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Factors of Learning Difficulties of Grade III Students in the Mathematics Learning Process at MI

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ABSTRACT

This study aims to analyze the internal and external factors causing learning difficulties in mathematics among third-grade students at MI Al Iman Sorogenen, Timbulharjo, Sewon, Bantul, and to describe the school's efforts to overcome these difficulties. The background of this research is the low learning achievement of students, where out of 27 students only two achieved the Minimum Mastery Criteria (KKM) score of 75. Mathematics is often considered a difficult subject by most students. This qualitative research employed subjects including third-grade students, mathematics teachers, homeroom teachers, and parents. Data collection techniques included interviews, observation, documentation, and questionnaires. Data analysis used the Miles and Huberman Field Analysis model and Relative Frequency Distribution Tables to calculate questionnaire percentages. Data validity was ensured through triangulation. The findings reveal that learning difficulties are influenced by internal factors (physiological: learning readiness and study habits; psychological: difficulties in counting, language and reading skills, and learning interest) and external factors (family and school environment). The school has implemented efforts such as tutoring after school hours, collaboration with parents, and individual approaches to students. Other potential strategies include remedial mathematics teaching, enrichment programs, and the implementation of drill methods.

Kata Kunci

Kata kunci pertama;
Kesulitan Belajar Siswa,
Upaya-upaya Mengatasi Kesulitan Belajar Siswa,

ABSTRAK

Adanya temuan rendahnya prestasi belajar siswa khususnya pada mata pelajaran matematika karena adanya faktor-faktor kesulitan belajar yang dialami siswa kelas III. Pembelajaran matematika merupakan pelajaran yang notabene dianggap sulit oleh sebagian besar siswa. Hal tersebut juga terjadi di MI Al Iman Sorogenen kelas III. Menjadi suatu hal yang menarik untuk diteliti adalah ketika dari 27 siswa yang lolos KKM hanya ada dua anak. Penulis telah mengamati faktor-faktor kesulitan belajar yang dialami siswa dan bagaimana upaya-upaya yang

Proses Pembelajaran Matematika.	telah dan mungkin bisa dilakukan untuk mengatasi kesulitan belajar yang dialami siswa tersebut, khususnya dalam proses pembelajaran matematika. Jenis penelitian ini adalah penelitian Kualitatif. Subjek penelitian adalah siswa kelas III, guru mata pelajaran matematika, guru kelas, dan orangtua siswa. Pengumpulan data dilakukan menggunakan wawancara, observasi, dokumentasi, dan kuisioner (angket). Analisis data menggunakan Analisis Lapangan Milles and Huberman dan Tabel Distribusi Frekuensi Relatif untuk menghitung hasil prosentase angket. Keabsahan data menggunakan Triangulasi. Hasil penelitian ini dapat diperoleh dari hasil wawancara dan data angket yang dapat disimpulkan sebagai berikut: Faktor-faktor kesulitan belajar yang dialami oleh siswa kelas III khususnya pada mata pelajaran matematika di MI Al Iman Sorogenen meliputi Faktor Internal dan Faktor Eksternal. Faktor Internal siswa adalah faktor fisiologis seperti kesiapan belajar dan kebiasaan belajar siswa, dan faktor psikologis adalah kesulitan dalam menghitung, kesulitan dalam bahasa dan membaca, dan minat belajar. Sedangkan, Faktor Eksternal siswa meliputi keluarga dan sekolah. Upaya-upaya yang telah dilakukan oleh pihak sekolah dalam mengatasi kesulitan belajar siswa adalah bimbingan belajar (les) setelah jam pembelajaran selesai, kerjasama dengan orangtua/walimurid, serta pendekatan kepada siswa. Sedangkan, upaya-upaya lain yang mungkin bisa dilakukan dalam mengatasi kesulitan belajar siswa di sekolah adalah pengajaran remedial matematika, program pengayaan, dan penerapan metode driil (latihan).

INTRODUCTION

Mathematics learning at the elementary school level plays an important role in shaping students' logical, systematic, critical, and creative thinking abilities. Mathematics not only functions as an academic subject but also serves as a foundation for developing problem-solving skills needed in daily life. However, the reality in the field shows that mathematics remains one of the subjects considered difficult by most elementary school students.

The problem of learning difficulties in mathematics among elementary school students is an important issue that requires serious attention from various parties, including teachers, schools, and parents. Based on initial observations and interviews with the third-grade mathematics teacher at MI Al Iman Sorogenen, Timbulharjo, Sewon, Bantul, it was found that out of 27 students, only 2 students were able to achieve the Minimum Mastery Criteria (KKM) for mathematics with a minimum score of 75. This indicates that approximately 92.5% of students have not achieved learning mastery.

Previous research has examined learning difficulties in mathematics among elementary school students. Earlier studies explained that learning difficulties in mathematics are influenced by psychological factors, cognitive abilities, learning environment, and family support. However, previous research remains limited to the analysis of students' cognitive abilities and has not comprehensively examined the relationship between internal and external factors in mathematics learning.

The research gap lies in the lack of comprehensive studies on factors causing learning difficulties in mathematics within the context of Madrasah Ibtidaiyah. This research supports previous studies on learning difficulties in mathematics while expanding the discussion through in-depth analysis of internal and external factors as well as treatment efforts.

The novelty of this research lies in the comprehensive analysis of physiological, psychological, family, and school factors influencing students' learning difficulties in mathematics. Additionally, this research combines observation, interview, documentation, and questionnaire results to obtain more comprehensive data.

This research aims to: (1) analyze the factors causing learning difficulties experienced by third-grade students in the mathematics learning process at MI Al Iman Sorogenen, Timbulharjo, Sewon, Bantul; and (2) describe the efforts made by the school to overcome students' learning difficulties in mathematics.

METHODS

This research uses a qualitative approach with a descriptive analytical research type. The research was conducted at MI Al Iman Sorogenen, Timbulharjo, Sewon, Bantul, Yogyakarta from November 2016 to January 2017.

The research subjects included mathematics teachers, third-grade homeroom teachers, third-grade students, and parents/guardians. The sampling technique used was purposive sampling, selecting nine students based on their mathematics learning outcomes on the final semester examination.

Data collection techniques were carried out through observation, semi-structured interviews, documentation, and questionnaires. Observation was conducted to understand the mathematics learning process in the classroom. Interviews were conducted with teachers, students, and parents to obtain in-depth information regarding factors causing learning difficulties in mathematics.

Documentation was used to obtain student learning outcome data and photographs of learning activities.

The research instruments included observation guidelines, interview guidelines, documentation sheets, and questionnaires. Data analysis used the Miles and Huberman model consisting of data reduction, data presentation, and conclusion drawing.

Data validity was ensured through source triangulation and technical triangulation by comparing the results of observation, interviews, documentation, and questionnaires.

RESULTS AND DISCUSSION

A. RESULTS

1. Learning Difficulties

   Learning difficulties essentially refer to problems that cause a student to be unable to follow the learning process properly like other students in general due to certain factors, resulting in delays or even inability to achieve learning goals as expected.

   According to Abu Ahmadi and Widodo Supriyono, factors causing learning difficulties are divided into two categories:

   a. Internal Factors (within the child themselves): Physiological Factors, Psychological Factors
   b. External Factors (outside the child themselves)

      Influenced by social factors, causes of learning problems in students such as family factors, school, playmates, and the broader community environment.

2. Learning Process

   According to Reber, process means specific ways or steps by which certain changes are brought about to achieve specific results. Meanwhile, learning is a translation of "instruction." This term is heavily influenced by cognitive-wholistic psychology, which places students as the source of activity. Influenced by technological development assumed to make it easier for students to learn everything through various media such as printed materials, television programs, images, audio, etc. This encourages changes in teachers

in managing the teaching-learning process, from teachers as learning resources to teachers as facilitators in teaching-learning. Thus, it can be concluded that the learning process is the way or steps taken by a teacher in managing a teaching-learning activity using various media to make it easier for students to learn everything about science and technology.

A learning process can be said to be successful if it has achieved the expected goals in the learning process itself. Learning outcomes are seen in the learning achievements obtained by students.

Learning outcomes are abilities acquired by children after going through learning activities. Learning itself is a process of a person trying to obtain a form of relatively permanent behavioral change. In programmed and controlled learning activities, it is called learning activities. Children who succeed in learning are those who successfully achieve the instructional learning objectives.

The function of learning outcome assessment in the teaching-learning process is as follows:

a. To determine whether teaching objectives have been achieved, particularly specific instructional objectives.
b. To determine the effectiveness of the teaching-learning process conducted by the teacher.

Regarding the discussion of learning difficulties in the learning process, especially mathematics, this research uses Piaget's cognitive learning theory as a supporting learning theory. The purpose of using this theory is to understand the thinking patterns of third-grade students in the mathematics learning process, as seen from their first semester examination scores.

According to Piaget, children are viewed as active organisms that develop with internal impulses and specific developmental patterns. Piaget sees that cognitive development is the result of children's efforts to understand and respond to their world. Jean Piaget developed his theory based on views of mathematical structures and children's structures, combining several mathematical foundations.

3. Mathematics

According to the Great Dictionary of the Indonesian Language, mathematics is the science of numbers, relationships between numbers, and operational procedures used in solving problems concerning numbers.

According to NCTM 2000 (Dodge, Colker, Heroman), the components of mathematics are as follows:

a. Number Concepts

b. Counting

c. One-to-one Correspondence

d. Patterns and Relationships

e. Geometry and Spatial Sense

f. Measurement

g. Data Collection, Organization, and Representation

Dienes stated that each concept or principle in mathematics presented in concrete form can be well understood. This implies that objects in the form of games play a significant role when properly manipulated in mathematics teaching. Dienes divided the stages of learning into six stages:

1. Free Play
2. Games
3. Searching for Communalities
4. Representation
5. Symbolization
6. Formalization

4. The Mathematics Learning Process at MI Al Iman Sorogenen

During the mathematics learning process in the classroom, researchers conducted several observations according to the mathematics subject schedule at MI Al Iman Sorogenen. Based on observation results, it can be concluded that the mathematics learning process took place with the teacher always greeting before and after learning, and explaining the material to be discussed. In the process, the teacher used lecture methods, question and answer, and assignments.

According to the researcher, at the beginning of learning, the teacher did not provide motivation or convey learning objectives to students before the material was presented, nor when ending the lesson. The unavailability of teaching aids and incomplete learning media in explaining material also caused students to still find it difficult to understand the material, resulting in students being unable to complete assignments maximally. These observation results are also included in the external factors of learning difficulties experienced by students.

5. Factors Causing Learning Difficulties Experienced by Third-Grade Students

1) Internal Factors (Within Students)

Internal Factors Questionnaire Results

Table 1. Hasil Angket Faktor Internal Siswa

No. Item	Answer Choice	N (Total Correct Answers)	F (Student Answers)	Percentage
1-11	Yes	297	216	73 %
	No		81	27 %
	Total	297	792	100 %

The table shows that there are still students who experience learning difficulties, with 73% answering "YES" and 27% answering "NO".

a. Physiological Factors

- Student Learning Readiness: Results obtained from parents indicate that student learning readiness is still less than optimal because children are not accustomed to having breakfast. Snacks are distributed during the first break at 08:45, which affects student development.
- Student Study Habits: From parents' answers, it can be concluded that children's study habits are still lacking; children rarely want to study, which will negatively impact learning outcomes if left unaddressed.

b. Psychological Factors

- Difficulties in Counting: Based on interview results, mathematics is still considered difficult by most students, leading many to avoid mathematics, similar to other students who have problems solving calculation problems.
- Difficulties in Language and Reading: From these answers, it can be concluded that some students still experience learning obstacles due to not being fluent in reading.
- Student Learning Interest: From interview answers, learning difficulties experienced by students are due to laziness or lack of interest in learning both at home and school. This negatively impacts student learning outcomes.

2) External Factors (Outside Students)

Table 2. External Factors Questionnaire Results

No. Item	Answer Choice	N (Total Correct Answers)	F (Student Answers)	Percentage
1-9	Yes	243	148	61 %
	No		95	39 %
	Total	243	243	100 %

The table shows that students also experience learning difficulties from external factors that can influence their learning outcomes. Students answering "YES" accounted for 61% and "NO" for 39%.

a. Family Factors

From interview results, it can be concluded that there are still parents who do not accompany their children in studying and have not provided optimal attention, resulting in children lacking motivation in learning. This is very valuable for children's development in achieving better learning outcomes.

b. School Factors

1. Teachers: From one parent's answer, teachers still lack attention to students' learning conditions both in and outside the classroom. This may be due to the large number of students and incomplete learning support tools. Communication between teachers and parents is also not yet well established, despite its benefits for student learning progress.
2. Students: In the teaching and learning process in the classroom, teachers cannot always manage students to be quiet and create a conducive atmosphere because each student has various characteristics.
3. Mathematics Learning: Based on teachers' answers, the mathematics learning process has not been optimal due to unavailable teaching aids and learning media. Additionally, factors also exist in students who still have learning difficulties due to lack of concentration, being preoccupied in class, etc.

3) Efforts to Overcome Learning Difficulties at MI Al Iman Sorogenen

Efforts that have been made to overcome student learning difficulties include implementing tutoring after school hours, collaborating with parents, and making individual approaches to students.

To overcome learning difficulties in third-grade students at MI Al Iman Sorogenen, the school may need to add other efforts:

a. Remedial Mathematics Teaching: This can be done to help students who still experience difficulties in solving calculation problems so that students with such difficulties can be immediately assisted and improve their learning outcomes.
b. Enrichment Program: This program is intended for students with higher intelligence levels than others. The purpose of this program is to train high-achieving students to share knowledge and help their peers understand the material being discussed (peer tutoring), assisting the teacher in explaining material.

B. DISCUSSION

The research results show that students' learning difficulties in mathematics are influenced by internal and external factors.

Internal factors include student learning readiness, study habits, difficulties in counting, difficulties in reading mathematics problems, and low student learning interest. Some students are not accustomed to having breakfast before going to school, causing lack of focus in learning. Additionally, students experience difficulties in basic calculation operations and understanding mathematics word problems.

External factors come from the family and school environment. Lack of parental attention to children's learning activities and limited learning media cause low student learning outcomes. Teachers also predominantly use lecture methods, causing students to become bored and less active during learning.

These findings align with Piaget's theory stating that cognitive development affects students' logical thinking abilities in understanding mathematical concepts. Additionally, Dienes' theory emphasizes the importance of using concrete media and games in mathematics learning so that students more easily understand abstract concepts.

The school has made several efforts to overcome student learning difficulties, such as implementing additional tutoring, individual approaches to students, and collaboration with parents. This research also recommends using more varied learning media, remedial mathematics programs, and drill methods to improve students' mathematical abilities.

This is supported by Buton's statement (in Abin Syamsudin's book):

"A student is said to have failed if within a certain time limit they do not achieve the minimum level of mastery in particular work... failed if they cannot achieve the expected achievement based on their ability level, intelligence, talent... failed if they cannot realize developmental tasks, including social adjustment according to their organismic pattern at a certain developmental stage... failed if they do not achieve the required level of mastery as a prerequisite for continuation, which can be classified as slow learners or immature."

From Buton's statement above, it can be reinforced with interview and observation results stating that factors causing student learning difficulties are divided into two: internal and external.

External factors influencing student learning outcomes so that students can be said to have learning difficulties are family and school factors. Family factors refer to lack of parental attention to their children's development, causing children to feel less motivated in their learning. School factors include teachers, students, and the learning process. The methods used by teachers are still limited, students still like to disturb friends or talk among themselves in class, causing other students to have difficulty concentrating, and the learning process is still hampered by the unavailability of teaching aids and incomplete learning media, resulting in students not optimally understanding mathematics material.

This is supported by Piaget's theory, which states that the child's mental world consists of two structural models: schemas and operations. Schemas are information packages, each related to one aspect of the world, including objects, actions, and abstract concepts. Sensory-motor schemas include how the five senses work in humans: seeing, feeling, hearing, and reaching. Schemas enable individuals to use symbols and think logically. Operations are rules that apply to knowledge.

To overcome learning difficulties experienced by students, the school has made several efforts, including implementing tutoring after school hours, collaborating with parents, and making individual approaches to students. Efforts that have not been made and might be possible at this school include Remedial Mathematics Teaching and Enrichment Programs, more specifically aimed at students with high intelligence levels.

This is also supported by Dienes, a mathematician who focused on teaching methods for children. If efforts to overcome learning difficulties experienced by students in the mathematics learning process are combined with Dienes' theory through six stages of games: 1) Free Play, 2) Games, 3) Searching for Communalities, 4) Representation, 5) Symbolization, 6) Formalization, this will attract students to enjoy the mathematics learning process more, so that students with learning difficulties can be helped by these game stages. This will also help facilitate the delivery of mathematics learning

material because students will more easily capture and understand what the teacher has conveyed.

CONCLUSION

The learning difficulties in mathematics experienced by third-grade students of MI Al Iman Sorogenen are influenced by internal and external factors. Internal factors include learning readiness, study habits, difficulties in counting, ability to read mathematics problems, and low student learning interest. External factors include lack of parental attention, limited learning media, less varied learning methods, and less conducive classroom conditions.

Efforts made by the school to overcome learning difficulties in mathematics include implementing additional tutoring, collaboration with parents, and individual approaches to students. This research recommends the implementation of remedial teaching, use of concrete media, and innovative learning methods so that students' mathematics learning outcomes can improve.

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