



Numeracy Literacy Guidance Using *Jarimatika* Method on Students of Elementary School 1 Lamokato, Kolaka Regency, Southeast Sulawesi Province, Indonesia

Tri Maniarta Sari¹, Ernawati², Irajwana Haidar³, A.S. Alonemarera⁴, Andi Saadillah⁵

^{1, 2, 3, 4, 5} Universitas Sembilanbelas November Kolaka

ABSTRACT

This guidance intends to provide guidance to class students of elementary school 1 Lamokato in using the Jarimatika method. This guidance is carried out because it is motivated by the low numeracy literacy of students at elementary school 1 Lamokato. This has an impact on the low ability of students to count. Therefore, guidance is needed for students using a different method from the method used by teachers at elementary school 1 Lamokato. This training was carried out from June to August 2022 at elementary school 1 Lamokato. The methods used in this training are demonstration methods, question and answer, and practice using the Jarimatika method. The students were very enthusiastic during the training. Students are interested in using the Jarimatika method. Students actively ask and answer about the Jarimatika method. Each student practices the method of Jarimatika in front of the class. The result of this training activity is that there is an increase in students' numeracy literacy in this case the ability to count.

Keywords: Numeracy literacy, Jarimatika

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¹ Corresponding Author: Program Studi Pendidikan Biologi, FKIP, Universitas Sembilanbelas November Kolaka; Jl. Pemuda No. 339, Kabupaten Kolaka, Indonesia; Email: trimaniarta@gmail.com

INTRODUCTION

Numerical skills are needed in all aspects of life, both at home and in society. In everyday life and society, for example, when shopping, planning a vacation, starting a business, building a house, and information about health, all require numeration. This information is usually expressed in numerical or graphic form. To make the right decisions, students must understand numeration. Numeration is the ability, confidence, and willingness to engage with quantitative or spatial information to make informed decisions in all aspects of daily life (Hardianti et al., 2021; Hidayati et al., 2021; Irmayanti et al., 2022; Muslihah & Tiawati, 2021).

Numerical literacy is the knowledge and skill to use various kinds of numbers and symbols related to basic mathematics to solve practical problems in everyday life and then analyze the information displayed in various forms and interpret the results of the analysis to predict and make decisions. In simple terms, numeracy can be defined as the ability to apply number concepts and arithmetic operations skills in everyday life (for example, at home, work, and participation in community life and as citizens) and the ability to interpret quantitative information that surrounds them. This ability is demonstrated by being comfortable with numbers and being able to use mathematical skills practically to meet the demands of life (Erlan Hadi, 2012; Nurlaeli, 2021; Wijaya & Yadewani, 2022).

Based on the results of interviews with teachers and students at elementary school 1 Lamokato obtained quite interesting information, namely there are still many students who have difficulty learning mathematics, especially on the multiplication problem. find it difficult to remember the number in multiplication which means that many students do not know the basic multiplication of 1 to 10. This is because the learning that has been carried out so far in schools rarely uses innovative methods. Students learn mathematics more through direct explanation by the teacher which is dominated by giving lectures. This happens as a result of the lack of understanding and skills of teachers to use innovative methods in learning mathematics. As a result, students learn mathematics in less meaningful ways. Students tend to memorize certain mathematical concepts or procedures. This results in students quickly forgetting the concepts they memorized (Aritonang & Elsap, 2019; Rahmatia et al., 2022).

In general, the learning process in schools is going quite well, but the use of media and teaching methods is not optimal. And it is very necessary to vary the media and learning methods, so that the teaching and learning process can improve its quality. To help improve the quality of the teaching and learning process, especially in the field of mathematics, among others, by providing a variety of media and learning methods. So that students' interest in learning can be increased, especially in Mathematics which is often considered difficult. This impression can be reduced by providing a variety of media and learning models that can attract students' interest. The success of the teaching and learning process is largely determined by good teaching methods, supportive learning media and a conducive learning atmosphere. This increase is also expected to be in line with the increase in numeracy literacy that exists in students (Elok Izza Magfiroh, 2021; Irmayanti et al., 2022; Munawwaroh et al., 2020).

The low numeracy skills of students at elementary school 1 Lamokato need to be improved. One way to improve students' numeracy skills is to provide guidance to

students. The innovative learning method that the implementing team gave to the students of elementary school 1 Lamokato was the Jarimatika method. Jarimatika is a combination of "finger" and "arithmetic" which is defined as a method or process of counting using fingers as a tool to operate arithmetic operations (Umam, 2019) compared to other methods, Jarimatika emphasizes mastery of concepts first and then the quick way, so that children master knowledge thoroughly (Anim & Rahmadani, 2019; Rahayu et al., 2021; Umam, 2019).

The arithmetic method is an alternative learning method to teach addition and subtraction and multiplication material for elementary school children using hands or fingers (Patintingan, 2015). This Jarimatika method does not eliminate the concept of mathematical operations, but the calculation process can be made easier and faster. This method may be primitive, but it is also quite interesting, practical, simple and economical. In addition, this method is still rarely used by teachers in the learning process. It is hoped that with this method, children will enjoy learning about basic arithmetic operations, especially multiplication, by learning while playing, because they only use ten fingers. Thus, it is expected to improve student learning outcomes for the better and have an impact on students' numeracy literacy (Patintingan, 2015; Quraisy et al., 2021; Tahir & Halim, 2021).

The importance of numeracy literacy must be instilled or developed from an early age. However, what happens is that the numeracy literacy that exists in students is still low. This can be seen in the students in elementary school 1 Lamokato. This can be seen in the daily life of the class in doing calculation problems, students are still quite difficult, even it takes a long time to do the calculation of addition and multiplication. The importance of numeracy literacy must be instilled or developed from an early age. However, what happens is that the numeracy literacy that exists in students is still low. This can be seen in the students in elementary school 1 Lamokato. This can be seen in the daily life of the class in doing calculation problems, students are still quite difficult, even it takes a long time to do the calculation of addition and multiplication.

METHODS

The implementation of this community service activity will start from June to August 2022. The location is at elementary school 1 Lamokato, Kolaka Regency, Southeast Sulawesi Province. The implementation is in the form of tutoring activities given to students of elementary school 1 Lamokato who are partners for this community service. The number of students who took part in this guidance were 40 students. The equipment used includes the Jarimatika manual. This guidance is carried out in three stages, plan, implementation, and evaluation. Activities in stages as follows:



Figure 1. Chart of Stages of Numeracy Literacy Guidance

1. Plan

In the planning activities, the implementing team invites partners to explain the purpose, objectives and technical implementation of the guidance activities, socialize the program to partners, and formulate numeracy tutoring programs. The preparatory stages carried out include: surveys, stabilization and determination of locations and targets, preparation of guidance materials/materials, which include modules for activities. The implementation stage is carried out after all the preparation stages are completed. In this stage carried out are as follows; 1) Explanation of the material that focuses on theoretical and technical understanding of Jarimatika. 2) An explanation of how to solve multiplication arithmetic operations, the guidance session pays close attention to technical completion in a fast and correct way using fingers.

2. Implementation

The action in this activity is in the form of program implementation. The activities carried out are (a) increasing students' knowledge and skills regarding the use of the Jarimatika method in basic arithmetic operations, especially multiplication, (b) training students on the use of the Jarimatika method, (c) training and assisting students on the use of the Jarimatika method. To carry out these activities, several methods of guidance were used, namely the lecture method and also with direct guidance. The lecture method combined with the question and answer method. The question and answer method is very important for students, both when receiving an explanation of the material and when practicing it. This method allows students to explore as much knowledge as possible about arithmetic operations and their solutions. And with direct guidance, it makes it easier for students to better understand the calculation methods that have been taught.

3. Evaluation

Evaluation in this activity is needed to find out the extent to which the method used by the implementing team is understood and can be applied directly by students. An example for tutoring in counting using the Jarimatika method evaluates the team by giving several questions related to multiplication and asking to be solved directly with the Jarimatika method, there will be seen the extent to which this method will help students improve their learning outcomes. In the process of guidance given to students at elementary school 1 Lamokato, it involved students to assist students in doing calculations using this arithmetic method. The analysis The analysis used in the evaluation is the t test with the help of SPSS.

Students who will be given guidance are students in grades 3 to 5, with this large number, student assistance is needed in helping the guidance process to be carried out. While the role of partners in this case is elementary school 1 Lamokato, namely providing a place for service, giving permission for the implementation of service as

well as accompanying and also listening to the guidance process so that in the future it can be applied by subject teachers so that they can improve numeracy skills continuously. With this guidance, which is followed by mentoring, it is hoped that it can help improve teachers' understanding and knowledge about the importance of using appropriate learning methods that are able to attract students' interest in mathematics, especially the Jarimatika method as an alternative for teachers in teaching students about addition, subtraction, multiplication, and division. , and improve the quality of teaching and can form professional teachers.

RESULTS AND DISCUSSION

The low numeracy literacy of students in elementary school 1 Lamokato needs to be improved. One way to improve students' numeracy skills is to provide guidance to students. The innovative learning method that the implementing team gave to the students of elementary school 1 Lamokato was the Jarimatika method. Jarimatika is a combination of "finger" and "arithmetic" which is defined as a method or process of counting using fingers as a tool to operate arithmetic operations. Compared to other methods, Jarimatika emphasizes mastery of concepts first and then the quick way, so that children master knowledge thoroughly (Muslihah & Tiawati, 2021; Wijaya & Yadewani, 2022).

The arithmetic method is an alternative learning method to teach addition and subtraction and multiplication material for elementary school children using hands or fingers. This Jarimatika method does not eliminate the concept of mathematical operations, but the calculation process can be made easier and faster. This method may be primitive, but this method is also quite interesting, practical, simple, and economical. In addition, this method is also rarely used by teachers in the learning process. It is hoped that with this method, children will enjoy learning about basic arithmetic operations, especially multiplication, by learning while playing, because they only use ten fingers. Thus, it is expected to improve student learning outcomes for the better. In the implementation of guidance, not only by lecture and demonstration methods, but also given a handbook to be a guide for students to learn the Jarimatika method (Erlan Hadi, 2012; Quraisy et al., 2021).



Figure 2. Socialization of Numeracy Literacy Guidance Activities Using The Jarimatika Method



Figure 3. Submission of The Finger Book to The School



Figure 4. The Implementation of Numeracy Literacy Guidance Using The Jarimatika Method

In the process, the numeracy tutoring that will be given will be evaluated at the end of the activity. The evaluation that will be carried out is to provide questions to measure students' numeracy skills after attending numeracy tutoring. Based on the results of the evaluation carried out there was an increase before and after tutoring with the Jarimatika method. This can be seen from the results of the t-test analysis carried out in table 1 below.

Table 1. Results of Statistical Analysis of T Test

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Nilai Pretest - Nilai Posttest	-31.5000	6.42511	1.01590	-33.55485	-29.44515	31.07	39	.000

Based on the results of the t test that has been carried out, it can be seen that the significance value is 0.000 and this is smaller than 0.05. This shows that there are differences between the results of the pretest and posttest that have been carried out at the evaluation stage. And the results also show an increase in students' numeracy literacy skills after conducting tutoring using the jarimatika method.

Research on the use of the Jarimatika method has been applied at the elementary school level carried out by Lanya et al the results showed that the direct contribution of the Jarimatika method to students' interest in learning mathematics and the teacher gave a positive response to this activity and found it helpful to teach counting techniques, especially in multiplication material (Lanya et al., 2020).

The results of the application of Jarimatika carried out by Husna shows that there is an increase in students' interest in the calculation material after being taught using Jarimatika. This can be seen from the indicators of student attendance, and during the activity they were very enthusiastic about participating in the activity from the beginning to the end of the activity (Husna, 2018).

The results of Sumirat, Idham et al.'s research shows that there is a positive influence on the application of Jarimatika practice on multiplication counting skills in second grade students S Gugus Jogonegoro Kec. Selomerto Kab. Wonosobo, and the practice of jarimatika is more influential than the confounding method on the second-grade students of elementary school Gugus Jogonegoro, Kec. Selomerto (Idham Sumirat, 2017).

After this activity ends, follow-up activities will be carried out. Follow-up activities are carried out based on the results of the evaluation that has been carried out. Based on the results of the evaluation that has been carried out and this jarimatika guidance has a positive impact on students' numeracy literacy, it is necessary to carry out these activities at other grade levels or in other schools that have less numeracy literacy.

CONCLUSION

Based on the results and discussion above, it can be concluded that the training of the Jarimatika method for the students of elementary school 1 Lamokato went well. This is evidenced by statistical tests based on the results of the students' pretest and posttest which showed differences and increases in student scores. Students can apply the Jarimatika method well. Students showed high enthusiasm for the implementation of the training using the Jarimatika method. Students actively ask and answer during the implementation of the Jarimatika method training activity. Principals and teachers gave a positive response to the training in the use of the Jarimatika method. It is suggested that the application of this tutoring can be applied in everyday learning and can be applied to other students.

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