessments which mostly contain good student modalities, therefore student needs are likely to be met. Parents need to create activities related to all domains of child development (cognitive, language, physical-motor, social-emotional, interaction-communication) in a fun way (Elliott & Olliff, in Sani, Wardany, & Herlina, 2022).

Hypothetical Program for Dyslexia Students Focused on Prerequisite Stages of Reading (Phonology and Morphology)

Programs aligned with student needs that focus on the prerequisite stages of reading, especially phonology and morphology with good student modalities will improve their reading skills, especially reading comprehension. As said by Attaprechakul, (2013). reading comprehension is the ability to read to understand the main idea, important details, and the whole understanding. With this high-level reading ability, students must first fulfill the prerequisite stages of reading. As said by Ou, et.al (2023) One-character nonword stimuli are component characters of polysyllabic words, which do not consist of words that

do not contain meaning. In accordance with the prerequisite content, which contains many words that do not contain meaning.

CONCLUSION

Based on the results of the analysis that has been carried out, the formulation of a hypothetical program for students is determined on the prerequisite aspects of reading by considering the abilities of students who are still below the average age, the results of the pre-requisite reading assessment that have not been fully mastered and considering the importance of this phase. It is expected that there will be an increase in competence, especially in prerequisite reading skills as a modality for students to master reading skills at a more difficult stage. The content of the program made refers to the results of the student assessment on the prerequisite aspects of reading which are limited to aspects of phonology (Removal, segmentation, blending, substitution, addition) and morphology (Root word, signal, decomposition, derivation) with consideration of research time and focus on short-term goals to be achieved during the research process. Of course, the material content of the program can be further developed in line with students' needs. This program has been validated by involving experts and parents so that it can be accounted for.

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