The implementation of skill assessment by the educators on the mathematics learning process in senior high school

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Abstract. The purpose of research to describe and know the implementation of skill assessment on the mathematics learning process with the high school mathematics teacher as the subject because it is less fully implemented. This research is the type of the descriptive qualitative method. The data was collecting observation method, interview and documentation. The result showed that on the planning stage of the implementation of skill assessment, there were many teachers who had not prepared all the completeness with various assessment techniques through performance, project and portfolio. The teacher was prepared the list of questions. On the implementation stage, there were many teachers who had not understand the stage of completing the assessment with the appropriate instrument method and development. On the reporting stage, discovered that teachers faced the difficulty on preparing scoring report with the range value. Aside from that, the teachers had not prepared the assessment instrument very well on the planning stage. It can be concluded that the implementation of skill assessment has been implemented but not maximally because educators don’t understand about the skill assessment and the number of instrument that must be prepared before the assessment.

1. Introduction
Assessment is the process of information collecting and processing to measure the achievement of learning outcomes of learners. Assessment is an important part of education [1]. Quality assessment can provide information to educators, learners, parents and systems in effective and useful ways [2]. For educators, are collecting information about learners learning and information about the learning process. For learner, the assessment is the process of information them about the progress of learning.

Assessment has become an important key to the improvement of the quality of education [3]. The best assessment has a seamless connection to curriculum and instruction so that it is ongoing. It represents all meaningful aspects of performance and has equitable standards that apply to all learners [4].

Assessment by the educator is an assessment conducted by educators/teacher of a subject that aims to measure the comprehension of the learners. Assessment can be done by educators by making assessment instruments including test and assessment formats. Educator has that must be applied in assessment [5]. The provisions of the educator in conducting the assessment of the learners on the knowledge and skills aspects of the form and usefulness of the assessment, mechanism assessment, procedures assessment, performed instruments assessment [5].

Assessment in curriculum 2013 requires educators to conducted authentic assessments that include attitudinal assessment, knowledge and skills [5]. In mathematics subjects, the authentic assessment used is the assessment of knowledge and skills [6]. Assessment as a form of implementation of KI 3 and KI 4 in the curriculum. In this study, focused on skill assessment.
Skills assessment is an assessment to measure the achievement of the competence of learners against KI 4 [7]. Skills assessment requires learners to demonstrate a certain competence. This assessment is intended to determine the level of mastery of knowledge learners to recognize and solve problems in real life.

Skills assessments in curriculum 2013 can be performed in a variety of techniques: performance/practice, project, and portfolio assessment [6,7]. Assessment of performance/practice is the assessment done by observing the activities of learners in doing something that is shown through an act. Performance appraisals refer to mathematical tasks and situations that enable students to demonstrate understanding and thinking and to apply learners' knowledge and skills in a variety of contexts [8]. Project assessment is the assessment of a task that must be completed within a certain period / time. Portfolio assessment is an assessment of a collection of work of learners in a semester or a year that shows the effort, development and achievement of learning with certain criteria that are considered good work [9].

The assessments done by the educators are in accordance with the assessment standards set by the government. It is contained in assessment standard of curriculum 2013. The procedure of assessing the skills aspect is done through the stages: a) planning the assessment; c) developing assessment instruments; c) executing the assessment; d) utilizing the assessment results; and e) reporting the assessment results in the form of numbers with a scale of 0-100 and description [6].

The purpose of this research is to describe the implementation of skill assessment on the learning process of mathematics. Skill assessment is one of the authentic assessments has the advantages with the product can be directly observed and understandable evidence of performance and work quality of learners [10]. While in school, educators rarely do the assessment with non-test [11]. In relation to the valuation function that is very important for educators and learners it has become a teacher's skill to be able to do a good assessment according to what assessment standards on the Curriculum 2013.

2. Method
The method used in this research is descriptive qualitative research to determine the application of skill assessment conducted by educators [12]. Data were obtained by observation, interview and documentation. The subject of this research is educator of mathematics of SMA Negeri 1 Ngawi 10th grade, East Java, Indonesia. Researchers conducted observations with the help of digital camera to record teaching activities. Based on the results of the observations, then the subject was interviewed to get a better results on skill assessment conducted at the time of learning. From the results of interviews, then performed documentation method of skill assessment results conducted by educators on student learning outcomes. And then data analysis technique is done by data reduction, data presentation and conclusion [11].

3. Result and discussion
Researchers make observations into the classroom to sew educators undertaken the learning and assessment process The results of observations of researchers on the learning process of educators who do any skills assessment is also just doing the learning process without doing the assessment. The results of the observation indicate that the educator implemented skill assessment by giving the problem to the learner. The problem can be a task at the time of mathematics learning takes place as well as home tasks. Duties at school and at home are then gathered together. The set of tasks has been rated so that the teacher knows the level of understanding of the learners through the answer sheet of the learners.

After the observation data were taken then interviewed by the mathematics teacher. From the results of observations made the deepening of information by conducting interviewed to teachers of mathematics on the assessment conducted on the learning process. The results of interviews to educators about the implementation of this assessment is the educators do not always use all three skills assessment techniques in the learning process. The educators must be able to adapted the material to use this type of skill assessment techniques. In the learning process educators are only able
to use one skill assessment format from various existing skill assessments. Educators are more likely to use portfolio assessment in assessing.

Portfolio assessment conducted by educators comes from the tasks of learners both school like Figure 1 and homework like Figure 2. There is also a repeat of every single basic competency has been completed. Collection of repetitive results and tasks of learners is used as a portfolio assessment by educators to determine the level of achievement of the ability of learners and the success of the learning process.

Stages of portfolio assessment done by educators in the form of planning, review of instruments, implementation and scoring. Planning undertaken by educators is a matter that suits the goals, KI and KD as well as making assessment rubric like Figure 3 and Figure 4. Review of the problem is a test of problems that have been made by educators ranging from the level of difficulty, the suitability of the material, the language used and for determining the duration of the workmanship of the learners. Implementation of assessment is done during the learning process takes place.

![Figure 1. School Task](image1)

![Figure 2. Homework](image2)
Next stage of portfolio by the educator is scoring stage. Scoring stage is done after all the work sheet of learners collected and then educators give a score like Figure 5. Scoring refers to a rubric of pre-made judgments. This can help educators be more objective.

**Figure 3. Assessment Rubric School Task**

**Figure 4. Assessment Rubric Home Work**

**Figure 5. Scoring Worksheet Learners**
The result of research on the implementation of skill assessment in mathematics learning process with performance assessment and project assessment technique is still difficult to be implemented fully by educator. Educators find it difficult to assess performance and projects. Constraints felt by educators is the lack of understanding of educators about the performance assessment and project assessment. Instruments required to conduct performance assessment and project assessment are numerous so that the time required is long enough to plan, execute and report the results of the assessment. Difficulty in scoring because it is scale and descriptive. The number of learners in one classroom is also an obstacle for educators to apply performance assessment and project assessment. An educator not only has one class but several classes with a group of learners consists of 32 students making it difficult for educators to maximize the implementation of the skills assessment.

However, researchers found other techniques used by educators in assessing skills in the learning process. The research findings, that to conduct a skill assessment, educators use oral tests to knowledge students' ability to express their ideas or opinions. Figure 6 showed the learners presented the result of their work in front of class. At the time of learning, educators provide feedback so that learners are able to explore information related to the material to be taught as well as the prerequisite materials in the learning process takes place. This is done by educators to assess learners 'skills related to students' self-confidence, comprehension of ability and mastery of the material. Educators provide additional scores for learners who are able to answer oral tests from educators so as to add scores to the tasks and grades of student learning outcomes.

Figure 6. Learners Presented the Result of Their Work

The use of oral tests is considered able to explore the ability of learners through the answer/response of learners [13]. Educators are able to recognize the attainment of understanding and the concept of mathematical thinking of learners directly.

Based on this, the educator has conducted a skill assessment set by the government for the achievement of Core Competence 4 but the implementation of the assessment has not been fully implemented because there are constraints experienced by educators regarding the number of assessment instruments that must be prepared. The existence of other techniques is oral tests to determine the ability of learners in conveying ideas and understanding ability of learners.

4. Conclusion
In the learning process, the educators make the assessment with 3 stages of assessment, those are planning, implementation and reporting. Planning to kill assessment by educators is different with the process standard. On the implementation stage, educators execute skill assessments with the help of written test besides of other forms such as the practice or work of learners. This is because the educators face a difficulty to choose material that can be used as a skill assessment. And then, on the reporting, educators have difficulty in preparing too many instruments to carry out skills assessments with performance assessment and projects assessment techniques. In addition, the assessment by
descriptive method with a large number of students per class and more than one class managed by educators require a longer reporting time.

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