

THE DEVELOPMENT OF AN AUTHENTIC INSTRUMENT FOR TO THE MATTER ENVIRONMENTAL CHANGES CLASS X HIGH SCHOOL IN ORDER TO STUDY RESULTS STUDENTS

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Abstract

The research aimed to identify the validity, practicality, and readability of authentic assessment instruments. The research is based on the model of research development research development research and development (R & D) consisting of six steps and potential, the collection of information, product design, validation of the product design, the revision of the product design, the limited test. To collect the data held in SMAN 1 Cerme on August involving as many 16 students of XI heterogeneous. Data collection method uses the validation and methods of observation. An analysis of the results of the data analysis using instrumen validation, the analysis of the activity of students, an analysis of the performance/practices, the student responded, and readability analysis. Based on the research done show results validation an instrument assessment seen from domain the contents with the feasibility 86.67%. Seen from domain construction with the feasibility 83.3%. In domain language after dipersentase its feasibility of 87.5%. Based on the results of the recapitulation of the activity of students who have been carried out by an observer it can be seen that the activity of students achieved a score of with the percentage 96.8 % or it can be said very practical. On the outcome of an instrument authentic assessment readability have a score with the level of 10 from 5 samples have been taken. Based on the analysis of the data can be inferred that the aspect of the criteria for validation in the category of very good/ perfectly valid, and based on the aspect of practicality in the category of very practical, and from the perspective of readability the same level in the category of 10 so that equivalent to class X high school.

Key word : Authentic Assessment, Enviromental Changes, 2013 Curriculum.

INTRODUCTION

Education in Indonesia is inseparable from a system that is required to be able to educate students into the next generation of good nation. A system will create a quality education for the future. A system is called the Curriculum. The Curriculum in Indonesia continues to be improved in order to create a better and optimal quality of education. At the moment the Indonesian world education using the Curriculum 2013 version 2016 as guidance 2013 Curriculum have a particular approach in the process of learning. This oncoming is the scientific approach manifested in learning activities namely observe, one another, collect the data, association, and communication. This approach is a characteristic who made 2013 Curriculum different from Curriculum in effect in indonesia before. The difference that can be seen real are the judgments study results teachers give for students participants. This assessment have a difference in contrast to the previous Curriculum. On KTSP Curriculum, teachers assessing for measuring competence students cognitive to the

course of the tests in 2013 Curriculum teachers assessing overall based on process and product resulted students as a attitude to competence, judgment to competence knowledge, the competence of knowledge.

The only difference is in the measurement of learning outcomes school tuition this needs the ability and teachers greater then appraise the outcome of students learning. Because the assessment is a technique evaluation which should be done in a proper possible way in the process of pembelajaran teachers in school (Poerwati and Amry, 2013). A judgment is expected in 2013 Curriculum is also a comprehensive assessment of the core competence I until the core competence IV which consisted of the aspect of attitude, the aspect of skill, cognitive and facets. Although on improving Curriculum carried out by the government namely 2013 Curriculum version 2016 not charged directly study results school tuition of competence I and II but assessment study results this must be done by teachers to

optimize study results school tuition so that the measurement of all competence can be measured by the optimal and thorough. In line with it, there are research conducted by Nurjananto and Kusumo (2015) found that instrument assessment that can be used to measuring the competence school tuition, the attitude, cognitive, and skills are the judgments autentik and instumen of this assessment in of implementation phase for points realibilitas instrument of 0.86 and instrument assessment autentik that has been declared valid, realibel, and effective.

The assessment of authentic as an activity measuring a result of working school tuition that concentrates the last the evident and something that was supposed to can it be valued the teacher who was responsible of the ability of that is owned by school tuition, essentially and perfectly morally good the process as well as the results of by the use of a variety of instruments the assessment of that can be adjusted with the demands of the competence which is valid (Kunandar, 2013). The assessment of authentic must also be able to describe the ability of the measures and the behaviour, skill, and knowledge that has not yet been owned or has been possessed by school tuition, the ability of school tuition in applying to display his knowledge, and all other forms of (Majid, 2015). Based on this shows that assessments by authentic in addition to providing a any weighing the demands of the position 2013 Curriculum, the assessment of authentic also know how to discern and competencies implemented shares will be held school tuition essentially and perfectly morally good aspects concerning the achievement of the measures and the behaviour, skill, and cognitive. Not only that is it based on the meaning of built with the sweat of it can be seen that, the assessment of authentic also know how to discern and school tuition in the aspect of the performance and the product of a result of working school tuition. In Permendikbud number 104 years 2014 well described that assessments by authentic is a form of the assessment of that which is willed school tuition on the other hand displayed the measures and the behaviour, use knowledge and skill acquired of learning in performing a duty on situations that indeed. This shows that assessments by authentic is needed teachers to judge capability owned by school tuition thoroughly and also the process of collecting the various data that can be describing the development of students known by teachers to prove that school tuition follow the process learning correctly and appropriate (Majid, 2015).

Standart of the scoring in 2013 Curriculum that requires teachers to assess all competence owned by school tuition to the teacher can find it

difficult to undertake an evaluation of student participants. Based on this information also shows that the assessment to measure all the competencies possessed by learners has not been assessed authentically. The process of spots like this should not be tolerated because the role of judgment is very conducive to learning that in a classroom.

The material change of environment a class of X Senior High School at the 2013 Curriculum were the subject of that studies regarding the changes to existing the environment and the third most common cause, and the impacts from such change beneath their feet yet. The material of which to be contained in chapter change of environment for poor people with recognition of an of the concept and body of knowledge about the environmental changes that can occur and the effect that imagination the strong desire of in real life that must be easily swayed and led away by workers participating in primary school students. The concept of and knowledge not thereby escape their doom was pretty direct about the life of school tuition who demands of students for of being directly involved in and understood by the school tuition to make it capable in applied in the life of to support his truthfulness. Supported by research conducted by Purnomo; *et al*, (2013) who showed that material environmental changes were the subject of environmental changes is the material of which requires mastery of knowledge to assess, attitude, and skills possessed by students. In the past teachers is more focussed students to know the subjects given by teachers and ignoring the aspect of the attitudes and skills. This of course contrary to the demand for 2013 Curriculum, basic competence to pay back so that a judgment is expected to allow good assessment can run in order to optimize the learning outcomes can run students in an optimal level because there was the assessment conducted in by only borders on damascus on one of the aspects world before that eventually it cognitive.

Based on it above shows that the inconsistency between the Curriculum over a bill which is in is not implemented. It is certainly measures should be taken to make it easier for teachers in making changes in terms of judging students in order the concept, the principle, assessment and procedures can be an irreducible (Dinar, 2016). This of course teachers need authentic assessment format that is appropriate for can evaluate. So student all at learning outcomes, of course is required the development of authentic assessment instruments eligible to be used in order to optimize the learning outcomes students on any material change of environment.

Based on the above analysis of every problem in over, to do a research program needs to be the development of assessment instrument titled "The development of an instrument the assessment of authentic on any material change of environment a class of x senior high school to to optimize the use of the results of of students to study" having the objective of to produce a absence of authentic priests by command have assessed on any material change of environment a class of X senior high school to to optimize the use of the results of of students to study, as well as described the validity, practicality, and readability.

METHOD

This research is research of development by referring to a model research development research and development (R & D). According to Sugiyono (2009) research development research and development (R & D). Consisting of six stage to be done. Including potential and problem, collect information, the product design, validation the product design, revision of the product design, the trial limited products. The data held in SMAN 1 Cerme in August 2017 using a student xi public SMAN 1 Cerme about 16 students who heterogeneous (gender, study results, and the think) and the data analysis on the October - November 2017 at Biology in Universitas Negeri Surabaya. The data collection in this study in a validation and methods observation. An analysis of data using an analysis of the results instrument validation, the activity of students analysis, analysis/ performance practices, the students analysis, and analysis readability.

RESULT AND DISCUSSION

The result of this research include the results of validation an instrument, the recapitulation of the activity of students, the recapitulation result response watchful such students, and the outcomes of the readability an instrument. The results of validation an instrument can be seen in Table 1.

Table 1. The results of validation an instrument authentic assessment on material change of environment class X Senior High School.

The aspects regarded as	Validator			Total	Average	Category
	V 1	V 2	V 3			
A. An instrument for seen from the (matter)						
The performance about / could be done by students	3	4	3	10	3.33	Good
Include time / the span of the do their tasks	4	3	3	10	3.33	Good

An instrument for developed realistic and can measure across the competence of the students	3	4	4	11	3.67	Good
The task is fair (no gender and social economic background)	3	4	4	11	3.67	Very good
Duty based on the state of the real world	3	4	4	11	3.67	Very Good
Limit questions/ statement from the answers of the expected clear	3	4	4	11	3.67	Very good
There is a rubric score	4	3	3	10	3.33	Very good
Rubric accompanied the score by which clear for a decision making	4	4	3	11	3.67	Very good
Rubric score arranged fairly every score	3	3	4	10	3.33	Very good
Total Score	36	36	35	104		
The percentage of feasibility					86.67%	Very good / very valid
B. An instrument for seen from the construction						
There are direction how does / get the job done	3	4	4	11	3.67	Very good
There are guidelines do score arranged clearly	3	3	3	10	3.33	Good
The formulation of a sentence about communicative	3	4	4	11	3.67	Very good
Constancy use the term appropriate	3	3	3	10	3.33	Good
The ability of which is to be judged not too much , so that all can be observed thoroughly	3	3	4	11	3.67	Very good
Total Score	15	17	18	50		
The percentage of feasibility					83.3%	Good / valid

C. An instrument assessment seen from the domain of language						
Use of writing the Indonesian language good and right	4	3	4	10	3.33	Good
The language used by the accordance with the age of students	3	3	4	11	3.67	Very good
Total Score	7	6	8	21		
The percentage of feasibility					87.5 %	Very good / very valid

On the table shows that every aspect rated in good category/very well and good/valid. The assessment validation instruments developed assessed by third this were converted to percentages validator next of every aspect. An instrument been validated according to three the domain /namely the matter, the construction and the language. The results show that an instrument validation judgment seen from the (contents) the matter with the appropriateness of 86.67% that can be interpreted very good/ perfectly valid. Seen from the construction with the appropriateness 83.3% so that it can be said that a good judgment / valid. On the language after dipersentase appropriateness of 87.5% so that it can be said that an instrument for very good / perfectly valid.

Validation done aimed at to determine feasibility an instrument assessment autentik theoretically based on validity and in order to obtain inputs and advice to be used as reference improvement device judgment developed. Validity it has to do with the extent to which the tests developed actually measuring what supposed to measure (Kaufm an & Thomas, 1980; Surapranata, 2004). The validity of an instrument authentic assessment developed then determined based on three domain the domain the contents of (material, construction, and domain language). After validated the validation an instrument assessment autentik developed of the three validator next converted to percentages of every aspect.

The following Table 2. Showing practicality instruments autentik assessment be interpreted by using sheets observation activity students assessed by observer.

Table 2. Recapitulation activity students to an instrument assessment autentik

Aspects	Percentage (%)
Competence attitude	100

Aspects	Percentage (%)
Competence skill process	87.5
Average	93.8 (Very practice)

Based on the results of the recapitulation of the activity of students who have been carried out by an observer at the it can be seen that the activity of students achieved a score of with the percentage of 93.8% or it can be said very practice. On the competence and obtained the percentage 100% or very practical because students have made almost all details activities within the competence in attitude on KI I and KI II has been shown by students. This is in accordance with Suastra (2009) which stated that in the science expected forming or capable of forming the student.

On the skill process that is still in category is very practical 87.5%. This is caused by students at the last the students still less done in observing information brief in LKS and also students still less done in processes information from the data the outcome of the experiment, analyzing, and noted the analysis data according to get experiment so results less than maximum. Observing activities, inform, processes information according to data analysis and analyze it does need observation. This is consistent with opinion Daryanto (2014) stating that there should be a great precision and nicety in observation use the object and tools because the observation have benefit to grow curiosity students in learning.

Based on result of making 5 samples to an instrument authentic assessment on any material change of environment Class X Senior High School result was obtained readability in Table 3. As follows.

Table 3. The results of readability an instrument assessment autentik to the matter environmental changes

Samples	LKS to	\sum Syllable (n)	n x 0.6	Level
1	LKS 1	244	146.4	10
2	LKS 2	245	147	10
3	LKS 3	244	146.4	10
4	LKS 4	250	150	10

Based on the data that has been obtained as that of which is shown in table invest in e instruments of the assessment of authentic have a score of readability with the level of 10 from 5 samples have been taken.

The value of readability is the extent of the reading of students against some LKS developed in an instrument the authentic assessment on any material change of this environment. A hundred said taken sample at the

level of discourse in LKS 1 to LKS 4 calculated the number of of a sentence and the number of the tribes he said. The number of these syllables to be multiplied by 0.6 and be converted into a graph fry developed by Edward Fry (1977). Based on the results of the conversion from graphs of fry analyzed a sort of descriptive set.

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CLOSING

Conclusion

Based on the research that has been carried out so it can be concluded that is an instrument authentic assessment in their experiences on any material change of environment biology class X high school if considered from the aspect of the validity of criteria in the category of very good/perfectly valid so that it is very appropriate for use. An instrument authentic assessment in their experiences on any material change of environment biology class X high school if considered from the aspect of the criteria for practicality by virtue of the activity students in the category of very practical so they are very practical to be used and based on students practical response in the category of very practical. An instrument authentic assessment in their experiences on any material change of environment biology class x high school if considered from the aspect of keterbacaan criteria at the same level so that equivalent to 10 senior high school levels as a class X.

Suggestion

Suggestion that can be given based on the research has done: needs to be increased the number of grains those on an instrument knowledge so can increase the diversity about change, the assessment was could be more appropriated and considered further by situation, the condition, and needs, and need to be considered the form of a judgment is objective to avoid the suggestion subjectivity from in terms of assessment.

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