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Curriculum Management and Physics Learning at Madrasah Aliyah (MA) Islamic Modern Islamic Boarding School (PPMI) Assalaam Surakarta

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Abstract
The purpose of this research is to explain: (1) curriculum and learning planning. (2) organizing curriculum and learning. (3) implementation of curriculum and learning. (4) evaluation of the implementation of curriculum and learning. This type of research is a qualitative research with an ethnographic design that was carried out at the Madrasah Aliyah PPMI Assalaam Surakarta. Data collection techniques with in-depth interviews, documentation, and observation. Data analysis uses an interactive analysis model with three stages. The results of the study were (1) Learning planning, in the preparation of madrasa curriculum documents a curriculum development team was formed involving all elements of the madrasa to verify syllabus documents, prota and promissory notes, and lesson plans prepared by the teacher before being validated by the head of the madrasa. The final product of the lesson plan is in the form of a KTSP document which is the official madrasah curriculum document as a reference in carrying out teaching and learning activities for one academic year. (2) Organizing Learning, including preparing an educational calendar. Arrangement of teacher assignments according to qualifications and competencies, preparation of lesson schedules assisted by application software. (3) Implementation of learning, including learning objectives, subject matter, methods, media, and evaluation of learning, is a part that must be fulfilled so that the objectives of learning can be achieved. (4) Evaluation of learning implementation, including supervision of learning planning, supervision of learning implementation, and supervision of learning outcomes.
Keywords: Management, Curriculum, Learning, Physics.

INTRODUCTION

In the life of a country, education plays a very important role in ensuring the survival of the nation and state, because education is a vehicle for improving and developing the quality of human resources. In Indonesia, education functions to develop the potential of students to become human beings who have faith and are devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic and responsible state (Pidarta: 2007).

Education is also the key to the development of a nation. The success of development in the field of education will greatly affect development in other fields. Therefore, education must be managed as much as possible both in quality and quantity. The teacher is the spearhead in improving the quality of education, where the teacher will interact directly with students in learning in the classroom. It is through this process of learning and teaching that the quality of education begins. This means that the overall quality of education starts from the quality of learning carried out by the teacher in the classroom.

The development of education certainly influences the development of science and technology (IPTEK). In the development of science and technology, natural science (IPA) plays a very important role. This is because natural science is a science that systematically seeks to

find out about natural phenomena, so that natural science is not only the mastery of a collection of knowledge in the form of facts, concepts or principles but also a process of discovery.

Science education is expected to be a vehicle for students to learn about themselves and the environment, as well as prospects for further development in applying it in everyday life. The learning process emphasizes giving direct experience to develop competencies so that students explore and understand the natural surroundings scientifically. Science education is directed to find out and do more deeply about the natural surroundings.

Physics is a branch of science that underlies the development of advanced technology and the concept of living in harmony with nature. The rapid development in the field of information and communication technology today was triggered by findings in the field of material physics through the invention of microelectronic devices capable of containing a lot of information in very small sizes. As a science that studies natural phenomena, physics also provides good lessons for humans to live in harmony based on natural laws. Management of natural resources and the environment and reducing the impact of natural disasters will not run optimally without a good understanding of Physics.

Teaching Physics is also an important part of Science for students. This is stated in the functions and objectives of subjects at the high school level which states that Physics is a means of: (1) Raising awareness of the beauty and order of nature to increase belief in God Almighty, (2) Fostering a scientific attitude which includes; honest and objective with data, open in accepting opinions based on certain evidence, critical of scientific statements, and able to cooperate with others, (3) Provides experience to be able to propose and test hypotheses through experiments; designing and assembling experimental instruments, collecting, processing, and interpreting data, compiling reports, and communicating experimental results in writing and orally, (4) Developing inductive and deductive analytical thinking skills by using Physics concepts and principles to explain various natural events and solve problems both qualitatively and quantitatively, (5) Mastering the knowledge, concepts and principles of Physics, and having knowledge of the skills and scientific attitudes of the Ministry of National Education, (2006).

The learning objectives of Physics will be achieved if the learning process goes well. But in fact what happened in the class is still not in accordance with the expected functions and objectives. Indonesia's participation in the International Trends in International Mathematics and Science Study (TIMSS) and the Program for International Student Assessment (PISA) since 1999 also shows that the achievements of Indonesian children are not encouraging in several reports issued by TIMSS and PISA. Hewi & Shaleh, (2020).

Data obtained from the Trends in International Mathematics and Science Study (TIMSS) in 2011, states that the average mathematics score of Indonesian students ranks 38th out of 42 countries, while for natural science it is even more concerning, namely it ranks 40th out of 42 countries. Some students can only solve questions up to the intermediate level, while some other students are only able to solve basic level questions. From this average, the question arises whether the teaching materials delivered in schools in Indonesia at the same level are different from the teaching materials tested at the international level.

Based on the data obtained from TIMSS and PISA, it is necessary to evaluate and improve the management of curriculum and learning, especially in the field of Natural Sciences, one of which is Physics. With the improvement and development of the curriculum, it is hoped that in the future it will be able to overcome the nation's problems, especially in the field of education. Madrasah Aliyah (MA) Islamic Modern Islamic Boarding School (PPMI) Assalaam is a superior Islamic boarding school-based Madrasah Aliyah, in 2020 designated as a National Research Madrasa by the Indonesian Ministry of Religion. Good quality madrasas with a myriad of

achievements, supported by adequate facilities and infrastructure, comfortable laboratories and classrooms for teaching and learning activities, professional educators and teaching staff make MA PPMI Assalaam always receive an A rating from each madrasah accreditation.

However, there has not been any research that reveals how the management of curriculum and learning in physics learning is carried out by MA PPMI Assalaam. So the authors are interested in conducting research to find out in more depth how MA PPMI Assalaam manages the curriculum and learning of Physics. In this study, educational management theory will be used, especially management functions in a schooling perspective, with reference to the thoughts of G.R. Terry, including: (1) planning (planning); (2) organizing (organizing); (3) implementation (actuating); and (4) supervision (controlling). Which will be implemented in the theory of Curriculum management in particular learning Physics.

Based on the research background described above, it can be stated that the focus of the problem in this study is: (1) how to plan the curriculum and learning Physics at MA PPMI Assalaam; (2) how to organize the curriculum and teaching of Physics at MA PPMI Assalaam; (3) how is the implementation of the curriculum and learning of Physics at MA PPMI Assalaam; and (4) how to evaluate the curriculum and learning Physics at MA PPMI Assalaam.

RESEARCH METHODS

This type of research uses qualitative research, with a research design using ethnographic designs. According to Cresswell (2012), Ethnography is a type of qualitative research, in which researchers conduct studies of group culture in natural conditions through observation and interviews. In this study, researchers tried to learn about the symptoms and events at MA PPMI Assalaam Surakarta that occurred in research subjects related to curriculum management and physics learning.

The reason for selecting the research location was that first, MA PPMI Assalaam is a national research madrasa under the guidance of the Indonesian Ministry of Religion since 2020. Second, the quality of the madrasa is good with many achievements at both the national and international levels, supported by adequate facilities and infrastructure with superior A madrasa accreditation. Third, this madrasa has never been used as an object of similar research so that it avoids the possibility of repeat research. The research was conducted from August to December 2022.

Sources of data for this research: (1) Curriculum documents and archives, (2) Resource persons for this research were the head of the madrasa, deputy head of the madrasa for curriculum, and the teacher of the Physics subject. (3) Places and events in the learning observations made by the teacher during the teaching and learning process in the classroom and in the laboratory. The technique of checking the validity of the data in this study is for credibility using data triangulation techniques where using a variety of different data sources can be used to collect similar data as in the following chart:

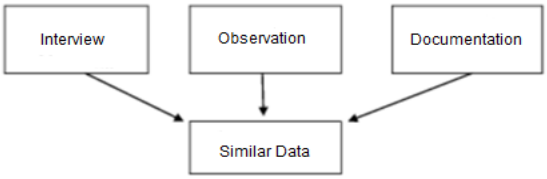

Figure 1. Data Triangulation Chart

In this study the method used was in-depth interviews which were used to find out how far the implementation of curriculum management activities and physics learning was carried out, through interviews with the head of the madrasa, deputy head of the madrasa for

curriculum, and physics teacher. In addition, a document search was also carried out regarding curriculum documents, syllabus documents, lesson plans documents, the results of the academic supervision of the head of the madrasa towards physics teachers.

To find out firsthand the learning process carried out by the Physics teacher, class observations were made to observe the Physics teacher teaching in the classroom or conducting demonstrations or practicum in the Physics laboratory. In this study, data analysis was carried out following the pattern proposed by Miles and Huberman, namely conducting data reduction, presenting data with descriptive text descriptions, organizing data, arranging it into patterns, and interpreting and then concluding based on an inductive approach. Like the following interactive analysis model chart:

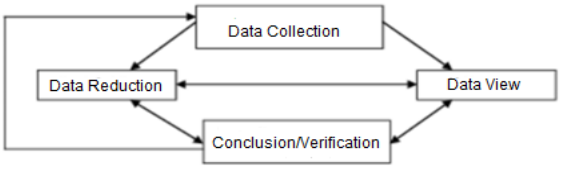

Figure 2. Miles and Huberman Interactive Analysis Model Chart

In this study, the in-depth interview method is a way to uncover curriculum management and learning Physics starting from planning, organizing, implementing and evaluating supported by data from observations and curriculum document data which includes academic calendars, prota, promissory notes, syllabus, lesson plans and learning outcomes assessment document which is the supporting data in this study.

RESEARCH RESULTS AND DISCUSSION

Learning Planning

Lesson planning is the activity of compiling the madrasah curriculum document (KTSP) by the curriculum development team involving all elements of the madrasa whose task is to verify teacher learning documents before being validated by the head of the madrasa and ratified by the regional ministry of religious affairs in the province. This finding supports previous research by Bahar, (2020). Subject teachers who are members of the MGMP carry out the preparation and development of the syllabus referring to the vision and mission, student abilities and additional focus on PTN entry selection material. This finding is in accordance with Permendikbud Number 22 of 2016.

Prota and promissory notes which are arranged based on the syllabus and calendar of madrasah education are one of the keys to successful learning, because they function to determine the distribution of material to the time allocation in years and semesters. This finding is in line with mulyasa in (Surfanti, 2017: 111). After holding a workshop on the preparation of learning tools by the madrasah, the teacher prepares a lesson plan based on the syllabus that has been developed according to the individual teacher and through the MGMP. These findings support Megalina's previous research (2021).

Learning Organization

The madrasah education calendar is compiled based on the provisional Ministry of Religion calendar adapted to activities in madrasas, functions to set schedules for learning activities, regulate learning hours, arrange assessment schedules, and serve as a reference for teachers in managing learning. This is in line with previous research from Wijayani (2016: 439). Appropriateness of educator competencies influences teacher pedagogics in the implementation of learning and also influences skills in dealing with child psychology, although

it is not a guarantee that teachers who are in accordance with their educational competencies will be better, all still need to be guided and improve their competence. This is in accordance with the Decree of the Minister of Religion of the Republic of Indonesia No. 890 of 2019 stating that the workload for subject teachers is a minimum of 24 hours face to face and a maximum of 40 hours face to face. Whereas the provisions in MA PPMI Assalaam teacher workload is a minimum of 30 hours face-to-face and a maximum of 40 face-to-face hours, both face-to-face hours of KBM Madrasah and hours of supervising Islamic boarding school activities or dormitories. The lesson schedule is a guideline for teachers as to when it is time to teach and picket for teaching and learning in class, in compiling the wakamad curriculum it is greatly assisted by computer-based applications such as Asc Timetables. This is in accordance with the theory put forward by Suryosubroto (2004: 43).

Implementation of Learning

Learning objectives can be identified from the syllabus, at the macro level according to competency standards (SK) and at the micro level according to basic competencies (KD). This is in accordance with the 2013 curriculum, the formulation of learning objectives is a more detailed description of the competency achievement indicators (GPA). The teacher's main material in learning refers to the student's handbook as a reinforcement of the concept of Physics theory, while additional material uses worksheets and internet sources so that the material received by students is more complete. This finding supports Nana Sujana (2000).

The learning activities carried out by the teacher in the classroom and laboratory use a variety of learning methods that are adapted to the conditions of the students and the learning material, there are three that use the lecture method, the question and answer method, and the cooperative method (discussion and presentation). This is in accordance with what was stated by (Sutikno, 2013: 86). Teachers in teaching use blackboard learning media, to get student responses that are even more conducive to using LCD projector media, while practical learning uses laboratory media supported by adequate laboratory facilities. This is in line with the theory put forward by Ibrahim (196:432).

Evaluation of learning is in the form of assessing attitudes through observing student activity, assessing skills through practicum tests, assessing knowledge through daily tests in the form of written tests, for students who have not completed remedial activities that have already been completed are given additional enrichment and the opportunity to participate in various competitions. These findings support previous research by Pradnyantika et al. (2018).

Evaluation of Learning Implementation

Audit activities for teacher learning tools are carried out to find out the readiness of the completeness of teacher administrative tools including educational calendars, annual programs, semester programs, syllabus, lesson plans, teacher journals, grade lists, KKM, student attendance, and teacher handbooks. These findings support previous research by Riyanto (2017).

Supervision of the implementation of teacher learning is carried out once a semester by the principal of the madrasah and the appointed senior teacher, starting from making supervision schedules, checking lesson plans, observing learning (opening, core, and closing), reflecting on the advantages and disadvantages of learning. This finding supports previous research by Widiawati et al. (2019). Supervision of learning outcomes is carried out in the form of examining and analyzing teacher assessment documents including a list of assessment results (UH, PTS, PAS, remedial and enrichment), and analysis of learning completeness. This is in line with what was conveyed by Djamarah (2005:245).

CONCLUSION

The management of the physics curriculum and learning at MA PPMI Assalaam goes through four stages, namely: (1) the teacher's learning plan has been prepared according to the 2013 curriculum, including the annual program, semester program, syllabus, and lesson plans. (2) the organization of learning has been running optimally including the activities of compiling educational calendars, setting teacher assignments according to competence and task load, preparing lesson schedules. (3) the implementation of learning goes according to SK/KD learning objectives, the main material of learning refers to student handbooks, uses various learning methods, utilizes various learning media, uses evaluation of attitudes, skills, knowledge, and follow-up of student learning outcomes held enrichment and remedial . (4) Evaluation of Learning Implementation is carried out through auditing teacher learning tools, supervision of learning implementation, and supervision of learning outcomes.

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