

## Lesson Study: Improving Madrasah Teachers' Ability in Writing a Scientific Paper in Banten

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### Abstract

This study aims to describe the lesson study mentoring activities carried out by the Teacher work Group (KKG) in improving the writing skills of madrasah teachers' scientific papers. There are three research questions: the first, What is the role of KKG in improving madrasah teacher's scientific paper writing skills?, the Second, What are the teacher's obstacles in writing a scientific paper?, and the last, How is the effectiveness of the Lesson Study (LS) carried out by the KKG in improving the writing skills of Ibtidaiyah Madrasah teachers? The subject of this research is lesson study activities which are held in two districts/cities: Tangerang and Serang City. Qualitative research methods were used in this study to describe the LS assistance carried out by the KKG in improving the writing skills of madrasah teachers' scientific papers. In collecting data used interview instruments, questionnaires, observations, and documentation. The results of this study concluded that the implementation of lesson study held at the KKG in Tangerang City and Serang City run well and was effective in improving teachers' ability to write scientific papers. This assistance is carried out by involving madrasah supervisors and the Banten Province Madrasah Development Center. In addition, the teacher gave a positive response to the lesson study of scientific writing carried out at the KKG. Most of the teachers were optimistic that this lesson study of scientific writings can improve their knowledge and ability in writing, besides that they hope to get assistance to publish scientific papers both presented in scientific activities and scientific journals.

**Keywords:** Lesson study, writing, Scientific article, Madrasah Teachers



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## Introduction

A teacher working group (KKG) at the teacher level *raudhatul athfal* or madrasah ibtidaiyah formed at the madrasah, sub-district, and city district levels based on Article 47A PMA No. 60 of 2015. The Tangerang City MI KKG and Serang City MI KKG are KKG under the auspices of the Ministry of Religion of Banten Province. The two KKGs have also carried out activities focused on improving the quality of teachers, especially in Continuous Professional Development (CPD). There are 1371 civil servant teachers of Madrasah Ibtidaiyah spread over eight districts and cities. It appears that the largest number of teachers is in Tangerang district with 422 teachers and the smallest number is in the city of Serang, namely 22 teachers. This research was conducted in KKG Tangerang City and Serang City.

Serang City Teacher Working Group has covered 21 Ibtidaiyah madrasahs, all of which are private, as in Serang City there is no public Islamic Madrasah. The area that has a lot of madrasah is in the Walantaka sub-district, while the least is in the Cipocok Jaya sub-district. Based on the number of the population, compared to other sub-districts, Cipocok District has the largest population because of its position in the city center. Many factors cause the small number of Islamic madrasahs in Serang City, especially in Cipocok Jaya District. The historical, cultural, and social factors of the community also affect.

The KKG Madrasah Ibtidaiyah in Tangerang has covered 109 Madrasah Ibtidaiyah with details of 108 MIS (private School) and 1 MIN (public school) spread over 14 sub-districts. The highest number of madrasahs is in Cipondoh sub-district as many as 23 Madrasahs while the smallest number is in Cibodas sub-district as many as 2 madrasahs.

The KKG of Tangerang City and Serang City are two areas that are the focus of research on improving the writing ability of Ibtidaiyah teachers. In this study, the implementation of pre-lesson study began on September 2, 2019, when the Madrasah Education Sector, the Regional Office of the Ministry of Religion, Banten Province, carried out guidance for representatives of supervisors and madrasah teachers throughout Banten Province regarding the preparation of scientific papers for supervisors and madrasah teachers as one of the requirements for grade promotion, which will be held in December 2019. In this activity, data can be obtained that madrasah teachers expect activities that can be carried out near their place of duty or carried out in the nearest teacher working group.

Based on the results of this activity, the researchers feel the need to communicate further with the madrasah supervisor who is ready to support lesson study activities in the Madrasah Ibtidaiyah Teacher Working Group. In addition, based on the results of the teacher credit score assessment in December 2019, it is known that of the 69 Madrasah Ibtidaiyah teachers who applied for class promotion, the result was 39 people graduated and 30 people did not graduate because 12 people (40%) lacked numbers in self-development and 18 people (60%) understated in scientific publications.

Based on the data above, this shows that the teacher's writing ability is still weak. According to Rahardjo (2010), in fact, the weak tradition of scientific writing occurs both among teachers and lecturers. There are several reasons for this, but generally, among others, due to weak awareness of the importance of writing, not knowing the benefits of writing, limited access to information so that they do not know what to write, weak mastery of the scientific method, and lack of encouragement from school leaders to teachers to write. Furthermore, Rahadjo (2010) said that the low ability and interest in writing scientific papers also had an impact on the stagnation of the teacher rank level. Nationally, most of the teacher ranks stopped at the IVA class. This is because starting from the IVA class and above, the increase in class requires components of scientific writing, in addition to the teaching component. As a result, as a matter of fact, of the approximately 2.6 million teachers, only 0.87% of teachers are class IVB, 0.07% are for class IVC, and 0.02% are for class IVD teachers. This data is one of the supporting factors for researchers to observe the process of assisting the making of scientific papers for Madrasah Ibtidaiyah teachers through the effectiveness of teacher working groups. Under the stages, this activity begins with Planning (Plan), Implementation (Do), and See (Reflection).

## Method

A qualitative research method was used in this study to describe the LS assistance carried out by the KKG in improving the writing skills of madrasah teachers' scientific papers.

## Participants

Respondents in this study were madrasah Ibtidaiyah teachers who were members of the Tangerang and Serang City KKG

## Measurement

Data collection techniques used were interview instruments, questionnaires, observations, and documentation.

## Data Analysis

The collected data is then analyzed by tabulating the data, coding the data, interpreting the data, and displaying the data.

## Results and Discussion

### *Lesson Study Activities in guiding Madrasah teachers in writing Scientific Paper*

To find out the teacher's obstacles in writing a scientific paper, the researchers then elaborated on the problems of teachers in writing scientific papers with the Tangerang City supervisor, the Tangerang City KKG administrator, and the administrators of the Banten Province Madrasah Development Center. based on data obtained from observations and questionnaires, it is known that madrasah ibtidaiyah teachers still have problems in writing scientific papers and need training or assistance in writing scientific papers. This can be seen from the data of teachers, most of them did not pass because they did not have scientific papers and scientific publications. The identified problems include:

- a. Teachers' difficulty in writing scientific papers because they do not understand the methodology and how to write a good scientific paper.
- b. The teacher's low motivation to write.
- c. There are no training or mentoring activities that can improve teachers' writing skills.
- d. Difficulty in publishing an article.

Based on the problems above, together with the relevant parties to overcome these obstacles, it was agreed that scientific paper lesson study was needed to improve the writing skills of scientific paper teachers by holding scientific writing assistance activities that included working groups for madrasah ibtidaiyah teachers, madrasah supervisors, and the Madrasah Development Center.

### *The role of the KKG in the CPD*

KKG is a teacher organization that aims to improve teacher competence. KKG has an important role in increasing teacher competency development. Things that can be done can be in the form of training activities, workshops, discussion questions, and other activities that support the development of teacher competence.

The KKG is one of the institutions that makes it possible to become the organizer of CPD based on KMA no 38 of 2018. The KKG as a forum for teacher professional development, among others, aims to: (1) facilitate activities carried out at the teacher activity center based on the problems and difficulties faced by teachers, (2 ) providing professional assistance to the classroom and subject teachers in schools, (3) increasing understanding, knowledge, skills and developing professional attitudes based on kinship and sharing, (4) improving the management of an active, creative, and fun learning process.

In line with the above statement, a research was conducted by Al Rasyid (2015) shows that the function of the KKG from the teacher's perspective in the KKG Kediri Regency, includes: (1) as a place for discussion and problem solving for teachers who have difficulty in learning activities, (2) as a forum for activities teachers who are members of a group who want to improve their professionalism together, (3) as a place for disseminating information about educational reform, especially those related to efforts to improve learning outcomes, (4) as a center for practical activities for making teaching aids, using libraries and acquiring various teaching skills and the development of classroom administration, (5) as a vehicle for exchanging opinions with each other that can provide more information or inform those who are lacking, (6) as a forum for discussion and problem solving, (7) as a forum for teachers' activities who are members of a group who want to improve their professional together, (8) as a place to disseminate information, improve teacher professionalism, and increase insight and knowledge, (9) as a place to solve a problem encountered in the learning process, and (10) as a place to share the latest information.

The KKG of Serang City and Tangerang City are not much different from the above, they have a work program aimed at developing teacher competence. Some of the activities carried out by the KKG are conducting training on lesson plans, curriculum review, analysis of exam questions, and CAR activities.

#### *Implementation of Lesson Study scientific paper Madrasah Ibtidaiyah Teachers*

Based on the results of the LS data analysis conducted at the Serang City KKG, the KKG held a lesson study mentoring scientific paper by involving the Madrasah Development Center. In the lesson study presented as models are lecturers who are experienced in writing a scientific paper and as reviewers of journals and research. They explained scientific paper to teachers in a coherent manner which was broken down into four main topics, namely: (1) scientific paper: Background and formulating problems, (2) scientific paper Writing methodology, (3) Instruments, techniques for collecting data, and data analysis and (4) scientific paper Publication Format.

All presentations are done online using Google Meet media. The selection of the median google meet is based on ease of access and use and is not paid. For online training, the use of Google Meet can increase participants' understanding and positive responses from participants (Irmawanty et al, 2020). All online training results can be recorded and saved automatically on Google Drive.

The format of the presentation is carried out systematically, starting with the presentation, question, and answer, and ending with practice. The duration of each meeting lasted 120 minutes. The participation of participants is very active. At the lesson study meeting, they brought a plan for writing a scientific paper. In accordance with the stages of exposure to the theme of lesson study, firstly, it is discussed about scientific paper and how to formulate the background and problems. In every question and answer session, there are always several questions that arise and are related to the scientific paper being made by the participants. The approach of communicative speakers in lesson study makes participants actively involved in discussions and practices. These speakers have good competence in the approach and method of delivering material because they are certified speakers who have been trained in the USAID Prioritas Banten project (Teacher Competency Development Program). At the end of the activity, the following action plan was carried out in the form of an assignment to complete scientific paper writing.

Participants hope that this activity can help them understand how to write a good scientific paper, starting from how to make a background, conduct a literature review, create a writing method, collect data and analyze data. Regarding the expectations of the participants, this activity is expected to have a positive value because some participants have never made a scientific paper and publish it, so they hope that the results of this activity can be used in filing for further promotion. The results of the LS activities carried out by the Serang City KKG have produced several drafts of Scientific Writing articles and two of them have been published in ISBN journals.

#### *Madrasah Ibtidaiyah Teachers' ability in writing scientific papers*

The ability to write Scientific papers for madrasah ibtidaiyah teachers is still low based on the percentage of results of the assessment of promotions that are delayed due to the absence of scientific publications. Components that are still considered obstacles in making scientific papers are: a lack of understanding of scientific papers, difficulties in writing scientifically, and difficulties in publishing them.

After the KKG assistance was carried out through lesson study, there were some improvements in teachers' writing skills, at least it can be seen from their writing in the components of IMRAD (Introduction, Method, Result, and Discussion). In the introduction of teachers' writings, the gap between the expected (ideal) and real (actual) conditions has been drawn so that based on this description, the teacher can see the real problems that will be used as problems in the study.

In writing the scientific paper method, the teacher uses a scientific method based on classroom action research. Teachers have been able to use scientific rules by applying the classroom action research method in the classroom action research that is being carried out. 90% of teachers have used CAR by applying two cycles. Two cycles were carried out to see any improvement. The instruments used in this method are cycle test results, field notes, and documentation of student activities during research. The analysis conducted by the teacher is descriptive and qualitative.

In presenting the results of the research, the teacher has been able to explain systematically. Starting with a cycle presentation in which there are several stages: Planning, Implementation, Observation, and Reflection. The presentation is done narratively. Matters related to the assessment are described in the form of tables and histograms and are followed by explanations and analysis.

In conducting the analysis, the teacher analyzes descriptively and quantitatively. Descriptive analysis was carried out on the data obtained by using a questionnaire, documentation, and observation. Meanwhile, quantitative analysis was carried out on data in the form of numbers obtained from test results and calculations to see the improvement or development of learning outcomes.

To see the teacher's writing ability based on the IMRAD component, see the following table.

**Table 1. The Writing Ability of Scientific Paper Madrasah Ibtidaiyah Teachers**

No	Component	Score			Description
		E	G	VG	
1	Introduction	-	80%	20%	
2	Method	10%	80%	10%	
3	Result	20%	70%	10%	
4	Discussion	5%	85%	15%	

Notes:

E : Enough (60 -70)

G : Good (71 – 80)

VG : Very Good (81 – 100)

Based on the table above, it appears that the teacher's writing ability is good, almost 80% of the teachers can write well and a small number of teachers write a very good scientific paper.

#### *Madrasah Teachers' Difficulties and Expectations*

Based on the results of the lesson study, teachers, ingeneral, have weaknesses in three aspects. First, understanding of writing scientific papers, secondly the methodology of scientific papers, third, writing (library review, results, and discussion). This is in line with the research of Juniardi and Irmawanty (2019) which stated that there are two main difficulties in writing scientific papers on elementary school teachers, namely the difficulty of analyzing data and writing down the results of their thoughts in the form of scientific works.

Some causes of these difficulties, there has never been any assistance or training in writing scientific papers so that they feel insecure and hesitant in writing scientific papers. The busyness of teaching assignments is the reason they are reluctant to write. They feel there is no time to write. In fact, to write a scientific paper requires sufficient time to read and to write.

This is in line with the analysis of teacher abilities conducted by Kusumaningrum et.al. (2020) who said that the basic problems that need to be urgently solved are: (a) lack of understanding and ability of teachers regarding insight/knowledge of writing scientific articles; (b) lack of understanding and ability of teachers in publishing scientific articles in scientific journals; (c) this will have an impact on the hope of producing professional teachers in achieving the quality of education in schools.

However, after the lesson study assistance was carried out, writing difficulties could be overwhelmed although there were still weaknesses, especially in the ability to present research results and discuss research results. This can be seen in table 1. There are about 20% of teachers have difficulty in making data analysis; 10% have difficulty in writing methods, and 5% of teachers have difficulty in discussing the results of their research.

#### *Impact of Lesson Study on Teachers' Writing Ability*

Based on the results of observations, documentation, and interviews, there are at least three things that impact lesson study on teachers' writing skills: First, lesson study conducted at the KKG Madrasah Ibtidaiyah increases the teacher's knowledge in writing scientific papers, by explaining the stages of writing coherently delivered by the presenters from the beginning to the end as well as discussions, and exercises carried out to make teachers progressively understand in writing scientific papers. Second, increased motivation and self-confidence. Having the guidance and lesson study provided, the motivation of teachers increases and their confidence increases, and thirdly, their understanding and clarity in making scientific papers increases since the speakers present examples of several publications writing templates, such as the template for the national seminar on Basic Education at the State University of Jakarta, the template for the PAI journal of UIN Sultan Maulana Hasanudin Banten and the template for the PAI journal of the Darunnaim Lebak Islamic Boarding School.

The statement above is consistent with previous research, lesson study increases teachers' creativity and innovation, and makes a teacher have good competence (Rizky, 2014). In addition, Effendi (2016), based on the results of his research relating to the impact of lesson study on teacher competence, said that the implementation of Lesson Study had a positive impact on increasing the professional abilities of teachers and could increase teacher motivation. In line with this, Sugandi and Maya (2020) say that the use of lesson study can improve teacher's competence.

The opinion above shows that there is a political impact of lesson study on teacher motivation and competence. This can also be seen in the LS activities to assist in writing a scientific paper for madrasah teachers. The motivation of teachers to write scientific papers has increased and the writing skills of scientific paper madrasah teachers have become better.

#### *The Effectiveness of Lesson Study in Writing Scientific Paper*

In any case, to see the effectiveness of lesson study, it can be seen from the teacher's understanding of scientific writing, the teacher's ability to write scientific papers, publication of scientific papers. When viewed from the teacher's understanding, all lesson study participants understand the concepts and stages in writing scientific papers. This is in line with the work documentation (draft of scientific papers) given to the assistants and there are significant developments along with the abilities of each teacher. Some have finished and even disseminate them through national seminars, some are currently completing discussions and discussions and some are still analyzing data.

In general, participants can write scientific papers well, this can be seen from the first, the writing format; second, formulating the writing problem (the purpose of writing); Third, making a literature review; fourth, writing methods, data analysis, and interpretation and fifth making conclusions and advice.

When analyzing the writing ability, the teacher still has difficulty in analyzing the data and interpreting the data which will have an impact on drawing conclusions and suggestions. The implementation of the lesson study method provides an opportunity for teachers to fill in or review their friends' writings or problems based on their experiences so that they can improve their understanding in three things, namely: understanding what scientific writing is, preparing scientific papers in the correct format and scientific publication. Meanwhile, for scientific publication competence, only 20% of participants have completed scientific papers and publish them at national seminars.

The success of several teachers who have completed their scientific writings is an external motivation for other teachers to complete their best practice writings so that they can be revised by other friends in their teacher working groups.

#### *Publication of Madrasah Teachers' Papers*

The ultimate goal of implementing a Scientific paper mentoring lesson study is that teachers can make scientific paper and publish it both in scientific forums and in scientific journals. From the results of this activity, several teachers have succeeded in making scientific paper and publishing it. The following is a table of scientific paper publications for madrasah teachers who participate in scientific paper lesson study assistance.

**Table 2. Teachers' Publication**

No	Teachers' Name	scientific paper title	Publication
1.	Ba'diah Susanti	Meningkatkan pemahaman pembelajaran denah melalui metode penugasan pada siswa kelas 5 MI Attaqwa Tangerang	Prosiding Seminar dan Diskusi Nasional Pendidikan dasar UNJ 2020
2.	Masni	Meningkatkan hasil belajar siswa kelas 6 pada materi FPB dan KPK melalui pemanfaatan Kelompok belajar Siswa kelas 6 MIS Attaqwa Tangerang	Prosiding Seminar dan Diskusi Nasional Pendidikan dasar UNJ 2020
3.	Rurun Bariroh	Pengaruh Tingkat Pendidikan dan Pola Asuh Orang Tua Terhadap Prestasi Belajar Pendidikan Agama Islam Siswa SD Islam	Jurnal BKPI No 1 Vol 2-- 2021
4	Nurhasanah	Penggunaan Metode Drill dalam Meningkatkan Hafalans Surat – Surat Pendek Di Kelas IV Mi Islamiyah Ciwaru Cipocok Jaya Serang	Jurnal BKPI No 1 Vol 2 --2021
5.	Uliyah	Pengenalan Warna Melalui Media Origami Bagi Anak Usia Dini	Jurnal BKPI No 1 Vol 2 -2021
6.	Mesalina	Pembelajaran Materi Identifikasi Gabungan Bangun Datar Melalui Metode Problem Solving pada Kelas 6 Di Madrasah Ibtidaiyah A1 – Hidayah Kecamatan Periuk Kota Tangerang	Jurnal BKPI No 1 Vol 2 -2021

Based on the table 2 above, the lesson study activities carried out by the KKG at the Ibtidaiyah Madrasah schools were quite successful. Six teachers are motivated to write a scientific paper and have published their scientific papers both in the proceedings of national seminars and in ISBN journals, while several other teachers are still under mentoring and are already at the stage of writing scientific paper reports.

The results of this lesson study activity in addition to providing knowledge and skills in writing a scientific paper but also making teachers confident and motivated in writing. This is inseparable from the collaboration of teachers with KKG and PPM who accompany them in the writing process.

## Conclusion

Based on the results of data analysis, this study concludes the following:

1. The pattern of implementing lesson study is carried out in a collaborative manner which was initiated by the KKG by involving several parties: the Madrasah Development Center consisting of UIN SMHB lecturers and Untirta lecturers has increased the motivation and writing skills of madrasah teachers.
2. The implementation of lesson studies held at the Tangerang and Serang City KKG went well and effectively in improving the ability to write scientific papers. This assistance is carried out by involving madrasah supervisors and the Banten Province Madrasah Development Center. Five meetings were held (once at the Tangerang City KKG and four times in Serang City). The lesson study was carried out during the Covid-19 pandemic so it was not possible to conduct face-to-face but carried out online using Google Meet.
3. The teacher gave a positive response to the lesson study of scientific writing carried out in the KKG. Most of the teachers hope that this lesson study of scientific writings can improve their knowledge and ability in writing, besides that they hope to get assistance to publish scientific papers both presented in scientific activities and scientific journals.
4. The implementation of lesson study in improving the ability of teachers to make scientific writings is very effective. After the lesson study has been carried out, there is an increase in understanding and ability in making scientific papers, teachers can write scientific papers and 20% of scientific papers have been presented at national seminars.

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