

## Indonesian Student Research Olympiad for SMA N 1 Mirit Students

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### Article History:

Received: Dec 24 th 2024

Revised: Dec 27 th 2024

Accepted: Dec 30 th 2024

**Keywords:** *olympiad, research, students*

**Abstract:** *Olimpiade Penelitian Siswa Indonesia (OPSI) is a prestigious event that provides opportunities for students to develop research and innovation skills. This community service activity aims to guide and prepare students of SMA N 1 Mirit in facing OPSI. The benefits obtained by students after carrying out this activity are being able to master the material and being able to carry out research. The methods used in the guidance activities are the presentation of research methods, strategies, discussions and questions and answers. The results of the guidance activities are the level of student understanding in research methods of 75%, and the level of student interest of 80%.*

## Introduction

Olimpiade Penelitian Siswa Indonesia (OPSI) is a competition event designed to encourage high school students to develop research and innovation skills. (Balai Pengembangan Talenta Indonesia Pusat Prestasi Nasional, 2024). This competition not only assesses the final results of the research, but also the critical thinking process, creativity, and analytical skills of students (Erfan et al., 2019)(Munawir et al., 2022) In the midst of increasingly complex global challenges, research skills are one of the important competencies that must be possessed by the younger generation. Olympiads can improve students' academic achievement (Sholeh et al., 2023) and also foster students' interests and talents (Wahyudin & Jauhari, 2018).

In recent years, SMA N 1 Mirit has participated in several scientific paper competitions. However, OPSI itself has never participated. Based on interviews with the Olympiad supervisors of SMA N 1 Mirit, during the participation in several scientific paper competitions, it was found that students' interest in participating in the competition was very minimal. However, after several students participated in the

competition, students began to be interested. Currently, students' interest in participating in research-related competitions has increased. However, the lack of basic understanding of research methodology among students can hinder the mentoring process. Many students feel confused in choosing relevant and innovative research topics. In addition, there are limited human resources who can provide guidance and the high cost of implementing guidance with external parties. Effective and structured guidance is needed to overcome these problems (Chaerul et al., 2024), so that students can maximize their potential and contribute significantly to the competition.

SMA N 1 Mirit is committed to providing quality education and equipping students with relevant skills. SMA N 1 Mirit and the S1 Statistics of Universitas Jenderal Soedirman collaborate to implement OPSI guidance for students. In this context, guidance to participate in OPSI is a strategic step. This guidance aims to help students recognize their interests and potential, as well as prepare students to be able to compete at the national level. Through a structured guidance program, students not only learn about research methodology, but are also trained in important aspects such as teamwork, time management, and presentation skills. Thus, this guidance is expected to increase students' self-confidence and encourage them to contribute to the world of research.

## Method

This mentoring activity was carried out at SMA N 1 Mirit. The activity was carried out on September 18, 2024. The subjects involved were students in grades X and XI. The methods used in the OPSI mentoring activity at SMA N 1 Mirit are 1) Preparation, 2) Implementation and 3) Evaluation. The analysis technique used is descriptive statistics. Descriptive statistics is a data analysis technique used to describe data that has been collected without intending to make conclusions that apply generally (Sugiyono, 2021). The instrument used is a questionnaire. The strategy used in achieving the objectives and stages of the mentoring activity is that mentoring does not only focus on the technical aspects of the research, but also on character building of students. Soft skills such as communication, cooperation, and time management are also taught through group activities. In addition, students are given the opportunity to simulate a research presentation before the actual OPSI event. This trial exam aims to increase self-confidence and prepare students to face the jury's assessment.

## Result

OPSI coaching is carried out as a form of cooperation between FMIPA Universitas Jenderal Soedirman dengan SMA N 1 Mirit. This mentoring activity was carried out by lecturers of the S1 Statistics study program. This activity was carried out by 10 students from grades X and XI. This mentoring activity also involved the Olympiad mentor teachers

at SMA N 1 Mirit. The mentoring process includes several stages including:

1. Preparation

The preparation activities begin with identifying students' interests and potential in the field of research. Discussion sessions are conducted to understand topics that interest students, as well as to identify each student's strengths and weaknesses.

2. Implementation

The implementation activities are carried out in two stages, namely basic research training and research project mentoring. Students are given basic training on research methodology, data collection techniques, and data analysis. This training is through a workshop. After the training, students are divided into small groups to work on research projects. Each group is mentored by a supervising teacher who is experienced in their field. Mentoring includes guidance in designing research proposals, data collection, and analysis and preparation of reports.



**Figure 1.** OPSI Coaching Activities

3. Evaluation

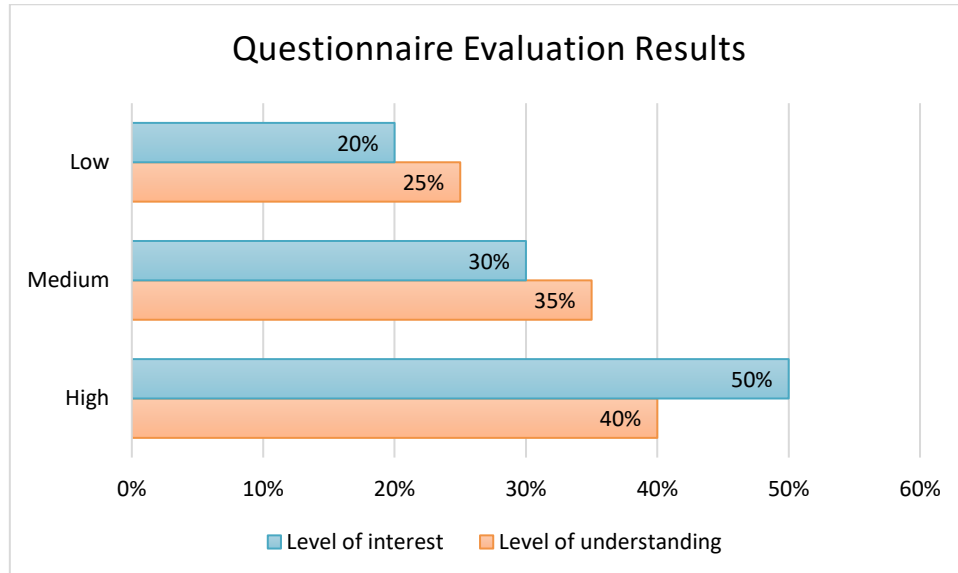
Evaluation of students' understanding related to guidance is done by distributing questionnaires at the end of guidance. The questionnaire consists of two question indicators, namely the level of understanding and the level of interest, where the levels are categorized into 3, namely high, medium and low.

## Discussion

This mentoring activity was attended by 10 students in grades X and XI. Which consisted of 7 females and 3 males. Thus, 70% of the activities were attended by females. Of the 10 students, 5 were students in grade X, and the rest were students in grade XI. This means that the number of students in grade X and XI who participated in the mentoring activity was balanced at 50%.

Based on the results of the questionnaire related to the understanding of research methodology material in guidance, it was obtained that the level of student understanding based on its category was high 40%, medium 35% and low 25%. It can be

said that the level of student understanding is 75%. Furthermore, the level of student interest in research activities is 80% consisting of high categories 50%, medium 30% and low 20%. More clearly can be seen in Figure 2.



**Figure 2.** Questionnaire Evaluation Results

The existence of this coaching activity can provide a good impact, namely increasing research skills, increasing student interest and developing networks. Through structured guidance, students of SMA N 1 Mirit showed a significant increase in research skills, namely understanding research methodology. Guidance also succeeded in increasing student interest in research activities. Many students who were previously not interested became more active and enthusiastic to participate in scientific activities. With collaboration with universities, students have the opportunity to expand their networks and get guidance from experts in their fields, which is very valuable for future academic and professional development..

## Conclusion

Mentoring in OPSI preparation for SMA N 1 Mirit students has proven effective in improving students' research skills and interests. With a comprehensive and collaborative approach, this program not only prepares students for the competition but also instills scientific values that will be useful in further education. It is hoped that similar initiatives can be implemented in other schools to encourage a culture of research among students.

## Acknowledgements

Thank you to SMA N 1 Mirit as a partner in community service activities.

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