

**TEACHER READINESS IN IMPLEMENTING CURRICULUM 2013
A CASE STUDY ON MATHEMATICS TEACHERS IN WEST NUSA TENGGARA
PROVINCE**

Hapiipi

Department of Mathematic Education Mataram University
Email: hapiipiunram@gmail.com

Abstract

This study aims to provide an overview of the readiness of mathematics teacher in the West Nusa Tenggara province in the implementation of the curriculum 2013. The readiness will be referred to three main aspects, namely: 1) teachers' understanding of the concept of curriculum 2013; 2) the readiness of teachers to make lesson plan, in accordance with the principles of the curriculum 2013; and 3) the readiness of teachers to implement learning and assessment process that adheres to the curriculum 2013. This research was conducted in the form of a survey. The survey was conducted on the sample of schools that are considered to represent schools in NTB. The sample consist of both schools that have and have not implemented the curriculum 2013. The results of this study are expected to provide the illustration of the extent of teachers' preparation, and what actions need to be done for the successful implementation of the curriculum 2013.

Keywords: Curriculum 2013, the implementation, the teacher readiness

INTRODUCTION

Background

The curriculum change is an important issue of education in Indonesia, which occurs in at least the last 10 years. In 2004, the government through the Ministry of Education issued a policy for the implementation of Competency Based Curriculum (KBK). Later the curriculum was modified in 2006, which was then known as the Education Unit Level Curriculum (KTSP). Seven years later, the Ministry of Education issued a policy for the implementation of the new curriculum, which is more familiar with the term Curriculum 2013.

Basically, the presence of the curriculum 2013 was not at all negate the existence of the previous curriculum, because the principle of competence-based, character education, and thematic approach remains adapted (with improvements) to the curriculum 2013. Mulyasa (2013) stated that Curriculum 2013 is a follow up of a competency-based curriculum (KBK) were ever tested in 2004.

However, the changes that occur in the four of National Standard of Education (SNP), make changes in the curriculum 2013 that is very important and great.

The changes which refer to the four standards are (Kemdikbud, 2013): competency standards, content standards, learning standards, and standard assessment process. The Fourth Amendment standards especially the last two, making this curriculum is very different from the previous curriculum.

The changes require a change in the charge of learning materials, the way teachers facilitate learning, students in the learning burden, the burden of teachers in the learning process, as well as components and how teacher assessment. The fundamental change makes the presence of this curriculum into a kind of shock, the "future shock" according to the terms Toffler (cited in O'neil, 2008). The pressure due to the shocking surprise is experienced by

individuals due to change too much in a relatively short time. Therefore, resistance and concerns about the sustainability of coloring the presence of this curriculum.

Such changes, making the implementation of the curriculum in 2013 was not readily accepted and practiced by teachers. While the roles of teacher in implementation of curriculum is certainly very large. Because the teacher is one of the main factors in the implementation process of classroom learning. Without the presence of the teacher, the learning process will not be optimal. Because of the strategic role of the teacher, the successful implementation of the curriculum in 2013 is also very dependent on how well prepared teachers in practice the idea of the curriculum in the learning process in the classroom.

For teachers, implementation of curriculum 2013 requiring them to make changes, at least in two ways, namely : 1) the approach and methods of learning , where teachers emphasized using a scientific approach to a more participatory methods ;and 2) processes and components must be more comprehensive assessment. The assessment not only measures cognitive ability, but also the attitude and skills.

Those changes, making the implementation of the curriculum in 2013 was not readily accepted and practiced by teachers. Then the fact that role of teacher in implementation of curriculum is certainly large. It occurs because the teacher is one of the main factors in the implementation process of classroom learning. Without the presence of the teacher, the learning process will not be optimal. Looking at the strategic role of the teacher, the successful implementation of the curriculum 2013 is also very dependent on how well prepared teachers in practice the idea of the curriculum in the learning process in the classroom.

Formulation of the problem

The statement problem of this study is "How the readiness of mathematics teacher at NTB in implementing curriculum 2013?"

Goal of the research project

The purpose of this study was to: 1) determine the extent of readiness of mathematics teachers in the province of West Nusa Tenggara in applying curriculum 2013 in the school; and 2) get an illustration of the obstacles encountered by the teacher in the implementation of the curriculum 2013 in province of NTB.

Benefits of the research project

The results of this study will provide an overview of the readiness of mathematics teachers and obstacles encountered in the implementation of the curriculum 2013, so the illustration can be used as a reference of improvements in implementing curriculum in the future.

METHODOLOGY

Design

This study was classified as descriptive research. Because this study will only make the observation of the facts that exist, then analyzed, further explanation and generalized. The purpose of descriptive research as stated Sulipan (2007) is to make an explanation in the systematic, factual, and accurate information on the facts and the properties of a particular population or region.

Sample of Data

The sample in this study consisted of two groups, namely: 1) learning math teachers implement the curriculum 2013; and 2) math teacher who has not implemented the curriculum 2013. Teachers came from 40 schools in the city of Mataram, West Lombok, Central Lombok, East Lombok, and Sumbawa district.

Technique of Collecting Data

Collecting data in this study using three ways, namely: 1) filling the questionnaire; 2) interview; and 3) documentation. Questionnaire was used to an overview of teachers' understanding of the concept of curriculum 2013. Meanwhile documentation techniques intended to get an idea of teacher-made lesson plan, and assessment techniques are used. Interview techniques are used only to confirm the questionnaire and documentation, as well as obtain information about the barriers and obstacles encountered in the implementation of curriculum 2013.

Data analysis technique

Data were analyzed using quantitative and qualitative methods of analysis.

RESULT AND DISCUSSION

RESULT

This study was conducted to gain an overview of the readiness of Mathematics teachers in West Nusa Tenggara province in implementing the curriculum 2013. The readiness is seen through three main aspects, namely: 1) teachers' understanding of the concept of curriculum, 2013; 2) preparation of teachers designed learning; and 3) the process of learning and assessment that teachers do. This study also provides an overview of the various constraints faced by teachers in implementing the curriculum 2013.

On Understanding Teachers Curriculum Concept 2013

Basically, the idea of curriculum 2013 is very broad, includes a rationale, idealized conditions, elements of change, the concept of the planned changes, the methods and stages of the planned changes. However, understanding of the concept of curriculum 2013 that referred to in this study are the concepts that are closely related to the position and role of the teacher in the implementation of curriculum 2013 in the school. The restriction is done to maintain consistency notion in this study, which focused only on the readiness of teachers.

In general the results showed that, teachers of Mathematics in NTB have known the implementation of curriculum 2013 that is started in the academic year 2013/2014. Generally, the knowledge obtained through: 1) Socialize curriculum activities organized by the government, schools, or related institutions; 2) The education and training curricula, 2013; 3) Printed media and electronic media; and 4) other sources, such as the Internet or peer. Even from school samples taken note that for schools that have implemented the curriculum 2013, approximately 76.2% of Mathematics teachers had attended the training curriculum. While the rest is around 23.8% that has ever attended socialization activities. As for teachers whose schools have not implemented the curriculum 2013, it is known that 26.3% had attended the training, 36.8% had attended socialization, and the rest to know through other media. Table 1. Following shows the condition.

Table 1. Information Resources of Curriculum 2013

Knowing through	School		Percentage
	SI	BI	
Socialization	5	7	30.0%
Training Education Program	16	5	52.5%
Media, colleague and others		7	17.5%

SI : has been Implemented

BI: has not been implemented

Through the data shown it can be concluded that all mathematics teachers in the Province of NTB had known about the curriculum 2013 and its implementation plan. However, if further confirmed, it turns teachers' understanding of the concept of curriculum 2013 that is being, and they will implement in classroom practice showing that the condition is not linear. Teachers' understanding of the concept of curriculum 2013 is still very diverse. In fact there is a very different understanding of the right concept.

Against the general idea of the curriculum 2013 with regard to the role of the teacher in the learning process at school, teachers know that understanding is not 100% accurate. The general idea means that are: 1) Basic formulation of competency standards (SKL); 2) Elements of curriculum changes in curriculum 2013 which refers to the standard eight education reform; and 3) the preparation of syllabus Responsibility for curriculum 2013.

Both schools have already begun to implement or not, it is known that less than 60% of teachers who understand the general idea accurately. Table 2 shows you about what has been provided.

Table 2. Teacher Understanding about General Concepts Curriculum 2013

School	Basic Formulation SKL			Element of Change			Responsibilities Syllabus		
	Yes	Less	No	Yes	Less	No	Yes	Less	No
SI	5	7	9	2	19	0	13	3	5
BI	5	3	11	1	14	4	10	4	5
Total	10	10	20	3	33	4	23	7	10
Percentage	25%	25%	50%	8%	83%	10%	58%	18%	25%

The above data clearly shows that 50% of teachers do not understand the basic formulation of competency standards (SKL) appropriately. There are still approximately 83% of teachers who lack an understanding of the elements of change of curriculum 2013. There are many people who still think that one of the major changes that characterize the curriculum 2013 was a change in the funding standard. Similarly, there are still about 43% of teachers do not understand clearly the task of developing a syllabus will be the responsibility of anyone. This has implications for understanding the perspectives of teachers on the implementation of this curriculum, as will be described in the next section.

The same thing also demonstrated an understanding of teachers related to their immediate task in developing a learning device. Samples taken from the teachers, it is known that 83% of teachers have not understood that the reference in the formulation of lesson plan the implementation of the curriculum 2013. Fact, 45% of Mathematics teachers in schools that have not implemented the curriculum 2013 have not understood the reference formulation of appropriate lesson plans.

Indicated better conditions related to teachers' understanding of learning approaches that seek hallmark of the curriculum 2013, the scientific approach. It is around 100% of teachers who have applied, knowing this approach. As for schools that have not implemented, there are still about 2% teachers do not understand this idea. It's just that, when explored further, it appears that teachers still do not understand the whole concept of the scientific approach. Only 33% of teachers who understand the concept of scientific approach correctly, while 65% is still not fully understood. Even 3% of teachers did not understand the concept of a scientific approach.

Table 3 below shows what you have just stated.

Table 3. Teacher Understanding about Learning Design of Curriculum 2013

School	Formulation of Lesson Plan Reference			Learning Approach			Scientific Method		
	Yes	Less	No	Yes	Less	No	Yes	Less	No
SI	6	15	0	21	0	0	10	11	0
BI	1	18	0	13	2	4	3	15	1
Total	7	33	0	34	2	4	13	26	1
Percentage	18%	83%	0%	85%	5%	10%	33%	65%	3%

Conditions are much better shown in teachers' understanding of aspects of assessment and assessment techniques that the primary characterize of curriculum 2013. For schools that have implemented the curriculum 2013, 100% teacher assessment properly understand aspects. It's just that there are still about 19% of teachers who do not understand about the valuation methods used. While applying for a school that has not implemented curriculum 2013, there were approximately 18% of teachers who do not understand the aspects of assessment, and 23% do not understand the proper methods of assessment. Even 10% of teachers did not know the method of valuation which is the central feature of curriculum assessment 2013. Following Table 4 to confirm what is stated.

Table 4. Understanding Teacher about Concept Curriculum Assessment 2013

School	Aspects of Assessment			Assessment Method		
	Yes	Less	No	Yes	Less	No
SI	21	0	0	17	4	0
BI	12	7	0	10	5	4
Total	33	7	0	27	9	4
Percentage	83%	18%	0%	68%	23%	10%

The results of interviews conducted by the researcher with the teachers at the sample schools also strengthen the above results. The teachers understand that learning approach of the curriculum 2013 is different from the previous curriculum. They also understand that the assessment is different from the previous curriculum. And so far despite some obstacles, the teacher still trying to do a scientific approach based learning, with authentic assessment. At least, this is already reflected in the lesson plans developed by teachers. However, still looks the difficulties experienced teachers in terms of the scientific approach to practice fully in the learning process. It is also parallel to the teachers' limited understanding of the scientific method of learning. From the data obtained it is known that there are many teachers understand that teaching methods that is suitable for scientific approach is only a method of discovery (discovery learning).

Preparation Process of Learning Curriculum 2013

The preparation process of learning became an important stage of learning activities. This section presents results of research related to teacher preparation is done prior learning in the classroom. Interview techniques and documentation used to obtain this data. The results showed that quite a lot of teachers who have difficulties in learning preparation. Several types of difficulties faced by teachers include:

1. Teachers still have difficulties in setting the steps of learning that meets the five principles (observing, questioning, associating, experimenting, and communicating)

2. Difficulty in developing student worksheets based on scientific
3. Difficulty in designing stage of the participatory group work students
4. Difficulty in adapting the material to the appropriate method, with reference to scientific approach
5. Creation Lesson Plan is not maximized because the components are too many
6. Concepts and technical authentic assessment is not yet understood in detail
7. Indicators difficulties, assessment of attitudes and skills.

Process of Learning and Curriculum Assessment 2013

In the learning process, most of the teachers are also having trouble.

The survey results revealed that this difficulty occurs in four parts, namely: 1) Some of the material is too difficult for students to understand; 2) the teacher got difficulties in conducting the steps of scientific learning; 3) low student motivation to participate in learning; and 4) difficulties in the assessment process. Difficulty for each section is presented below.

Curriculum materials in 2013

Too much material. Equivalent to the high school level, the mathematics materials in curriculum 2013 reached 12 chapters, whereas the previous curriculum, only 7 chapters. As a result, the allocation of teachers felt that there was not sufficient time to complete all of the material.

1. Several materials are too difficult to be understood by student
2. Students also have difficulty in comprehending reading text on the textbook, so the concept is also difficult to be understood by the students.

Learning Activities

1. Teachers have difficulties in fully implementing the scientific stage
2. Difficulty in facilitating students to discover concepts independently.
Students tend to expect teachers in order to explain concepts directly.
3. Difficulty in motivating students to follow the stages of learning seriously.

Conditions Shiva in Learning Activities

1. Student difficulty adapting to the curriculum 2013. Students fully expect the teachers explanation about the concepts, such as prior learning curriculum 2013
2. Ask and explore still unfamiliar with students
3. At some schools, student interest is still low.

Process Assessment

1. It is hard to conduct assessment in every activity
2. Number of students in a class around 40 people, and with a considerable amount of class, the it made teacher hard to assess students' attitudes and skills
3. Difficulty in assessing attitudes and skills, because the indicator is not yet clear.

Discussion

The preparation of Mathematics teachers in implementing the curriculum 2013 in the province of West Nusa Tenggara cannot be said to be fully prepared. This condition is clearly visible from the teachers' understanding of the concept of curriculum 2013 which has not been intact. And at the same time, teachers also have difficulty in carrying out the process of learning the concept of curriculum 2013.

The teacher not fully understand reflected through the low ability of teacher in understanding the general concept of curriculum 2013, the learning design that be a primary

characteristic of curriculum 2013, and the concept of assessment is a defining characteristic of the curriculum 2013. It's not only the teachers in schools that have not implemented the curriculum 2013, which has not fully understanding, but it also happens to teachers in schools that have implemented the new curriculum. The illustration, in short can be seen in the following table.

Table 5. Teachers Understanding of Curriculum 2013 Concept

School	General Concept			Learning Design			Assessment Concept		
	Yes	Less	No	Yes	Less	No	Yes	Less	No
SI	32%	46%	22%	59%	41%	0%	90%	10%	0%
BI	28%	37%	35%	30%	61%	9%	58%	32%	11%

SI: It has been implemented

BI: No Implementation

Furthermore, the lack of understanding implicate for the emergence of the difficulties faced by teachers in implementing the learning in the classroom, ranging from the preparation, implementation process, until the assessment process. As Sanjaya (2008) states that the teachers' understanding of curriculum to be one of the main indicators of professional competence of teachers. This idea is truly easy to understand, that it was difficult to study the creation of a teacher is able to reference the appropriate curriculum if teachers' understanding of the concept of the curriculum is still minimal.

Taken example, in the case of the implementation of the curriculum 2013 in the province of NTB, there are some teachers who stated that the implementation of curriculum 2013 are difficult to implement because of existing support facilities at the school which are inadequate. This belief is certainly well-founded, because it's hard to curriculum implemented well without the support by adequate facilities. But if it refers to the context of the curriculum 2013, in which the element changes only include competency standards, content standards, learning standards, and assessment standards, as stated Kemdikbud (2013), the carrying capacity of infrastructure demands was difficult to find its relevance. Curriculum 2013 only requires the curriculum overhaul in charge of learning, instructional design and assessment. This condition is clearly a reflection of the idea that an understanding of the curriculum becomes important.

Other cases are common in NTB is, teachers have difficulty in designing and implementing the learning that follows the scientific stage. This is truly also related to teachers' understanding of concepts with the scientific approach is not yet complete, as shown in Table 2 above. There is still approximately 52.4% of teachers are already implementing the curriculum 2013, but lack understanding of the concept of proper scientific study.

Moreover, the deductive nature of mathematic is very different from the principle of inductive science. Therefore we need a more comprehensive understanding of mathematics if you want to learn scientifically (inductive stage). As stated in the Suherman (Kemendikbud, 2013) maintains that the learning of mathematics has different characteristics from other learning. These characteristics are to follow the spiral method of learning math, learning stages, emphasizing deductive mindset, and change the consistency of truth.

Similarly, the difficulties faced by teachers in implementing the assessment process. So far most teachers, who have implemented the curriculum 2013, still have difficulty in developing assessment instruments, especially with regard to attitudes and skills assessment. Indeed, authentic assessment component has been understood by the majority of teachers of Mathematics in NTB. The data above shows that only 10% of teachers are already implementing the curriculum 2013 but has yet to grasp the concept of authentic assessment as a whole.

However, as the recognized of teachers (in interviews), teachers still have difficulty in formulating a self-assessment instrument. Teachers also have difficulty carrying out the assessment process in the learning process. This last condition can occur as a result of the learning model chosen does not connect with the concept of authentic assessment. As Muchtar in (Wulandari, et al., 2013) point out that the assessment system should be developed in line with the model and the learning strategies developed. Moreover, the result may be from an understanding teacher who considers that the only way to assess the attitudes and skills is to do it in conjunction with the learning process. Such understanding makes the assessment process becomes difficult.

On the other hand, in general it can be said that the implementation of the curriculum 2013 that has begun in a number of schools and will be expanded to other schools running.

CONCLUSSION AND SUGESTION

Several conclusions can be considered to improve the implementation of the curriculum 2013, particularly in the province of West Nusa Tenggara is as follows.

1. Understanding of mathematics teacher about the concept of curriculum i2013 remains intact.
2. Majority of teachers have difficulty in developing learning by using the scientific approach.
3. Teachers also have difficulty in the learning process by following the stages of scientific study.
4. Teachers are still experiencing difficulties in the assessment process, especially with regard to attitudes and skills assessment.

Therefore, continual assistance is still needed to improve and develop the skills of teachers in the implementation of curriculum 2013. Mentoring activities focused on the needs of teachers in lesson preparation, implementation of the learning process, and the assessment process.

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