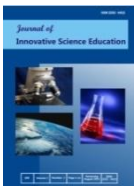
JISE 7 (2) 2018 : 160-168

Journal of Innovative Science Education

http://journal.unnes.ac.id/sju/index.php/jise



Analysis of Implementation Plan of Science Learning and the Factors of Its Implementation in MTs and MA Al Khoiriyyah Semarang

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Article Info

Article History:
Received January 2018
Accepted March 2018
Published August 2018

Keywords:
Analysis, RPP, Implementation of learning.

Abstract

The learning process requires a plan, so that what is done can run and produce something as expected. With such a plan, the process to be carried out over a long period of time has a clear direction, predictable results, predictable resources required, and can be used to determine the requirements of students in following the learning process in the school. The purpose of this study is to analyze the conformity and implementation of RPP, as well as supporting factors and inhibiting the implementation of science learning in MTs and MA Al Khoiriyyah Semarang. The method used in this research is qualitative research with case study method. This research takes place in Madrasah Tsanawiyah (MTs) and Madrasah Aliyah Al Khoiriyyah Semarang. Sources of data in this study are teachers of science lessons in MTs Al Khoiriyyah and physics, chemistry, biology teacher at MA Al Khoiriyyah. Data collection techniques used consisted of observation, interview, documentation, and student response questionnaire. The results showed that the quality of RPP in MTs and MA Alkhoiriyyah was in accordance with Permendikbud number 22 of 2016 with very good criteria. The implementation of science learning in MTs and MA Alkhoiriyyah has been in accordance with Permendikbud number 22 of 2016 with good category. Factors supporting the implementation of RPP in learning are the source of learning and supporting facilities such as libraries, laptops, LCDs, and the internet. While the inhibiting factors are time constraints, students are less active, and the teacher's understanding is still lacking in combining the methods, models, and learning strategies with a scientific approach. Implementation of science learning activities in MTs and MA Al Khoiriyyah received a good response from learners.

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p-ISSN 2252-6412
e-ISSN 2502-4523

INTRODUCTION

Learning planning is the process of preparing the lesson material, the use of instructional media, the use of approach or learning method, in a time allocation that will be implemented for one semester to achieve the intended purpose (Hernawan, 2007). The learning process requires a plan, so that what is done can run and produce something as expected. With such a plan, the process to be carried out over a long period of time has a clear direction, predictable results, predictable resources required, and can be used to determine the requirements of students in following the learning process in the school.

Learning devices such as syllabus and RPP should be made in accordance with the provisions.

These provisions generally contain teaching and learning activities that will be implemented, the learning steps are arranged systematically. The learning steps should be arranged in as much detail as possible so that they can be used by other teachers, easy to understand, and do not lead to multiple interpretations. RPP components include subject identity, competency standards, basic competencies, learning objectives, competency achievement indicators, time allocation, learning resources, teaching materials, learning methods, learning activities, and assessment of learning outcomes (Kemdikbud, 2016).

Implementation of learning should be in accordance with the planning of learning that has been prepared so that the learning objectives are achieved optimally. RPP is structured as complete as possible and systematic so that it can be easily understood and implemented by other teachers. Especially when the teacher is absent, other teachers from the cognate subjects can replace directly, without having to feel confused when they want to do it.

RPP which made by teachers should be adjusted to the principles of RPP preparation that are:

taking into account individual differences of learners, encouraging active participation of learners, developing a culture of reading and writing, providing feedback and follow-up. Based on the results of interviews conducted by teachers in MA Alkhoiriyyah, obtained information that teachers in designing RPP still refers to the RPP last semester or the previous year regardless of the characteristics of students and material characteristics that will dibelajarkan, teachers are still using the lecture method, and if practicum it is done on easy material only. Suspected in the preparation of RPP teachers are not accompanied by an understanding of the characteristics of students and material characteristics that will dibelajarkan that affect the process of implementation of learning in the class so that there may be inequality between the plan that has been prepared with the implementation of learning in the classroom. In addition, supervision conducted by the principal and school supervisors in the learning was never done so that the teachers lack briefing and guidance.

Based on the above background, it is important to do research on the analysis of the implementation plan of science learning and its implementation factors in MTs and MA Alkhoiriyyah Semarang. The purpose of this study is to analyze the conformity and implementation of RPP, as well as supporting factors and inhibiting the implementation of science learning in MTs and MA Al Khoiriyyah Semarang.

METHODS

The method used in this research is qualitative research with case study method. This research takes place in Madrasah Tsanawiyah (MTs) and Madrasah Aliyah Al Khoiriyyah Semarang. Sources of data in this study consisted of 4 teachers, including: teachers of science lessons in MTs Al Khoiriyyah as much as one person and physics, chemistry, biology teacher in MA Al Khoiriyyah

each of one person. In addition, the data source also uses the students as an additional data source to find out the students' responses to the learning process by the teacher. Data collection techniques used consisted of observation, interview, documentation, and questionnaires.

RESULTS AND DISCUSSION

Quality of RPP

The analyzed RPP is the lesson plan of science class VII and RPP of physics, chemistry and biology class X class semester of the year 2017/2018 which is based on Permendikbud number 22 year 2016 about process standard. Details of RPP and subject matter are presented in Table 1. The recapitulation of the results of the RPP component analysis is presented in Table2.

Table 1. Details of the RPP and the subject matter

No	RPP	Code	Subject matter
1	RPP IPA	G1	3.4 temperature and its change
2	RPP Fisika	G2	3.4 Newton's law and its application
3	RPP Kimia	G3	3.5 Chemical bonds (ionic and covalent bonds)
4	RPP Biologi	G4	3.6 Protista and its role

Table 2. Recapitulation of RPP Component Analysis

No	RPP	Skor	%	Category
1	RPP IPA	47	87	very good
2	RPP Fisika	51	94	very good
3	RPP Kimia	49	90	very good
4	RPP Biologi	46	85	good
	Average	48	89	very good

Based on Table 2 indicates that the RPP compiled is in accordance with Permendikbud number 22 year 2016 with very good average criteria. The percentage of RPP developed by teachers G1, G2, G3, and G4 are 87%, 94%, 90%, and 85%, respectively. The average percentage for the RPP is 89% making it a very good category.

The category in detail there are still some obstacles or difficulties. Some of the difficulties that

teachers face in preparing the RPP include: not yet developing a complete learning objectives with ABCD components; has not classified material between facts, concepts, principles, and procedures; have not classified the specific scientific activity stages in the learning activities; and has not developed an authentic assessment of psychomotor aspects and complete attitudes along with rubric and scoring criteria.

Difficulties in preparing RPP can have an effect on the implementation of the curriculum. This is as stated by Wahyuddin (2009) that the difficulty in making RPP is an obstacle factor in the implementation of the curriculum. Curriculum is a set of programs prepared by educational institutions for learners to conduct learning activities and the preparation of plans and implementation of learning should be based on the applicable curriculum (Choy et al., 2013). In addition to the applicable curriculum, the preparation of the plan and the implementation of the lesson should be guided by the process standards established by the government (Rakhmawati et al.,2016).

In the completeness of RPP components, teachers have been able to

prepare RPP in accordance with its components which include: school identity, KI, KD, GPA, learning objectives, materials, methods, media, learning resources, learning steps, and assessment. The completeness of the RPP's identity has been written by a complete teacher, which includes: educational unit, class, semester, subject, subject matter, and time allocation. This is stated in Permendikbud number 22 year 2016 about process standard (Kemdikbud, 2016).

Aspects of completeness of preliminary activities undertaken by the teacher already contains

more than two activities. Aspects of conformity step of learning activities with scientific approach conducted by the teacher, only contains one activity in accordance with the scientific approach. Good core activity is seen from the strategy that contains the method. models and approaches used in learning (Antonius, 2016). The scientific approach makes it easier for teachers to break down the process into steps in detail and include instructional instruction (Varelas & Ford, 2009).

Cooperative learning model is an effort to increase the participation of learners in learning by forming a small group, working together in a team to solve a problem, task, or achieve common goals (Hanze & Berger, 2007).

Conformity Analysis between RPP and Implementation of Learning

In detail the results of analysis of the implementation of science learning conducted by each

teacher presented in Table 3.

Table 3. Recapitulation of Implementation Analysis of Learning

No	Code	Score	%	Category
1	G1	69	86	Very good
2	G2	56	70	enough
3	G3	60	75	Good
4	G4	61	76	Good
	Average	61,75	77	Good

Based on Table 3 indicates that the implementation of learning is done in accordance with Permendikbud number 22 year 2016 with a good category average. The percentage of RPP developed by teachers G1, G2, G3, and G4 were 86%, 70%, 75%, and 76%, respectively. The average percentage for the implementation of the learning is 77% making it a good category.

In introduction activities, the teacher always greet / pray, check the attendance, and cleanliness of the class. Greetings and prayers are made when the teacher starts to go to class, then checks the attendance list and class journals, and checks the cleanliness and neatness of the class and students. In the delivery of apperception, the teacher conveys apperception by linking the previous material with the material to be discussed. Apperception is done aiming to form students' understanding. In motivating learners, teachers communicate material with life and description of activities. Revealing motivation is a psychic driving force from within a person to be able to do learning activities and add skills and experience. In conveying information on learning objectives, teachers convey by mentioning basic topics or competencies without conveying indicators and learning objectives. Complete information submission aims to facilitate learners to achieve understanding of the material and competencies learned.

In the core activities, the presentation of learning materials by teachers, has used the sequence of preliminary activities, core, cover through a scientific approach in an interactive atmosphere. Interactive atmosphere occurs because of the mutual relationship between

teachers with learners which is a good interaction in learning. In the use of instructional media, teachers use more than one kind of tool / media appropriately. Such media or aids include: LCD, laptop, image media, media objects, microscopes. The use of good learning media starts from the planning stage so that it can be known the benefits and functions of the media in the learning as a whole (Lee & lee, 2014). The utilization of instructional media requires the creativity of teachers in order to support the successful implementation of the 2013 curriculum (Kristiyaningsih, 2015).

Chalmers (2011) who states that to understand an object, there is no need to present a real object but can be replaced with objects that can represent the role of the object. The use of inappropriate media will result in inadequacies of learning competencies. The use of IT media using the power point is mostly included by teachers in learning planning (Yilmaz, 2016).

In the implementation of learning, biology and physics teachers, for example, carry out learning activities in a logical sequence. The logical sequence includes activities: observing, asking, trying, analyzing, associating, and communicating. In science and chemistry teachers, the activity is not done because only the presentation of the teacher's discussion. In the management of learning time, teachers use time efficiently but not effectively. Ineffective learning time because many students who do not follow the lessons maximally. They are late and some of them have other student activities.

In the mastery of learning materials, teachers are very master of learning materials. The teaching teacher is the teacher with the appropriate linear qualifications required in the regulation. In organizing learners, teachers organize learners fairly effectively, providing good direction in group discussions and learning activities undertaken. Teachers always provide opportunities for learners to be actively involved in learning. Active involvement in learning will stimulate the mindset and character of students to be more advanced and independent.

In an interactive teacher with learners, most teachers create a two-way interaction. The interaction that occurs is the interaction of teachers with learners and vice versa. Interaction in learning is a good feedback in helping the skills of learners. This process will foster interaction and good communication in order to find a solution of the existing problems (Ackay, 2009). Good communication and interaction will stimulate learners to learn real problems in daily life (William & Beattie, 2008). The problem is familiar with the daily life of learners, triggering learners to be generative and systematic thinking.

In closing activities, teachers do not facilitate the making of learning conclusions. Conclusions are made by the teacher himself through the closing lecture. The teacher performs the covering activity through with two elements. These elements include: assessment, feedback, reflection and subsequent meeting plans. Follow-up done by the teacher through assignment. Teachers who often do reflections will be encouraged in improving the quality of self that has innovation and revolution in learning (Korthagen & Vasalos, 2005).

In making and developing RPP, according to science teachers, the RPP is adjusted to the subject matter and adapted to the syllabus, KI and KD. According to the chemistry teacher, the RPP is adjusted to the subject matter and adapted to the syllabus and the characteristics of students and materials. According to the physics teacher, the RPP is adjusted to the subject matter and adapted to the syllabus and the characteristics of students and materials. According to the biology teacher, the RPP made is adjusted to KI and KD.

Factors supporting the implementation of learning process written in the RPP, according to science teachers is the time, methods and activities of students. The method is adjusted to the time available. students who are enthusiastic and active assist in the smooth learning. According to the chemistry teacher is a means and time adapted to the state of the laboratory, According to the physics teacher is a means and time, if not held a discussion or presentation.

According to biology teacher is a means, time, and activity of students.

Inhibitors in the implementation of the learning process written in the RPP, according to science teachers are incomplete means so that all activities can not be done. Practical work takes a lot of time while effective time is limited so that it can not all be implemented. According to chemistry teacher is student activeness, if not fished with question, they are not active. According to the physics teacher is not yet write 5M activities in detail in RPP and the model used has not seen syntax in learning, and not yet understand how to combine and combine it. According to the biology teacher is the existence of a very large number of schools, thus reducing learning hours in the classroom, forcing teachers to change the methods that have been prepared.

Facilities that support the learning process, according to science teachers are LCD, Laptop, internet connection, and laboratory. According to the chemistry teacher is a LCD, laptop, and learning video. According to physics teachers are LCD, Laptop, and practicum tools. According to biology teachers are LCDs, laptops, and text books.

Supporting Factors and Implementation Inhibition of RPP

The following are the supporting factor interviews and impediments to the implementation of the RPP presented in Table 4.

Table 4. Supporters and Impediments of RPP Implementation

Teacher	Supporting	Inhibitor
IPA	Implementation of good learning methods and appropriate with scientific student active (student center)	Facilities not complete yet. methodslimited time allocation, lack of approach,student activity
Fisika	Adequate facilities, enough time, active students, suitable methods	Not understood to combine methods, models, and learning strategies with a scientific approach
Kimia	The existence of supporting books for students, LCD and presentation devices	Less time allocation and low student activity
Biologi	Sufficient laboratory facilities, sufficient time, supporting books and active students	The time allocation for a limited laboratory.

Factors supporting the implementation of RPP in learning in MTs and MA Alkhoiriyyah is a learning resource and supporting facilities such as library, laptop, LCD, and internet connection. While the inhibiting factors are time constraints, students are less active, and the teacher's understanding is still lacking in combining the methods, models, and learning strategies with a scientific approach.

One of the keys to the success of the 2013 curriculum is the availability of adequate facilities and learning resources (Mulyasa, 2015). Teachers as facility users have a variety of important roles in the use of the only care source of learning ability of teachers developing the environment as learning resources are expected to be more meaningful learning. The availability of infrastructure as a learning support facility is needed in order to improve the quality of learning (Kristiyaningsih,2015). Efficient utilization of facilities and learning resources enables learners to explore concepts, add insight and actual understanding. Actual understanding allows learners have the ability to bertindk

appropriate environmental needs and global thinking according to the progress of science and technology.

The ability of teachers in designing technology-based learning from planning stage by integrating classroom activities with instructional resources based on technology will foster critical thinking ability (Koh et al., 2015). Critical thinking becomes a necessity in the student-centered 2013 curriculum. Some of the most important elements in the planning of learning that are oriented to critical thinking skills include the provision of structured problems, the use of clear assessment criteria, evaluation of learning outcomes and the improvement or remedial efforts of learning outcomes of learners (Brodbear, 2012). Giving the problem into a stimulus for learners to carry out the first learning phase of the scientific approach that is observing. The process of observation is done by research subjects that is observing images, video and environment. Technological learning begins with teachers' beliefs about the knowledge of the material delivered effectively and efficiently and integrated between one material with another (Kim et al., 2013; Wiyanto et al., 2018).

One of the inhibitor in the planning and implementation of the 2013 curriculum is the adjustment of time allocation to the amount of material and learning load (Ayuningrum & Peniati,2016). Teachers are required to adjust the implementation plan of learning with the educational calendar available. Another ability is to condition learners with heterogeneous ability so that there is an effective and efficient guidance process in learning. A very important teacher ability is the teacher as the manager (Sanjaya, 2011). Teachers required to carry out planning functions include: estimating needs, objectives, topics to be studied, allocating time and determining the resources needed. Good planning requires teachers to think creatively and imaginatively, thereby impacting on the determination of structured and orderly learning directions.

Student Response to Learning

The result of questionnaire of student response for each teacher in learning implementation is presented in Table 5.

Table 5. Student Response Questionnaire for Each Teacher in the Implementation of Learning

No	Code	Score	%	category
1	G1	13	91	Very good
2	G2	12	85	Good
3	G3	13	89	Very good
4	G4	12	81	Good
	Average	12	86	Good

Table 5 shows that students' responses in learning implementation amounted to 86% with good category. This shows that learners have more attention when learning is implemented with different methods / models / strategies. Learning that requires learners as a center of learning activities (student centered) provides an opportunity for learners to be active in completing the task. Some activities that are not performed maximally based on the questionnaire of the learners are: 1) for G2 teachers, including: material understanding submitted by teacher, coaching in making summary of learning, and giving evaluation question; 2) for G4 teachers, including: material understanding submitted by teachers and coaching in making a summary of learning.

CONCLUSION

Based on the results of analysis and discussion can be concluded that the quality of IPA RPP in MTs and MA Alkhoiriyyah has been in accordance with Permendikbud number

22 of 2016 with very good category. The implementation of science learning in MTs and MA Alkhoiriyyah has been in accordance with Permendikbud number 22 year 2016 with good category. Factors supporting the implementation of RPP in learning is the source of learning and supporting facilities such as libraries, laptops, LCDs, and internet connection. While the inhibiting factors are time constraints, students are less active, and the teacher's understanding is still lacking in combining the methods, models, and learning strategies with a scientific approach. Implementation of science learning activities in MTs and MA Al Khoiriyyah received a good response from learners.

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