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An Evaluation of the Implementation of Assessment in Biology Distant Learning Based on Curriculum 2013

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ABSTRACT
This study is aimed to evaluate the planning and process of the authentic assessment of Biology distant learning based on curriculum 2013. It is a quantitative evaluation study on the implementation of authentic assessment in Biology distant learning based on curriculum 2013 in SMAN 1 using the Stake evaluation model. The data were collected through interview and documentation. Data were analyzed using the descriptive quantitative method. The results showed that: (1) Implementation of authentic assessment in Biology distant learning in the planning phase implemented well according to the indicators of 84.8%, and 15% have not been implemented. (2) Process phase was carried out well according to the indicator of 80%, and not according to the indicator of 20%. These means that the planning and implementation of an authentic assessment of Biology learning at SMAN 1 have not been fully implemented according to the authentic assessment procedure.

Keywords: *Authentic assessment, Biology, Curriculum 2013, Distant learning.*

1. INTRODUCTION

The curriculum has changed many times in the Indonesian education system, starting from the 1947 curriculum to the latest curriculum, namely the 2013 curriculum. Curriculum changes are expected to minimize problems that exist in the previous curriculum, namely the Education Unit Level Curriculum. The Education Unit Level Curriculum is a curriculum implemented in 2006, resulted from an improvement from the previous curriculum. This change aims to take advantage of global competition based on information technology. One of the efforts to improve the quality of graduates is to maintain graduation standards. The Education Unit Level Curriculum is still considered problematic in its implementation since it is considered unresponsive to local, national, and global social changes [1]. Furthermore, the Education Unit Level Curriculum criteria are assessed based on competency-based assessment. The assessment criteria for this curriculum are considered not to lead to a competency-based assessment.

The 2013 curriculum is a curriculum set by the government to replace the 2006 curriculum or improve the previously implemented curriculum. Another change comes from the concept of the 2013 curriculum itself. The 2013 curriculum is expected to provide a balance of cognitive aspects, affective aspects, and psychomotor aspects. So far, the assessment is only based on the cognitive aspect [2]. Setiadi also stated the same thing that the striking difference between the 2013 curriculum and the previous curriculum is the emphasis on the realm of learning. The 2013 curriculum emphasizes the education process as a whole so that it covers a broader field, namely the realm of knowledge, attitudes, and skills [3]. The 2013 curriculum divides it into four core competencie: social attitude competencies, spiritual attitudes, knowledge, and skills. Therefore, the potential of students can also be observed and developed from the realm of knowledge.

The 2013 curriculum is believed to be a strategic policy in preparation for the challenges and demands of the Indonesian people in the future. The 2013 curriculum policy can describe the function of adjusting to the environment [4]. According to Nurdyansyah & Fahyuni, the 2013 curriculum has an essential vision that knowledge cannot be transferred from teacher to student. Still, students are subject to an operational

capacity to seek, process, construct and use knowledge [5]. Learning must be related to the opportunities given to students to build their knowledge. Students must be encouraged to be able to solve problems, find things, and try to realize their ideas.

Changes in the 2013 curriculum include learning and assessment of student learning outcomes. An intense learning process is through a scientific approach, which encourages students to observe more, ask questions, collect data, debate, and communicate. A scientific approach is a pedagogical approach using steps according to the scientific method [6]. Biology learning is considered difficult for students, so that students are less interested in learning. This problem has a significant impact on the learning process and student learning outcomes. Teachers must be able to design exciting learning processes and adapt interesting learning strategies and methods to make students interested in participating in Biology learning.

In addition to learning, assessing learning outcomes is also one of the most essential things in education. Assessment is the most important component in the implementation of education. Efforts to improve the quality of education can be through improving the quality of learning and the quality of the assessment system. The two are interrelated, and a sound learning system can produce good quality learning. Meanwhile, a sound assessment system can encourage teachers to determine good teaching strategies and motivate students for better learning [7]. Students' learning during the Covid-19 pandemic will be evaluated whether it can still run or not.

An outbreak of a disease called Covid-19 spread throughout the world in 2019. The current COVID-19 is sweeping the world, including Indonesian, inviting all parties to adapt and accept its impact. Education is one of the most impactful areas. According to UNESCO, due to the Covid-19 pandemic, more than 91% of students have been affected by school closures [8]. The Ministry of Education and Culture of the Republic of Indonesia explained in Circular Number 4 of 2020 that in addition to the increasing spread of Covid-19, the main reason for implementing education policies was students, teachers, school principals and school residents. Thus, it is advisable to carry out the teaching and learning process at home through distant learning.

The distant learning process has different characteristics from offline learning. There are several aspects that affect the success and effectiveness of distant learning. According to the opinion of Pangondian, the effectiveness of distant learning depends on the technology, the character of the students, and the character of the teacher [9]. The distant learning program is an effort to develop the learning process during the Covid-19 pandemic. Distant learning is a learning process that applies media and achieves interaction between teachers and students [10]. Distant learning must have different characteristics from offline learning. According to the opinion of Pininta (2020) the learning process at home is carried out with the following provisions: (1) the purpose of learning at home through distant learning is to equip students with practical knowledge without any obligation to complete all the academic results provided. (2) Learning is carried out in their homes by focusing on life skills education, such as those related to the Covid-19 pandemic. (3) There are many ways for students to complete homework. (4) The results of the learning process at home are qualitatively fed back by the teacher, without the need for the teacher to provide quantitative values.

Based on the results of observations made on Biology teachers in March 2021 at SMAN 1, teachers have received training activities on the 2013 curriculum and have been implemented in schools. However, teachers still find it challenging to carry out authentic assessments in the 2013 curriculum, especially amid the learning process that is carried out remotely. Teachers feel they are not sure about the suitability of authentic assessments carried out with the existing 2013 curriculum assessment system. The implementation of the 2013 curriculum itself has been going well, the assessment is even more specific, but the teacher finds it difficult to implement it authentically. This is because there are so many aspects of the assessment.

Another problem is that students are not punctual when collecting assignments for network constraints, so the authentic assessment process becomes less than optimal. Then, teachers still carry out authentic assessments using only one aspect and infrastructure during distant learning, which is inadequate to support authentic assessments, especially on the affective aspects of students. Researchers are interested in knowing the extent to which the planning, process, and management of authentic assessment result in the school, so this research was conducted.

2. METHOD

This is evaluation research with descriptive approach. It was conducted by adopting the evaluation model of Stake (1967) in the implementation of distant learning programs for Biology subjects. The evaluation consists of two stages, namely: input and process. They were analyzed by means of the descriptive quantitative. The reason for choosing the Stake evaluation model is because the evaluation model is structured.

The variable in this study is authentic assessment during distant learning. Authentic assessment is a student assessment activity, which emphasizes the

content and process that should be assessed using different assessment tools. This assessment tool is adjusted to the competency requirements in the Competency Standards or Core Competencies and Basic Skills. The implementation of the authentic assessment is further refined in the sub-variables, namely: planning an authentic assessment and implementing an authentic assessment. The sub-variables above are then transformed into authentic assessment criteria that can be used to implement authentic assessments in distant learning Biology in the classroom. The subject of this research is a Biology teacher at SMAN 1. The study was conducted from February to March 2021. Their data were collected through interview and documentation. In analyzing the descriptive data method was used.

3. RESULTS AND DISSCUSSION

Evaluation of the implementation of distant learning Biology in SMAN 1 class X and XI is seen from three aspects: evaluation of planning and evaluation of the assessment process. This is in line with the evaluation model used, namely the Stake evaluation model which includes: the input phase and the process phase.

3.1 Input Phase

The input stage is to assess the teacher's willingness to carry out an authentic assessment of Biology distance learning. This willingness is manifested in an authentic assessment plan described by the teacher in the lesson plan and lesson plan syllabus. The lesson plan and curriculum are descriptive data from the teacher. Then, the descriptive data is compared with the standards that have been set. The results of the comparison produce a decision whether the descriptive data meet the criteria or not.

Authentic assessment planning consists of evaluation components, namely cognitive assessment, affective assessment, and psychomotor assessment. Each evaluation component consists of several parts, namely: evaluation design, indicators of competency success, evaluation techniques and tools, and processing of evaluation results. Furthermore, this component is further developed into evaluation criteria. The evaluation criteria are based on Permendikbud Number 104 of 2014 and the assessment guidelines.

3.1.1. Cognitive Assessment Planning

Cognitive assessment planning carried out by the teacher is the first stage, which describes the state of a comprehensive examination in the learning process. Evaluation of cognitive assessment planning includes several aspects, including: (1) cognitive assessment design, (2) cognitive ability performance indicators, (3) cognitive assessment techniques and tools, (4) cognitive assessment procedures. Based on these four aspects, it is explained in the comments stating the standard of assessment planning in evaluating the implementation of cognitive assessment of Biology subjects for students in class X and XI at SMA N 1 Gabus (see table 1).

Table 1. The results of the evaluation of the implementation of the cognitive assessment plan.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P (%)	F	P (%)
Rater 1	12	11	91,2	1	8,3
Rater 2	12	11	91,2	1	8,3
Mean	12	11	91,2	1	8,3

Table 1 describes the implementation of planning from the implementation of cognitive assessment in Biology learning carried out by teachers. From the results of the documentation analysis and comparing with the criteria, there are several indicators that do not meet the criteria. As shown in the table above, the results of the evaluation of inputs that rater 1 and rater 2 obtain a percentage of 91.2%, meaning that there are 11 indicators of cognitive assessment planning that have been implemented by the teacher and 8.3% which means that there is 1 indicator that has not been implemented by the teacher. This indicator shows that the teacher has not made a cognitive assessment rubric in the cognitive assessment tool.

3.1.2. Affective Assessment Planning

Affective assessment planning carried out by teachers and students is the first stage that describes the state of an assessment that is integrated into the learning process. Evaluation of affective assessment planning includes several aspects, including: (1) affective assessment design, (2) affective ability performance indicators, (3) affective assessment techniques and tools, (4) affective assessment procedures. Based on these four aspects, it is explained in the comments stating the standard of assessment planning in evaluating the implementation of affective assessment of Biology subjects for students in class X and XI at SMA N 1 Gabus. For more details, see table 2.

Table 2. The results of the evaluation of the implementation of the affective assessment plan.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P(%)	F	P(%)
Rater 1	12	10	83,3	2	16,7
Rater 2	12	10	83,3	2	16,7
Mean	12	10	83,3	2	16,7

Table 2 describes the implementation of planning from the implementation of planning from the implementation of affective assessment in Biology learning carried out by teachers. From the results of the documentation analysis and comparing with the criteria, there are several indicators that do not meet the criteria. In table 2, the results of the evaluation of inputs for rater 1 and rater 2 obtained a percentage of 83.3%, meaning that there are 10 indicators of affective assessment planning that have been implemented by teachers and 16.6%, which means that 2 indicators have not been implemented by teachers. These indicators are that they have not written an attitude assessment plan in the syllabus and the teacher has not made an assessment rubric on the affective assessment instrument.

3.1.3 Psychomotor Assessment Planning

Psychomotor assessment planning carried out by teachers and students is the first stage that describes the state of an assessment that is integrated into the learning process. Evaluation of psychomotor assessment planning includes several aspects: (1) psychomotor assessment design, (2) psychomotor ability performance indicators, (3) psychomotor assessment techniques and tools, (4) psychomotor assessment procedures. Based on these four aspects, it is explained in the comments stating the standard of assessment planning in evaluating the implementation of psychomotor assessment in Biology subjects for students in class X and XI at SMA N 1 Gabus. These standards are used to carry out the evaluation step after obtaining descriptive data in the field. The results of data processing for the assessment of psychomotor assessment planning in Biology learning are disclosed using an observation sheet used by researchers to obtain data between standards and data from class X and XI SMA N 1 Gabus. For more details see table 3.

Table 3. The results of the evaluation of the implementation of the psychomotor assessment plan.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P(%)	F	P(%)
Rater 1	10	8	80	2	20
Rater 2	10	8	80	2	20
Mean	10	8	80	2	20

Based on all the components that have been evaluated in the input phase in Biology learning, the results of the implementation of authentic assessments in distant learning are obtained. This input phase includes planning for cognitive assessments, planning for affective assessments, and planning for psychomotor assessments. Can be concluded that the authentic assessment evaluation in the input phase of authentic assessment implementation received a percentage of 84.8%, which means that there are 29 indicators that have been implemented and 15% which means that there are 5 indicators that have not been implemented. When applying authentic assessment, it is necessary to understand the level of achievement to obtain information regarding whether or not it is good in its implementation.

3.2 Process Phase

The process stage, which describes the implementation of authentic assessments carried out by Biology subject teachers when teaching. Through observations in the learning process related to the conformation of the assessment system and the implementation of an authentic assessment in accordance with the assessment plan. The implementation of authentic assessment is carried out by taking into account three aspects of the assessment, namely: cognitive assessment, affective assessment, and psychomotor assessment.

3.2.1 Implementation of Cognitive Assessment

Impementation of cognitive assessment, which is the implementation stage of the planning process that has been made previously. The implementation of cognitive assessment is implemented in an integrated manner in the bioogy learning process in the classroom. The implementation of affective assessment is carried out before takes place. Implementation before learning is carried out by giving questions that have to do with the material being taught. The implementation of affective assessment during the learning process is carried out by providing practice questions or group discussions. Meanwhile, at the end of the lesson, a written test is given to see the ability of students after participating in the lesson.

The knowledge assessment carried out in Biology learning at SMA N1 Gabus uses oral test techniques, written tests, and assignments. The evaluation of the implementation of authentic assessment in this study includes several components, namely: (1) informing the cognitive assessment system, (2) implementing effective cognitive assessments. Between the two components of the implementation of cognitive assessment is changed into a more detailed statement. The statement describes the standard of implementing cognitive assessment in accordance with the 2013 curriculum and is included in the observation sheet. This standard is a benchmark for the application of affective assessment of SMAN 1in learning Biology. The results of data processing for the evaluation of the implementation of affective assessment obtained from observations using the observation sheet. More details can be seen in table 4.

Table 4. The result of the evaluation of implementation of cognitive assessment.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P(%)	F	P(%)
Rater 1	5	5	100	0	0
Rater 2	5	5	100	0	0
Mean	5	5	100	0	0

In this study, the observed classes were X and XI. Cognitive assessment is carried out before, during, and after the Biology learning process. Cognitive assessment is carried out in the form of multiple choice questions and descriptions using a written test. Oral exam skills with direct questions posed by the teacher via the Zoom platform or Google Meet. From the table above, it can be concluded that the results of the evaluation of cognitive assessment by rater 1 and rater 2 obtained a percentage of 100%, which means that all indicators of cognitive implementation are in accordance with the established indicators and can be categorized that the implementation of cognitive Biology assessment in SMAN 1is going well.

3.2.2 Implementation of Affective Assessment

Implementation of affective assessment, namely the implementation stage of the planning process that has been made previously. The attitude assessment is implemented in an integrated manner in the Biology learning process in the classroom. The implementation of affective assessment is carried out during the learning process. The implementation of affective assessment includes several aspects, namely the type of assessment, assessment techniques, forms of tests and assessment procedures. The evaluation of the implementation of authentic assessment in this study includes several components, namely: (1) informing the affective assessment system, (2) implementing effective affective assessment. Between the two components of the implementation of affective assessment, it was changed to a more detailed statement. The statement describes the standard of implementing affective assessment in accordance with the 2013 curriculum and is included in the observation sheet. This standard is a benchmark for the application of affective assessment of SMAN 1in learning Biology. The results of data processing for the evaluation of the implementation of affective assessment obtained from observations using the observation sheet. More details can be seen in table 5.

In this study, the observed classes were X and XI. Affective assessment is carried out during the Biology learning process. Affective assessment is carried out in the form of an observation sheet instrument that has been planned in the learning implementation plan.

Table 5. The results of the evaluation of the implementation of affective assessment.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P(%)	F	P(%)
Rater 1	5	3	60	2	40
Rater 2	5	3	60	2	40
Mean	5	3	60	2	40

From table 5, it can be concluded that the results of the evaluation of affective assessment by rater 1 and rater 2 obtained a percentage of 60%, which means that there are 3 indicators of affective assessment implementation that have been implemented by the teacher and 40%, which means that there are 2 indicators that have not been implemented by the teacher. These indicators are teachers who do not explain the attitude assessment system and what attitudes will be assessed by the teacher.

3.2.3 Implementation of Psychomotor Assessment

Implementation of psychomotor assessment, namely the implementation stage of the planning process that has been made previously. The implementation of psychomotor assessment is implemented in an integrated manner in the Biology learning process in the classroom. The implementation of affective assessment is carried out during the learning process. The implementation of psychomotor assessment includes several aspects, namely the type of assessment, assessment techniques, forms of tests and assessment procedures. Evaluation of the implementation of authentic assessment in this study includes several components, namely: (1) informing the psychomotor assessment system, (2) implementing psychomotor assessment effectively. Between the two components of the implementation of the psychomotor assessment, it was changed to a more detailed statement. The statement describes the standard for implementing psychomotor assessment in accordance with the 2013 curriculum and is included in the observation sheet. This standard is a benchmark for the application of psychomotor assessment at SMAN 1in Biology learning. The results of data processing for the evaluation of the implementation of psychomotor assessment obtained from observations using the observation sheet. More details can be seen in table 6.

Based on all the components that have been evaluated in the process phase in Biology learning, the results of the implementation of authentic assessments in distant learning are obtained. This process phase includes the cognitive assessment process, the affective assessment process, and the psychomotor assessment

process. can be concluded that the evaluation of authentic assessment in the phase of the authentic assessment implementation process gets a percentage of 80%, which means that there are 12 indicators that have been implemented and 20%, which means that there are 3 indicators that have not been implemented. When applying authentic assessment, it is necessary to understand the level of achievement to obtain information regarding whether or not it is good in its implementation.

Table 6. The results of the evaluation of the implementation of psychomotorik assessmen.

Evaluator	Number of indicators	Implementation			
		Accordance		Not Accordance	
		F	P(%)	F	P(%)
Rater 1	5	4	80	1	20
Rater 2	5	4	80	1	20
Mean	5	4	80	1	20

Based on the results of interviews with biology teachers at SMAN 1, this teacher lacks participate in repeated trainings on authentic assessment so that knowledge and mastery in assessment authentic is still lacking. This incident is not appropriate with the technical guidelines of the Minister of Education and Culture Number 22 Years 2016 in process and outcome assessment authentic learning.

Similarly, research that done by Vidriana, he found that there were still gaps in assessing authentic due to lack of knowledge in make this assessment because one of the basic problems faced SMP science teachers are lacking opportunity to participate in curriculum training 2013 on authentic assessment. Trainings that have been attended by teachers IPA has not fully answered the need teachers on authentic assessment incurriculum 2013. However, in Teacher 1 and Teacher 3 already refers to the standards technical guidelines.

Thus it is formulated that evaluation of the results of the implementation of the authentic assessment of the 13 field of study curriculumbiology at SMAN 1 can it is known that it has not reached the maximum goals that refer to the standard.

4. CONCLUSIONS

Based results of research and evaluation that have implemented authentic distant learning Biology curriculum 2013 at SMAN 1 are obtained as follows: Evaluation of authentic 2013 implementation at SMAN 1 has been carried out by 85,5%. However, it has not been carried out according to authentic procedures. Likewise, with the implementation. The implementation of the authentic assessment of the 2013 curriculum at SMAN 1 is only 80% carried out according to the indicators, meaning that it has not fully used the appropriate instrument procedure. Authentic generally in Biology subjects which still use old assessment and tend to be subjective.

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