WHAT ARE THE PROBLEMS OF MATH LEARNING BASED ON CURRICULUM 2013?

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Abstract
This study aimed to describe problems which teachers face before the learning process, the learning process after the mathematics learning process based on Curriculum 2013 in SMP N 4 Klaten. This research type was a qualitative research of case study. The subjects were two mathematics teachers at 7th grade SMP N 4 Klaten, selected by purposive sampling. Data collection techniques in this research were participant observation, semi-structured interviews and document study. Data analysis was performed periodically during and after the collection of data through three stages, namely: (1) data reduction, (2) presentation of data, and (3) conclusion and verification. Mechanical data validity checking was done by techniques triangulation and sources triangulation. The results obtained in the planning of learning process, teachers sometimes did not make the lesson plan before teaching process. In lesson plan it was found that the material component did not explained based on categories, facts, concepts, principles and procedures. Lesson plan components made have not refers to the attachment Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 103 of 2014 on Learning In Primary and Secondary Education yet. In learning implementation, the teachers’ problems were they did not convey the indicators and the learning objectives in the preliminary activities. Props and learning media in the school have not optimal yet. In the scientific approach, questioning aspects and communicating aspects have not maximum. The findings of the study indicate that there were problems and constraints faced by teachers, they were in the models of learning process assessment of mathematics based on curriculum 2013. Teachers did not do the assessment observation, self-assessment, journal assessments, oral assessment, and portfolio assessment periodically. In the implementation of remediation, the teachers have constraint of time in the implementation of remedial actions.
Keywords: Curriculum 2013, learning, teacher.
According to Law No. 20 of 2003 on National Education System, article 1, paragraph 1 stated that the National Education is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that students are actively developing their potentials to have the spiritual power of self-control, personality, intelligence, noble character, and skills needed by then, the community of nations and states.

National Education in Indonesia has always experienced growth and change to meet the challenges and global influence. These changes and the development include curriculum improvement. According to regulations the Ministry of Education and Culture of the Republic of Indonesia, in the Joint Regulation of Director General of Primary and Secondary Education on Technical Guidelines for Implementation of Curriculum 2006 and Curriculum 2013 in the Primary Education and Secondary Education No. 5496/C/KEP/2014 stipulates that Curriculum 2013 is one of the criteria imposed on the Academic Year 2014/2015 (Kemendikbud: 2014b). Curriculum 2013 is the result of a refinement of the previous curriculum that is the Curriculum 2006.

There are eight standards in education implementation. The eighth standards include: (1) graduates competency standard, a content standard, a processes standard, an assessment standard, standard of teachers and education personnel, facilities and infrastructure standard, the standard of management, as well as funding standard (Sutrisno: 2013). One of such standards is the learning process standard. The standard of process is the criteria regarding the implementation of learning in the educational unit to achieve the Graduates Competency Standard. Related to the above principles, the developed standards of process which includes planning the learning process, the implementation of the learning process, learning outcomes assessment, and supervision of the learning process (Kemendikbud: 2013a). In this case the researchers focused on three-activities-based learning curriculum standards in 2013, namely: (1) planning of the learning process, (2) the implementation of the learning process, and (3) assessment of learning outcomes.

Implementation of mathematic learning process based on Curriculum in 2013 is the implementation of the plan of the learning process. In the implementation of learning include the introduction, core activities, and closing. In the implementation of learning should include developing attitudes, knowledge, and skills that are elaborated for each of the learning process. While in the process of assessment of learning outcomes, based on attachments of Regulation of Minister of Education and Culture No. 65 of 2013 using authentic assessment approach (authentic assessment) that assess a student's readiness, process, and learning outcomes as a whole (Kemendikbud: 2013b). The successful learning implementation of Curriculum 2013 is based on the professionalism of teachers in implementing the learning process. But the fact the teacher has not understood yet in implementing mathematic learning process based on Curriculum 2013.

SMP N 4 Klaten is one of schools that execute the Curriculum 2013 in the Regency of Klaten. Based on the results of preliminary observations conducted by researcher on the implementation of mathematics learning in 7th grade SMP N 4 Klaten, it is found that it is done by the method of discussion, presentations, and question and answer. In the implementation of learning, students studied in groups, discussing the problem of Student Worksheets, and presented the results of group discussion. Before the discussion began, the teachers have described about learning materials. At the time of execution of the discussion, the students searched for information and solutions from the book, as well as asked the teacher. After the discussion ended, the teacher asked a representative from each group to present answers to the problems contained in the given problem. After representatives of the group delivering answers, the teacher asked the responses of other groups to the answers of the corresponding group. Then the teachers gave the answered to every problem being discussed. At the closing, the teachers and students concluded the learning outcomes continued with the homework.

Observation results show that most of the implementation learning process based on Curriculum 2013 has been done in mathematics learning in 7th grade SMP N 4 Klaten. The results also showed that the components observed, asked, gathered information, associated, and communicated in the scientific approach has been implemented. However there are still some things in the learning process which has not been implemented to the maximum, which are as follow: (1) Aspects observe and ask in the scientific approach has not been done well. Students observed the activities carried out by reading books; (2) Teachers have not using the media yet, so some students were confused with learning abstract concepts. But teachers also need to understand that the students' cognitive abilities varied, so that not all the students helped by the learning; (3) the teacher has not seen the assessment for learning. In fact, the observation assessment should be done by the teachers continuously. This does not mean that the teachers’ act of learning and all the problems and obstacles of learning is influenced by a lack of understanding of the teachers in implementing of learning based on the Curriculum 2013. Another external factor, such as the school's physical condition, condition of students, availability of time allocation, the obligation of the teachers outside of instructional hours, and lack of infrastructure and learning facilities are also potentially affect teachers’ learning problem.

Based on the description, the learning act of teacher in implementation of mathematics of the Curriculum 2013 needs to be examined to gain a deeper understanding of the teachers’ act and teachers' problems and obstacles in the implementation of mathematical learning process based on Curriculum 2013.
METHOD
This research was included as a qualitative reasearch. Sutama describes that the qualitative research more emphasis in terms of understanding and meaning, is closely related to certain values, more emphasis on process than on measuring, describing, interpreting, and giving meaning and does not enough with the explanations and utilize multi method in research (Sutama: 2012). This research uses descriptive analysis because the research is to examine the problems of lesson plan, the implementation learning and after the implementation of mathematical learning process based on Curriculum 2013.

Based on the research method, it uses case study draft. According to Arifin a case study research basically study intensively an individual, a group or an institution that is considered to have or undergo certain cases (Arifin: 2011). This study intends to investigate and explore further to get a more complete description of the problems of lesson plan, implementation and post implementation of learning of mathematic learning based on Curriculum 2013.

In accordance with a form of qualitative research approaches and sources of the data collected, the data collection can be done in a variety of sources, and a variety of ways. Therefore the type of data collected in this study is a description of the teachers’ act of learning mathematics in the mathematics learning process based on Curriculum 2013. The subjects were two teachers of mathematics in 7th grade N 4 Klaten. The selection of research subjects using purposive sampling technique. The data collection techniques used in this study is the participatory observation, semi structured interviews with teachers, and study of documents related to the focus of the research.

The type of data in qualitative research include interview transcripts, field notes, photographs, audio recordings, videotapes, diary of personal comments, memos, official archives, passages in textbooks, and everything that can deliver the actual words or actions of people (Sutama: 2012). Sources of data in the study are the subjects of where the data was obtained (Arikunto, 2006). Sources of data in this study consisted of primary data sources and secondary data sources. The primary data source is a source that directly provides data to a data collector relating to the problems of mathematics learning-based on Curriculum 2013, while the secondary data source is a source that does not directly provide the data to the data collector. Secondary data sources in this study are the documents provided to support the research. This research information obtained from a variety of events. Object of this research is the mathematics learning based on Curriculum 2013 in 7th grade in SMP N 4 Klaten.

RESULT AND DISCUSSION
This section describes the findings and results obtained during the study, which is the answer to the problem formulation. The findings in this study describes the problems of mathematic learning process based on Curriculum 7th grade in 2013 at SMP N 4 Klaten, which include: (1) the problems of the planning of mathematics learning process based on Curriculum, 2013; (2) the problem of mathematic learning process based on Curriculum in 2013, and (3) the problem of assessment of mathematics learning outcomes-based on Curriculum, 2013. The data described is a real description of the findings of the researcher on problem of mathematics learning based on Curriculum 2013. Data collected by participative observation, semi structured interviews with teachers, and study of documents related to the focus of the research.

Problems of the planning mathematics learning process based on Curriculum 2013
The findings of the research showed that the problems and constraints faced by teachers in lesson plan of mathematics based on Curriculum, 2013. First, in preparing the lesson plan process, teachers still follow a systematic learning process Regulation of Minister of Education and Culture No. 81A 2013. Teachers did not include components of remedial and enrichment on draft of learning process. This means the teacher does not alter the draft of the learning process based on the latest rules contained in appendix Regulation Minister of Education and Culture of the Republic of Indonesia Number 103 of 2014 on Learning in Primary Education and Secondary Education.

Second, it was found that the teachers did not make draft of the learning process before the process of teaching, due to the business teachers. Moreover, it was found that a discrepancy in the drafting of the learning process, especially in the use of media of learning. In the draft, the learning process using the LCD but the process of learning uses the media blackboard, ruler, and markers.

Third, in the draft of the learning process, the material components do not expose the category, the fact, the concepts, the principles and the procedures. Material components for teachers only described in general and only wrote its subject matter alone.

Fourth, teachers are burdened by the demands of the drafting of detail learning process. It is because the assessment instruments are too much. The findings in the study of documents on the draft of the process of learning of the teachers, it cannot be found components of assessment instruments.

Fifth, it was found that the teachers make the draft of the learning process in the beginning of semester because teachers have not received an education calendar from the department. So the planned time allocation is often different from the actual learning conditions.
Problems of mathematics learning process based on Curriculum 2013

The findings of the research showed that the problems and constraints faced by teachers in mathematics learning process based on Curriculum 2013. First, teachers do not convey the indicators and the learning objectives in a preliminary learning activity. In a preliminary study, the teachers sometimes do not check students' abilities prerequisite for the material to be taught.

Second, teachers have problems in learning media and the use of props. It is because the school does not have props and learning media in the school are not optimal. The teachers still use the available tools and media to the learning process.

Third, in Regulation of Minister of Education and Culture No. 103 of 2014, explained that the learning path with scientific approach. In learning activities the steps to observe, ask, collect information/try, reasoning/associate, communicate. In the learning activities with scientific approach conducted by the teachers to question aspects less maximum, the students tend to be silent and reluctant to ask. In the aspect of collecting information/try and communicate was not maximum because students tend to be indifferent and oblivious to the presentation of the results of the discussion theme.

Fourth, by using the method of discussion and presentations made by the teacher, it is often that more time required in the learning process. This resulted in the allocation of learning is not done neatly, so that at the close of teachers are inconclusive and deliver material or the next chapter to be learned.

Problems of mathematics learning (assessment) based on curriculum 2013

The findings of the research showed that the problems and constraints faced by the teacher after mathematics learning (assessment) based on curriculum, 2013. First, based on research findings can be explained that not all types of assessment can be carried out by teachers. Teachers did not conduct the assessment of observation, self-assessment, assessment of journals, oral assessment, and assessment of the portfolio periodically. Whereas in Regulation of Minister of Education and Culture No. 66 of 2013, explained that such an assessments should be made on an ongoing basis.

Second, in the aspect of attitudes assessment, the teachers only observe the students who in the upper middle and lower middle class. In this case the teacher does not observe the students as a whole, due to the number of students is too many and can reduce the learning process carried out by the teacher, because the teachers focus on observing students in the classroom.

Third, in the execution of the skill assessment is not conducted maximally, because the teachers give project in each chapter so that students are not burdened with the cost when there should be a task for the project per each subject matter.

Fourth, in the implementation of remediation and enrichment, teachers experienced the constraint of time. Because counted time allocation has already prepared to do the learning in one school year.

CLOSING

Here are the conclusions of the research and discussion about the problems of mathematics learning based on curriculum 2013. In the learning process plan, teachers have not prepared the draft of learning process, student worksheets and instructional media due to busy teachers. In the draft of the learning process, it is found the discrepancy in the used of LCD media but in the learning process used blackboard, ruler, and markers. In the draft of the learning process, the learning process drafts found in the teacher, material components are not explained by category, facts, concepts, principles and procedures. The teachers were burdened by the demands of the drafting the details learning process. It is because the assessment instruments are too many. The finding in the documents study on the draft of the teachers’ learning process, it was not found the skills assessment. Problems in drafting the teachers’ learning process in the beginning of semester because teachers have not obtained the education calendar from the department. So the planned time allocation is often different from the actual learning conditions. In addition, teachers also did not know the characteristics of students who are taught. The component of the learning process draft made has not refers to the attachment Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 103 of 2014 on Learning In Primary and Secondary Education yet.

Implementation of learning undertaken by teachers has been largely corresponding to the Curriculum 2013, which includes the introduction, core activities, and closing activities. However, there are some parts in the learning process that was not implemented. The findings from the study showed that teachers did not convey the indicators and the learning objectives in the preliminary learning activities. The school did not have the props and optimal learning media. In the scientific approach to question aspects were less maximum, the students tended to be quiet and reluctant to ask. In the aspect of communicating, the students tended to be indifferent and unaware to the presentation of the results of the discussion theme. At the closing, of the teachers did not provide conclusions and delivered the next material or the chapter.

The findings from the study showed that the problems and constraints faced by teachers in the mathematics learning process based on Curriculum 2013. Teacher did not perform observation assessment, self-assessment, journals assessment, oral assessment, and assessment of the portfolio periodically. Whereas in Regulation of Minister of Education and Culture No. 66 of 2013,
explained that such an assessment should be made continuously. In the aspect of attitudes assessment, the teachers only observed the students that at the upper middle and lower middle class as a reference assessment. In the implementation of the remediation, teachers experienced problems when implemented remedial problems.

REFERENCES


Undang-undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.