

## THE DEVELOPMENT OF AUTHENTIC ASSESSMENT BASED ON CHARACTERS AT PRIMARY SCHOOL

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**Abstract:** The development of this research is intended to produce a character-based authentic assessment instruments at attitudes and skills in primary school. Subjects of this study are: (1) Primary school teacher; (2) Primary school students; (3) Seven experts for validation of assessment instruments that have the following criteria are: 1) mathematician SD; 2) Sciences SD expert; 3) Socials SD expert; 4) Indonesian SD expert; 5) Civics SD experts; 6) Assessors expert, and 7) psychologists. The method used in this study is development research on the type of formative research. Its development is focused on two phases: preliminary phase and formative evaluation phase to include self evaluation, prototyping (expert reviews, one-to-one and small group), and field test. Data are collected through questionnaires and field trials. Expert validation results show that attitude character-based assessment instruments are valid, good and decent to assess students' attitude with a note should be revised in the sub-components categorized not good. The results of field trials (small scale and large scale) indicates that the character-based assessment instruments developed attitudes have good validity and have very high reliability. Thus, based on the results of expert validation and field trials can be concluded that the attitude of character-based assessment instruments are valid and have very high reliability category, so the instruments eligible for use in measuring the achievement of the values of the character of students.

**Keyword:** authentic assesment, character, primary school

### 1. INTRODUCTION

Recently, character building at primary school is very necessary. Character as a personality of someone is formed from the internalization of virtues which are believed and used as a basis of way of thinking, behave and act. Here virtue consists of a number of moral values, and norms, such as honesty, courage to act, trustworthy, respect for others, self-discipline, independent, hard working and creative. National identity seems deprived from its roots, so the character becomes a hot topic to be discussed again lately. At the article number I of National Education Act, 2003 states that among the objectives of national education are to develop potential learners to have the intelligence, personality and noble character. Mandate of Education Law, 2003 is not only intended to establish education in Indonesia by producing intelligent students, but also having personality or character, so that it will be born generation who grows up with a character consisting of noble values of the nation and religion.

The importance in character building for primary school students should be supported by possessing a complete learning media which can support the strengthening of student's character. One of learning media needed by students is an authentic assessment oriented in character. To reach the goal of character needed, done indirectly through various learning activities undertaken, teachers are expected to make an assessment for students directly to see a certain characters value reached by student [3].

But the fact, most teachers do not understand much about the concept and implementation of authentic assessment focused on character oriented. It is informed by Rusilowati (Okezone.com, 2013) in her survey against 20 from 23 teachers of SMP 21 Semarang. The RESULTS is 87% teachers are having some difficulties in doing authentic assessment. From 23 respondents, as many as 87% teachers have difficulty in understanding how to vote, and 70% teachers have difficulty in making observation instrument.

The above data is also supported by preliminary observations on the elementary school in Medan. Almost all of the teachers have difficulties in doing the assessment. It happens because many teachers do not understand how to do authentic assessment, especially in assessing the achievement of students' character. There are 5 elementary schools which have been observed in Medan and all of them

expresses some difficulties in implementing authentic assessment to measure the achievement of a certain character values on students [6].

Actually, the government has done training aggressively guided by competent persons, but in reality it is not an efficient training. The reason is because there is no valid example of an instrument that allows teachers to implement character-based authentic assessment. Assessment in the character dimension is not only the cognitive achievement of learners, but also the achievement of affective and psychomotor.

The development of character-based authentic assessment includes two competencies, they are attitude competences and skill competences done in a balanced, so it can be used to determine the relative position of each learner against established standards. In Permendikbud No. 66, 2013 stated that the scope of assessment refers to the scope of the material, the competence of subjects, the competence of the charge/competency programs, and processes.

Character-based authentic assessment instruments are indispensable for teachers in assessing the achievement of student characters. But unfortunately, there is no example of a character-based authentic assessment instruments which can be used as a guidance in the implementation of assessment in primary schools. Therefore, in this research, the researcher will introduce and develop character-based authentic assessment instruments as research products. With the authentic character-based assessment instruments, it is expected to facilitate teachers in conducting an assessment of character especially in the realm of attitudes and skills in the classroom and outside the class-room.

[2] claims that judgment or authentic assessment is statistically significant assessment on the study of students to the realm of attitudes, skills and knowledge. In academic life, phrases of authentic assessment and authentic assessment are often interchangeable. [5] states, the assessment of the actual (authentic assessment) is the process of collecting a variety data that can give an idea or information about the development of students' learning experiences. According to Hibart in [2], various types of authentic assessment are; 1) performance assessment, 2) observations and questions, 3) presentation and discussion, 4) projects and investigations, 5) portfolios and journals. The authentic assessment is to assess the knowledge and skills (performance) which is obtained by students. Appraiser is not only teachers, but it can also be a friend of another or others.

Character assessment is done through observation, self-assessment, peer assessment and teacher journals. Skill assessment is done through the performance appraisal, the assessments requiring students to demonstrate a certain competence by using the practice test, project, and portfolio assessment. The instrument used in this activity is a checked list or the assessment scale (rating scale) equipped by rubrics.

Government (Kemdiknas/Kemdikbud) has set a standard of educational assessment which can be used as a guidance by the teacher in the assessment of the school, namely Ministerial Regulation No. 20 of 2007 on Standards for Educational Assessment. In this standard, a lot of techniques and forms of assessment offered to conduct the assessment, including the assessment of character. In the assessment of the character, the teacher should make an assessment instrument equipped by an assessment rubric to avoid subjective judgment, either in the form of observational assessment instrument (observation sheet) as well as the attitude scale assessment instruments (eg, Likert Scale).

Character values taken by schools as a main value are quoted from the points of competency standards graduation and some subjects in school which are targeted to internalized by learners. Ministry of National Character Education Team (2010: 9-10) said that the values are as follows: (1) Religious, (2) To be honest; (3) Tolerance; (4) Discipline; (5) Work hard; (6) Creative; (7) Independent; (8) Democratic; (9) Curiosity; (10) Having spirit of nationality; (11) Love for the motherland; (11) Appreciating the achievements; (12) Friendly/communicative; (13) Love peace; (14) Joy of reading; (15) Care for the environment; (16) Social Care; (17) Responsibility.

## **2. METHODS**

This research is conducted in SD Negeri 104202 Bandar Setia and SD Negeri 106811 Bandar Setia, which is located on Jalan. Terusan Dusun V Bandar Setia, Kecamatan Percut Sei Tuan, Kabupaten Deli Serdang . The research is done from April to December 2016 for the first year, and will be taken up again in the second year.

Subjects of this study are: (1) teacher; (2) students as subjects for testing a limited group; (3) 7 experts for validation of assessment instruments as follows: (a) mathematician SD; (b) expert in IPA

SD; (c) expert in IPS SD; (d) expert in Indonesian Language SD; (e) expert in PPKn SD; (f) expert in giving marks; and (g) psychologists.

The method used in this research is a research method development with a *formative research type* [9]. According to Tessmer, this research is focused on the development of two phases: *preliminary* and *formative evaluation* that includes self evaluation, prototyping (expert reviews, one-to-one and small group), as well as field test.

The instruments used in this study are: (1) sheet of expert validation and (2) Sheets attitude assessment instruments. Instrument validation of character-based authentic assessment questionnaire using Likert Scale which is modified by researcher to the scale of 4. [8] suggests that the evaluation criteria are classified in four levels with the following ratings: (1) Poor, (2) Enough (3) Good, (4 ) Very Good.

Analysis data is used for validation of character-based authentic assessment instruments developed. To analyze the results of the assessment given by experts and teachers to see the quality and feasibility of the products is used descriptive analysis by using formula of Mean Percentage Score (PRS) expressed by [8] and the internal reliability of all instruments proposed by Guilford in Suherman, (1990).

### 3. RESULTS AND DISCUSSION

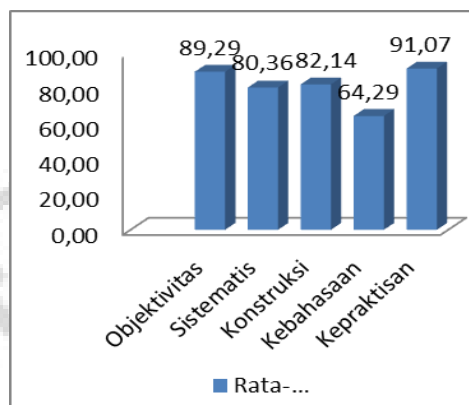
#### 2.1 The Development of the Character Based on Character Assessment

The development of assessment instruments to the character-based attitude is done to make the completeness of the assessment which does not exist at a teacher's book and student's books. Instrument development, the assessment is only done on the whole theme is contained in the fourth grade primary school. The development instrument in character assessment is also based on the types of assessment contained in Curriculum 2013 including observation ratings, self, peers, and teachers journal. The followings are forms of assessment instruments developed attitudes, along with the scope of learning, assessment rubrics and scoring information. Based on the acquisition of validation score from experts shown in Table 1.

**Table 1.** Results of Expert Validation

Component	Sub-Component	Score	%	Criteria
Objectivity	1. The ability of the instrument to measure students' ability	26	92.86	Very good
	2. The ability of the instrument to measure the students according to the actual circumstances	24	85.71	Good
Mean			89.29	Good
Systematic	1. suitability instrument with learning indicators	19	67.86	Poor
	2. Assessment instruments arranged in a systematic and coherent	26	92.86	Very Good
Mean			80.36	Good
Construction	1. Correctness on sentence arrangements on assessment instruments developed	19	67.86	Poor
	2. Writing of sentence arrangements in assessment instruments developed does not create double meaning	27	96.43	Very Good
Mean			82.14	Good
Language	1. The use of Indonesia language rule is correct on the writing instrument developed	18	64.29	Poor
Mean			64.29	Poor
Practicality	1. It is easy to implement the assessment instruments developed	27	96.43	Very Good
	2. it is easy to use assessment instruments developed in general	24	85.71	Good
Mean			91.07	Very Good
Total			83.33	Good

The obtaining of mean in each component of character assessment developed based on expert validation is presented in Figure 1.



**Figure 1.** The Assessment results of Expert Validation

Based on the chart, it can be concluded that each component has varied categories, ie, good and excellent. Overall the average value of 5 components and 9 sub-components components are obtained an average score of 83.33 or has a good category. So, it can be informed based on validator that the validation results to an assessment instrument of character is good and it is feasible to be used to assess students' characters with a note that it should be revised at the sub-components categorized not good.

## 2.2 Field Trial

Character assessment instruments revised based on suggestions for improvement of the validator should be validated in field trials. The aim of field trials is to fulfill the elements of the feasibility of assessment instruments attitude at fourth grade elementary school students. Implementation of field trials is divided into two scales, ie a small scale test and a large-scale test conducted on students and teachers at fourth grade elementary school in SD Negeri 104202 Bandar Setia and SD Negeri 106811 Bandar Setia.

A small-scale trial is conducted by one theme: The Beauty of Togetherness and has three sub-themes, namely: (1) The Diversity of My National Culture; (2) Unity in Diversity; and (3) Be Grateful for Diversity. This a small scale trial is carried out at the first three weeks at the school in academic year 2016/2017, precisely on 18<sup>th</sup> July to 6<sup>th</sup> August 2016, by applying the first sub-themes on a weekly basis.

Based on a small scale trial, it shows that teachers or students do not have any obstacles in using the instrument at the assessment based on the character of one theme that is The Beauty of Togetherness. However, students obtain a lower score at the first sub-theme at a peer assessment. It happens because the students give a score for their characters which do not based on reality, but based on a subjective or personal elements among students. At the second sub-theme, teachers help researchers to guide students to provide peer assessment objectively in accordance with the real character of his friend and not because of subjective or personal relationships among students. So that the second sub-theme and the third sub-theme, students are motivated to achieve character competency which has been determined at each meeting. So at the second sub-theme and the third sub-theme, students are motivated to obtain a high score. The trial results of a small scale at the second and third sub-theme have a high score. It indicates that a revision or improvement of assessment instruments is not needed, but it only needs a little correction on instructions for the use of instrument.

After that, a large-scale test is conducted at the fourth grade with two themes, namely: (1) Always Save Energy; and (2) Care for Living Things. Each theme has been separated into three sub-themes. Each sub-theme has the idea of Always Save Energy, namely: (1) a variety of energy sources; (2) the use of energy; and (3) force and motion. Sub-theme on the theme of care for living things, namely: (1) animal and plants in my neighborhood; (2) the diversity of living things in the neighborhood; and (3)

come on, love the surroundings. Large-scale trial is conducted at four weeks until nine weeks in the Academic Year 2016/2017, precisely on 8 August to 17 September 2016 by applying one sub-theme for each week.

The results of a large-scale trial shows that teachers or students do not have any problems in using the instrument at the assessment based on the character at the second theme (Always Save Energy) and on the third theme (Care for Living Things). Even, the students obtain a high score for characters for each sub-theme. It happens because students begin to understand that learning in school is not just a cognitive-based, but also attitude. Attitudes also affect the value of report so that they do not longer behave something unreasonable. Thus, the results of a large-scale trial shows that it does not need to make be a revision of the assessment instruments as well as the guidance to use the instruments.

The results of field trials shows that the character-based assessment instruments developed attitudes have a good validity. It can be proved from the test attitudes towards student assessment instruments using the same four types of assessments as well (observation assessment, self-assessment, peer assessment and teacher journals votes) generating synchronous data as presented in Table 2.

**Table 2.** Total Score Assessment for Each Theme

Theme to:	Subtheme to:	Mean Score
1	1	73.21
	2	74.19
	3	73.05
2	1	73.43
	2	74.39
	3	67.29
3	1	78.10
	2	75.60
	3	75.65
Total		73.88



**Figure 2.** Score of Student Character Assessment

Based on Table 2 and chart 2, it is obtained that the instrument of character assessment on first theme and first subtheme till the assessment on the third theme till third subtheme have an average score of adjacent. Even at total average, the score is not far.

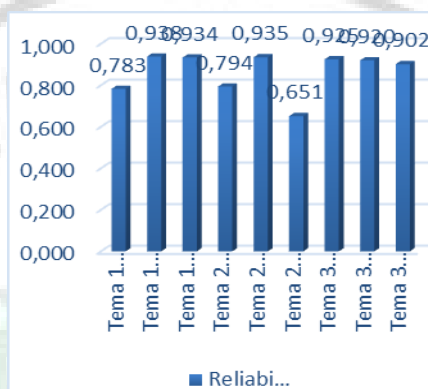
The results of field trials also shows that overall character-based assessment instruments developed attitudes have a very high reliability categories as presented in Table 3.

**Table 3.** Instrument Reliability on Each Sub-theme

Theme to:	Subtheme to:	rb	rii	Category
1	1	0.643	0.783	High
	2	0.884	0.938	Very High
	3	0.876	0.934	Very High
2	1	0.658	0.794	High
	2	0.878	0.935	Very High

Theme to:	Subtheme to:	rb	rii	Category
	3	0.483	0.651	High
3	1	0.861	0.925	Very High
	2	0.852	0.920	Very High
	3	0.821	0.902	Very High
Total Mean		0.77	0.872	Very High

The results of reliability test is presented at Figure 3.



**Figure 3.** The results of Reliability Test

Based on the expert validation and field trials, it can be concluded that the character-based assessment instrument in elementary school that developed in this research is valid criteria and has a very high reliability. So it can be used as a measure of student's characters.

Expert validation results show that the overall assessment instrument developed is valid or feasible to be used but there is a little note to be improved in accordance with the advice of validator. After that, it must be there is a test subject or field testing.

Based on the results of a small scale and a large scale on each sub-theme, the assessment of teachers, friends, or self-assessment on each of the students are not much different. The fact that there are many students having the same score, so the assessment instruments developed an overall declared valid and it can be used as an instrument for student's character assessment. It is based on the average score of the students' character obtained from the the assessment on one the first theme and the first subtheme till the third theme and the third subtheme which have an average score of adjacent. Even, at total score also has a score which is not far. The results of field trials also shows that overall character-based assessment instruments developed characters have a very high reliability category.

The findings in this study are supported by several previous studies which have been published in national journals, including the research done by [7], indicating that all Indonesian language teachers have implemented an authentic assessment of learning. Teachers apply various models of authentic assessment indicating that there are factors of creativity in the application of assessment. However, teachers are still experiencing various kinds of constraints in implementing authentic assessment. Another research conducted by [10] shows that authentic assessment guides learning through various creation of learning activities of the student during the learning process containing of characters. Authentic assessment gives a real Figure of students' abilities in reading and provides a measure of the achievement of students' character development. Based on the fact that the use of authentic assessment will contribute to an increase reading comprehension and character development of students.

This research is not only supported by studies published by national journals, but also internationally as research conducted by [1], shows that the characteristics of students, achievement, and attitudes have a statistical value related to one another. Another research is conducted by [4], the survey results show a good attitude assessment instruments which can contribute to the measurement of student's attitudes. The results of this study shows that the use of authentic assessment is an innovation learning development that can serve as the vehicle of implementation and attitude measurement through the democratic way. An authentic assessment is able to train teachers to be a model of character development in the learning process and also able to develop students' character.

Based on the findings in this study and several previous studies, it can be concluded that the assessment character-based at elementary school developed in this research is valid criteria and has a high reliability, so it can be used as a measurement of student's characters. It can be summarized that the development of an authentic assessment instruments in the realm of character-based attitude to the fourth grade of elementary school is ready to be used and can provide accurate assessment attitude.

#### 4. CONCLUSIONS

The results of preliminary observations concerning the existence of an assessment instrument indicates that the character-based authentic assessment instruments have not been applied in elementary school. Expert validation results show that attitude character-based assessment instruments are valid, having a good category and can be used to assess students' attitude but there is a little correction should be done at the sub-components which are categorized not good. The results of field trials shows that the character-based assessment instruments developed attitudes have good validity and high reliability. The evidence can be seen from the trial assessment of the students using the same four types of assessments as well (observation assessment, self-assessment, peer assessment and teacher journals) generates synchronous data and the range of scores which are almost the same. Thus, based on the results of expert validation and field trials, it can be concluded that the attitude of character-based assessment instruments are valid and have very high reliability category, so the instrument is eligible to be used in measuring the achievement of the values of students' characters.

Here, the author would like to give some advices: (1) The teacher should be able to adjust the indicator used for students' characters with material studied, particularly the implementation of curriculum 2013; (2) For other researchers who will conduct research and development, it is better if the product developed is suitable with the subject required as a sample of research and the research should be done at school having enough facilities, media and participants which can support the research; (3) If other researchers conducting research with the model and the same instrument but different research samples, the results tends not much different from the results of this study and expected to obtain the perfect results.

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