



## The Mentoring of Integrated Science Olympiad to Improve Student Achievement at Madrasah Aliyah Negeri 3 Jombang

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### Abstract

*Science Olympiad activities are a routine agenda organized by various educational institutions, including the Ministry of Religion, which organizes Science Olympiads as part of the Madrasah Science Competition. The policy of adding integrated Arabic, Islamic Education and English is a challenge in itself in this competition. Madrasah Aliyah Negeri 3 Jombang is a school that actively participates in the Science Olympiad competition considering that the quality and achievements of non-academic activities in educational institutions are currently one of the special assessments of the relevant community includes the quality of education. The aim of this Olympic mentoring program is to provide provisions to improve students' competence in participating in the Olympics. Mentoring activities carried out using the PAR (Participatory Action Research) method. The results of this mentoring include several aspects, academically, namely increasing understanding of material, mastery of competition techniques and strategies, increasing academic achievement, while non-academic results include: Increasing interest in Arabic, Improved soft skills, time management abilities and increased collaboration between teachers and students. With these results, the mentoring program not only provides short-term benefits in the form of achievements, but also long-term positive impacts for students, madrasas and society.*

**Keywords:** Mentoring, Arabic Language Science, Olympiad

### INTRODUCTION

The quality and achievement of non-academic activities in an educational institution today is one of the special assessments of society regarding the quality of education in it as a whole. Non-academic achievements seem to be a new assessment measure for schools in improving the quality and good name of the school to prospective students. Even in some leading schools, the achievement of non-academic activities is given top priority in the management process.

The increasingly tight competition, especially in the field of non-academic achievements lately, is proof that school institutions must strive to foster non-academic activities in a good and higher quality manner. How can school administrators deliver their students to become high-achieving students in many fields in competitions held for students, especially elementary to middle school levels?



Schools that are able to produce high-achieving students will be the ones that will receive more trust from the community.<sup>1</sup> Good management of non-academic activities not only adds value to the good name of the school among other schools. The existence of non-academic activities in schools is a place for developing students according to their talents, interests, and potential in being active and creative outside of school hours.<sup>2</sup>

Management is a process of motivating, organizing, and directing human efforts to achieve a goal.<sup>3</sup> Management can also mean management, namely the process of planning and making decisions, organizing, leading and controlling to achieve certain goals according to management objectives. Management is a planning activity that is continued with organizing as a basis for control and direction to make decisions in an activity for a certain purpose.

Ability in non-academic fields is a talent or potential that humans have that is very possible to develop. Talent is an innate ability that is a potential that still needs further development and training.<sup>4</sup> Potential is the basic ability of a person that is still hidden and waiting to be brought out into real power. Talent and potential are one of the foundations in developing non-academic activities.<sup>5</sup> Students who have certain potential and talents will find it easier to develop provided they still need further development and practice.<sup>6</sup>

Arabic is one of the international languages. One of the six official languages used in the United Nations organization. Arabic is also the official language of more than 20 countries; mainly in the Middle East. Arabic is spoken by more than 300 million people in the world. Arabic is also a religious language for about one and a half billion Muslims worldwide; because the holy book of Muslims, the *Qur'an al-Karim*, was revealed in Arabic. Even some religious rituals must be carried out in Arabic such as the Syahadat and Sholat. Therefore, Arabic is ranked among the top five most widely used languages in the world; besides Mandarin (Chinese), Indian, English and Spanish.<sup>7</sup>

The majority of Indonesian people are Muslim. The number of Indonesians who are Muslim reaches more than 90%. Only about 10% of the rest are non-Muslims. For Muslims, Arabic is always used every day. At least when reading the holy book of the *Qur'an al-Karim* and performing prayers. So it is certain that people who are Muslim have knowledge of Arabic.

Science Olympiad are routine agendas held by various educational institutions, both state and private, from the Institution level to the national level. The Ministry of Religion also holds Science Olympiads as part of the Madrasah Science Competition activities whose selection starts from the district level, work area, province to the final at the national level.

The Directorate General of Madrasah Education from the Ministry of Religious Affairs of the Central Jakarta held the National Madrasah Science

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Competition with several provisions, namely that Science Material is integrated with Islamic Religious Education and Arabic Language materials. Therefore, it is necessary to carry out the provision of Arabic Language Material based on Science for members of the National Madrasah Science Competition Science Olympiad Team. This aims to motivate and facilitate students' abilities so that they develop well and can continue to be improved sustainably.<sup>8</sup>

Based on the above considerations, then through the Guidance and Mentoring for Strengthening Arabic Language at the Science Olympiad, and submitted activity proposals to the School/students to jointly carry out a coaching program for students to face the prestigious National Madrasah Science Competition. Through this program, it is hoped that coaching and assistance can be carried out comprehensively and systematically so as to obtain optimal results.

## **METHOD**

Mentoring activities carried out using the Participatory Action Research (PAR) method or Participatory Action Research is an approach that prioritizes active community involvement in the research process and solving problems faced. In the context of community service in schools, the PAR method has a number of significant benefits, both for schools, students, and the surrounding community. With PAR, this mentoring activity not only focuses on results, but also on processes that empower all parties involved.

This method was chosen for several reasons, namely; 1) Increasing Active Participation; PAR involves students, teachers, and madrasahs in management processes, so that a sense of ownership of the program is created; 2) More Accurate Needs Identification; by using a participatory approach, the needs and challenges faced by students in the Arabic language olympiad can be identified more accurately; 3) Contextual Solutions. The PAR approach allows solutions offered to be in accordance with local conditions, student abilities, and madrasah resources; 4) Community Empowerment; This approach empowers students and teachers by giving them an active role as decision makers, not just as beneficiaries; 5) Strengthening Collaboration; PAR encourages closer cooperation between students, teachers, and mentors, thus creating synergy to achieve common goals; 6) Sustainable Capacity Development. Participatory processes help students and teachers not only to achieve short-term goals, but also to develop skills that will be useful in the future; 7) Data-Based Evaluation and Improvement. Through a continuous cycle of reflection and action, PAR ensures that the mentoring program is continuously improved based on the results achieved; 8) Increased Self-Confidence and Motivation. When students and teachers feel involved in the process, they are more motivated and confident in facing the challenges of the Olympiad.

Based on the agreement between the proposer and the partner, the following activity plan and design was obtained.

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**Table 1. Activity plan details**

Stage	Activities
Preparation	Analysis of weaknesses of science olympiad team students
	Analysis of Arabic Science material
Socialization & selection of madrasah science competition team members	Opening selection of student team members who have greater abilities and are competent in the field of science olympiads and Arabic language skills
	Collaborate with Local Arabic Language Tutors to submit the names of students who have high abilities in the field of Arabic.
Implementation	Regular guidance with members of the science olympiad team

In the preparation stage, at this stage the Mentor together with partners and the entire Olympiad Material Strengthening Guidance team together with the Madrasah Quality Development Unit gather, discuss and analyze the strengths and weaknesses of the Olympiad team members. Furthermore, the Mentor together with partners consisting of the Coordinator of the Achievement and Innovation Center, Mrs. Catur Endang S, M.Sc, the Coordinator of the Olympiad Material Strengthening Guidance, Mr. M. Bagus Amrullah, the Arabic Language Olympiad Material Strengthening Guidance teacher, Mrs. Fitriyatur Rosyidah, S,Pd, determine the standard of ability that must be achieved by students according to the Olympiad level to determine the material to be given.

**Table 2. Main material of mentoring**

No.	Subjects	Main material
1.	Mathematics	Basic Mathematics Terms in Arabic
2.	Physics	Basic Physics Terms in Arabic
3.	Chemistry	Basic Chemistry Terms in Arabic
4.	Biology	Basic Biology Terms in Arabic
5.	Geography	Basic Geography Terms in Arabic
6.	Economics	Basic Economics Terms in Arabic

The selected mentored subjects were students in grades XI and XII who were the results of the initial selection of prospective Madrasah Science Competition participants who came from members of the Science Olympiad Guidance team in each subject.

**Table 3. Name of student subject mentored**

No.	Name	Class	Subjects
1.	Faza Fahira hanifah	XII MIPA 8	Chemistry
2.	Elvina Dwi Rahmawati	XII MIA 4	Mathematics
3.	Nur Lailatus Zulfiana	XI MIPA 5	Biology
4.	Siti Nur Farida	XI MIPA 8	Physics
5.	Fithra Alfa	XI IIS 1	Economics
6.	M. Pradipta	XI IIS 1	Geography

## RESULTS

### Condition of mentored subjects

Madrasah Aliyah Negeri 3 Jombang is a school that has a large number of students and great student potential.<sup>9</sup> The interest of students in this school is also very high to be involved in the Science Olympiad competition, and has proven to be able to produce achievements in various subjects, both exact sciences and religion (Islamic Religious Education). From year to year, the increase in the achievements of the Olympiad team is evenly distributed in all subjects, both science and language (English and Arabic) in the region/city level, provincial level and national level with significant developments in line with the madrasah's policy in developing existing potential. Madrasah Aliyah Negeri 3 Jombang is supported by a potential curriculum structure to improve students' abilities in the field of Olympiads.

Madrasah Science Competition from year to year runs better and with increasing standards especially in the mapping of the material presented. In the implementation of the Madrasah Science Competition, the system used is a tiered selection system from the district level, then the provincial level, and finally the national level.

The material used as the standard material for questions in the Madrasah Science Competition is science material integrated with Islamic Religious Education, Arabic and English. The form of questions is multiple choice with a combination of questions and answers derived from verses of the Qur'an, hadith, applied science research results of Muslim scientists and standard Olympiad material. The challenge for students is the questions presented in trilingual or three languages, namely Indonesian, English and Arabic. If students who are struggling to participate in the Olympiad in the Madrasah Science Competition do not have adequate language skills, they will definitely have difficulties until they are finally unable to work on the questions presented, which results in a reduction in points/scores.

**Table 4. List of basic Arabic language subjects at each level**

No.	Subject	Number of hours	Competence
1.	Arabic Compulsory	3 Lesson hours	Qiroah, Kalam, Istima' & Kitabah + Mufrodat
2.	Arabic Interest	3 Lesson hours for Religion major & 1 Lesson hour for Social Sciences major	
3.	Foreign Language (Arabic)	4 Hours of lessons for Language majors	
4.	Nahwu	1 Lesson hours	Grammar
5.	Shorof	1 Lesson hours	Grammar

From the table above, it can be seen that on average, students receive Arabic and supporting subjects (Mulok Nahwu Shorof) for a minimum of 6 hours of lessons in the Social Sciences, up to 9 hours of lessons each week for the Language.

In such conditions, students actually have provisions for foreign language skills from academics. However, the Olympiad material and everyday foreign language material are very different, so he tried to increase the time and enthusiasm of the students to study in order to get non-academic achievements.

After the implementation of the Arabic Language Material Strengthening Guidance Assistance Program for the SAINS Olympiad Team at Madrasah Aliyah Negeri 3 Jombang, the results of this activity were presented according to the stages of the strategy mentioned in the previous section. The details are as follows.

### Problem and needs analysis

This stage produces clear competency standards that must be owned and mastered by members of the Olympiad team at each level. The material has been arranged with levels starting from basic to advanced levels. The following are the material standards produced and the target time to achieve competency.

**Table 5. Standards for the material produced and target time for competency**

Level	Abilities	Materials	Time
Basic	<i>Shorof</i>	Tasrif Istilahi chapter tsulatsi Mujarrad–Tsulatsi Mazid	Week 1-2 on September
		Tashrif Lughawi fi'il madly, mudhori' Amar, Isim Fa'il Changes and transitions in form according to the shighot	
	Question analysis	Mathematics olympiad standard questions, correctness target of 75%-100%	
	<i>Nahwu/</i> structure	Number of <i>Mufidah: Ismiyah, Fi'liyah</i>	
		Number of <i>Mufidah</i> + Object and Adverb + Na'at	
		Number of <i>Idlofiyah</i>	
		<i>Isim Tafdlil</i>	
		<i>Maf'ul Bih</i>	Week 3-on
		<i>Maf'ul Ma'ah</i>	September
		<i>Maf'ul Fih</i>	
<i>Maf'ul Li Ajlih</i>			
	<i>Hal</i>		
	<i>Tamyiz</i>		
	<i>Nun Taukid</i>		
Middle	Question analysis	Olympiad standard questions, correctness target of 80%-100%	Week 4 on September
	<i>Mufrodat</i>	Compulsory Arabic Language Book for Grades 1-3	
Arabic Language Book of Interest		Week 1 on	
<i>Al-Arabiyyah lin Nasyiin</i> Reading Material Volume 3		October	
Advanced	Qiroah	Reading Material for <i>Al-Arabiyyah Bayna Yadaik</i> Volume 2	
		<i>Al-Arabiyyah lin Nasyiin</i> Reading Material Volume 4	Week 2 on October
	Question analysis	<i>Madrasah Aliyah</i> olympiad standard questions, correctness target of 90%-100%	October

### **Socialization and selection stage**

The target of this socialization stage is to recruit students who are members of the science olympiad team who have high abilities in Arabic, especially those who have talent and interest in analyzing olympiad level questions. The second step, the Mentor works with the Science Olympiad Supervisor to submit the names of grade XI students who have high abilities in their respective subjects and compare them with their Arabic language abilities.



**Figure 1. Team Member Selection**

### **Guidance program implementation**

Guidance is carried out during off-campus hours by dividing study groups according to subjects so that there are 6 subject groups. Guidance activities are carried out from September to October.



**Figure 2. Implementation of Mentoring of Physics**



**Figure 3. Simulation Implementation**

The Olympiad simulation is also an important component in the learning process in this mentoring. This simulation is designed to resemble a competition with adjustments to the time and number of questions according to the Madrasah Science Competition Olympiad standards. By conducting simulations, students are given similar questions and atmospheres to be a stimulus to adapt to competitive situations, with the aim that they can be more mentally prepared and not feel anxious when facing the actual Madrasah Science Olympiad/Competition.

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## DISCUSSION

In the world of education, we will learn various things from academic and non-academic. Academic education is obtained through a learning system with teachers at school or lecturers at college, while non-academic education is obtained through activities, organizations and socializing with other people. Non-academic education in the form of arts and sports activities that contain aspects of discipline and skills are expected to be able to help someone to be able to live in society.

The Olympiad is not only aimed at achieving victory, there are many other impacts from the development of this Science Olympiad that are much more valuable than just winning. One of the direct impacts that can be developed through sustainable development of the Science Olympiad is the development of character values, noble morals, religious awareness, psychomotor development, and of course the development of integrated cognitive potential during the learning process.<sup>10</sup> Experienced instructors who understand the educational aspects of Science Olympiad coaching will prioritize the development of these values in the learning process they teach. Thus, Science Olympiad students will have a more capable capacity to become agents of change and can be directed to become "idol figures" as a representation of the quality of education in their schools.

The Olympiad program has many advantages and positive aspects for many parties in general and specifically, both for schools/institutions and for individual students. The general benefits are: 1) Stimulating a climate of objective and sustainable science competition; 2) The growth and development of scientific interests, especially in the field of Integrated Science with Arabic for students and school residents; 3) The realization of an increase in the quality of mathematics and science education in all schools, districts/cities, and provinces, as well as nationally.

### Academic Results

The results of this mentoring and guidance activity academically are 1) Improved understanding of material. Students have a deeper understanding of Arabic language olympiad material, including grammar (nahwu and sharaf), vocabulary, balaghah, and reading, writing, listening, and speaking skills; 2) Mastery of competition techniques and strategies. Students master strategies for answering questions effectively, including time management, question analysis, and application of logic in answering olympiad questions; 3) Improved academic achievement. Students show better results in simulation tests.

### Non-Academic Results

The results from the non-Academic side include: (1) Self-Confidence. Students are more confident in facing challenges and dare to appear in olympiad competitions; Critical and analytical thinking skills. Students can analyze questions in depth and find solutions in an efficient manner; (3) Time management. Students

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are able to manage their time well when working on questions or preparing for the olympiad; (4) Improved soft skills; (5) Teamwork. If the Olympiad is in the form of a team, students are able to work together effectively with their peers; (6) Discipline and responsibility. Students become more disciplined in learning and are responsible for their success; (7) Increasing interest in Arabic; (8) Mentoring helps foster students' love of Arabic as an interesting and useful science, and; (9) Increasing cooperation between teachers and students. The relationship between teachers and students becomes closer because of intensive cooperation in the mentoring process.

In addition, the benefits for Madrasahs include: (1) Assisting Madrasah programs in the field of Olympiad development; (2) Optimizing student achievement so that it can raise the name of the Madrasah and the region; (3) Assisting and supporting learning achievement development programs; (4) Helping to boost the potential of superior seeds of activity participants; (5) Increasing positive public perception of Madrasahs; (6) Stimulating programs to instill noble values in the education and learning system in Madrasahs.

If we examine the benefits above, among the results of the activities there are benefits that are internal to the students, including: first, Training analysis that affects the perseverance and patience of students. Solving complicated problems requires diligence and patience. Students must look for many references and practice solving them continuously. If done routinely, students can solve these problems quickly and accurately. This patient, persistent, and meticulous attitude is one of the added values of students who take part in science olympiads.

The second internal benefit that can be summarized is that a competitive climate can increase students' competitive and fighting spirit. Through this event, students' competitive and fighting spirit will increase. This competitive spirit is also needed when students will face college entrance tests, scholarship tests, job tests, or other tests. Then the third is that the achievements achieved can increase self-confidence. The victories achieved by olympiad participants in every event, both local, regional and national, can foster and increase students' self-confidence. And this certainly motivates others. At school age, the role of friends is very important for a child's growth and development. Facts in the field show that students are also motivated by the success of other students in certain fields, so that they encourage themselves to be more active in studying and make students who excel as role models.

## CONCLUSION

Thus the importance of an olympic coaching that will support the improvement of the quality of national education in Indonesia. The competitive climate of the world of education will encourage all parties to realize better education and produce superior seeds of achievement.

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The results of this activity academically are Increasing Understanding of Material, Mastery of Competition Techniques and Strategies, Increasing Academic Achievement, while non-academic results include: Increasing Interest in Arabic, Increasing Soft Skills, Time Management Skills and Increasing Cooperation between teachers and students.

The Olympic Guidance Assistance Program held at Madrasah Aliyah Negeri 3 Jombang is expected to provide priority attention and thoughts related to the development of education in Indonesia through competitions in the field of Arabic. In the long term, priorities like this will make a significant contribution to certain relevant parties and are related to the creation of an education system to support national development.

The progress of the world of Indonesian education is a shared responsibility. The quality of education in Indonesia is below several other countries in Southeast Asia with low competitiveness. Hopefully, this concerning condition can be fixed together by uniting, working together to realize the Indonesian nation as an intelligent, accomplished, competitive, cultured and civilized nation.

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