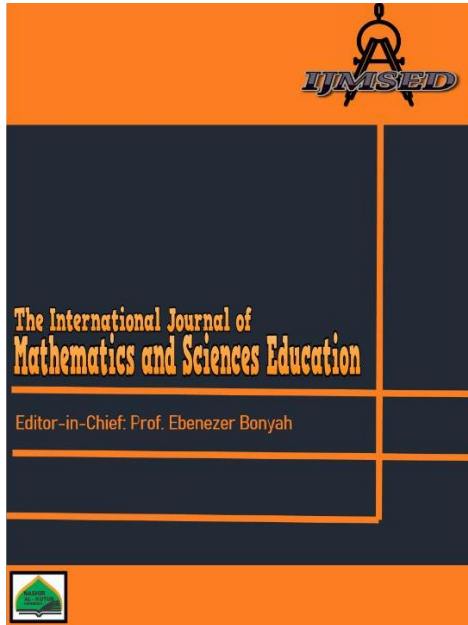




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### Observation of mathematics learning results in Al Biruni Class IV students

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## Observation of mathematics learning results in Al Biruni Class IV students

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### Abstract

This study aimed to observe the results of learning mathematics in fourth-grade students at SDI Al Biruni. The observation method was employed to understand the level of students' understanding of mathematics material and the effectiveness of teaching methods used in the school. The study involved 30 grade IV students as observation subjects. Data were analyzed through qualitative analysis to identify trends and patterns in the observations. The results of this study are expected to have provided an overview of the extent to which grade IV students at SDI Al Biruni mastered mathematics and offered insights into possible improvement efforts in the learning process.

**Keywords:** Learning outcomes, mathematics, g students

### 1. Introduction

Education is the most important part of the progress of a country because the progress or decline of a country is largely determined by it. For the progress of a country and a country, quality education is very important. Basic education is the most important level in education because it is here that students receive initial knowledge that will determine their next steps. The learning process is a problem that often occurs. Learning is a process of activity that allows teachers to teach and students to receive subject matter systematically taught by teachers and influence each other in learning activities to achieve the desired goals in the learning environment (Mujtahidin, 2014: 6).

In an educational institution, learning is the core of the educational process. Learning is a change in knowledge, skills, and attitudes, as well as learning standards (Dadri et al., 2019). Learning is said to be successful or of good quality if all students are actively involved in the learning process physically, mentally and socially. They also show a strong enthusiasm for learning and self-confidence (Mulyasa in Asiyah, 2014). Thus, the teacher's efforts to improve student learning outcomes are very important because student learning outcomes determine the success of learning, especially in terms of learning Mathematics for grade IV students.

According to Rahayuningsih (2017), mathematics is a universal science which is responsible for the development of various fields of science and technology. Apart from that, it plays an important role in various other disciplines and enhances human thinking abilities. Because mathematics is taught at every level of education, satisfactory results are expected. Therefore, mathematics lessons must be given to all students starting from elementary school to build the ability to think logically, analytically, systematically, critically, creatively, and cooperatively. However, teacher-centred teaching and learning approaches still dominate classroom learning today. Teachers still provide information to students

with the lecture method, so students are less active and do not understand what is being taught. This condition resulted in poor learning for students.

Learning is a process and activity that is always carried out by humans from the fetus, cradle, and development of children, adolescents, and adults, according to the principles of lifelong learning. However, learning is a teacher's intentional effort to make students learn actively and increase their creative thinking. The main purpose of learning activities is to provide students with the ability to process and acquire knowledge, abilities, and attitudes independently. Students are expected to be active, motivated, and happy to take part in interesting and meaningful learning activities (Mulyasa, 2013:20). Learning is a process of changing behavior caused by the interaction between a person and his environment. Learning outcomes are consistent, positive, functional, directed, and active (Pane & Muhammad 2017).

In addition, AL BIRUNI's SDI is still low. Poor learning outcomes cannot be separated from teachers and students. The observation results show that the learning is mostly conventional and the methods lack variety. In addition, teachers do not innovate in learning mathematics, so students are not interested in learning. In delivering material, the teacher still uses a lecture and drill approach. Because they only listen, students tend to be passive. Students are not enthusiastic about following the lesson, are not focused during the learning process, and do not pay attention to the teacher's explanation. They are also unable to understand the material being taught.

In addition, students are not used to solving problems through discussion while studying. Students with high abilities are more involved in group learning, so students with low abilities do not understand what is being learned in groups. Students with low abilities are not happy with the learning process because the discussions are still conventional.

Nurhadi (in Syafaruddin et al., 2019: 80) defines learning outcomes as student achievements that achieve subject values and change their behavior as a result of learning activities. Learning outcomes can also be defined as student achievement in the form of acquisition or level of ability to follow the learning process briefly with the desired results being achieved. According to Djamarah (in Syafaruddin, et al. 2019: 80), there are three components that affect learning outcomes: individual factors, stimulus factors, and learning planning factors.

1. Individual Factors: These individual factors greatly influence student learning activities because growth and age go hand in hand with growth and development. As a person matures, various physiological functions develop.
2. Stimulus Factors: Factors that come from outside the individual that encourage reactions or changes in the affirmation and composition of the external environment that are received are known as stimulus factors.
3. Learning Design Factors: The teacher's teaching method greatly influences student learning. Teachers can design learning using effective and innovative models so that students are interested and the learning process goes well.



## 2. Methods

This research was conducted at SDI AL BIRUNI which is located in Pendong Hamlet, Bintang Rinjani Village, Suralaga District. The location of SDI AL BIRUNI is right on the edge of the highway so it is strategically located. Implementation of class action research (CAR) began by asking permission from the school principal on Tuesday, August 8 2023, then proceeding to ask permission from the class IV teacher at SDI AL BIRUNI, followed by observations on Thursday, August 10, 2023. The population of this study were all class students. IV SDI AL BIRUNI A total of 10 students, the number of male students is 5 students and the number of female students is 5 students

Data collection techniques used in this study include observation and tests. The research instruments used were observation guidelines and Eid tests. Observation guidelines are used to observe the process of teaching and learning activities of teachers and students and study results test sheets to determine the learning outcomes of class IV SDI AL BIRUNI.

## 3. Findings and Discussion

The research results from class IV SDI AL BIRUNI show that teachers only use conventional learning approaches, namely lectures, during the learning process. The teacher teaches by sitting in groups and just explaining the subject matter. Classroom learning focuses more on the teacher or teacher learning center. Because students are less active while studying, teachers should encourage students to participate in questions. In addition, many students are sleepy, play alone, or talk to their friends so they don't listen to the teacher's explanation. As a result, this makes it difficult for students to understand the material being taught and has an impact on their learning outcomes. Table 1 is a presentation of test results in class IV SDI AL BIRUNI in mathematics.

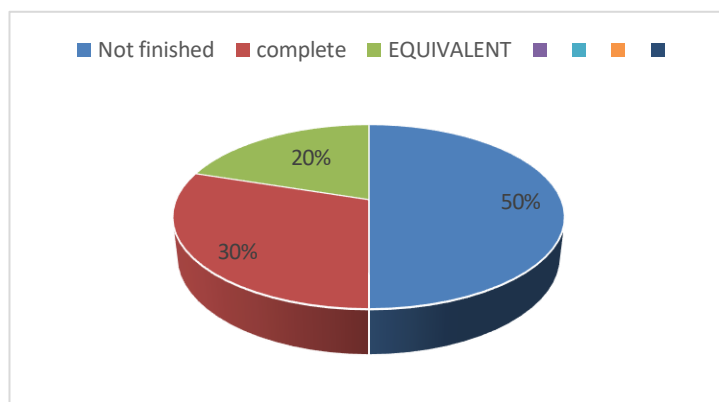
Table 1

*Data on test results for class IV students at SDI AL BIRUNI*

No	Name	KKM	Mark	Information
1	Riskika arini	65	100	complete
2	Tika	65	25	Not finished
3	Aldi	65	65	complete
4	Rafi	65	100	complete
5	Bayu	65	100	complete
6	Limah	65	65	complete
7	Halimah	65	25	Not finished
8	Iwan	65	25	Not finished
9	M. Arifin S	65	25	Not finished
10	Azizah	65	25	Not finished



Figure 1  
Percentage of mathematics learning outcomes of fourth grade students at SDI AL BIRUNI



### Information

KKM: 65

Complete: 5 Student Not

finished: 5 Student

The table above shows that there are 10 students in grade IV at SDI AL BIRUNI, namely 5 male students and 5 female students. The table and diagram above shows the learning outcomes test scores that out of 10 grade IV students at SDI AL BIRUNI in 2023 with a KKM score of 65, 2 students got a standard KKM score with a percentage of 20%, 3 students got a score above the KKM with a percentage of 30% and 5 students scored below the KKM with a percentage of 50%.

### 4. Conclusion

The results of the preliminary research show that fourth-grade students at SDI AL BIRUNI have very low mathematics learning outcomes. The problem analysis shows that teachers do not vary and do not use effective learning models or methods and learning media to support the learning process. The percentage of learning achievement tests that out of 10 grade IV students at SDI AL BIRUNI in 2023 with a KKM score of 65 2 students got a standard KKM score with a percentage of 20%, 3 students got a score above the KKM with a percentage of 30% and 5 students got a score below the KKM with a percentage of 50%.

### 5. References

Dadri, P. C. W., Dantes, N., & Gunamantha, I. M. (2019). *Pengaruh Model Pembelajaran Kooperatif Tipe NHT terhadap Kemampuan Berpikir Kritis dan Hasil Belajar Matematika Siswa Kelas V SD Gugus III Mengwi. PENDASI: Jurnal Pendidikan Dasar Indonesia*, 3 (2), 84-93.

Duli, Nikolaus. 2019. *Metodologi Penelitian Kuantitatif: Beberapa Konsep Dasar Untuk Penulisan Skripsi & Analisis Data Dengan SPSS*. Sleman: CV Budi Utama.

- Hamalik, Oemar. 2001. *Proses Belajar Mengajar*. Jakarta: PT Bumi Aksara.
- Mujtahidin. 2014. *Teori Belajar Dan Pembelajaran*. Surabaya: Pena Salsabila. Mulyasa. 2005. *Menjadi Guru Profesional*. Bandung: PT. Remaja Rosda Karya.
- Rahayuningsih, Sri. 2017. *Penerapan Model Pembelajaran Kooperatif tipe STAD Untuk Meningkatkan Hasil Belajar Matematika Tentang Faktor Prima Pada Siswa Kelas V Semester 1 SD 3 Wates Undaan Kudus*. Malih Peddas Majalah Ilmiah Pendidikan Dasar. Vol. 7 No. 2.
- Susanti. 2019. *Penerapan Model Student Teams Achievement Divisions Untuk Meningkatkan Hasil Belajar Matematika Kelas IV SD 8 Kandangmas*. Jurnal Elementary. Vol. 7 No. 2.
- Syafaruddin., Supiono., & Burhanuddin. (2019). *Guru, Mari Kita Menulis Penelitian Tindakan Kelas (PTK)*. Yogyakarta: CV Budi Utama.