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Fun Learning Method in Effecting the Students' Interest in Learning Mathematics

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Abstract

This study is based on the low interest of students in learning mathematics. The phenomenon was indicated by the activities of students who are often outside the classroom during mathematics learning, the students do not ask when there is confusing material, the students do not complete the task given, and some students are sleepy during the learning process. These conditions indicated a low level of learning interest. At the same time, interest is crucial in learning mathematics because it affects students' learning achievement. Regarding the condition, the teacher's role is to increase the student's learning interest by applying appropriate methods. One of the learning methods that is assumed to be able to attract students' learning interest is the fun learning method. The fun learning method in this study was applied through classroom action research with two learning cycles. This study aims to know the effect of fun learning methods on students' interest in mathematics. This study was conducted at VII.7 grade of SMP Negeri 1 Pinrang, South Sulawesi. The research instrument used was a questionnaire and an observation sheet. The data was collected through a questionnaire and observation, then the data collected was analysed using descriptive statistics. Indicators of increased interest obtained from questionnaires show an increase in the average percentage of student interest in learning from the moderate category of 2.88 to the good category of 4.08, which meets the average indicator of students' interest in learning mathematics of 3.50 in the good category. In contrast, other indicators are shown through the results of observations of student activity, namely an increase in the percentage of student activity from 44.2% to 75.4%, which met the success indicator of 75%. The result showed that the fun learning method could increase the student's interest in mathematics.

Keywords: *Fun Learning; Interest; Mathematics; Method*

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Abstrak

Penelitian ini berawal dari rendahnya minat siswa belajar matematika. Gejala ditunjukkan adanya aktivitas siswa yang sering berada di luar kelas pada saat pembelajaran matematika berlangsung, siswa tidak bertanya ketika ada hal yang tidak diketahui pada materi yang diajarkan guru, siswa tidak mengerjakan soal-soal yang diberikan, serta beberapa siswa mengantuk saat pembelajaran matematika berlangsung. Kondisi ini mengindikasikan minat belajar yang rendah. Padahal peran minat sangat penting dalam pembelajaran matematika, karena merupakan faktor yang berpengaruh terhadap hasil belajar siswa. Dengan kondisi tersebut, maka dibutuhkan peran guru dalam meningkatkan minat belajar siswa dengan menerapkan metode yang tepat. Salah satu metode pembelajaran yang diasumsikan dapat menarik minat belajar siswa adalah metode fun learning. Metode fun learning dalam penelitian ini diterapkan melalui penelitian Tindakan kelas sebanyak dua siklus pembelajaran. Penelitian ini bertujuan untuk mengetahui pengaruh penerapan metode fun learning yang dapat meningkatkan minat belajar matematika siswa. Penelitian dilakukan dikelas VII7 SMP Negeri 1 Kabupaten Pinrang, Sulawesi Selatan. Instrumen penelitian yang digunakan berupa lembar angket dan lembar observasi. Data dikumpulkan melalui teknik angket dan teknik observasi, selanjutnya dianalisis secara statistic deskriptif. Indikator peningkatan minat yang diperoleh dari angket menunjukkan meningkatnya persentase rata-rata minat belajar siswa dari kategori cukup sebesar 2.88 menjadi kategori baik sebesar 4.08, memenuhi indikator rata-rata minat belajar matematika siswa sebesar 3,50 berada pada kategori baik, sedangkan indikator lain ditunjukkan melalui hasil observasi aktivitas siswa, yaitu meningkatnya persentase aktivitas siswa sebesar 44.2% menjadi 75.4%, memenuhi indikator keberhasilan sebesar 75%. Hasil penelitian menunjukkan bahwa metode Fun learning dapat meningkatkan minat siswa belajar matematika.

INTRODUCTION

Mathematics is a subject that has a big role in the education world because mathematics is applied at all education levels. Mathematics learning in schools is not only intended to achieve the objectives of material mathematics education that equip students to master mathematics and apply it in daily life. However, mathematics learning is also intended to achieve the goals of formal mathematics education that organize the students' reasoning and shape their personalities (Mustafa, 2021). Mathematics as one of the subjects in the school should be managed to be interesting and fun so the students are interested to learn it and then succeed in achieving the objective of mathematics learning.

Mathematics learning must be designed to make the students enjoy it to encourage their interest in participating in the learning process. Interest is a feeling that occurs because it relates to something. Interest can be learned and affect the next learning activity, influencing the acceptance of new interests. So, interest in something results from learning and supports the next learning activity. A strong interest in learning mathematics will make the students more successful in mathematics learning (Kamid et al., 2021). Interest indirectly affects students because their interests influence the standard of attraction to someone. Interest in learning is a significant factor that determines the learning activities of learners (Burke, 1995). Triarisanti et al. (2019) revealed that high interest in learning would affect the process of successful teaching and learning activities. In learning mathematics, students relate to learning activities. Interest in learning will create immediate attention, facilitate concentration, prevent distraction, strengthen attachment to learning material, and reduce the boredom of learning.

The preliminary information about students' interest in learning mathematics was obtained through observation. The observation was conducted at Junior High School 1 Pinrang, especially in class VII, related to how students' activities follow the learning process, the learning methods used by teachers, and their mathematics learning achievement. The observation result found that there were

activities of students who are often outside the classroom during mathematics learning, the students do not ask when there is confusing material, the students do not complete the task given, and some are sleepy during the learning process. As a strength, interviews were conducted with mathematics teachers, and information was obtained that student activities that tend to be passive following the learning process have impacted low mathematics learning achievement, an average of 65, which is below the minimum completeness criteria set 75.

One of the factors of the low students' learning achievement due to the low students' interest in learning mathematics. With the learning methods used by teachers being teacher-centered, they need to involve students in the learning process. Based on the condition, the teacher's role is needed to increase the student's learning interest by applying the appropriate method. The method applied is expected to create enjoyable situations so that students do not feel bored and convenient while learning mathematics so that the student's learning interest can increase, and ultimately affect students' learning achievement. One learning method that is expected to create a fun situation for students to not feel bored during the learning and easy to learn mathematics and can increase students' interest in learning mathematics is the Fun Learning method.

The fun learning method is interesting. According to Berk (2006), an interesting learning process uses a fun learning process using fun methods with patterns and directions of application exemplified by the teacher in the delivery of learning materials so that students can understand the material presented, which makes the learning process does not dull. Fun Learning is a holistic approach to education to nurture the passion for learning and continuous development throughout life. According to Mauli et al. (2021), the Fun Learning approach encourages collaborative learning through play and exploration. In other words, fun learning is the pattern of a good relationship between teachers and learners in the learning process.

The fun learning method has three steps: 1) Finding. In this step, the students are asked to find out the concept of the material by themselves. 2) Uttering, in this step, the students reveal and discuss the result of the steps with the teacher and their classmates. The teacher has an important role as the examiner of the students finding and gives corrections if there is a wrong student's concept. 3) Nailing, in this step, the concept has been applied and reflected with the real condition, so the students understand the material. Nailing activity means that this activity is conducted to "advance or stick" things that students have learned. Regarding a sequence of learning activities in the classroom, reflection is expected, which can effectively aid students in controlling their thinking processes and feeling. Because often in schools dominated and controlled by adults, students rarely make their own decisions about their learning process.

Specifically, in the research of fun learning methods developed in learning mathematics in 5 stages, namely (a) Conditioning Stages: The atmosphere and environment of teaching and learning activities can be conditioned by forming groups or arranging attractive benches, (b) Exploration Stages: It creates or brings about a common experience that all students can understand, (c) Material Presentation Stage: The teacher delivers the material learned using media, interesting pictures, and ice-breaking games, (d) Performance Stage: The teacher gives a chance to the

student to show that they understand the material, (e) The Last Stage: The teacher gives directions to review the learning again and celebrate every achievement the students showed during the learning process.

Fun learning is very necessary for every learning process. It helps students get a meaningful learning process and gives satisfaction because it is the main factor determining. The problem in this research is whether the fun learning method can increase interest in mathematics learning. because meaningful and fun activities can help students learn math better. One way to create fun learning activities is to provide entertainment while learning.

METHOD

This research is classroom action research conducted in two cycles. The subjects in this study were students of class VII7 Junior High School 1 Pinrang, South Sulawesi. The stage of cycles is explained in the Figure 1.

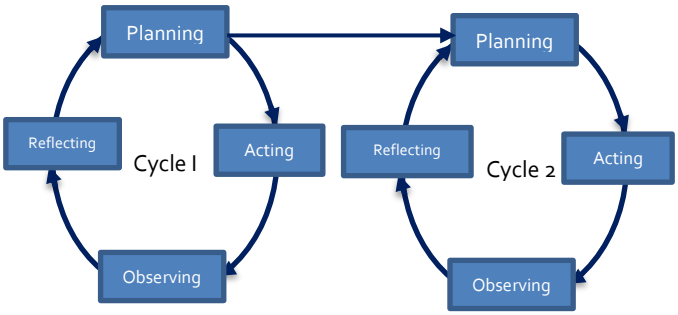

Figure 1. The cycle of classroom action research

Planning. At this stage, the researcher explained the preparations for the implementation of the research, which included preparing lesson plans, compiling instruments such as observation sheets of activities, and interest questionnaire sheets as a measuring instrument to determine students' interest in learning mathematics at the end of the cycle.

Implementing (action). The activity undertaken at this stage was implementing learning according to the planning that had been prepared. The learning mathematics process conducted in the classroom applied a fun learning method. It is observed objectively by the observer based on the learning situation. The questionnaire sheet was distributed at the end of the lesson after the entire learning process was completed. The observation sheet and questionnaire used contained several statements prepared based on the interest indicators determined in this study, including (1) attention, (2) interest, (3) involvement, (4) enthusiasm, and (5) pleasure. Technically, the implementation of learning at the action stage is described in the following table.

Table 1. The Stages of Applying the Fun Learning Method on Learning Mathematics

The Stages	Learning Activity
Conditioning: Condition the learning atmosphere and environment, such as forming groups or arranging attractive seats.	Arranging the learning environment according to students' preferences and comfort, motivating students, and talking intimately and humorously.
Exploration: Generating everyday experiences that all students can be related to.	Providing apperceptions about previous learning and relating with the topic to be learned, providing contextual problems, and exploring concepts.
Material Presentation: Present the material learned using media with exciting pictures and ice-breaking games.	Explain the material to be learned, provide ice-breaking, and then distribute the student worksheet to each group.
Demonstration:	Monitoring/guiding students working on the questions given.

The Stages	Learning Activity
Allowing students to show that they understand the material being taught.	
The Last Stage: Giving directions to repeat the entire lesson and celebrating any achievements that students have shown during the learning process.	Providing good models and appreciation to students who complete mathematics tasks.

The stages are applied in each cycle. However, based on reflection, particular emphasis will be given to specific stages that are improved in the next cycle.

Observation. learning process. The researcher observed students' learning activities while delivering learning material. Next, the researcher asked for help from a colleague as a collaborator to observe the learning process. The collaborator observes the learning process based on the instrument compiled by the researcher. The researcher will use the result of observation from the collaborator as a reflection for the next learning improvement.

Reflection. Reflection is conducted when the collaborator (the observer) has finished the observation of the learning process conducted by the researcher. This stage is the core of classroom action research when the collaborator reveals which part is running well or not when the researcher manages the learning process. The result of reflection is used as a consideration in planning the next cycle.

Obtaining the data needed in this study, the instrument of research used to collect data is the questionnaire and observation sheets. Next, the collected data were analyzed using descriptive statistics. The criteria of interest in this research are explained in Table 2.

Table 2. The Criteria of Learning Interest

Score	Criteria
$4.50 \leq x \leq 5.00$	Very Good
$3.50 \leq x < 4.49$	Good
$2.50 \leq x < 3.49$	Good Enough
$1.50 \leq x < 2.49$	Fair
$1.00 \leq x < 1.49$	Poor

The instrument used in this research is a questionnaire. A questionnaire is used to gain data about mathematics learning interests. The questionnaire used in this research is closed, whereas it has provided statements arranged by the researcher. The questionnaire consisted of five indicators that are stated in the Table 3.

Table 3. Indicator of Interest and Statements Number of Questionnaire

Indicator	Statements	
	Positive	Negative
Attention	14	2, 7, 16
Interest	12, 17	4, 11
Involvement	8, 10, 15	3, 9
Enthusiasm	5, 18, 19	13
Happiness	6, 20	1

The questionnaire of learning interest using the Likert scale is explained in the Table 4.

Table 4. The scoring of the questionnaire for learning interest

Positive Statement	Score	Negative Statement	Score
Strongly Agree	5	Strongly Agree	1
Agree	4	Agree	2
Indecisive	3	Indecisive	3
Disagree	2	Disagree	4
Strongly Disagree	1	Strongly Disagree	5

The worksheet and the observation sheet are also used in this research. A learning achievement sheet measures students' success with the mathematical learning material. Moreover, the worksheet is distributed at the end of every cycle. The observation sheet used in this research aims to gain data about students' activities during the learning process and teacher competence in managing the learning process

using the Fun Learning method. Before it is implemented, all research instruments have been validated. In this study, the student's interest in learning mathematics increases if the learning activity shows an increase in the number of active students from cycle 1 to the next cycle with the criteria of 75% of the total students in the class, the average student interest in learning mathematics 3.50 is in a good category.

RESULTS AND DISCUSSION

Results

This study was conducted in the VII_7 grade at Junior High School 1 Pinrang South Sulawesi through the fun learning method. The learning process was taken in eight meetings, with details of six meetings for learning and two meetings for giving questionnaires related to mathematics learning interests.

The Data Presentation of Cycle 1

Planning. The research activities began with the planning stage, where the researcher developed a lesson plan using the fun learning method. The lesson was designed following the stages of the fun learning method set out in this study. The researcher also ensured that the validated research instruments were ready for use. In addition, the researcher coordinated with the team involved, the observer, and monitored the readiness of students who would participate in the learning process.

Implementing (action). After compiling the planning, the next stage was implementing stage. At this stage, the researcher implemented the activities planned. The learning was conducted following the stages of the fun learning method. The conditioning and the exploration stage are conducted in the introductory activity. Next, the material was presented, and the demonstration was conducted in the core activity. Furthermore, the direction was delivered in the closing activity. Cycle I was conducted into four meetings, with details of three meetings conducted the learning process, and one meeting was held distributing questionnaires of interest in learning mathematics.

One of the activity stages in the fun learning method is conditioning the atmosphere and learning environment by grouping or arranging interesting chairs. In this study, the researcher provided a theme in a fun learning atmosphere, for example, forming groups using the names of pirate captains because the theme was "Pirates". The given theme was conducted to attract students' attention. Besides that, it also gave yells suitable to the theme, providing ice breaking to support interesting learning, and rewarding small gifts to support students' learning efforts. The stages fun learning method is applied to follow the following stages.

Table 5. The Stages of Applying the Fun Learning Method to Learning Mathematics (teacher and students' activities)

Activities Stage	Teacher Activities	Students Activities
Conditioning: Condition the learning atmosphere and environment, such as forming groups or arranging attractive seats.	Arranging the learning environment according to students' preferences and comfort, motivating students, and talking intimately and humorously.	Arranging the learning environment with the teacher, interacting comfortably, generating self-motivation, and preparing for learning cheerfully
Exploration: Generating everyday experiences that all students can relate to.	Providing apperceptions about previous learning and relating with the topic to be	Listening to the teacher's apperception, engaging in concept explora-

Activities Stage	Teacher Activities	Students Activities
	learned, providing contextual problems, and exploring concepts.	tion, and conveying new ideas
Material Presentation: Presenting the material learned using media that has exciting pictures and ice-breaking games.	Explain the material to be learned, provide ice-breaking, and then distribute the student worksheet to each group.	Paying attention to the teacher's explanation, playing icebreakers, completing the worksheets in groups, discussing, conveying new ideas, and getting actively involved during the discussion.
Demonstration Allowing students to show that they understand the material being taught.	Monitoring/ guiding students to work on the questions given.	Conducting demonstrations (presentation of group discussion results) and engaging in inter-group discussions.
The Last Stage: Giving directions to repeat the entire lesson and celebrating any achievements that students have shown during the learning process.	Providing good models and appreciation to students who complete mathematics tasks.	Receiving direction, fostering interest in repeating the material that has been learned, and celebrating the appreciation that has been given

Observing. During the learning process, the observer observes the activities carried out by the teacher and students. The observation aspect refers to the observation instrument. The data analysis on the percentage of students' activities observed during cycle 1 is presented in figure 2.

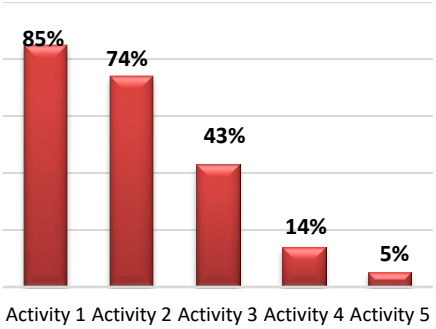

Figure 2. The Observation of Students' Learning Activities in Cycle I

Note:
Activity 1: Conditioning stages
Activity 2: Exploration stages
Activity 3: Material presentation stage
Activity 4: Performance stages
Activity 5: Final stage

Reflecting. In the last step of cycle 1 after the data is collected and analyzed, then the reflection is carried out. The reflection results are used as consideration in planning the next cycle. The data on Mathematics learning interests are gained by the questionnaires given to the students at the end of each learning cycle.

Table 6. Statistics Score Mathematics Learning Interest in Cycle I

Statistics	Scores
N	32
Mean	2.88
Maximum	4
Minimum	2
Range	2
Standard Deviation	0.707
Variance	0.500
Standard Error of Mean	0.125

If the student's interest score scores are grouped into five categories, the frequency, and percentage distribution are as follows.

Table 7. Distribution of Frequency of Mathematics Learning Interest in Cycle 1

Score Interval	Category	F	%
$4.50 \leq x \leq 5.00$	Very Good	0	0.0
$3.50 \leq x < 4.49$	Good	6	18.8
$2.50 \leq x < 3.49$	**Good Enough**	**16**	**50.0**
$1.50 \leq x < 2.49$	Fair	10	31.2
$1.00 \leq x < 1.49$	Poor	0	0.0
	N	32	

Table 7 shows that no students have a score of mathematics learning interest in the poor and very good category, 10 in the fair class, 16 in the good enough category, and 6 in the good category. The mean score of Mathematics learning interests of the students in cycle one is 2.88, so it can be concluded that the score of Mathematics learning interests of the students in cycle one is categorized as Good Enough.

The achievement of students' interest in learning mathematics in cycle one only reached 2.88 in the "good enough" category. In contrast, the frequency of active students was 44.2% is less than 75%, so they still need to fulfill the success indicators. After analyzing the data in cycle 1, it was concluded that the research was continued to cycle 2 to determine the achievement of the success indicators set in this study. The implementation of learning in cycle two is adjusted to the reflection that needs to be followed up, which includes.

Table 8. Cycle 1 learning reflection

No	Obstacles/ barriers	Improvements in cycle 2
1	Students are encouraged to choose where they study, either in or outside the classroom. It is a challenge for teachers to direct students	Learning activities are limited to the classroom environments to monitor students more effectively and control while still providing flexibility for students in expressing new ideas or ideas, involving more student participation in exploring concepts.
2	The ice-breaking provided could have been more varied, so some students felt bored or uninterested	Preparing more varied icebreakers

After analyzing data on cycle 1, the research continued to cycle 2 to determine the achievement of the success indicators set in this study. Next, cycle two was conducted according to the reflection in cycle 1, and some weaknesses should be improved.

The Data Presentation of Cycle 2

Cycle 2 was conducted in four meetings; three meetings conducted the learning process, and one meeting retrieved to deliver the questionnaire of learning mathematics interest.

Planning. At this stage, the researcher returned to planning to learn like cycle 1, but several important notes in cycle 1 needed to be improved in cycle 2, namely learning that increasingly attracted students' attention, and preparing research instruments to be used.

Implementing (action). In cycle 2 the application of the fun learning method is carried out almost the same as in cycle 1 where the researcher continues to provide it in the form of "treasures" so that students' curiosity can be maintained as in cycle 1 because the more enthusiastic students are in learning mathematics, the more influential they will be in increasing learning activities the math. In cycle 2, the steps of the fun learning method are applied in a more planned and thorough manner according to the stages. Fun learning methods developed in learning mathematics in 5 stages, namely (a) Conditioning Stages: The atmosphere and environment of teaching and learning activities can be conditioned by forming groups or arranging attractive benches, (b) Exploration Stages: It creates or brings about a common experience that all students can understand, (c) Material Presentation Stage: The teacher delivers the material learned using media, interesting pictures, and ice-breaking games, (d) Performance Stage: The teacher gives a chance to the

student to show that they understand the material, (e) The Last Stage: The teacher gives directions to review the learning again and celebrate every achievement the students showed during the learning process. In cycle 2, the implementation of the fun learning method was like cycle 1, where the researcher still gave it as a "treasure" so that students' curiosity could be maintained as in cycle 1 because the more enthusiastic students have in learning mathematics, it will affect the increase in their mathematics learning activities.

Observing. In cycle 2, the fun learning method was applied almost the same as in cycle 1. Appreciating students is still provided in "treasure," so the students have curiosity and become more enthusiastic about learning mathematics which will certainly affect student activities. Student activity was analyzed in cycle two by using the student activity analysis formula. During the learning process, the observer observes the activities carried out by the teacher and students. The observation aspect refers to the observation instrument. The data analysis on students' activities observed in cycle 2 is presented in the following figure 3.

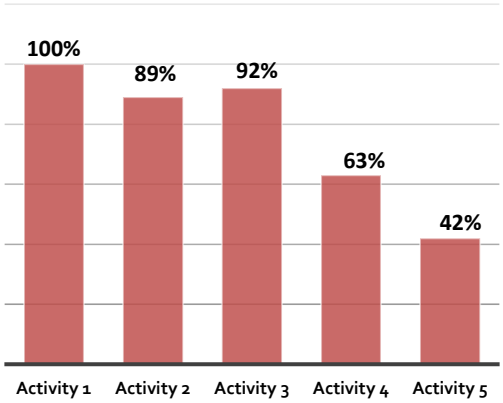

Figure 3. The Observation of Students' Learning Activities in Cycle 2

Reflecting. The implementation of learning in cycle two still follows the stages of the fun learning method; it is just that learning activities at certain stages are strengthened due to the low scores in cycle 1. For instance, at the exploration stage, students are given the flexibility to express their ideas. During the demonstration of work, they respond to each other between groups, engage in fun ice-breaking, and participate in appreciation. The learning process is centered in the classroom to facilitate the teacher to control and direct students in their learning activities.

In the last step of cycle 2 after the data has been collected and analyzed, then the reflection is carried out. The results of reflection on cycle 2 are very decisive because they will get an idea of whether the application of the fun learning method can increase students' interest in learning mathematics from cycle 1. Data on interest in learning mathematics are obtained from a questionnaire given to students at the end of each learning cycle.

The average percentage of student activity can be seen in Figure 3. The questionnaires about mathematics learning interests were provided at the end of the learning. Its result is explained as follows.

Table 9. Statistics Score Mathematics Learning Interest in Cycle 2

Statistics	Scores
N	32
Mean	4.0
Maximum	4
Minimum	4
Range	0
Standard Deviation	0.000
Variance	0.000
Standard Error Of Mean	0.000

If the student's interest score scores are grouped into five categories, the frequency, and percentage distribution are shown on Table 10.

Table 10. Distribution of Frequency of Mathematics Learning Interest in Cycle 2

Score Interval	Category	F	%
$4.50 \leq x \leq 5.00$	Very Good	0	0.0
$3.50 \leq x < 4.49$	**Good**	**32**	**100**
$2.50 \leq x < 3.49$	Good Enough	0	0.0
$1,50 \leq x < 2.49$	Fair	0	0.0
$1.00 \leq x < 1.49$	Poor	0	0.0
	N	32	100

In cycle 2, the researcher was provided more variations of ice-breaking than in cycle 1. In the same way, by conditioning the classroom atmosphere, the researcher gives students choices to work in a group based on student comfort. Then the appreciation that will be given to students is interestingly prepared so that students are more interested and enthusiastic about learning mathematics. The activity in cycle two was proven more effective. It can be seen from the increasing data on student interest in learning previously in the first cycle was in the "good enough" category, and cycle 2, was in the "good" category.

The Data Analysis of Learning Interests One of the students' works

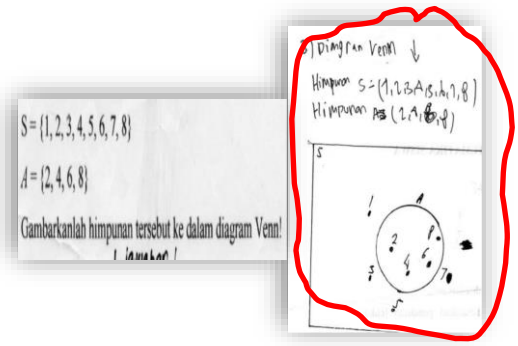

Figure 4. Student Work Samples

The test is given at the end of each cycle after the learning process is carried out using the fun learning method. The picture above results from student work on question number 3, which presents the set in a Venn Diagram. The stages of problem-solving can be carried out by students correctly, starting with identifying the known elements: Set S = {1,2,3,4,5,6,7}, Set A={2,4,6,8}. This step helps students determine the location of the members of set A in the universal set diagram. The next step is to draw a Venn Diagram. In this step, students begin to place the members of set A on set S. The members of the set A = {2,4,6,8} are placed inside the circle, while some members of the set "S" who are also not members of the set A are placed outside the circle, i.e. {1,3,5,7}. It can be concluded that students can present Venn Diagrams according to the known set members.

Based on the data analysis of cycle 1 and cycle 2, a comparison of the percentage of students' mathematics learning activity with the fun learning method was obtained. Figure 1 shows the activity mean score ratio in cycles one and two. The data was obtained based on the observation result conducted during the mathematics learning process.

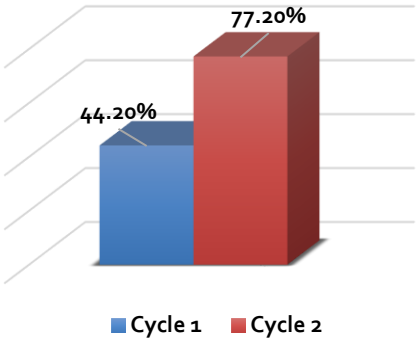

Figure 5. Percentage of Learning Activity Improvement

Quantitively the presentation of the activity from cycle 1 to cycle 2 shows the increase in a learning activity with a fairly good fun learning method by 33.00%. Specifically, the data analysis for each indicator of interest showed an increase from cycles 1 to 2. This condition indicated that the fun learning method could increase students' interest in learning mathematics.

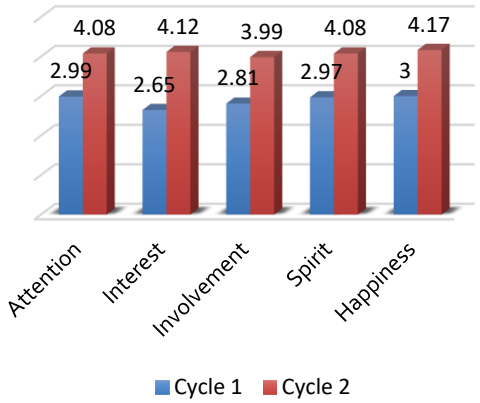

Figure 6. The ratio of the Interest Mean Score of Cycle One and Cycle Two

The reflection of learning in cycle 1 and cycle 2 showed that there was an achievement of the research indicator, including (1) increasing the average percentage of learning activities from cycle 1 by 44.20% to 77.2% in cycle 2, and (2) increasing the average percentage of student's interest in learning mathematics from cycle 1 by 2.88% to 4.08 in cycle 2. Analysis of the percentage of each interest indicator in cycle 1 showed an increase in cycle 2. Thus, the fun learning method can increase students' interest in mathematics. It indicates that an increase in fun learning could enhance students' interest in learning.

Reflection on cycle 2 shows the achievement of research indicators. The percentage of learning activities reached 77.2%, with an average score of interest in learning mathematics of 4.08 in a good category. The percentage of student activity increased by 33%, and the interest score exceeded the standard of 3.50. This condition indicates the achievement of the success indicators determined in the study, so it is not continued to the next cycle.

Significant student responses are shown in indicators of interest in the fun learning method and indicators of pleasure. The increased questionnaire score from cycle one to cycle two indicated that the fun learning method positively impacts students' interest in learning mathematics. Based on the data analysis of students' activities and learning interests from cycle I increased in cycle 2. Based on the data, it can be concluded that implementing the fun learning method in mathematics learning increases the mathematics learning interests of the VII_7 grade students at Junior High School 1 Pinrang South Sulawesi.

Discussion

The result of this study shows that the implementation of the fun learning method affects increasing students' interest in learning mathematics. The percentage of student activity increased by 33% from cycle 1 of 44.20% to cycle 2 of 77.20%, meaning that it met the criteria of 75% of the total students in the class, and the average student interest in learning mathematics was 4.08, meaning that it met the criteria of 3.50 in the good category.

An increase in students' interest in learning mathematics will have an impact on improving their learning achievement. It is supported by Purnomo et al. (2022), who explained that interest significantly impacts high and low student achievements in school. Besides the impact on students' achievements, interest also affects students' participation during the learning process. Setiawan et al. (2022) revealed that interest in learning would affect learning. The fun learning method helps students when receiving material is more fun and can train students to be more active and dexterous in solving a challenge. It is aligned with Sulistyo et al. (2021) that fun learning is intended for students to be more active and creative through some challenges.

Interest is a sense of liking and interest in a thing or activity without the presence of commands that can be expressed through statements that show a fondness

for an item (Suwa et al., 2020). Interest is obtained through the learning process that arises from observing an object which results in a specific assessment of the thing that causes someone's interest. Interest in learning is also an aspect of motivation builder, a phenomenon that is formed because of social interaction, and student involvement in learning activities (Arwaty & Lullulangi, 2022). Interest is the awareness that accompanies and stimulates attention, feeling pleasant or painful, that directs attention to an action or object; in addition to that, interest is also a motivating factor that encourages the desire to take a step (Ijeoma & Rita, 2021). Interest is related to meaningfulness, where this aspect acts as a student's sincerity in understanding each learning topic at school. In fostering student interest in learning, a teacher needs to create personal meaning for each student with an exciting way of learning (Purnomo et al., 2022). Thus, students are expected to be able to apply to learn actively and creatively.

Safira *et al* (2017) stated that identifying the students' interests can be measured by: 1) Favorite, generally an individual who likes something because of their interest. Usually, what you want the most is easy to remember. It is the same with students who are interested in a specific subject and will like the subject. This favorite showed by the students' passion and initiative in attending the learning. 2) Interests, it can be found in the students who give reactions and responses to the teacher's explanation when the learning process in the classroom. The response shows that the teacher's explanation catches their attention, so there is great curiosity. 3) Attention: Every student interested in a field of science will tend to pay great attention to that subject. The student can easily understand the subject's point with this great attention. 4) Involvement in a process that requires student involvement, tenacity, and hard work. In this study, the indicators used to observe the students' interest in learning are (1) attention, (2) interest, (3) involvement, (4) spirit, and (5) happiness.

The involvement of students in learning hard, trying to find something new that is obtained from the learning process at school. The student in the learning activities will have the desire to develop knowledge, self-development, self-confidence, and Students in learning activities will have the desire to create understanding, develop self-confidence, and a feeling of curiosity. Interest plays an essential role in the learning process, so students will be able to achieve it (Suwa et al., 2020). Interest in learning is a person's tendency and focus on learning activities. Interest can be seen from the awareness that arises towards objects that are very liked and give birth to great attention for individuals (Jelita et al., 2022).

Changes in the learning process are variations in increasing interest in learning. The teacher needs to implement a fun learning method for students because the appropriate method will greatly support their learning activities. In addition, each student has different characteristics, which means that students with high, medium, or low learning interests also affect their understanding of learning topics (Purnomo et al., 2022). Therefore, implementing appropriate learning methods is essential in learning, as Wilkins (2021) reinforces that appropriate learning methods play an important role in monitoring and directing students' actions and reflecting on students in each learning process.

The finding in this study contributed to learning mathematics because the fun learning method is an innovative learning method that can increase the student's

learning interest in learning mathematics. This method is expected to be implemented in various mathematics subject matter. The teacher can develop the method by using various mathematical aids or manipulative props that can stimulate students' interest in learning mathematics so that it is fun as revealed by Arumugham (2019) that a teacher takes help to develop fun learning for the students in a classroom setting. The success of the teaching and learning process cannot be separated from the role of teachers in varying methods (Hartini & Faridah, 2022). Fun learning has been a successful emerging trend for making effective learning. It has also been concluded that fun learning put a strong effect on enhancing students' creativity. Meaningful and fun activities can help students learn mathematics better. One way to create fun learning activities is by providing entertainment while learning. With the entertainment in learning, students will enjoy the learning activities so that the expected learning goal can be achieved (Putra et al., 2018).

The characteristics of the fun learning method are marked by: (1) conditioning students' learning environment, and in this case, the teacher will make small groups by giving group names in the form of names of plants, colors, objects, and others, this is the first step for students that they can grow their interest in the received lesson, (2) the use of media such as PowerPoint to show animation appropriated with the material that will be taught in every meeting, (3) prepare ice breaking. Ice-breaking can be provided when the class condition is not conducive anymore, and the students are bored with learning. Fun ice-breaking can be exciting so that it can recover the students' attention, concentration, and spirit. One of the ice-breaking in this study is "clap hand". According to Lestari et al. (2021), the implementation of icebreaking activities can increase learning interest. (4) celebrating the achievements that students have obtained during learning; in this case, the teacher appreciates the students with rapturous applause or other forms of joy such as giving small prizes for student success in education.

Interest is a tendency to pay attention and is related to the impulse that encourages students to be interested in certain things. Interest in learning mathematics has a fundamental role because it is a factor that affects the success of the intended achievement. Implementing the fun learning method for two cycles in this study is one of the strategies to increase student's interest in learning mathematics. The results showed an effect of the fun learning method on students' interest in mathematics because there was an increase in interest scores from cycle 1 to cycle 2. The results of this study indicate that students' interest in learning mathematics can be explored and increased when provided with the appropriate learning method.

In cycle 1, the fun learning method was implemented well enough according to its stages, but the results obtained had yet to reach the success indicator. Some critical notes because adaptation/conditioning is needed between students' learning habits and the methods used by teachers who do not activate/involve students in the learning process. As a result, students were passive and reflected a low interest in learning mathematics. These important notes became the reflection material for improvement in cycle 2. The stages fun learning method is applied to follow the following stages (See Table 11).

Table 11. The Stages of Applying the Fun Learning Method to Learning Mathematics (teacher and students' activities)

Activities Stage	Teacher Activities	Students Activities
Conditioning: Condition the learning atmosphere and environment, such as forming groups or arranging attractive seats.	Arranging the learning environment according to students' preferences and comfort, motivating students, and talking intimately and humorously.	Arranging the learning environment with the teacher, interacting comfortably, generating self-motivation, and preparing for learning cheerfully
Exploration: Generating everyday experiences that all students can relate to.	Providing apperceptions about previous learning and relating with the topic to be learned, providing contextual problems, and exploring concepts.	Listening to the teacher's apperception, engaging in concept exploration, and conveying new ideas
Material Presentation: Presenting the material learned using media that has exciting pictures and ice-breaking games.	Explain the material to be learned, provide ice-breaking, and then distribute the student worksheet to each group.	Paying attention to the teacher's explanation, playing icebreakers, completing the worksheets in groups, discussing, conveying new ideas, and getting actively involved during the discussion.
Demonstration Allowing students to show that they understand the material being taught.	Monitoring/ guiding students to work on the questions given.	Conducting demonstrations (presentation of group discussion results), and engaging in inter-group discussions.
The Last Stage: Giving directions to repeat the entire lesson and celebrating any achievements that students have shown during the learning process.	Providing good models and appreciation to students who complete mathematics tasks.	Receiving direction, fostering interest in repeating the material that has been learned, and celebrating the appreciation that has been given

The table above is a form of development conducted in this study because it is adjusted to the characteristics of students. The advantages of this method involve expressing ideas in a fun way, providing motivating ice breaks, creating a comfortable learning environment, and appreciating students' learning success. These techniques can arouse students' interest in learning if supported by teacher techniques to manage to learn well.

Implication

Learning mathematics by applying the fun learning method can increase the student's interest in learning mathematics in VII7 grade of Junior High School 1 Pinrang, South Sulawesi. Therefore, in learning, teachers should apply the fun learning method well and correctly according to the stages of the method.

Therefore, in learning, teachers should apply the fun learning method well and correctly according to the stages of the method. The application of the fun learning method affects student activities that are more active and creative in learning.

It has implications for achieving the intended learning objectives. The teaching actions conducted by the teacher and student activities in learning mathematics through the fun learning method provide an overview of the extent to which interest in learning mathematics could be increased. Fun learning, motivating ice-breaking, exploration of new concepts and ideas, functional performance, and

celebrating appreciation can attract students' interest so that they enjoy learning mathematics. Increased student interest during the mathematics learning process will increase students' learning achievement.

Limitation

Some limitations in this study are: (1) learning materials are limited to the specific subject matter, so the meeting is only held four times in one cycle. (2). The flexibility given to students in learning outside the classroom in cycle one was challenging to control the teacher, so in cycle 2, the learning process with the fun learning method was centered only in the classroom. However, the fun learning method could be tested by other teachers with various modifications according to the situation and conditions in their class.

CONCLUSION

The fun learning method is a learning method that allows for creating an effective learning environment, creating a happy atmosphere in the learning process, making students more prepared and easier to learn, and even changing negative attitudes. The fun learning method eliminates the boring atmosphere and provides the joy of learning for students. This condition indicates that the fun learning method can increase mathematics learning interests. Indicators of improvement are shown in the increase in the percentage of student activity increased by 33% from cycle 1 at 44.20% to cycle 2 at 77.20%, meaning that it met the criteria of 75% of the total students in the class, and the average student interest in learning mathematics was 4.08, meaning that it met the criteria of 3.50 in the good category. This research is limited to mathematics learning, and its variable is learning interest. However, other variables can be developed, such as the effect of fun learning methods on learning outcomes, learning achievement, or the other variables that can contribute to education and learning.

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