

Factor Analysis of Learning Difficulties in Independent Curriculum Science Learning in State Elementary Schools

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ABSTRACT

Education plays an important role in national development, and improving educational quality has become a priority of the Indonesian government through the implementation of the Merdeka Curriculum, which provides schools with greater flexibility to design learning according to students' characteristics and needs. However, learning difficulties in science subjects remain a challenge, influenced by factors such as ineffective teaching strategies, limited conceptual understanding among teachers, differences in students' learning styles, and environmental conditions at home and school. This study employed a qualitative approach to explore learning difficulties experienced by students implementing the independent learning curriculum. The findings show that students face learning difficulties in three main aspects: social interaction, perception, and memory. These difficulties affect students' ability to respond to teachers' questions, academic performance, motivation, and self-confidence. The results indicate the need for more effective teaching strategies that emphasize repetition, memory reinforcement, and the reduction of learning distractions, supported by the role of teachers and a supportive learning environment to help students overcome these challenges.

Keywords: Science Learning, Independent Curriculum, State Elementary Schools



INTRODUCTION

One important component in a country's development is education. The Indonesian government has made improving the quality of education a top priority. This is reflected in the implementation of the Merdeka Curriculum in 2013, which aims to give schools more freedom to develop a curriculum that suits students' characteristics and needs. In this way, students can choose the lessons they want, improve the quality of education, and produce superior human resources in education (Kemdikbud, 2022).

In the Independent Curriculum, Natural Sciences (IPA) is one of the prioritized subjects. Science learning in elementary schools has an important role in forming students' basic knowledge and understanding of science concepts. The aim of science learning in elementary school is to teach and equip students with the skills to acquire and apply science concepts, as well as to provide the basic knowledge that students need to continue to a higher level of education and to apply these concepts in everyday life. (Ministry of Education and Culture, 2022a). In the Merdeka Curriculum, science is expected to facilitate students to be independent and able to collaborate with other people, as well as understand how the universe works through empirical approaches that can be accounted for. (Ministry of Education and Culture, 2022a). Thus, science in elementary school plays a strategic role in developing critical thinking skills and increasing students' awareness of the importance of science in everyday life and in preserving the natural environment.

The Merdeka Curriculum has started, but there are still problems to be implemented, especially related to learning problems experienced by some students. Although learning difficulties are common in school, it is important to understand their causes. Several factors that can influence students' learning difficulties include lack of basic abilities, lack of motivation, lack of parental support, lack of learning facilities, and lack of teacher ability to teach. With the Independent Curriculum, teachers and the government must understand and overcome students' learning difficulties by improving the quality of education, improving students' basic abilities, and increasing students' desire to learn.

Previous research has shown that various factors can cause difficulties in learning science, such as inappropriate teaching methods, teachers' understanding of different concepts, different learning styles of students, and environmental factors both at school and at home. Internal factors such as students' interests, motivation, self confidence, study habits and aspirations can also influence the difficulty of learning science. Apart from that, external factors such as interests, motivation and ideals.

Previous research has shown that learning difficulties in science learning can be caused by various factors, including inappropriate teaching methods, lack of understanding of concepts by teachers, differences in student learning styles, as well as environmental factors both at school and at home. Internal factors such as students' interests, motivation, self-confidence, study habits and aspirations can also influence the difficulty of learning science. Apart from that, external factors such as a lack of learning media, material that is too dense, teachers who tend to dominate learning, and students' unfamiliar study habits can cause difficulties in learning science. (Awang, 2015).



The author conducted this research to analyze the factors that cause students' learning difficulties in learning science and science in the independent learning curriculum at SD Negeri 1 Karangnanas. The aim of this research is to explain the problems faced by students in learning science and science in the independent learning curriculum, as well as the factors responsible for these problems. By using a qualitative research approach, researchers can understand the phenomena that occur in the subjects studied and produce descriptive data in the form of written and oral documentation. Researchers obtained this data by analyzing the author's data using reduction, presentation and conclusion models. The results of the research show that in the science and science learning independent learning curriculum at SD Negeri 1 Karangnanas, internal factors such as interest, motivation, self-confidence, study habits and students' aspirations can influence the difficulty of learning science. External factors such as a lack of learning media, material that is too dense, teachers who tend to dominate learning, and students' unfamiliar study habits (Rahmah & Harahap, 2024; Rahmah & Afifa, 2023; Umami, 2022).

It is hoped that this research can help state elementary school teachers create better science learning designs that suit students' needs. These factors include lack of basic skills, lack of motivation, lack of parental support, lack of learning facilities, and lack of teacher ability to teach. Thus, this research can contribute to the development of education in Indonesia, especially in improving the quality of science education in state elementary schools (Fajri & Wulandari, 2022; Paramita et al., 2021; Uula et al., 2021).

Thus, this research will take an inverted pyramid approach, starting from an analysis of the factors that cause learning difficulties, then moving towards efforts that can be made to overcome these learning difficulties, thereby making a real contribution to improving the quality of science learning in state elementary schools. based on the Independent Curriculum.

METHODS

In this research the author used qualitative methods. A qualitative approach is defined as an approach whose orientation is to collect various information regarding existing events by understanding the phenomena that are discussed in the research. This research was carried out by observing, visiting the research object with the aim of describing the situation in order to answer the problem factually in the hope of gaining an understanding of the phenomenon being discussed in order to produce a theory which could later be useful for future researchers.

The instrument used is a person or human instrument, that is, the writer himself is required to be able to ask questions, analyze, photograph and construct the social situation being studied to make it clearer and more meaningful. Research is presented in descriptive form which describes and analyzes each individual in their life and thoughts. The object of the research is an analysis of factors in students' learning difficulties regarding the independent curriculum in state elementary schools. The researcher selected a sample of informants who had knowledge related to the object studied by the researcher.



The researcher uses qualitative data analysis techniques in the data analysis to select and sort the most important core of the information or data obtained after the data has passed the reduction stage which requires the researcher to look at the data, convey the data which is done by briefly describing the data.

RESULTS

1. Indicators of Social Learning Difficulties

Students who have learning difficulties show an attitude during learning activities, they will disturb their friends while studying, there are some students who just stay silent during group activities and don't socialize with their classmates. Students who have difficulty learning are less willing to ask questions from students who can and are less likely to try. This shows that there is a lack of support from social relationships. Students prefer to remain silent rather than ask questions to students who can and are reluctant to socialize with their classmates because they are often teased. This explanation is in accordance with learning difficulties based on social factors. Learning success is supported by classmates and other students, but the socialization of students with each other is very lacking.

2. Perception Learning Difficulty Indicators

Students who experience learning difficulties in recognizing or interpreting what they feel, see and hear. When students do practical learning about electrical circuits, it appears that the students only focus on imitating the practical stages in making an electric circuit, but when the teacher asks questions related to electrical circuits, many students just remain silent and do not answer the teacher's questions. When researchers asked several subjects, they focused and paid attention to the teacher, but many of them did not immediately understand. Most of them tried to focus on paying attention to the teacher's explanation, but still had to explain it repeatedly in order to understand the material. From the explanation above, it is known that the teacher explains the material, the students do not immediately understand the material, the teacher must use interesting learning media and explain repeatedly. Students have difficulty interpreting what they feel they see and hear, this is in accordance with the indicator of learning difficulties, namely perception. For this reason, students must be more focused and active in learning, teachers must be patient in guiding students to understand the material being studied.

3. Indicators of Memory Learning Difficulties

When students repeat material that has been explained and studied, students have difficulty remembering the material. This can be seen when the teacher repeats last week's material and asks students about the material, they tend to remain silent and have to be provoked to remember it. This can be caused by students who have a habit of playing for too long so they are lazy to study and repeat the material learned at school. There are too many student activities that are not useful so it is difficult to remember the lesson material because students are still carried away by thinking about playing at school. When interviews were conducted with the students' parents at home, it was seen



that some of the students were found playing with cellphones and playing outside the house with friends. When researchers asked the parents about what activities their children did after school, most of them answered that their children only played until the afternoon. every day. The students' after-school activities, which were explained by the parents, had an impact on learning. Students were reluctant to study and preferred to play. In the end, students did not repeat the material learned at school, so students would forget the material, even the habit of playing was carried over to school. While at school, students were more interested in playing than studying.

DISCUSSION

1. Indicators of Social Learning Difficulties

In this research, the main focus is on the behavior and attitudes of students who experience learning difficulties, as well as their impact on social interactions and the learning process in the classroom environment. The following is a discussion based on the statements provided. The attitude of students who disturb their classmates during learning activities can be caused by several factors. One of them is the student's inability to understand the material being taught. The frustration and confusion that arise from difficulty understanding material can encourage students to seek attention in less productive ways, such as annoying their classmates. Additionally, the need for attention or validation from peers may also be a cause of this behavior. In some cases, disruptive behavior can be triggered by a student's need to get attention or recognition from his friends, especially if the student feels unnoticed or unappreciated in social interactions (KPAI Team, 2013).

Students who remain silent during group activities may have difficulty interacting socially or feel uncomfortable in an environment that requires cooperation. This can be caused by a lack of confidence in communicating or uncertainty in expressing their ideas or opinions. Lack of social skills or social anxiety may also be a contributing factor. In some cases, students who are not active in group activities may have a fear of speaking in front of other people or have excessive anxiety when interacting with their friends. Lack of social skills can also be an obstacle for students to actively participate in group activities, such as difficulty in listening or communicating ideas.

The attitude of students with learning difficulties who are reluctant to ask other students can indicate a lack of social support from their learning environment. There may be a negative perception that asking questions will result in the student being ridiculed or considered unintelligent by their classmates. This may result in students choosing to remain silent rather than face these risks. In some cases, students who are not confident or have a fear of asking questions can have difficulty understanding the material, because they do not have enough resources to get help. Negative perceptions about asking questions can also be triggered by a culture that does not support students' courage to ask questions and ask for help, so that students feel unsafe interacting with their friends.

The attitude of students who are reluctant to socialize with their classmates and feel reluctant to ask questions because they are afraid of being ridiculed reflects a lack of social support and the existence of social stigma towards students who experience learning difficulties. The presence of ridicule or teasing from classmates can create an unsupportive environment for students who are



experiencing learning difficulties. In some cases, students who experience learning difficulties can experience frustration and confusion which can affect their courage to ask questions or interact with their friends. The negative perception that asking questions will cause the student to be ridiculed or considered unintelligent by his classmates can result in students choosing to remain silent rather than face this risk. Lack of social support and social stigma towards students who experience learning difficulties can worsen the situation, so that students feel unsafe interacting with their friends. To overcome this, there is a need for cooperation between guidance and counseling teachers at schools, homeroom teachers, subject teachers, and students' parents to provide better assistance and support to students who experience learning difficulties (Husaini & Lestari Purwanti, 2017) .

The behavior and attitudes of students who experience learning difficulties can have a significant impact on the learning process in the classroom. Distractions while studying, inactivity in group activities, and the inability to ask questions can hinder understanding of material, reduce the effectiveness of collaboration between students, and hinder students' overall social and emotional growth.

2. Perception Learning Difficulty Indicators

In discussing research based on statements by students who have learning difficulties in recognizing or interpreting information that is perceived, seen and heard during practical learning about electrical circuits, several aspects need to be considered. The behavior of students who only focus on imitating the practical stages in making an electrical circuit but have difficulty answering questions from the teacher shows that they may pay more attention to physical actions than understanding the underlying concepts. This indicates that there is a gap between practical experience and the necessary conceptual understanding. In some cases, students who only focus on imitating the practical stages without understanding the basic concepts can experience difficulty in answering the teacher's questions. This can be caused by a lack of understanding of the concepts underlying the physical actions they perform. Students who only pay attention to physical actions without understanding the basic concepts may not have the ability to answer questions related to the concepts they are doing.

To overcome this difficulty, teachers can use more effective strategies in teaching basic concepts related to electrical circuits. This strategy can engage students in more interactive activities and allow them to understand the basic concepts underlying the physical actions they perform. For example, teachers can use simulations or models that allow students to understand how electrical circuits work without having to perform complex physical actions. In this way, students can understand the basic concepts underlying physical actions and have the ability to answer teacher questions better (Amalia et al., 2022).

Many students who remain silent and do not answer questions from the teacher indicate that they have difficulty responding to questions or expressing their understanding. This can be caused by not understanding the material, social anxiety, or low self-confidence in speaking in front of the class. Even though many students try to focus and pay attention to the teacher's explanation, repeated explanations are still needed to understand the material. This suggests that students may



have difficulty absorbing information presented verbally or visually, and require more time or a different learning approach to understand the material.

These findings highlight the importance of diverse and inclusive learning approaches in dealing with students who have different learning styles and levels of understanding. Integrating various learning methods, such as practical demonstrations, group discussions, and the use of multimedia, can help overcome learning difficulties experienced by students and facilitate better understanding.

Teachers have an important role in helping students overcome their learning difficulties. They need to be sensitive to individual student needs and be able to present material in a clear and engaging manner, as well as providing additional support and assistance when needed. Apart from that, teachers also need to create a classroom environment that is supportive, inclusive, and has the courage to ask questions without fear or shame.

3. Indicators of Memory Learning Difficulties

In discussing research based on statements regarding students' difficulties in remembering the material they have studied, several aspects need to be considered. The behavior of students who have difficulty remembering the material they have studied can be an indication of limitations in remembering or storing information in long-term memory. Factors such as distraction or lack of focus when material is taught, as well as a lack of repetition and practice, can affect a student's ability to retain the information in their memory. In some cases, student behavior that has difficulty remembering material can be caused by limitations in remembering or storing information in long-term memory. Factors such as distraction or lack of focus when material is taught, as well as a lack of repetition and practice, can affect a student's ability to retain the information in their memory. To overcome this difficulty, teachers can use more effective strategies in teaching material, such as using more interactive learning methods and providing sufficient repetition and practice (Annisa & Mailani, 2023).

The statement that students have a habit of playing for too long and lack motivation to learn can be a significant factor in their difficulty remembering lesson material. Too much time spent on non-academic activities such as playing can reduce the time available for studying and reviewing material, thereby disrupting the retention process. Focus distractions and less useful activities, such as playing games or spending time on social media, can interfere with students' ability to focus and learn effectively. This can lead to a lack of concentration when the material is taught and difficulty in processing and retaining the information learned.

Difficulty in remembering course material can have a negative impact on students' academic performance, because they may not be able to master the material taught and be unable to answer the teacher's questions or take exams well. This can contribute to a decrease in students' motivation and self-confidence in the educational context. These findings indicate the need for further research to understand the factors that influence students' ability to remember course material, as well as to develop more effective learning strategies in overcoming these difficulties. Approaches that focus



on repetition, strengthening memory, and reducing distractions during study time can help improve students' ability to remember and understand course material.

CONCLUSIONS

This research highlights several factors that influence students' difficulties in remembering lesson material. Focus disorders, excessive playing habits, and less useful activities are factors that can interfere with students' ability to retain information in long-term memory. The impact of this can include difficulties in answering teacher questions, lack of academic achievement, and decreased student motivation and self-confidence in the educational context.

Students' difficulties in remembering lesson material indicate the need to develop more effective learning strategies. Approaches that focus on repetition, strengthening memory, and reducing distractions during study time can help improve students' ability to remember and understand course material. In this case, the role of teachers and a supportive learning environment is very important to help students overcome their learning difficulties.

Taking these findings into account, more active and holistic intervention measures are needed to help students overcome their learning difficulties. In addition, further research can also be carried out to deepen understanding of the factors that influence student learning difficulties and to develop more effective and inclusive learning strategies in overcoming this problem.

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