

## Implementation of Teaching Assistance on Mathematics and Natural Sciences Olympiad in Elementary School

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### Abstract

*The Mathematics and Natural Sciences (MIPA) Olympiad for Elementary School (SD/MI Equivalents) in Tuban Regency, which was organized by Unesa students community services (KKN) and supervised by the Tuban Education Office, is a competition activity that is engaged in the world of education. This Olympic activity was held for 3 days starting from the technical meeting stage, preliminary session and final. Activities carried out with the aim of improving the quality of education and student resources in mastering mathematics and natural sciences are carried out at the Prunggahan Wetan Village Hall and zoom meetings. The results of the MIPA Olympiad were able to produce five categories of winners, namely Champion 1, 2, 3, hope 1 and hope 2. The event was enlivened by the appearance of Unesa KKN students and attended directly by the Head of the Middle School Office of Tuban Education. It is hoped that with this competition, with the form of competition, it is hoped that the new generation will be able to maximize their potential and also advance their scientific spirit so that they can compete with global challenges in the future.*

**Keywords:** Olympiad, Education, Teaching Assistance

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## INTRODUCTION

Real Work Lecture in Indonesian is Kuliah Kerja Nyata (KKN) is an intra-curricular course held by all tertiary institutions, both public and private, which is attended by all students to improve students' abilities, knowledge, and insights as provisions for living in society after graduating from studies (Feri, 2020). After students get lecture material which can always be useful in the community, so that KKN-T is a form of real dedication of a student to the real community. Community service provides many benefits to students, especially experience in various fields that can provide direction in solving problems and handling problems appropriately in the fields of religion, education, science, art, and technology (Sayidatul, 2022).

The chosen theme is teaching assistance. Teaching assistance is an activity carried out collaboratively by students who are under the auspices of teachers and supervisors in educational units throughout Indonesia. The place of teaching activity is the school. Activities, work programs from KKN-T with the theme of teaching assistance in the form of academic and non-academic activities so as to improve the soft skills of the community. With teaching assistants, students with a high interest in education have the opportunity to develop and deepen their knowledge and help areas where the quality of education is classified as low so that they can assist in increasing equity in the quality of education. The activity with the theme of teaching assistance to the Tuban group will be carried out in Prunggahan Wetan Village, Semanding District, Tuban Regency.

Science and technology that are developing rapidly until now can make humanity more competitive in various fields of life leading to the era of global competition. What is important in the era of global

competition is the critical and creative thinking competition for students. This is due to the more complex level of problems in modern life (Suryawan, Gita, & Hartawan, 2017). The global era can provide positive inspiration for Indonesian people who really need competitive skills in mastering science and technology with very healthy competition so that they can improve the quality of human resources through improving the quality of education starting from basic education (Suryawan et al., 2017). Elementary school is the foundation for the basic level to continue to a higher level (Rosyid, 2019). Based on the regulation of the minister of education and culture no 39 of 2008 point A that the development of student potential is in accordance with the functions and goals of national education. To improve the quality of education, competitions can be held about broadening horizons, developing talents, creativity, and students' interests (Rohati, Pasaribu, & Kumalasari, 2018). One of the efforts to improve the quality of education is to increase the ability to understand science which includes Mathematics and Science Olympiads (Ariyanti, Rahajeng, & Rahabistara, 2019). Thus, to develop the KKN theme, a work program was held, namely the Mathematics and Natural Sciences Olympiads for SD/MI Equivalents throughout Tuban Regency. Based on the regulation of the minister of education and culture no 39 of 2008 point A that the development of student potential is in accordance with the functions and goals of national education. To improve the quality of education, competitions can be held about broadening horizons, developing talents, creativity, and students' interests (Rohati, Pasaribu, & Kumalasari, 2018). One of the efforts to improve the quality of education is to increase the ability to understand science which includes Mathematics and Science Olympiads (Ariyanti, Rahajeng, & Rahabistara, 2019). Thus, to develop the KKN theme, a work program was held, namely the Mathematics and Natural Sciences Olympiads for SD/MI Equivalents throughout Tuban Regency. Based on the regulation of the minister of education and culture no 39 of 2008 point A that the development of student potential is in accordance with the functions and goals of national education. To improve the quality of education, competitions can be held about broadening horizons, developing talents, creativity, and students' interests (Rohati, Pasaribu, & Kumalasari, 2018). One of the efforts to improve the quality of education is to increase the ability to understand science which includes Mathematics and Science Olympiads (Ariyanti, Rahajeng, & Rahabistara, 2019). Thus, to develop the KKN theme, a work program was held, namely the Mathematics and Natural Sciences Olympiads for SD/MI Equivalents throughout Tuban Regency. development of students' talents, creativity, and interests (Rohati, Pasaribu, & Kumalasari, 2018). One of the efforts to improve the quality of education is to increase the ability to understand science which includes Mathematics and Science Olympiads (Ariyanti, Rahajeng, & Rahabistara, 2019). Thus, to develop the KKN theme, a work program was held, namely the Mathematics and Natural Sciences Olympiads for SD/MI Equivalents throughout Tuban Regency. development of students' talents, creativity, and interests (Rohati, Pasaribu, & Kumalasari, 2018). One of the efforts to improve the quality of education is to increase the ability to understand science which includes Mathematics and Science Olympiads (Ariyanti, Rahajeng, & Rahabistara, 2019). Thus, to develop the KKN theme, a work program was held, namely the Mathematics and Natural Sciences Olympiads for SD/MI Equivalents throughout Tuban Regency.

Mathematics and Natural Sciences (MIPA) is one of the subjects that can support the development of science and technology. This makes MIPA learning very important, especially at the elementary school level. The Olympics is one of the media that can develop the academic potential of the younger generation (Fertilia, 2021). Thus, the Mathematics and Science Olympiad (MIPA) is one of the media that can turn the younger generation into mathematicians and science scientists (Yaqutunnafis, 2020). MIPA SD / MI Olympiad is a competition with gradual selection starting from the school level to the international level with a prestigious event among students at the elementary level.

In the academic improvement of students, especially in primary level schools throughout Tuban Regency by holding Mathematics and Natural Science Olympiads. To foster enthusiasm in academic competition for SD/MI Equivalent students throughout Tuban Regency, especially in the field of Mathematics and Science studies, the UNESA 2022 TUBAN KKN-T group held an activity entitled "Mathematics and Science Olympiad at Elementary School/MI Equivalent Levels throughout Tuban Regency". This Olympiad aims to improve the quality of education and human resources, especially at the SD/MI-equivalent level, to foster a spirit of academic competition for SD/MI-equivalent students throughout Tuban Regency, to increase the intelligence of students in mastering material or questions in mathematics and natural sciences,

The MIPA Olympiad is held with the hope that it will become a means for students to become students with a scientific spirit, as well as for further development in application in everyday life. In general, the Olympiad is part of a comprehensive effort to develop a culture of learning, creativity and achievement motivation. So as to produce healthy competition and uphold the values of sportsmanship.

## METHOD

The KKN-T program is carried out using coaching methods through several stages including design, development, implementation, and evaluation. Coaching is efforts, actions and activities that are carried out consciously, planned, directed, organized and responsible to obtain better results. MIPA Olympiad for SD/MI Equals in Tuban Regency as a manifestation of the implementation of the theme of teaching assistance which is one of UNESA's KKN-T MBKM programs in 2022. This Olympic activity is expected to help raise the name of Prunggahan Wetan Elementary School in particular and improve the quality of education in Tuban Regency in order to prepare young generations who are competitive and accomplished.

The MIPA Olympiad for SD/MI equivalent throughout Tuban Regency is supported by the Education Office and the Tuban Regency Ministry of Religion as related institutions that oversee educational issues in Tuban district. The Olympics were held in the village of Prunggahan Wetan, to be precise at the Village Hall and SDN Prunggahan Wetan, which were the locations for the Community Service Program. The implementation of the Olympiad was carried out by providing guidance to students of Prunggahan Wetan Elementary School who were selected on the basis of observations during teaching activities with consideration from local teachers.

The stages or steps in carrying out the MIPA Olympiad activities for SD/MI at the same level in Tuban Regency include:

### 1. Preparation phase

The preparatory stage is the initial stage carried out aiming to prepare everything that supports the activity. The preparation stage includes:

- a. Preparation and finalization of activity plans that last for two months.
- b. Preliminary studies and coordination with related institutions, namely the Prunggahan Wetan Village Government, the Prunggahan Wetan Elementary School, the District Education Coordinator, and the Tuban Regency Education Office and the Tuban Regency Ministry of Religion.
- c. Selection of students in grades 4, 5 and 6 of Prunggahan Wetan Elementary School as delegates to take part in the SD/MI Olympiad on the same level as Tuban Regency.
- d. Preparation of grids and instruments for Mathematics and Natural Science Olympiads.
- e. Submitting a test of the validity of the MIPA Olympiad questions to educators who are experts in their field.
- f. Publication of Olympic activities in all SD/MI equivalent throughout Tuban Regency online through social media and offline by visiting the target location directly.
- g. Dissemination of sponsorship proposals to companies and institutions that are linear as support in the need for activity funds.
- h. Development of strategies for working on Olympic questions for Prunggahan Wetan Elementary School students through tutoring outside of school hours.
- i. Recording the number of participants who registered for the Olympics.

### 2. Implementation Stage

The implementation stage is an action or implementation of a plan that has been prepared in a mature and detailed manner. At this stage is the timeline of Olympic activities which include:

- a. Technical Meeting or technical presentation of the Olympics through a virtual zoom meeting to participants which will be held on December 2, 2022.
- b. Mr. Allowances are made online through the Google Forms platform, equipped with an auto proctor and virtual meetings, zoom cloud meetings.
- c. Correcting participants' answers as well as screening 30 participants with the highest scores to advance to the final round.
- d. The final round was carried out offline at the Prunggahan Wetan village hall and Prunggahan Wetan SDN as the host.
- e. Correction of participants' answers to take the top five with the highest score as the winner.
- f. Announcement of winners and distribution of prizes in the form of trophies and coaching money.
- g. Closing of a series of events in the final round of the Olympics.
- h. Submission of certificates and certificates of appreciation for Olympic participants to the Tuban Education Office to be signed as legality.
- i. Distribution of certificates and certificates of appreciation to participants.

3. Evaluation

The evaluation stage is the final stage of an activity that aims to critically examine the activities that have been carried out. At this evaluation stage includes analysis of deficiencies and obstacles during preparation until the activity is completed. Evaluation of activities is written in the form of an accountability report which is submitted to Field Supervisors, Prungahan Wetan Village Government, and the Tuban District Education Office.

RESULTS AND DISCUSSION

The Tuban Regency MIPA SD/MI Olympiad was held by the UNESA TUBAN KKN-T. The results of the MIPA SD/MI Olympics throughout Tuban Regency have been carried out with details of the activities as shown in Table 1.

Table 1. Olympic schedule

No.	Date	Activity
1.	1 November -2 December 2022	Registration
2.	December 2, 2022	Technical meeting
3.	December 3, 2022	Elimination round
4.	December 4, 2022	Final Round and Announcement

The implementation of the activity began with a Technical Meeting which was held on Friday, December 2, 2022 which was carried out online with a working time (60 minutes) which was carried out via a Zoom Meeting. The following is the documentation of the SD/MI MIPA Olympiad Technical Meeting activities throughout Tuban Regency, presented in Figure 1.



Figure 1. Students do a technical meeting

Furthermore, on Saturday, December 3, 2022 an elimination round was held which was held online and was attended by 121 participants with a working time (120 minutes) using the Google form. In this preliminary round, the 30 best participants were taken who would qualify for the next round, namely the final round. The following documentation of the activities of the preliminary rounds for the SD/MI MIPA Olympiad throughout Tuban Regency is presented in Figure 2.

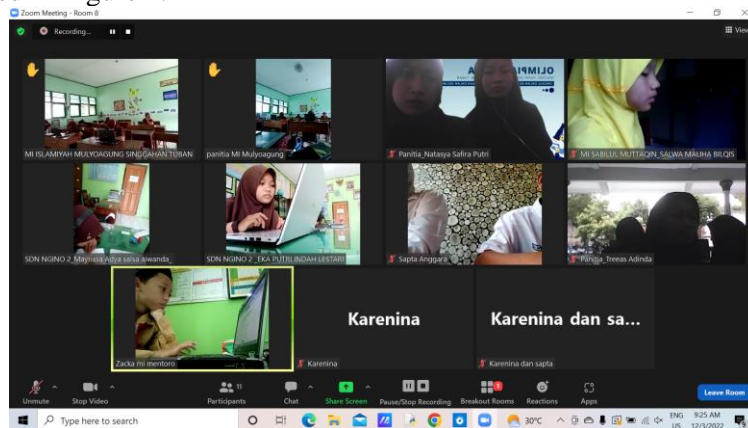


Figure 2. Preliminary round activities

Furthermore, on Sunday, December 4, 2022, it will be the highlight of the MIPA Olympiad for SD/MI Equivalents throughout Tuban Regency. In this activity the final round was held, the participants in the MIPA Olympiad in SD/MI Equivalent in Tuban Regency who had passed the selection in the preliminary round worked on the questions prepared by the committee with time (90 minutes). The following is one of the documentation of the activities for the final round of the SD/MI Equivalent MIPA Olympiad throughout Tuban Regency, presented in Figure 3.



Figure 3. Final round activities

121 participants participated in the MIPA SD/MI Olympiad in Tuban Regency with 30 finalists and 5 champions. The winners taken in this competition were 1st place, 2nd place, 3rd place, 1st hopeful champion and 2nd hopeful champion. In the final event of the MIPA Olympiad competition, representatives of the Tuban education office, namely the Head of the Middle School Division, Mr. Rasmani, S. Pd., M.Pd. This event was also enlivened by live performances from Unesa Tuban KKN-T students in the form of dance and music performances. The list of MIPA Olympiad winners is shown in Table 2.

Table 2. The List of Olympic Champion

No.	Finalist Name	School	Score
1.	Savina Zahrotul Roziqoh	SDN Kebonsari 3 Tuban	82
2.	Alif Musyaffa	MIM 2 Cendoro	72
3.	Winda Eka Septia Sari	SDN Gedongombo VI	70
4.	Ricky Bayu Saputra	Prunggahan Wetan Elementary School	50
5.	Samuel Asher Son of Aguell	Catholic Santo Petrus Elementary School	44

And the following is the documentation of awarding the winners of the MIPA SD/MI Olympiad throughout Tuban Regency which is presented in Figure 4.



Figure 4. Presentation of awards to the winners

## CONCLUSION

The MIPA Olympiad for SD/MI Equivalents in Tuban Regency organized by KKN Unesa Tuban and sponsored by the Tuban education office is an activity carried out with the aim of improving the quality of education and student resources in mastering mathematics and natural sciences. This activity was carried out in various stages of implementation, and was attended by various elementary and MI schools in Tuban district. Activities aimed at benefiting from creating new generations who have competence and are literate in science, especially natural sciences and mathematics. This competition won five categories of winners, namely 1st, 2nd, 3rd place, hope 1 and hope 2. The hope for this competition is to hope that in the form of competition.

The suggestions that can be written for MIPA Olympiad activities for SD/MI Equivalents in Tuban Regency, they are: (1). It is hoped that in the future the Olympic competitions will be carried out in a festive manner on behalf of the Tuban Regency government, and (2) The committee is advised to publish the competition with a longer time so that it is possible to get many participants.

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